Proceedings of the 18th European Conference on Management Leadership and Governance

ISCTE – Instituto Universitário de Lisboa Portugal

10-11 November 2022

Edited by
Professor Florinda Matos
and Professor Álvaro Rosa

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Proceedings of the

18th European Conference on Management Leadership and Governance
ECMLG 2022

Hosted by
ISCTE – Instituto Universitário de Lisboa
Portugal

10-11 November 2022

Review Process
Papers submitted to this conference have been double-blind peer reviewed before final acceptance to the conference. Initially, abstracts were reviewed for relevance and accessibility and successful authors were invited to submit full papers. Many thanks to the reviewers who helped ensure the quality of all the submissions.

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ECMLG Preface

These proceedings represent the work of contributors to the 18th European Conference on Management Leadership and Governance (ECMLG 2022) hosted by ACI and ISCTE – Instituto Universitário de Lisboa, Portugal on 10 - 11 November 2022. The Conference Chair is Professor Florinda Matos and the Program chair is Professor Álvaro Rosa, both from ISCTE – Instituto Universitário de Lisboa, Portugal.

ECMLG is now a well-established event on the academic research calendar and now in its 18th year the key aim remains the opportunity for participants to share ideas and meet the people who hold them. The scope of papers will ensure an interesting two days. The subjects covered illustrate the wide range of topics that fall into this important and ever-growing area of research.

The opening keynote presentation is given by Professor Miguel Pina e Cunha, Nova SBE - Universidade Nova de Lisboa, Portugal, on the topic of *Paradoxes of power and leadership.* The second day of the conference Keynote presentation is given by Professor Stefan Güldenberg, EHL Hospitality Business School Lausanne, on the topic of *Rethinking Leadership in the Knowledge Economy.*

With an initial submission of 129 abstracts, after the double blind, peer review process there are 56 Academic research papers, 8 PhD research papers, and 2 work-in-progress papers published in these Conference Proceedings. These papers represent research from Austria, Brazil, Colombia, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Ireland, Kuwait, Lebanon, Lithuania, Macau, Malta, Nepal, New Zealand, Northern Ireland, Norway, Pakistan, Poland, Portugal, Russia, South Africa, Switzerland, Taiwan, Thailand, The Netherlands, UK, United Arab Emirates and the USA.

We hope you enjoy the conference.

Professor Florinda Matos
ISCTE – Instituto Universitário de Lisboa
Portugal
November 2022

ECMLG Conference Committee

Biographies

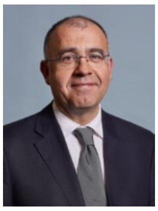
Conference Chairs

Prof. Florinda Matos holds a PhD in Social Sciences, Organizational Behavior Studies from the Technical University of Lisbon. She is a professor in Post-Graduate courses at the ISCTE – IUL and a researcher at DINÂMIA'CET – IUL . Presently, she is leading the project "KM3D - Knowledge Management in Additive Manufacturing: Designing New Business Models" in a national consortium, funded by FCT.

Prof Álvaro Rosa is associate professor (with Habilitation) at ISCTE Business School. Currently is the director of the Master of International Management at Iscte - Instituto Universitário de Lisboa and member of Scientific Committee of Iscte Doctoral Programme on Applied Management. His research interests are strategy, qaulity and cross-cultural management. He is a regular visiting scholar in faculties in China, Brazil, UK, and Slovenia.

Keynote Speakers

Stefan Güldenberg is a pioneer and leading expert on the future of work, digital strategies, sustainable leadership, and knowledge management. He is a university professor, platform founder, strategy consultant, executive coach, and knowledge entrepreneur. He studied Business Mathematics, Philosophy, and English at the University of Ulm and then received his doctorate and habilitation at the Vienna University of Economics and Business. Stefan has 25 years of experience in research, knowledge transfer, and practice. He conducts research on and supports the development of strategy and transformation processes. Stays abroad led him, among others, to Harvard University, the Massachusetts Institute of Technology (MIT), and the National University of Singapore. He is the current Vice President Practice of the European Academy of Management (EURAM) and President of the New Club of Paris, a think tank and agenda-setter for the knowledge economy. Stefan is the Academic Director of EHL Hospitality Business School Lausanne (https://www.ehl.edu/)



Miguel Pina e Cunha is the Fundação Amélia de Mello Professor at Nova SBE, Universidade Nova de Lisboa (Portugal). He studies different dimensions of organizing and organizations, using the lens of paradox. He is a co-author of the *Elgar Introduction to Organizational Paradox Theory* (Elgar, 2021), *Positive Organizational Behaviour: A Reflective Approach* (Routledge, 2020), and *Elgar Introduction to Organizational Improvisation Theory* (Elgar, 2022) and a co-editor of *Contemporary Social Theory for Management* (Routledge, 2019).

Mini-Track Chairs

Carolina Almeida Cruz is an entrepreneur and champion of positive impact in Portugal who started her career at the International Labor Organization and recently received the Women Economic Forum award for "Iconic Women Creating a Better World". Carolina is a PhD scholar at the Lisbon University Institute (ISCTE) and studied Psychology at ISPA, Finance and Administration for Non-Profit Organizations at Harvard, and Entrepreneurship and Corporate Sustainability Management at Cambridge University.

Prof David Ferraz is a Public Policy and Public Administration Professor of ISCTE-University Institute of Lisbon and ISCSP-Lisbon University and, currently, the General Secretary of the Portuguese Economic and Social Council. He is the author and co-author of various national and international publications in the areas of Management, Administration, Public Policy and Human Resource Management.

Tatiana Gladkikh is Head of Business, Management and Computing at the University of the Highlands and Islands (UHI), Perth College. As an academic and consultant, she has worked the UK, Russia, Europe and the Middle East. Her research is focussed on leadership and cross-cultural issues in the global business environment. Among her recent publications are Luxury Yachting: perspectives on Tourism, Practice and Context (Palgrave Macmillan, 2021) and The International Business Environment and National Identity (Routledge, 2018). Dr Gladkikh is a Senior Fellow of the Higher Education Academy (SFHEA) and a Member of the Chartered Institute of Linguists (MCIL).

Adriana Coutinho Gradim is a student at the PhD of Business and Economics by the University of Aveiro. She has a bachelor in Languages and Business Relationships and a master's in management – specialized in marketing and international business. For the last two years she worked as a research fellow in the INNHOSPITAL project in which she was able to improve her research skills in the field of innovation and health management. Currently, she has a doctoral scholarship granted by the University of Aveiro to develop her thesis in the field of intellectual capital and knowledge management in a mobility context.

Teresa Dieguez, Specialist on Strategy and Entrepreneurship at Polytechnic Institute of Cávado and Ave (IPCA), Portugal. After her studies in Economics, Teresa worked for several years at the automotive industry. She founded her first company in 1995 and in 2007 she took a Master on Innovation and Technological Transfer. Nowadays Teresa is a professor and a co-promotor of different businesses and activities. She is a Social Judge, and she is taking her PhD on Social Sustainability and Development. She believes that innovation is a good way to improve sustainable development

Isabel Ferreira, PhD in Information Technologies and Systems, specialization area e-government, from the University of Minho, Portugal. Research collaborator in the group Information Systems and Technologies for the Transformation of Organizations and Society (ISTTOS), of the Algoritmi Center, University of Minho. Founder member of the AIS Student Chapter of the University of Minho.

Paula Loureiro, PhD student in Business Sciences, with several publications in the areas of Human Resources Management and Organizational Behavior. Paula has been teaching in Higher Education since 1998, having taught various curricular units in management for undergraduate and master's degree courses. Experience in coordinating disciplinary areas of the Management Department. Research interests: Career Management, Skills management, Equal opportunities and diversity management.

José Vale is a professor at the Porto Accounting and Business School, Polytechnic of Porto, Portugal, where he teaches several courses related to management accounting. He is PhD in management – specialized in accounting and management control. He has several articles published in indexed international journals, having also participated in different international and national conferences. He has been a member of different scientific committees in conferences. Currently, his research interests are mainly in the areas of intellectual capital (IC) and knowledge management, as well as accounting, with a focus in non-financial reporting.

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Toon Abcouwer: lecturer (University of Amsterdam) for four decades, supervisor of hundreds of thesis students. Founder of the Adaptive Cycle of Resilience, helping organisations operating in changing environments. Together with Emőke Takács he published over 30 articles in the past five years, leading to the understanding of the necessary shift from the 'Me-We' paradigm to the 'We-All'.

Rameshwar Acharya is Assistant Professor of Finance (Public Youth Campus, Tribhuvan University, Nepal). M. Phil received (Tribhuvan University, 2016). Published several journal research articles. Served Government of Nepal, as Financial Management Expert in 2011 and 2016. Research interests: governance, remittances and tourism. Has published a text book on Financial Institutions and Markets on co-authorship. Currently the director of BBA program.

Hanan Al Mazrouei: Associate Professor (United Arab Emirates University, UAE). Received Master's in human resources management (Swinburne University, Melbourne, Australia) and Ph.D. in business (Latrobe University, Melbourne, Australia). Has a strong record of research, teaching and administrative experience (Assistant Dean for Student Affairs at UAEU). Research areas are cross cultural management and leadership. Publishes in leading international journals

Reza Asghari is chair of the Entrepreneurship Hub of TU Braunschweig and Ostfalia University of applied Sciences. He earned his doctorate in 1997 at the Institute of Economics at the TU Braunschweig. He is the author of numerous publications in the field of high-tech innovation, entrepreneurship and e-government.

Dimitrios Belias, Assistant Professor (Department of Business Administration, University of Thessaly, Greece) is also a Postdoctoral Research Fellow (Department of Business Administration and Tourism, Hellenic Mediterranean University, Greece). Main research interests are in the areas of Management, Human Resource Management, Organizational Behavior, Tourism Business Administration, Educational Management, Service Quality and Tourism and Hospitality Management.

Karen Rocio Beltran Rueda, Internship and job training leader and Professor of the Undergraduate Degree in Hospitality and Tourism Management at Corporación Universitaria Minuto de Dios - Distance and Virtual Learning. Culinary and Gastronomy Professional, specialized on Teaching and Pedagogy. Experience as a professional chef and chef instructor. Latin-American cultural studies Master's student.

Andrea Bencsik is a professor at Pannon University in Hungary and at J. Selye University in Slovakia. She is doing research in the fields of knowledge- change- human resources management and teaching these disciplines at the same time. She is the author of a number of scientific publications and a member of some international scientific committees.

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Łukasz Bryl is an Assistant Professor in the Department of International Economics at the Poznan University of Economics and Business. He holds PhD in economics and specializes in Intellectual Capital and corporate reporting. Lukasz was Visiting Professor at the Jyvaskyla University of Applied Sciences.

Marian Carcary is a lecturer in business in Mary Immaculate College, Ireland. Her research interests include qualitative and quantitative research methods, design science and engaged scholarship, organisational digital transformation, and digital technology adoption within the education sector. Marian has previously managed and worked on multiple Enterprise Ireland and European-funded projects. Contact her marian.carcary@mic.ul.ie.

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Oscarina Conceição is Professor at Polytechnic Institute of Cávado and Ave and researcher at Dinâmia'CET - Iscte (Instituto Universitário de Lisboa). She has a PhD in Economics from University of Minho. Her research interests include the following topics: innovation process and their socio-economic effects; knowledge transfer; knowledge and innovation networks; entrepreneurship; Academic entrepreneurship; Blue Economy.

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Simona Činčalová received PhD degree from the University of Pardubice, Czech Republic in 2018, in Management. She is a lecturer and a researcher in the Department of Economic Studies, College of Polytechnics Jihlava. She is interested in corporate social responsibility (CSR), customer satisfaction and loyalty, gender gap and managerial ethics.

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Denis Imhof is an aspiring PhD student in Management and holds a MSc in Business Information Systems and a BSc in Business Administration degree. He is now doing research in the field of leadership and strategic management with Prof. Dr. Stella Gatziu Grivas. He has obtained practical experiences in multiple large enterprises in Switzerland.

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Sofia Panagiotidou is a PhD candidate at the University of Macedonia, Greece (GR). She is an experienced career counselor with Master degrees in Environmental Education, Communication and Didactics and graduate in Philology and Business Administration. Her main research areas are human resources management, talent management, internal and external employer branding strategies.

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Maria Gabriela Silva from ISCTE- Instituto Universitário de Lisboa. My primary research interest encompasses global mobility and expatriation, women in management, and team performance management. A second strand of my research is concerned with (big) data analytics and text analytics. I have published in the area of Organisation Studies.

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Ádám Szaller has been working as a research associate in the Institute for Computer Science and Control in Budapest since September 2017. His research area is platform-based resource sharing considering trustfulness. He is also actively participating in industrial projects related to simulation of manufacturing and logistics systems and networks.

Emőke Takács: researcher at ERI Hungary – European Research Institute. Has been teaching with Toon Abcouwer (University of Amsterdam) and worked on further developing the Adaptive Cycle of Resilience with him.

Experience with social economical challenges led to initiation of new insights for dealing with future uncertainties and the underlying logic. The Me-We-All approach is the result of this cooperation.

Dinh Uy Tran is an industrial PhD student at the University of Oslo and Special Adviser at Sykehuspartner Trust. He has over 10-year experience from the healthcare industry and in Information Security. He holds numerous industry certifications, including CISSP, CISSP-ISSMP, CISM, CRISC and ISO27001 LI. His research interest is in Information Security Governance and Management.

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Sanja Zivkovic is a leadership consultant, educator, researcher and PhD student. She is the founder and director of Heartist Center, an associate expert at the University of Zagreb and a member of the International Leadership Association. Her main research interests are inspiration, impact and intelligence in leadership.

Relationship between Corporate Governance and Firm Valuation in Nepal

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Abstract: In the context of growing corporate financial scandals and misconduct, the purpose of this study is to examine the relationship between various internal corporate governance measures and corporate valuation (Tobin Q) in Nepal. The study is descriptive and analytical in nature. Causal comparative research design especially multivariate regression models have been used. The method of estimation is Ordinary Least Square (OLS). Board size and independence, CEO duality and existence of audit committee as corporate governance variables and Tobin Q as performance variable for the valuation measure of 54 listed Nepalese firms over the period 2018/19 and 2019/20 have been used in the analysis. Result supports governance performance hypothesis. It shows a significant positive relationship between board size and firm value (Tobin Q). The study establishes the positive impact of CEO duality on firm valuation and concludes that independent directors are unable to play role in value creation. Finally, the role of audit committee is not significant in creating value. These results provide insights on the current regulatory provisions. The findings raise the questions over the role of our expert directors and audit committee. The need of larger board size has been established. Therefore, current regulations with respect to board size and independence; and CEO duality and audit committee need to be reassessed. Though few studies have examined role of corporate governance measures in corporate performance and valuation in Nepalese context, this study is new in its type in investigating the governance performance relationship taking recent dataset of Tobin Q as valuation measure. However, the study is based on limited internal corporate governance variables from a small sample size for only two year’s data set. Hence, generalization should be made cautiously.

Keywords: Corporate governance, Tobin Q, board size and independence, CEO duality and audit committee.

1. General background

Corporate governance, as the system by which business corporations are operated, regulated, controlled and monitored, is about promoting corporate fairness, transparency and accountability (World Bank, 1999). It includes the relationships among stakeholders and is the set of processes, customs, policies, laws and institutions affecting the way a corporation (company) is directed, administered or controlled. The relationship between corporate governance and performance has been an area of research interest in the financial literature. It is important not only in formulating corporate plans but also for regulations as well. It is widely believed that good corporate governance helps in improving the value of the firm. Several literatures confirmed the direct relationship between two in both developing and developed countries (Black 2001: Klapper and Love 2004: Gompers et al. 2003: and Beiner and Schmid (2005)). However, there are differences in the nature, direction, magnitude and processes of operation of the relationship between developed and developing countries due to differences in their economic, social, regulatory framework and market behavior (Hermalin and Weisbach 1991:, Ahunwan 2003). It is important especially for developing countries to incorporate these differences into the analysis for an appropriate understanding of the role of corporate governance in influencing the corporate value and formulating regulatory framework. However, these differences have not been systematically discussed in the existing literature based on developing country like Nepal.

2. Literature review and research questions

Cadbury (1992) defines corporate governance as the mechanism used to discipline organizations. However, different people from different fields have come up with different interpretations that basically reflect their own perspectives. It indicates the policies and procedures applied by firms to attain fixed sets of objectives, corporate missions and visions with regard to stockholders, employees, customers, suppliers and different regulatory agencies and the community. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as the board, managers, shareholders and others, and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance (OECD 2004). Alternatively, it deals with the ways in which funds suppliers assure themselves getting a return on their investment. How do the suppliers of finance get managers to return some of the profits to them? How do they make sure that managers do not steal the capital they supply it in bad projects? How do suppliers of finance control managers? There are internal and external ways of achieving this. Morin and Jarrell (2001) argue that corporate governance is a framework that controls and safeguards the interest of the relevant players in the market. Perfect corporate governance can strengthen intra-company control and can reduce opportunistic behaviors and lower the asymmetry of information, so it has a positive impact on the high quality of disclosed information (Li and Qi, 2008). Obviously good corporate governance practices are more essential in determining the cost of capital.

Corporate governance codes that serve as templates of achieving value to the shareholders have been developed by OECD and several countries. South Africa: King Report II, 2004, Brazil: CVM Code, 2003, UK: Combined Code, 2003 and Cadbury Code, 1992, France: Bouton Report, 2002, Russia: CG Code, 2002, Singapore: CG Committee, 2001, USA: SARBANES-OXLEY ACT 2002 and Commonwealth countries: Corporate Governance Guidelines (1999) are few names. In the context of Nepal, still there is no unified corporate governance code of conduct. However, Nepal Rastra Bank has recently issued Unified Directives, 2078 which laid down some rules for governance to banking and financial sectors that come under the jurisdiction of NRB. The voices for promoting corporate governance have been increasing. It is believed that good corporate governance reduces risk, stimulates performance, and improves access to capital markets, enhances the marketability of goods and services, improves leadership, demonstrates transparency and social accountability (CIPE, 2004). Corporate governance, as indicated by Gompers, Ishii, and Metrick (2003), Bebchuk et al. (2005), Cremers and Nair (2005), Brown and Caylor (2006), and Black et al. (2006), is a crucial factor to dictate firm value and performance. Some researchers have examined the relationship between the internal governance mechanisms and valuation and some have focused their studies on exploring the relationship between external governance mechanisms and various performance measures. This study also tries to investigate the relationship between internal governance variables and firm valuation. Drobetz et al. (2004) states a positive relationship between governance practice and firm valuation for German public firms and confirms that small board size is generally believed to improve the value of the firm. Eisenberg, Sundgren, and Wells (1998) report a clear negative relationship between board size and firm value. Lipton and Lorsch (1992) suggest an optimal board size between seven and nine directors. Yermack (1996) finds negative correlation between board size and profitability. Mak and Kusnadi (2005) report that small size boards are positively related to high firm value. Sanda et al. (2005) report that value of the firm is positively correlated with small, as opposed to large boards.

Table 1: Empirical evidences on the effect of board size on valuation

This table reports the findings of previous studies that examine the impact of board size on valuation. * denotes *Statistical significance at the 10% level or better.*

Author (year)	**Sample (period)**	**Observations**	**Model**	**Tobin Q**
Cheng (2008)	350 US firms 1984-1991	2,199	OLS	-*
Wintoki (2007)	>6,000 US firms 1991-2003	>16,000	OLS/FE/GMM	
Beiner et al. (2006)	109 Swiss firms 2002	109	OLS/IV	+*/+*
Adams & Mehran (2005)	35 US firms 1986-1999	472	FE/IV	+*/+
Lasfer (2004)	1,424 UK firms 1990-91/ 1996-97	1,798	OLS	-*
Loderer & Peyer (2002)	169 Swiss frims1980-1995	330	OLS	-*
Eisenberg et al. (1998)	879, Finish firms 1992-1994	879	OLS/IV	-*
Conyon & Peck (1998)	481 UK firms 1992-1995	1924	GMM	-*
Yermack (1996)	452 US firms 1984-1991	3,400	OLS/FE	-*/-*

Above table clearly shows the mixed relationship between board size and valuation. Another concern is about the relationship between board independence and performance. Following table shows the previous findings.

Table 2: Empirical evidences on board independence and Tobin Q

Study	**Sample size**	**Focus of the study**	**Key findings**
Bhagat and Black (2002)	934 large U.S firms	Board independence and performance	*No linkage between the proportion of outside directors and Tobin's Q,
Hermalin and Weisbach (1991)		Outside directors and Tobin Q	* No association between the proportion of outside directors and Tobin's Q.
Agarwal and Knoeber (1996)	383 large US firms, Forbes 800 (1987)	Performance and Control	*Tobin's Q decreases significantly with board outsiders, leverage, and corporate control activity. *Presence of non-executive directors is negatively linked with firm value.

Table 3: Empirical evidences on CEO duality and performance

Study	Sample size	Focus of the study	Key findings
Song et al. (2006)	3,589 Chinese firms	CEO duality and performance i.e. ROE, ROA, Tobin Q	*Duality firms outperform non-duality firms when state ownership is high and Non-duality firms outperform duality firms when state ownership is low.
Bai et al. (2004)	2,905 firms	CEO duality and Valuation as Tobin Q	*Non-duality firms outperform duality firms.
Dalton et al. (1999)	228 firms	CEO duality and Market and accounting measures	*No significant relationship
Brickley et al. (1997)	661 large US firms	CEO duality and ROI, stock returns	*Duality is an optimal leadership structure. *The cost of separation is larger.
Baliga et al. (1996)	181 industrial firms1986-91	CEO duality and ROE, Stock returns	*Market is indifferent to changes in duality structure.
Rechner and Dalton (1991)	141firms1978-1983	CEO duality and ROI, profit margin	*Non-duality firms outperform duality firms.
Donaldson and Davis (1991)	321 firms	CEO duality ,ROE and Stock returns	*Duality firms outperform non-duality firms.

Majority of the literatures shows the negative relationship between duality and performance. However, the table shows the mixed results. Based on the literature discussed above, this research seeks to answer the questions like: is there a link between corporate governance and company performance? Does a good governance practice boost value for Nepalese listed companies? Specifically, do board size and independence, CEO duality and audit committee affect value of Nepalese firms? It aims to assess the status of governance practice and links governance to the valuation. In Nepalese context, a study conducted by Ranjana Rijal and Surya Bahadur G.C. (2010) reveals stronger corporate governance practices leads to lower financial leverage and lower agency conflicts. However, the number of corporate governance studies in Nepalese context is very limited. Hence, this study intends to highlight on the impact of selected corporate governance measures on the firm valuation in Nepalese context. The study is based on the following theoretical framework.

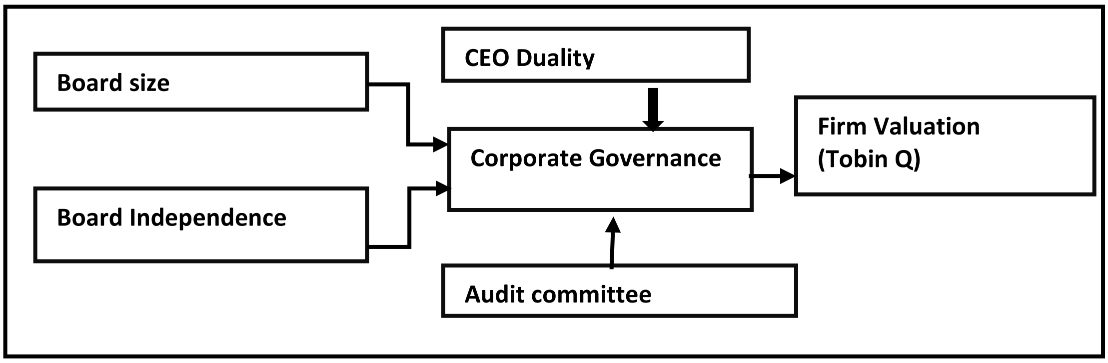

Figure 1: Theoretical framework

The Figure 1 assumes that corporate governance is affected by CEO duality, board independence and size and existence of audit committee. The literature supports the proposition that presence of more independent directors on the board leads to better governance, which in turn would positively impact the performance. Likewise, presence of audit committee for effective corporate governance can have impact on performance. It has been shown in the figure that firm's performance is measured through Tobin Q. The main objective of this study is to analyze and empirically investigate the relationship between corporate governance and value of the firm in Nepal. Specifically to examine the relationship between corporate governance measures (board size, board independence, CEO duality and audit committee) and value of the firm, to identify which governance measures have more influence on the firm valuation in Nepal and to discuss the implications of the findings and make policy recommendations.

3. Hypotheses

H_1: The size of the board is negatively related to value of the firm, **H_2:** Independent directors have a positive relationship with value of the firm, **H_3:** The separation of CEO and Board chair positions has a positive relationship with value of the firm, H4: The audit committee has a positive relationship with value of the firm.

4. Data and methodology

The study first measures the governance variables as explanatory variables and then firms' value (Tobin Q) as dependent variable. Finally, it links governance and valuation. This study uses descriptive and causal comparative research designs to deal the issues raised. Selected corporate governance variables and Tobin Q of 54 firms with a total of 108 observations for the year 2018/19 and 2019/20 have been used for testing the relationship. The required data come from annual trading report of Nepal stock exchange, SEBO/N, banking and financial statistics publication of the Nepal Rastra Bank and annual reports of the firms. The sample includes 12 commercial banks, 4 manufacturing and processing companies, 3 hotels, 3 hydropower, 2 trading, 15 insurance, 6 finance companies and 9 development banks. The overall sample includes 23.28 percent of the population. Since the stock market trading and disclosures practice of financial sector is dominating in Nepal, the sample is also dominated by financial firms. Statistical tools like average, standard deviation, correlation, regressions and t- tests, F-test have been used to analyze the data. Data are processed through the Statistical Packages for Social Science (SPSS) version 13.0. The method of estimation is Ordinary Least Squares (OLS).

4.1 The empirical model

In order to test the hypotheses, the econometric model used in the study (which is in line with what is mostly found in the literature) is specified as:

$$Q_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BIND_{it} + \beta_3 CEOD_{it} + \beta_4 BAC_{it} + \varepsilon_{it} ----------- (1)$$

Where, Q: is the dependent variable (Tobin Q); BS: Board size; BIND: Board independence measured as the proportion of independent directors in the board; CEOD; CEO duality which means dual role of a same person as Chief executive Officer and BOD member; BAC Board audit committee are the explanatory variables; β_0 is constant term $\beta_1, \beta_2, \beta_{3,} and \beta_4$ are coefficients of explanatory variables; ε_t is the error term assumed to have zero mean and independent across time period. First, descriptive statistics of the variables and then correlation analysis will be presented. Finally, various specifications of regression models are used to show the combined effects of selected independent variables on firms' value. F test is used to see the significance of the model. Multicollinearity test which IS carried out to assess the degree of correlation among the explanatory variables. Besides, VIF values will be looked into.

As used by Himmelberg et al (1999), Palia (2001) and Bhagat et al. (2002), Tobin's Q as the ratio of the market value of assets (equity and debt) to the replacement value of assets will be used as a main dependent variable. It is defined as market value of assets divided by book value of assets where market value of assets is the sum of market value of equity plus book value of debts. Market equity indicates to the total market value of firm's common stock outstanding (in million Rs), calculated as year-end market price per share multiplied by the number of common stock outstanding. Board size is measured as the total numbers of directors in the board of the company. BIND is measured as the proportion of independent directors on the board. CEOD takes the value 0 if same person occupies the post of the chairman and the chief executive officer otherwise 1. BAC takes the value 1 if there is audit committee otherwise 0.

5. Presentation and analysis of data

5.1 Descriptive statistics

The descriptive statistics of all variables have been shown in Table 4 which reveals that the value of Tobin Q of the sampled firms ranges from minimum 0.260 to maximum 17.350 with mean value 2.057 and standard deviation of 2.145 respectively. This wider fluctuation indicates that the sample includes both high and low value firms. The average board size is7.38 with a standard deviation of 1.483 and it ranges from 5 to 11 in members. The average proportion of independent directors on the board is 0.052 with standard deviation 0.068. The proportion of independent directors ranges from zero to 18.2 percent only. This indicates that Nepalese companies appoint minimum number of independent directors just to fulfill the policy guidelines. The result also indicates that 68% firms have separate persons occupying the post of the chief executive and the board chair, while 32% have the same person occupying the two posts. A majority of the firms (88%) have audit committee.

Table 4: Descriptive statistics

This table provides the descriptive statistics of all governance variables and performance variables.. The sample includes 54 firms listed in Nepal Stock Exchange (NEPSE).

Variables	Tobin Q	BS	BIND	CEOD	BAC
Mean	2.057	7.380	0.052	0.676	0.880
St. Dev.	2.145	1.483	0.068	0.470	0.327
Minimum	0.260	5.000	0.000	0.000	0.000
Maximum	17.350	11.000	0.182	1.000	1.000

5.2 Correlation analysis

This study uses several corporate governance variables that can have influence on valuation. The study considers Tobin Q as performance variable. Therefore, it is reasonable to expect some sort of relationship among the pairs of variables used in the study. This section exhibits the relationship among pairs of variables. Specifically, Pearson bivariate correlation coefficients with statistical significance are summarized in Table 5.

Table 5: Correlation matrix

This table shows the bivariate Pearson Correlation Coefficients between different pairs of variables.. Significance at the 5 percent and 1 percent levels are indicated by * and ** respectively.

Variables	Tobin Q	BS	BIND	CEOD	BAC
Tobin Q	1.000				
BS	0.264**	1.000			
BIND	-0.083	0.147	1.000		
CEOD	-0.242*	-0.117	-0.081	1.000	
BAC	-0.059	-0.040	-0.009	0.352**	1.000

Table 5 depicts the magnitude and direction of the correlation coefficients between variables. As table shows, Tobin Q is positively related with board size. The relationship is statistically significant at 1 percent level which does not support the priori expectation which is interesting result. Tobin Q has a negative relationship with independent directors and positive with CEO duality which is against the priori. The significant negative coefficient between CEOD dummy and Tobin Q indicates that valuation is positively affected by CEO duality (As value 1 has been assigned to non-duality and 0 to duality). However, no relationship is noticed between the audit committee and firm value.

The above table also reveals stronger positive relationship between value and board size as suggested by the highest coefficient of 0.264. Out of correlation coefficients among the explanatory variables, the highest correlation of 0.352 is observed between CEOD and BAC. Out of total 10 pairs of correlation coefficients, only 3 pairs (2 pairs positively and 1 pair negatively) are found significant. Out of 6 pairs of explanatory variables, more than 83 percent pairs are uncorrelated. In conclusion, the above correlation matrix shows that firms with larger board size with CEO duality tend to be more valuable.

5.3 Regression analysis

In order to test the statistical significance of the result, various regression models have also been specified. These regression models further confirm the relationship between dependent and explanatory variables. Hence, this section depicts the regression results of the different models and analyses the relationship of Tobin Q, with the four corporate governance variables for cross sectional data set of Nepalese listed firms. During these courses, the study also checks the validity of the model through statistical test of significance such as t-test, F-test, coefficient of determination (R^2) and other checks. In an attempt to test whether selected corporate governance variables capture the variation in firm value as measured by Tobin Q, simple and multiple regressions have been performed. The parameters estimates of different specifications of the model have been shown in Table 6 where specifications I and II represents simple linear regression result of Tobin Q on board size and CEO duality respectively. Finally, specification III shows the multiple regression results where Tobin Q has been regressed on board size, board independence, CEO duality and audit committee.

Table 6: Regression Results of Board size, Board independence, CEO duality and Audit committee on Tobin Q for 54 sample firms during 2018/19 through 2019/20 with 108 observations.

$$Q_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BIND_{it} + \beta_3 CEOD_{it} + \beta_4 BAC_{it} + \varepsilon_t$$

This table shows regression results of Tobin Q on explanatory variables based on pooled cross sectional data of 54 firms listed in NEPSE with 108 observations for the year 2018/19 and 2019/20. Both dependent variable and independent variables are measured at mid-July end of year t. The figures in the parentheses are t-values and (*) and (**) indicates that the result is significant at 5 and 1 percent level. P-values are presented below the t-value in bold and italicized form.

Model	Intercept	BS	BIND	CEOD	BAC	F	R^2
I	-.759 (-.744) ***.458***	.264 (2.816**) ***.006***				7.928**	.070
II	2.803 (7.930**) ***.000***			-.242 (-2.569*) ***.012***		6.602*	.059
III	.065 (0.056) ***.956***	.258 (2.771**) ***.007***	-.140 (-1.505) ***.135***	-.235 (-2.376*) ***.019***	. 032 (.329) ***.743***	4.006**	.135

Table 6 shows the results of the simple and multiple regressions. In specification I, the simple regression result shows a positive relationship between Tobin Q and board size. The coefficient of board size is significant at 1 percent level. This relationship is confirmed to that of observed in the correlation analysis. The F-statistics, 7.928 is statistically significant at 1 percent level. Hence, the first hypothesis that size of the board is negatively related to value of the firm cannot be accepted. This finding supports the findings by Beiner et al. (2006), Zahra and Pearce (1989), Kiel and Nicholson (2003), Adams and Mehran (2005), Dalton et al. (1999) but contradicts with the findings of Yermack (1996), Eisenberg et al. (1998) and Singh and Davidson (2003). The explanatory power of the model is 7 percent. In Specification II, the coefficient of CEO duality on Tobin Q is negative and significant at 5 percent level which confirms the result of correlation analysis. This ultimately indicates that CEO duality is useful in value creation. This surprising finding is also against the priori hypothesis that the separation of CEO and Board chair positions has a positive relationship with value of the firm. Similarly, in equation III, where all selected variables have been included in the model provides important insights into the regression results. Out of four governance variables, board size and CEO duality are found important in valuation. As shown by insignificant coefficients, board independence and audit committee have no role in valuation. The sign of board size is constantly positive and its coefficient is significant. Similarly the coefficient of CEO duality remains negative and maintains the previous relationship. This finding supports the previous findings of Donaldson and Davis (1991), Brickley et al. (1997) and contradicts the findings of Rechner and Dalton (1991), Bai et al. (2004). The variance inflation factors (VIFs) of all explanatory variables in specification III are 1.103, 1.103, 1.103, and 1.141 respectively for board size, board independence, CEO duality and audit committee. These values are less than 10. Hence, it can be viewed that the model is free from multicollinearity. Taking overall, the explanatory powers of specifications III is about 14 percent. The coefficient of board size is slightly higher than that of CEO duality which indicates that board size has more influence in valuation.

6. Conclusions

This study examined the relationship between corporate governance mechanisms and value of the firm. The study supports the governance performance relations. The result reveals a positive and significant relationship between Tobin Q and board size which is in support of the resource dependency theory of corporate governance. This supports the findings by Adams and Mehran (2005), Beiner et al. (2006), Zahra and Pearce (1989), Kiel and Nicholson (2003), and Dalton et al. (1999) but contradicts with the findings of Yermack (1996), Eisenberg et al. (1998) and Singh and Davidson (2003). Similarly, this study establishes the positive impact of CEO duality on valuation and concludes that duality firms outperform non duality firms which supports the previous findings of Donaldson and Davis (1991), Brickley et al. (1997) and contradicts the findings of Rechner and Dalton (1991), Bai et al. (2004), Brown and Caylor (2004) and Yermack (1996) etc. The study also concludes that independent directors have no role in value creation which supports the Hermalin and Weisbach (1991), Bhagat and Black (2002) findings. Finally, audit committee is not significant in value creation. These results have the implication that regulatory agencies should encourage firms to increase reasonable board size. Unlike the findings in developed countries, the results show no significant evidence to support the idea that outside director help promote firm performance. This suggests the need for the regulatory authorities to reassess the procedures for the appointment of outside directors. Corporate governance should not be practiced just to fulfill the regulations. Similarly, the findings on the audit committee's role to create value suggest that the regulatory bodies should make new provisions about the chairman of the audit committee. Therefore, re-evaluation of these requirements with respect to board independence and duality is needed.

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Working from home during COVID-19 Lockdown: Changing Competencies and work-home life Boundaries

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Abstract: Crisis situations often introduces drastic lifestyle changes. This study is focused on the COVID-19 pandemic and aims to shed light on an unprecedented context of forcing employees to work from home with a short notice of companies and the government. The goal is three-fold: i) to understand the extent to which employees were indeed prepared to work from home; ii) to uncover the most important competencies that enabled employees to deal better with a crisis situation, such as the COVID-19 pandemic; and iii) to discuss the real impact that working from home had in the employees' lives during the pandemic situation and the quarantine period. Using narrative inquiry, this study explores the experiences of 18 young adult consultants working in different business areas, in Portugal. Semi-structure interviews were conducting during the third wave (12/2020 – 03/2021) and thematic analysis was used to analysis the transcripts. The analysis revealed three main themes: 'management competencies', 'work-life balance' and 'work flexibility'. Each theme consisted of several subthemes which illustrates how the participants perceived working from home and the factors that reflect their experiences and understanding. The research findings illustrate that interpersonal communication, anxiety and stress management, time management, and e-leadership are vital skills to cause a great impact on participants' productivity and well-being at work. Participants all appeared to notice that working from home provides a better work-life balance (e.g. saving time on daily commute) and more flexibility with regards to the work schedule and home commitments. Nonetheless, their experiences of home working depend on the personal situation, personality and the perceived management support offered during the COVID-19 lockdown. The research highlights a need to train employees on soft skills and prepare them to future crisis situations. Theoretical implications suggest that academics should expand research and interventions to include not only the work environment but also other external factors that affect employees. The limitations of the study and recommendations for future research are suggested.

Keywords: Working from home, competencies, consultants, COVID-19 pandemic, crisis management.

1. Introduction

At the end of December 2019, COVID-19 was firstly detected in the city of Wuhan, China. On January 30th 2020, the World Health Organization declared the COVID-19 outbreak as a public health emergency of international concern. The pandemic suddenly dominated our daily lives and the definition is now familiar to all of us — an infectious disease where we see significant and ongoing person-to-person spread in multiple countries around the world at the same time (Savic, 2020). In the absence of any specific treatment at the time, one way to stop the spread of COVID-19 was self-quarantine and isolation (Dubey and Tripathi, 2020). Governments around the world instructed companies to close their offices and enable employees to work from home — to telecommute and to close stores, restaurants, coffee shops, hairdressers and so on.

This health crisis impacts everyone (Bavel et al, 2020) and may affect the health, safety, and well-being of individuals, causing them, for example, insecurity, confusion, emotional or community isolation (Pfefferbaum and North, 2020). It may lead to stress and anxiety, as we need to change our behaviours (staying more at home, using masks, working from home, isolation – quarantine). It may impact the family's economic situation due to lay-off or loss of a job. Social connections have also been shaken. On the one hand, to cope with stress and stay resilient, people may intensify the online interactions with friends and co-workers. On the other hand, being isolated at home with the nuclear family or tenants in a rented house could lead to anger or explosive behaviours.

This study aimed to shed light on an unprecedented context of forcing employees to work from home with a short notice of companies and the government. The goal is three-fold: i) to understand the extent to which employees were indeed prepared to work from home; ii) to uncover the most important competencies that enabled employees to deal better with a crisis situation, such as the COVID-19 pandemic; and iii) to discuss the real impact that working from home had in the employees' lives during the pandemic situation and the quarantine period. Each profession has its own peculiarities and would be difficult to study all professions in a transversal way. Hence, this research was focused on consultants. Based on our findings we will present theoretical and practical implications and future research.

1.1 Competencies of a consultant

Competency is the ability learnt to perform a task, a duty or a role (Roe, 2002). It includes three main characteristics: i) the knowing – the explicit reference to the domain of the professional activity, ii) the articulation of the competence with the theoretical knowledge and iii) the capacity to use such knowledge. Competency is distinguished from qualification, because the former concept requires the correct use of know-how in a certain job function or task, while qualification does not guarantee it (Neves, Garrido and Simões, 2015). For instances, it is common to find self-taught individuals that are competent and graduates that are not competent in organizations.

Employees can develop new competencies or improve existing ones at work contexts. Some competencies can be developed with the experience (such as negotiation) and others are more stable and often related to the personality and natural abilities (such as relationship building, creativity and self-discipline).

In the context of the COVID-19 lockdown, at home and isolated from their co-workers, consultants faced many new challenges. Specific competencies may play an important role in overcoming the adverse effects of stressful situations. For instances, solving problems and making decisions are very important as consultants face more decisions on their own. Staying resilient in situations that cause stress and change allows one to maintain and regain mental health, despite experiencing adversity. Engaging in proactive activities often implies going beyond routine behaviour by developing new strategies or even pursuing alternative goals (Fay & Sonnentag, 2012). In this study, one objective was to reveal the set of technical, business and consulting competencies (Nickols and Bergholz, 2013) that consultants may have used (and, perhaps, developed) to adapt and succeed in their work during the pandemic.

1.2 Working from home and the work-life balance

Due to the pandemic, working from home became mandatory in several countries. It is estimated that four out of five people worldwide were being affected by full or partial workplace closures (Savic, 2020). Working from home is defined as employees working outside of their company's offices (Savic, 2020) and includes four basic characteristics: (1) a person who is an employee of a company or a staff member of an organization; (2) actual work engagement with a company or an organization on specific tasks; (3) work being performed outside the company's physical premises; and (4) telecommunication with the employer.

Working from home can increase the available time for other activities (Klopotek, 2017) as employees are able to reduce commute time and have fewer interruptions. However, this extra time is not always spent on rest or leisure activities. People often fill the extra time with household chores, other paid work, or even redirect it to more work as opposed to recuperation time (Grant, Wallace and Spurgeon, 2013). Working from home is also associated with difficulties to separate home affairs from professional ones (Klopotek, 2017). In this pandemic, people may experience disturbances at the household due to the restrictions imposed and the closed down of schools and kindergartens, for example (Ipsen et al, 2021). Furthermore, many employees have requested time off from work to look after their relatives who contracted the SARS-CoV-2. Hence, the COVID-19 pandemic has significantly transformed the work-family balance with potential serious impact on interpersonal relationships and well-being.

Knowing that one of the goals of this research is to understand the impact that working from home had in the employees' life during a pandemic situation and the quarantine period, this research can bring us new insights on this issue, as the consultants began working from home with just one or two days' notice and had to be inventive and adaptative in their responses to a new way of work.

2. Methodology

The qualitative approach was used to understand the experiences of consultants who were forced to work from home with a short notice of companies and government. This approach was chosen because of the descriptive, exploratory, nature of the research questions and our need to examine the ways in which factors, such as events, realities, meanings and experiences, affect the behaviours of participants.

2.1 Participants and procedure

Participants were required to have, at least, 6 months of experience in the consulting area prior to the pandemic and have been working from home for, at least, 3 months since the first lockdown. For the data collection, the principal author used her professional network to contact informants who work in consulting companies in Portugal. 18 consultants accepted the invitation to participate in this study (72% female, 28% male; M_{age} = 28.11, SD = 3.97). The age of interviewees ranged from 23 to 41 years old (23-25: 17%, 26-30: 61%, 31-41: 22%). 6% were senior managers, 6% were senior consultant, 44% were consultant and 44% were analyst. After interviewing the 15th subject, no new insights were revealed. However, three new consultants were interviewed. The saturation was confirmed (Guest, Bunce and Johnson, 2006), and the principal author stopped collecting new materials.

2.2 Data collection and analysis

The interviews took place from December 2020 to March 2021 during the second severe lockdown measure. Participant interviews were conducted remotely by the principal author. Informants were first asked to focus on the current experiences of the job, then the interview moved to describe the challenges and changes imposed by the pandemic on work arrangement, work-life balance, motivation, stress, competencies, and performance. Finally, the interview was concluded by asking participants to reflect on what they could have done differently as they know that the pandemic was not a two-week or one-month situation and on their expectations about what will happen to them with regards to working from home and their companies in the future. The interviews were conducted in an informal, conversational, and story-telling perspective, so that the informants felt more comfortable about sharing their experiences and feelings about this phase of their professional lives. With durations of between 30 and 70 minutes, all interviews were audiotaped with the prior consent of the interviewees and were subsequently fully transcribed.

Data analysis relied on Braun and Clarke's (2006) stages of thematic analysis. Initial codes were generated from a deductive perspective and then, complemented inductively from single-case data. These codes formed the main repeated patterns (themes) and helped to organize data. Subthemes were created within themes. Themes and subthemes were organized to be presented in a meaningful and useful theme map. Table 1 presents the finalized themes, subthemes, and a descriptor.

3. Results analysis

3.1 Management competencies

When people went home, they lost the physical contact with colleagues and had to rely on technology. Conducting videocalls began to be an essential element on their daily working routine. However, soon, informants understood that colleagues' availability was not the same as it was at the office. The interpersonal relationships also changed. Some interviewees noted improvements in the relationships and acquired new insights about workmates. This experience helped them to learn about each other's difficulties and develop feelings of solidarity. However, communication via videocalls was not exempt from errors and misunderstandings. Messages were often unclear and diffuse with opposite effects on work and people's motivation. In those circumstances, people referred to problems of coordination and cooperation, misalignment of schedules, and poor leadership.

During the COVID lockdown, informants also admitted having experienced many moments of anxiety and stress due to uncertainty associated with the COVID outbreak and the difficulties to rearrange daily life (i.e., work and non-work routines). To reduce psychological stress, some of them tried to do yoga or meditation. Others tried to rely on colleagues' help to handle work issues. However, the co-workers' support was not immediate since they had been detached from social contact.

The abrupt emergent changes in work practices (e.g. working from home) demanded something consultants were not accustomed to do: setting daily and weekly goals, with fixed schedules, in order to get back to "normal", regain motivation, and be able to manage the work tasks, the family duties, and other tasks from home. Interviewee P told:

> *"I only work now, my cell phone is available 24 hours a day, my computer isn't just there because I hang up when I go to sleep. People who work with me are not concerned with whether I'm busy or not, whether I'm doing something related to work. I'm constantly being bombed with calls and messages on teams. When it's not on teams, it's on the phone. Customers also call and text anytime, if needed. I think that*

was, and is, the big challenge … know how to turn off the computer, turn off the phone, make this separation."

In addition, informants recalled that being successful in achieving goals also depends on the ability to be resilient despite experiencing adversity, the ability to be proactive and to have an open mind to accept the uncertainty and adjust to this unprecedent health crisis.

Surprisingly, few respondents recognised that remote work means being more disciplined and using time in a proper way. As participant A noted:

"If I want to make this transition successfully, time management and discipline will allow me to reduce distractions, make work life more purposeful, productive, and boost satisfaction."

Table 1: Themes overview

Themes	Description
Management competencies	Competencies developed by the employee when he or she is working from home during COVID lockdown.
• Change orientation	The degree to which an individual is or is not satisfied and the magnitude of the change that is needed to develop his personal and professional success.
• Proactivity	Going beyond routine behaviour by developing new strategies or even pursuing alternative goals.
• Establishing goals	The act of stating clearly what one wants to achieve and how he or she will achieve it.
• Resilience	Positive adaptation, or the ability to maintain or regain mental health, despite experiencing adversity.
• Anxiety and Stress management	Choosing or exercising healthy self-control and self-management in response to stressful event.
• Work inside virtual teams	Work only supported on communication through informational technology and possibly remote.
• Interpersonal communication	The ability to communicate and to be perceived as well as to listen and respond to the message communicated.
• E-Leadership	Leaders who mainly communicate via information technology, and whose interaction with followers is facilitated by it.
• Time management	The ability to manage their own tasks and organize then according to the time available and the deadline imposed.
Work-life balance	Personal vs professional life - quarantine + family + hobbies + work + home tasks, all together in the same environment.
Work flexibility	Flexible work arrangement that helps employees to align organisational goals with their own goals.

Data show that there are no important differences on perceptions about many of the management competencies, which enable employees to deal better with a crisis situation, based on gender, age and seniority. However, it seems that anxiety and stress management was experienced differently depending on whether informants live alone or with others. Those who live alone often referred that working from home decreased their stress or, at least, it did not get worse, while other participants experienced higher anxiety and stress, in part due to family responsibilities. Furthermore, personality traits also played a key role in workplace adjustment during the COVID-19 shutdowns. For example, the impact of social distancing and working from home seem to vary for those who are higher (vs. lower) on aspects of extroversion and openness-to-experience. For example, participants Q and R appear to have different dispositions to experience challenges:

"I consider my work to be stressful, by nature and in a normal environment. I think that working from home can get even worse ... First, because we are a little bit more alone and it is difficult to share our pains with our colleagues." (interviewee Q).

"I dealt with the help of colleagues, sharing information, sharing the problem, looking for solutions, not keeping the topics to myself. Having a joint decision making." (Interviewee R).

3.2 Work-life balance during the health crisis

The circumstance of asking people to work from home had tremendous impact on the work-life balance. Overall, informants recognised the positive aspects of remote work, such as saving commuting time, being lazy regarding the appearance and dressing, being more relax regarding the surface emotional labour and having more flexibility to change the work schedule. They also pointed out that the COVID pandemic was a lifetime opportunity to get extra time with the family, to practice a hobby, or simply rest.

However, people often identified the loss of daily routines. As everything was happening on the same place, it was hard to separate the personal from the professional life. Participants frequently mentioned longer working hours. Furthermore, being at home also required other duties, such as meals preparation and more cleaning tasks.

> *"I notice that I end up working longer. I feel I have more time, because I also don't waste time on transport to come home, but I also see that there are days that I work more... more hours."* (Interviewee J)

Finally, individual family status (e.g. living alone, with others, or with young children) appears likely to disparately affect the work-life balance during the COVID-19 lockdown. For example, those who live with others faced a larger set of challenges than those who live alone. Consultants who have children also highlighted the negative effects of working from home when children were also doing remote schooling in the house, because they needed to monitory them. Regarding other demographic characteristics or individual differences, data do not reveal important differences.

3.3 Work flexibility

The interviews were conducted in the second severe lockdown and participants had a long experience of working from home. Overall, informants appreciated the advantages of more flexibility in where and when they work. Further, the time saved on long commutes could be channelled to leisure activities or spent with their family.

Nevertheless, they also recognised that working from home was also social isolation and loneliness. As people prize face-to-face interactions, one idea about making remote work effective seem to be a hybrid work arrangement where people can spend few days a week at home and few days at the office.

> *"I spend less time on transport, it can be good or bad. You can wake up at 8am and do your stuff or wake up at 8:50am and turn on your laptop. It requires some discipline. But, there is no physical separation between work and home, it is not very positive. If it was once or twice a week, now every day, no."* (Interviewee F)

In a hybrid model, interviewees believe that at home they could do work that does not require interaction with others, and collaborative work at the office. In addition, this new kind of work arrangement would also allow informants to better deal with poor space in one's home to attend work and family responsibilities.

4. Discussion

One of our aims was to understand the extent to which employees were indeed prepared to work from home. At the beginning of the pandemic, consultants had a 360-degree change from working at the office to remote work. Knowing that the social connections are essential for human beings to regulate emotions, cope with stress and stay resilient (Bavel et al, 2020), public health emergencies like the COVID-19 pandemic may bring insecurity, confusion or emotional isolation to individuals, with consequences for their health and well-being (Pfefferbaum and North, 2020). Our findings support this view. During early stages of the pandemic, almost all interviewees felt fear, anxiety and stress due to the situation, as they were not able to predict what the future would be. Over time, participants went through an adaptation process, developed strategies to relax and tried to achieve the inner balance.

Being at home allowed informants to save time on commuting. However, soon, the extra free time was occupied with more work, making the workday longer. It indeed introduced extra anxiety and stress, demotivation, and loss of productivity. These findings correspond with the views of Wang et al (2021), who argue that people, who did remote work, were expected to work outside their regular hours and often suffered fatigue, stress and burnout.

This article also aimed to identify important competencies that enable consultants and analysts to deliver the work in ways which were different from work at the office. Our study suggests two personal competencies (i.e., resilience and proactivity) and two instrumental competencies (i.e., establishment of goals and time management). Generally, our findings are consistent with prior research that support the argument that being committed with important tasks and having individual resources can make work life more purposeful and productive (O'Driscoll and Eubanks, 1993). In addition, the mandatory work from home required the creation of new mechanisms for coordinating work (Lilian, 2014) as people had to work inside virtual teams. It urges to develop e-leadership competencies – an ability that seemed not to be well tackled in the consultant's experiences with their superiors.

Importantly, we also identified some unique findings to succeed in a crisis situation like the COVID-19 quarantines. Our research shows that remote workers suffered isolation and loneliness when working from home. In addition, a 360-degree change, from office-based to home-based work, demanded a social learning process to go through. Some consultants did not have space in their homes to attend work, others required time to accommodate with the videocall communication. Therefore, interpersonal communication and openness to change are also crucial competencies for learning and development, as well as to improve the network.

Regarding the impact that working from home had in the work-life balance, our study corroborates the literature. Working from home was experienced predominantly as positive for the majority of the respondents, with fewer respondents were having a hard time making it work. This confirms Klopotek's (2017) results, which suggest that the biggest disadvantage of working from home is the difficulty in separating home affairs from the professional ones. To mitigate this aspect, the findings suggest a hybrid arrangement as the best model to make remote work effective. At the office employees could recover the face-to-face interaction and collaborate with their teammates. At home they could focus mainly on the work.

5. Theoretical contribution and practical implications

COVID-19 has been considered one of the recent outbreaks with the greatest impact on workers and workplaces worldwide. The unprecedent and urgent overnight shutdowns of offices and mandatory work- from home for employees has precipitated shifts in how we work. Covid-19 has contributed to impose a new agenda for the diffusion of virtual working practices. Organizationally, the transition from an office-centric culture to more flexible ways of working will be facilitated by the rise of connectivity technology and digitalisation. At the individual level, home-based workers are likely to appreciate the advantages of their new flexibility, as they would find extra time with their families, time for leisure or other non-work activities.

However, from a work-life perspective, it is important to acknowledge and address important issues. As people will not have to come to an office, virtual working could be lonely. There are concerns that, as people become isolated, their capacity to work collaboratively and innovate decrease. In addition to damaging performance, individuals are likely to experience misunderstandings on online communication, with serious consequences for interpersonal relationships and loneliness. Workplace loneliness may have additional detrimental effects on new hires working remotely. In other words, if new hires did not have the opportunity to spend time at the office, they would not get to live the culture of the organization.

This research could also be valuable to companies that have the intention to prepare their employees to a future situation of crisis, to still deal with the current one, or to implement new work arrangements. For example, our findings support the results of recent studies that propose a hybrid work arrangement (Gratton, 2021) if a new quarantine is needed. Many competencies for consultants working at the office would remain in a working-from-home context. Nonetheless, new competences seem to be crucial to make remote work effective. One is interpersonal communication, which suffered a massive change within this new framework of working from home (Lal, Dwivedi and Haag, 2021). Therefore, managers should invest on communication training with a focus on technology and the ways that technology allow employees to communicate and cooperate.

Other important competencies are anxiety and stress management, time management and e-leadership. To avoid future issues of anxiety and stress among employees (Shi et al, 2022), leaders and managers can implement weekly yoga classes, provide counselling to the consultants who may need it, or just manage to have a coffee (informal) break at the end of the week with their teams to speak about non-work matters and relief a little from the week. Promoting a culture with individual human concerns (Spicer, 2020), such as respecting the working hours, the work-life balance and, consequently, the personal life, can have benefits for the employee and the company.

E-leadership is a competency that is related to technology, leadership, and interpersonal communication (Contreras, Baykal and Abid, 2020). Managers should scrutinise their employees to better understand their teams' personal preferences, work contexts, and key tasks. Adopting technologies of virtual work, such as cloud-based services, may provide managers with tools to improve cooperation, coordination, and focus among employees.

6. Limitations and future research

The present study has a number of significant limitations. Consultants often gave straight answers or did not elaborate on their answers even when asked to do so. They also had difficulty to explain their perspectives, thoughts or feelings. Further research should be developed to understand whether informants experienced changes in their work life due to the evolution of the pandemic. Further studies may also include experimental and observational designs to identify the right arrangements for their workflows and projects.

Furthermore, the sample includes only 18 consultants aged between 23 and 41 years old. Future research should include more informants. In addition, future research should extend the study to other activity sectors and to a wider age group with the aim to analyse possible differences across industries and sub-groups.

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The Concept and the Measurement of Strategic Leadership: The case of Greek Hotel Employees with the use of Exploratory Factor Analysis

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Abstract: Over the past two decades, scholars and practitioners are interested in the term of Strategic Leadership. Strategic Leadership is a leader's ability to anticipate, envision, being flexible, and enable others to make strategic changes as required. There are several researches connecting strategic leadership with various variables of the Human Resource Management (HRM), such as: work stress, (Baysak and Yener, 2015), work commitment (Chiang & Wang, 2012) and role conflict (Palomino & Frezatti, 2016). Hence, it is very important to develop a reliable measurement tool which will explore the nature of strategic leadership and map its dimensions. Barbara Davies & Brent Davies (2004) have already developed a model which consists of both the organizational abilities and the individual characteristics of strategic leaders. The main purpose of the current paper is to study the application of Davies & Davies model (2004) in the hospitality industry. More thoroughly, the empirical data used on this paper has derived by a research consisted of 372 participants who work on Greek Hotel Companies. The method used to analyze the connections between the items of the strategic leadership was factor analysis. The findings support that Davies & Davies model (2004) can be used as a measurement tool in the hospitality industry. Thus, the current paper aims to contribute to the comprehension of the nature of strategic leadership on the hospitality and tourism industry, and trigger future empirical research in the field.

Keywords: Strategic leadership, Greek, Hotel Companies, Hospitality Industry, Factor analysis

1. Introduction

In today's complex environment, organizations emphasize on organizational change, as well as on flexible and autonomous work environment (Belias et al., 2020; Belias et al., 2020b). Unfortunately, this environment has caused continuously changes on job conditions (Belias et al., 2022b), work anxiety and stress, ambiguity and role conflict (Tang & Chang, 2010; Koutiva et al., 2020). A solution to these problems that were risen by the changing working environment can be given by human resource management (Belias and Trihas, 2022d; Belias and Trihas, 2022e; Belias and Trihas, 2022f). More thoroughly, human resource management's functions may have as a result that an organization would have a successful response to the current antagonistic environment as well as to the changes that are associated with a) the needs and expectations of the clients, b) the technology and c) the concept of labor relations (Itika, 2011). In addition, an organization should have an effective leadership so as it would be able to stand against the technological and globalization challenges that are caused to the business environment (Redmond, 2012).

Having in mind that in such turbulent environment organizations need to change, this means that there is a need to provide further evidence on how organizations can cope with the changes occurring on this environment. One of the variables that may determine the fate of a change program is strategic leadership and how it may have an effect on Human Resource Management during a change. The essence of strategic leadership is not only to be able to empower the personnel to make changes but also to have the necessary envision and maintain flexibility during the course of a change (Jaleha & Cachuki, 2018). Furthermore, there is evidence that strategic leadership is connected with a number of Human Resource Management attributes, such as work commitment (Dlamini et al, 2017; Chiang & Wang, 2012), role conflict (Palomino & Frezatti, 2016), work stress (Peiro & Rodriquez, 2008; Baysak and Yener, 2015) and overall achieving high performance (Gahan et al., 2021).

A sector which is characterized by frequent changes is the tourist sector. There is a number of researches which indicate that strategic leadership is connected with the ability of human resources to implement with success a change management program (Belias & Koustelios, 2014; Belias et al., 2017; Belias and Trihas., 2022a; Belias and Trihas, 2022b; Belias et al., 2022). Overall, the tourist sector is a service which relies on the performance of the employees, especially on hotels (Rossidis et al., 2021; Rossidis et al., 2021b; Rossidis et al., 2019; Rossidis et al., 2019b; Badr El-Deen, R., & Ali, 2021; Belias and Trihas., 2022c; Ntalakos et al., 2022a). Nonetheless, there is a number of publications (Agyapong & Boamah, 2019; Alseiari et al., 2019; Ntalakos et al., 2022b; Ntalakos et al., 2022c) that have focused on the lack of a research tool for measuring strategic leadership in the hotel sector. This brings the need to develop a reliable measurement tool which will explore the nature of strategic leadership and map its dimensions. For this reason, the aim of this paper is to develop a proposal for an instrument of research for measuring strategic leadership on hotels. The research will rely on the findings retrieve from a pilot test which occurred among employees on Greek hotels.

2. Literature review

2.1 Definition of Strategic leadership

During the past decades, leadership has been described by a plethora of terms. Some of them are the following: a) an effort to influence people through communication to achieve the goal; b) a force which influences other people to take action or to make positive changes in their lives; c) an action that plays an important role in the motivation and coordination of an organization in order to achieve its goals; d) an ability to improve the self-confidence and the support of the followers in order to achieve a goal (Alam, Haerani, Amar & Sudirman, 2015). To sum up, leadership is connected with the capability of a person to influence individuals in order to succeed in visualizing organization’s visions and goals (Redmond, 2012)

Strategic leadership is described as the compilation of visionary leadership style and managerial leadership style. In other words, strategic leadership is defined as the ability of an individual to positively affect his/her followers to make everyday decisions which enhance not only viability of the organization in long terms but also maintenance of its financial stability in short terms. A key element of this definition is the balance between the importance of the organization's direction, and its financial stability (Redmond, 2012). In a more recent publication Samimi, et al. (2021) have provided an updated definition which is that strategic leadership in contemporary management is the ability to cope with the uncertainty and constant changes. Mahdi & Nassar (2021) agree with Samini et al. (2021) on the fact that the Covid-19 crisis has given emphasis on the ability of leadership to ensure the organization’s financial and functional sustainability during the harsh times of a major crisis such as the Covid-19 crisis.

Furthermore, strategic leadership is described as a set of exclusive abilities that a leader need to have in order to anticipate, envision, maintain flexibility, think strategically, and empower his/her employees to be creative and innovative so as to achieve high performance. Also, strategic leadership is considered to provide purpose to organizations (Fernandes et al, 2022). In addition, strategic leadership is referred to an individual capability to create and maintain adaptable skills as well as to distinguish environmental opportunities. Finally, according to Abu Mostafa et al. (2021), strategic leadership is related to the ability of the leader to communicate the values and the vision of the organization to the employees as well as to decide the best for the organization using minimal organizational controls.

As a result, strategic leadership can create through the appropriate purpose and direction, the opportunities which will lead the internal and external stakeholders to achieve high performance (Jaleha & Machuki, 2018). Strategic leadership consisted by the following key factors (Jaradat & Mashhour, 2017):

1. Vision (it should be applied in a medium-term plan),
2. Social architecture (it includes elements that define the organization. For example: organization’s origins, the basic principles of operation, the nature of its work, management styles, authority distribution and decision-making capabilities, impact and status),
3. The promotion of trust among the employees,
4. The promotion of innovation, creativity and social development.

Furthermore, there are six aspects in which strategic leadership can be referred; these are the following (Jaradat & Mashhour, 2017):

1. The development of Human capital. It refers to the abilities, knowledge, skills, qualifications, expertise that the employees of an organization possess. If a company wants to gain competitive advantages, it should invest to its Human capital.

2. Setting a strategic direction. In other words, strategic leadership can be used in the implementation of strategic actions, missions, and long-term visions (5 to 10 years). It is very important for a leader to take into account the advantages of an organization, when he/she plans a strategy. These advantages can play a significant role in the implementation of an important change.
3. Maintaining and improving high performance. Strategic leaders should decide about the ways which can improve, maintain and enforce the performance of the organization.
4. Developing an effective organizational culture. Organizational culture is defined as a plethora of different ideologies, symbols and values within an organization, which have a strong effect on leadership due to the facts that the factors of organizational culture can regulate as well as they can control behavior. In addition, organizational culture should promote initiation and risk-taking. Finally, organizational culture should use reward systems in order for an organization to ensure the creation of the proper abilities so as to achieve its strategic goals.
5. Ethical behavior requirements. One of the responsibilities of the strategic leaders is to ensure that all members would ethically behave within an organization. Thus, organizational culture should promote ethics, which will guide the employees to act accordingly inside and outside of the organization.
6. Existence of a strategic control system. There are two control systems in an organization: financial and strategic control. Sometimes these two systems are operating in an opposite way. As a result, strategic leadership tries to balance between these controls.

To sum up, effective strategic leadership is considered to be a significant element for the success of an organization that operates in the continuously dynamic and complex environment of the 21st century. Due to the fact that there are environmental uncertainty and lack of resources, strategic leadership must deal with the reality of environmental turmoil and the ongoing need for appropriate organizational change in order to achieve performance goals. Several empirical studies have shown that strategic leadership actions have a significant effect on the performance of an organization (Jaleha & Machuki, 2018).

2.2 Instruments for measuring strategic leadership

According to Davies' (2004) research, there is one question which needs to be resolved: What constitutes the difference between the "good leadership" and the "strategic leadership"? Hence, many researchers have focused on concepts such as effective leadership or which leadership style fits best for any given situation; on the contrary there has been no excessive research on issues about strategic organizational leadership. For this reason, Davies et al. (2004) have argued in favour of a research framework about strategic leadership.

As a result of this, Davies and Davies (2004) have suggested a research framework which is portrayed in Figure 1.

Figure 1: Davies and Davies' strategic leadership framework

Source: Davies and Davies (2004)

As it is understood from the above given figure (Figure 1), the research framework suggest that strategic leadership is determined by two key variables. The first one is organizational ability which refers to the fact that strategic leaders "have the organizational ability to: 1. be strategically orientated; 2. translate strategy into action; 3. align people and organizations; 4. determine effective strategic intervention points; 5. develop strategic competencies". The second variable is the individual characteristics of the leadership which are the following: "6. a dissatisfaction or restlessness with the present; 7. absorptive capacity; 8. adaptive capacity; 9. Wisdom". Based on these factors, the model has been used on different sectors such as in education (Williams & Johnson, 2013; Davies & Davies, 2006) and in tourism (Belias et al., 2022c; Lazarakis, 2020; Belias et al, 2017) with acceptable Cronbach reliability.

Nonetheless, Davies and Davies (2004) research framework has been used mostly on education. Despite of its high level of reliability, still it has not been widely used nor examined (Kumkale, 2022). For this reason, this publication aims on evaluating the research model and re-introducing it on the academia with a focus on employees on Greek hotels.

3. The methodology

3.1 The participants

The research has focused on the population of the employees of four and five star hotels in Greece. For this reason the researchers distributed the questionnaire through Google forms to a sample of 470 five and four star hotels from all over Greece in April 2022. The hotels' data was found from the Hellenic Hotel Chamber. The hotels were chosen due to their size which allows them to rely on effective management and to apply best-practices in relation with their human resource management.

So, 593 questionnaires were sent to the employees. From the total of 593 questionnaires, 57 refused to answer, 115 did not answer at all (no response) and 49 did not answer correctly or they answered with missing values (more than the 50% of the total questions). The outcome was that 372 hotel employees answered the questionnaires. The locations of the hotels where participants worked, varied, with most hotels situated in Dodecanese (23.7%), Cyclades (16.7%), the Ionian Sea (13.4%), Chalcidice (12.4%), Thessaly and the Sporades Islands (7.5%), and Crete (6.5%).

The study included 372 adult participants, and there were no missing values (valid sample N = 372). Almost all participants were of Greek nationality (97.8%, N = 364); 2.2% were of Albanian nationality (N = 8). The marginal majority were males (51.1%). Ages varied, with 10.8% below 30 years, 28.5% between 31 and 40 years, 34.9% between 41 and 50 years, and with 25.8% aged over 50 years old. The educational level of the participants also varied, where 21.5% had completed secondary education, 25.8% had gone to professional college, 17.2% had attended technological college, 16.1% had received a Bachelor's degree, 17.7% had received a Master's degree, and six participants had received a PhD degree (1.6%). The majority of participants were married (59.1%). Half the sample were permanently employed (50%), while the remaining 50% were employed seasonally. A large proportion of the sample had work experience of over 20 years (43.5%). Participants' years of employment in the specific hotel varied between 1 to 2 years (15.1%), 3 to 5 years (20.4%), 6 to 10 years (24.2%), 10 to 20 years (20.4%), and over 20 years (19.9%) of working at the particular hotel. The large proportion of the sample had been employed in the hotel industry in general for more than 5 years (overall 86%). Approximately one in two participants were employed at either 4 star hotels (51.1%) or 5 star hotels (48.9%). Table 1 presents the demographic and work characteristics of the sample.

Table 1: Demographic and work characteristics of the sample

		Frequency	Percent
Gender	Male	190	51.1
	Female	182	48.9
Age	< 30	40	10.8
	31-40	106	28.5
	41-50	130	34.9
	> 50	96	25.8
Marital status	Single	108	29.0
	Married	220	59.1
	Divorced	44	11.8
Work experience (in years)	0-5	32	8.6
	6-10	60	16.1
	11-15	52	14.0
	16-20	66	17.7
	>20	162	43.5
Type of employment	Permanent position	186	50.0
	Seasonal position	186	50.0
Years of employment in specific hotel unit	1-2	56	15.1
	3-5	76	20.4
	6-10	90	24.2
	10-20	76	20.4
	>20	74	19.9
Years of employment in the hotel industry	1-2	12	3.2
	3-5	40	10.8
	6-10	94	25.3
	10-20	98	26.3
	>20	128	34.4
Level of education	Secondary education	80	21.5
	Professional college (IEK)	96	25.8
	Technological college (ATEI)	64	17.2
	Bachelor's (AEI)	60	16.1
	Master's	66	17.7
	PhD	6	1.6
Do you work in a 5 or 4 star hotel?	5 stars	182	48.9
	4 stars	190	51.1

3.2 The instrument of research

As it has been written in previous part of this publication, the research will rely on Davies & Davies model. For the purpose of this research, the authors have used a 5-point Likert scale, taking values from Rare (1) to Usually (5). The instrument of research consists of 10 questions used to measure the extent to which employees have organizational and personal strategic leadership skills. These questions are presented in Appendix.

The authors translated the key statements of this questionnaire from English to Greece, so as to develop its Greek version. More thoroughly, in order to use the above research tool, the authors asked the permission from the creator of it (Davies and Davies, 2004). Davies and Davies (2004) authorized the authors to use their tool for research purposes; so the authors followed all the seven steps that are methodologically required in order to apply the usage of a questionnaire which is created for a different language than the one that it will be used. According to Vallerand (in Banville Desrosiers & Genet-Volet, 2000) there are 7 steps that are required during the translation process in order for a translated questionnaire tool to be valid, accurate, reliable and similar meaning to the authentic questionnaire. These 7 steps are the following: a) preparation of preliminary versions, b) evaluation of preliminary versions and preparation of an experimental version, c) pretest of an experimental version, d) evaluation of the content and concurrent validity, e) reliability analysis, f) evaluation of the construct validity, and g) establishing norms. Each step is performed successively using a specific technique. After a step is finished, an assessment committee reviewed, evaluate and approved the results.

Finally, apart from the key items of the instrument of research, there were questions regarding the background of the participants including demographic and professional questions.

In conclusion, there are two hypotheses which would be investigated in the current research:

- RQ1. Davies & Davies Strategic Leadership Model can be applied in the hotel industry.
- RQ2. Which characteristics of the Strategic Leadership have higher influence on hotel companies' employees?

3.3 The statistical methods used

The aim of this research is to investigate the reliability of Davies & Davies (2004) instrument of research which measures strategic leadership on organizations. Hence, the statistics used aim mostly on measuring the internal consistency and the modifications that have to take place on the questionnaire. Internal consistency is measured with Cronbach's alpha coefficient. Regarding the method used to study the relationship between the factors, exploratory factor analysis between the 10 items of the questionnaire is used, in order to test their factor structure. The study employed principal component analysis, and aimed to minimize data loss, by using primarily unrotated factor analytic models, or in some instances, Varimax rotation with Kaiser normalization. Additionally, measures of sampling adequacy (Kaiser-Meyer-Olkin) and sphericity (Bartlett's chi-square) were utilized in order to examine how well the data fit the factor analyses. Cronbach reliability tests for all scales are reported in the next section.

4. Results

4.1 Factor Analysis

In the factor analytic model (Strategic leadership), data were adequate for use [KMO = .86, Bartlett's $\chi 2(45)$ = 1443.07, $p < .0001$], and the initial model extracted two factors, that explained 55.74% of the variance.

Varimax rotation results were reported in this instance. Both Varimax and Oblimin rotation models provided the same solution, with item 6 "I challenge my long-standing assumptions and encourage others to challenge theirs as well" being removed from analysis, because it was the only item with a high loading into the second factor. In a model without rotation, item 6 would also have to be excluded; in addition a second item would also have to be excluded due to multicollinearity (item 2 "I can be aware of every condition of the body, without being affected by the daily functional details") (Table 4).

In other worlds Item 6 had very low loading scores on all types of rotation (no rotation -.218, Varimax rotation -.106 and Oblimin rotation -.167). So, the current sample showed that the long – standing assumptions is one characteristic that hotel employees do not take into consideration as far as their Strategic Leadership's skills are concerned. Besides, the mean value of Item 6 (2.48) indicates that the participants rarely challenge their long-standing assumptions in comparison with the other items where the mean value is between 3.8 - 4.38 (which shows that the participants practise these skills in a more regularly). These results come to an agreement with the fact that the majority of the sample works for a lot of years in the hospitality industry, and more specifically in the same hotel company, so they probably feel safe and comfortable in their working environment without having long-term assumptions about their working future in the hotel industry.

Table 4: Factor solution for "Strategic leadership"

Factor	Items	Loadings
Strategic leadership	Item 1	.691
	Item 2	.555
	Item 3	.769
	Item 4	.731
	Item 5	.746
	Item 7	.776
	Item 8	.651
	Item 9	.630
	Item 10	.756

4.2 Reliability, Mean scores and Normality of the extracted factors

The research has taken place in a sample of 372 employees on five star hotels in Greece. Table 5 indicates the basic descriptive characteristics of the instrument of research.

Table 5: Reliability of scales and subscales, mean scores and normality of dimensions of the study

	Cronbach reliability	N of items	Mean	Std. Deviation	Kolmogorov-Smirnov Value	df	P
Strategic leadership	.788	10	3.99	.595	.102	372	.000

More precisely, Table 5 presents the Cronbach reliability results for the scales, as well as the mean scores and normality results for the dimensions of the study. Results showed that data had acceptable Cronbach reliability (a=.788). In addition, strategic leadership has a mean of 3.99. This means that the leadership on Greek hotels is regarded as having a strategic orientation. Hence, it has a long-term determination which means that this organization can turn strategic planning in action.

Although, the value of Cronbach alpha (.788) is very strong, if Item 6 was missing from the above analysis, the value of Cronbach alpha would have been .870 which indicates that the items 1,2,3,4,5,7,8,9,10 are more closely related.

4.3 Hypothesis Testing

As far as the first hypothesis is concerned ("RQ1. Davies and Davies Strategic Leadership Model can be applied in the hotel industry"), Cronbach reliability analysis as well as exploratory factor analysis revealed that Davies & Davies (2004) Strategic Leadership Model can be implemented in the hospitality industry. During the past 20 years, Davies and Davies model had been applied in employees who worked in several institutes, such as educational schools (Davies and Davies, 2006) and hospitals (Hunitie, 2018). Hence, the current research suggests that Strategic Leadership Model can be implemented on the hospitality industry, and more specifically in the hotel companies. However, the research revealed that Item 6 "I challenge my long-standing assumptions and encourage others to challenge theirs as well" should be excluded from the initial model, when the model is applied on the hotel industry.

Regarding to the subscales of the strategic leadership, that are most affected when the model is applied in the hotel industry, the high values of factor loadings as well as the mean values revealed that these are the following: Item 3 (factor loading .769, mean value 4.03), Item 4 (factor loading .731, mean value 4.20), Item 5 (factor loading .746, mean value 4.40), Item 7 (factor loading .776, mean value 4.01), Item 10 (factor loading .756, mean value 4.07). In other words, hotel employees score higher regarding the below factors of the strategic leadership: they compare the possible short-term and long-term consequences of the actions they are about to take; they are more willing to accept new approaches and change ideas when new information indicates the need to do so; they are searching for opportunities today, which can create valuable results tomorrow; they can turn strategy into action very easily; and eventually they maintain a strong understanding of the local, regional and national context in which their hotel operates.

5. Discussion/Conclusions

The main purpose of the current paper is to shed some light in the empirical gap of strategic leadership into the tourism industry and to evaluate a proposed research instrument which relied on the work of Davies & Davies (2004). This scale consists of two factors/variables: organizational ability and individual skills.

The purpose for the usage of this measurement tool was to provide a tool that can be used in order to measure the strategic leadership skills of employees who work in the hospitality industry. More specifically, hospitality industry have been seriously "damaged" by the latest crisis on its external environment (financial crisis, pandemic Covid-19 crisis, ecological crisis). So, it very critical for the employees to feel that they have the skills to anticipate, envision and maintain flexibility so as to be prepared for strategic changes when necessary. Thus, the current research aims to discover the dimensions of the strategic leadership which are applied by the personnel of four and five star hotels.

The analysis of the responses shows that the research instrument has an acceptable high Cronbach reliability (a=.788) which means that this tool can be accepted in order to measure the strategic leadership of employees who work for the hospitality industry, especially in the Greek hotel industry.

As factor analysis is concerned, the results of the research showed that there are high loadings on every item of the variable strategic leadership. The only exception is item 6 ("*I challenge my long-standing assumptions and* *encourage others to challenge theirs as well"*) which had a high loading in a second factor. For that reason item 6 had to be excluded from the measuring tool of strategic leadership into the hospitality industry.

The aim of this paper was to examine whether Davies & Davies (2004) research framework and instrument can be used so as to measure strategic leadership. The primary research indicated that indeed Greek hotels have a strategic leadership, something which has been mentioned from Lazarakis (2020) and Belias et al. (2017). Nonetheless, it is a research framework which has not been widely used (Williams & Johnson, 2013) but the recent changes on tourism management which requires more strategic decisions in order to cope with the high uncertainty has brought the need to assess whether hotels have a strategic leadership or not. Hence, the examined instrument of research is quite necessary for the effective management of tourist organizations in today's turbulent environment.

The findings of this research support that Davies & Davies model (2004) can be used as a measurement tool in the hospitality industry with few modifications that have been mentioned by the factor analysis. Thus, the current paper hopes to contribute to the comprehension of the nature of strategic leadership on the hospitality and tourism industry, and trigger future empirical research in the field, which is necessary in order to help the decisions makers to understand how to cope with the crisis and the current changes in the tourist industry.

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Appendix

Measurement of Davies & Davies	Questions
Strategic Leadership	*(1) I keep the balance between the organization's long-term perspective, and its short-term business needs.*
	(2) I can be aware of every condition of the organization, without being affected by the daily functional details.
	(3) I compare the possible short-term and long-term consequences of the actions I am considering.
	(4) I am able to accept new approaches and change ideas when new information indicates the need to do so.
	(5) I am looking for opportunities today, which can create valuable results tomorrow.
	(6) I challenge my long-standing assumptions and encourage others to challenge theirs as well.
	(7) I can turn strategy into action.
	(8) I can get staff members involved in strategic discussions.
	(9) I understand how the wider political and cultural environment affects my organization.
	(10) I maintain a strong understanding of the local, regional and national context in which my organization operates.

The role of Traditional Female cook's and Tourist in the Markets of Bogotá

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Abstract: What is the role of female traditional cooks as carriers of culinary knowledge for tourism development in some of the food markets in Bogota? This research analyses the role of the female cook as a carrier of culinary knowledge, determines contributions to gastronomic heritage that allows tourism development and generates resources for tourism use around local gastronomic heritage. Thus, interviews to traditional female cooks were conducted face to face in order to analyse the knowledge they have about Colombian Cuisine, and where they obtain this knowledge from, as well as their perception on gender division of labour on their kitchens. About methodology, a qualitative approach was used, from the action-participation research method with a process that allows a collective learning of their reality. As a result, traditional cooks are bearers of intangible cultural heritage and are representatives of Colombian cultural identity; most of their culinary knowledge has been obtained in empirical processes due to family tradition or work experience. In conclusion, their role is to keep the recipes intact and teach them to other generations to maintain cultural heritage as living heritage in the gastronomic tourism chain.

Keywords: Intangible Cultural Heritage, Living Heritage, Gender Roles, Culinary

1. Introduction

Historically, the role of the cook for men and women are understood as different concepts, as Sánchez-Valdés et al. (2020) states, women are referring to as cooks and men as chefs, although women keep working hard to get some recognition, men get more attention and more credit as chefs in the restaurant industry. In addition, the concept of cook falls below the hierarchy of the chef in a kitchen brigade. As established by Herkes and Redden (2017), professional cooking is a man´s activity and home cooking is a woman´s activity linked to domestic work.

The gastronomic sector has long been a sector with a larger participation of men, but in recent years the industry recognition associations, such as Michelin guide with their Michelin Stars, which are used to rate food and service from all over the world and The World's Fifty Best Restaurants list by William Reed enterprise, which is a list made by more than a thousand experts that provides the best culinary experiences for gastronomic tourism, have worked to give greater visibility to the work of women as chefs. For instance, The World's Fifty Best Restaurants recently named the Colombian chef Leonor Espinoza as the best female chef ("The World's 50 Best Restaurants | The List and Awards", 2022). Castilla and Vernot (2017), on their research on gender and identities on Colombian kitchens, establish that one of the reasons women do not make it to these lists is that the knowledge learned as a woman, such as domestic practical knowledge from activities like cooking, is not yet recognized as it should, and emphasize that there may be other factors related such as class and race. As a money driven industry, money could be added as another factor.

The Preliminary findings of the Global Report on Women in Tourism, presented on 2011 by the World Tourism Organization, have acknowledged the lack of recognition towards inequality in the distribution of benefits between men and women in the tourism sector, it also states that discrimination and gender stereotypes keep women doing kitchen, cleaning and hospitality jobs (UNWTO and UN Women, 2011). In the second edition of the Global report on Women in Tourism, it is concluded that women are more than half of the workforce and do not achieve sufficient leadership and management positions (World Tourism Organization, 2019).

In Colombia, according to the National Planning Department (DANE), entity in charge of national statistics, in its report on Participation of Women on the Labour Market, there is an unequal distribution of work between men and women, with the total daily workload of women being 2 hours and 10 minutes higher, in addition, most of the hours worked are unpaid, restricting their economic autonomy (DANE, 2020). In terms of salary, the pay gap has decreased, but a difference on the income of women remains 12% less than men.

In Mexico, the figure of the female traditional cook has been used as a national emblem and this figure has been used by hosting touristic events, such as *Encuentro de Cocineras Tradicionales* - Convention of Traditional (female) Cooks as Reyes-May et al. (2017) and Matta (2019) mention, to highlight the work of these female cooks, who are bearers of gastronomic heritage. In Colombia, very few projects that propel female cooks as living heritage and as a representation of cultural heritage, one of them is a project on female cooks from in Popayan markets on the south region, Gálvez-Abadía (2013). Although, significant steps are being taken on the pacific coast (south) of Colombia, as Ruíz-Chanchi and Blandón-Caicedo (2020), Galak and Escobar (2019) and Escobar-Rivera, J. C. (2015) research traditional female cooks as study subjects there are no studies found from other regions of Colombia.

This research takes place on *plazas* from Bogotá, as Stadel and del-Alba-Moya (1988) refer to, *plazas* are market locations where periodic markets show up, these markets or *plazas* are locations where social intersections occur, rural and urban merge as economic, cultural relations and transactions happen. In this case, the *plazas* chosen for this study are daily markets in these locations, where agricultural produce is kept and sold; prepared food, cultural artefacts, flowers and herbs are traded.

This paper aims to highlight the role of women as traditional cooks, in order to contribute to tourism development of these markets through them, as bearers of knowledge. Consequently, the research is seeking the answer to the question: what is the role of the traditional cook as a bearer of culinary knowledge for tourism development at four markets of Bogotá? Therefore, the traditional cooks of the district markets of Bogotá can be made visible for the dissemination of heritage and the generation of resources for tourist use.

1.1 Gastronomic Heritage

Heritage keeps traditional knowledge and customs of our ancestors, which is transmitted through generations (Baratero et al., 2020). Similarly, the identity of a society refers to its culture and history, which local communities use as a value proposition to enhance the tourist offer (Kravets and De-Cornago, 2008). Especially gastronomy, which has become one of the main attractions as it promotes cultural exchange (Carvache-Franco et al., 2017). With gastronomy you can live a different life experience and obtain a cultural knowledge from it (Mora, 2019). Likewise, this is a trace of identity of the communities that reflects their own elements such as agriculture, products, traditional dishes and customs, the way of eating and serving, which can be attractive to foreigners (Acle-Mena et al., 2020). A consolidated heritage tourism requires a good quality gastronomic offer, an agri-food sector and a public sector involvement, as well as public policies to promote and safeguard the gastronomic and cultural heritage (Aguirregoitia-Martínez and Fernández-Poyatos, 2017). Furthermore, it implies that between culinary and gastronomy there is a solid relationship with rural life and services segment (Baratero et al., 2020).

Therefore, the elements of the territory must be identified, and actions must be generated to save the gastronomic heritage (Skowronek et al., 2019). Therefore, the valorisation of agri-food heritage can play a part on the economic revitalization of the territory, based on the possible articulations from food products, particularly favouring the rural area, where the insertion of new activities is a tool for the generation of complementary income, additional to traditional activities (Thomé-Ortiz et al., 2017). Consequently, it is important to develop sustainable strategies that helps the community improve their lifestyle and promoting tourism that contributes to their local economy (Mora et al., 2019; Mora-Forero and Pérez, 2021). The value of building gastronomic routes must be highlighted, to involve environmental, landscape and cultural aspects, considering the opinions and perceptions of tourists to meet their needs (Castellón-Valdez and Fontecha-Fontecha, 2018). Consequently, public, private and academic institutions will have to guarantee safeguarding, conservation and promotion of traditional cuisine, for which these institutions must respond to specific plans, programs and projects in different fields (Meléndez-Torres and Cañez, 2009). Hence, the main objective of the policy is to value and safeguard the diversity and cultural knowledge, food practices and products of traditional kitchens of Colombia, as fundamental factors of identity, belonging and well-being of its population.

1.2 Gastronomic Tourism

Currently, according to Mora (2019), gastronomy is considered a tourist attraction, due to its relationship with the patrimonial aspects. Likewise, the communities have been interested in developing tourism products related to gastronomy. In fact, according to Oliveira (2011), some travellers carry out gastronomic activities in order to get to know the territory and see it as a tourism experience. Even Acle and Mena (2020) state that for some tourist's gastronomy is their main motivation, because they see the possibility of learning more about the culture just by trying the traditional dishes of each destination. In addition to this, Saavedra et al. (2021) affirm that it is essential to link the community and sustainability aspects in order to guarantee the success of tourism initiatives. The motivation of the gastronomic tourist shows that, above all, they choose the destination to try new products and traditional dishes (Hernández-Ramírez, 2018). Thus, it is, where the importance of gastronomy as cultural heritage stands out; the influential aspects brought on by the fact that there is a cuisine with its own identity. Similarly, Testa et al. (2019) state that another motivational factor is the social and environmental sustainability of these places, which puts sustainability in a fundamental role in the competitiveness of tourist destinations.

Orgaz-Agüera and López-Guzmán (2015), assure that it is a great opportunity to improve the tourist offer since the historical-cultural potential combined with the local gastronomy is considered. As well as for Carvache-Franco et al. (2017) tourist enjoy the new culinary proposals and consider it as a potential when it comes to visit a destination.

Torres-Oñate (2017) states that some countries use molecular mixology with cocktails that represent the destination, contributing to national and cultural diversity, thus favouring tourist activity. Additionally, Su (2015) affirms that some tourists like to try new food in the places they visit in order to experience a different gastronomic culture, attending festivals that motivate their trip and turn gastronomy into a key factor to offer a destination. For that reason, Ascanio (2009) states that the proposal of activities such as gastronomic routes is significant to increase the number of visitors, since this is considered an important option to expose and know the places where traditional gastronomy unfolds. Martinez et al. (2012) conclude that the type of traveller who appreciates the gastronomy of a place has a tourism is also a promoter and enhancer of sociocultural changes, progressively influencing the construction of daily life in the territories of human populations (Huerta et al., 2022)

1.3 Gender roles in the kitchen

The gender role in the kitchen is marked by the division of paid and unpaid jobs, the latter being exclusive to women, on a recent study on gender gaps in Colombia (ONU Women, DANE and CPEM, 2020) authors mention that the responsibility on feeding the family still falls on women, moreover, unpaid care and domestic work is one of the restrictions women face on getting more hours to work. As Meah and Jackson (2013) reviewed the relationships of men and women with the domestic kitchen has changed, in some households men also take part of cooking, but as a hobby not as a constant activity, however the responsibility of feeding the family keeps falling on women.

Kurnatz et al. (2018) show in their research that it is possible for women to achieve their recognition in professional kitchens, but they must work more than men and having their acceptance is also a key factor. The authors also emphasize that some advantages of women chefs are their patience, organization and teamwork, however, among the disadvantages: being physically weak, the difficulty of adapting to work hours, considering that they are long shifts that require specific cooking times either very early or very late at night. Additionally, they state that the mistreatment, humiliation and in some cases the workplace harassment to which they are exposed is what bothers women chefs the most in professional kitchens.

Matta (2021) highlights the great empowerment that women cooks have had in the gastronomy and cultural heritage sector, but also shows the great pressure that the heritage sector puts on these representatives of traditional cuisine.

Political factors intervene many times and overshadow the aim and efforts of these events such as presenting the gastronomy of indigenous women who want to stand out, to make their cultural patrimony known and valued. Likewise, this author relates to the term of empowerment, in this field of traditional cooks and states that empowerment refers to the ideals of entrepreneurship of these women, who have the idea that only they are responsible for improving their living conditions through these activities. The traditional cooks of the marketplaces are these working women, in charge of disseminating culinary heritage, who work to support their families, but their work and knowledge are not recognized (Sarmiento-Méndez, 2018).

2. Methodology

The purpose of this research was making visible the role of the traditional cook as a woman carrier of culinary knowledge and determining the contributions to the gastronomic heritage in order to develop tourist products around the local gastronomic heritage. The methodological structure used for this research is based on a qualitative approach and the type of research is descriptive type. The participants of this study were approached at the markets from November 2021 to April 2022 and participation was voluntary. Only touristic markets were chosen for this study; the relationship between markets and the number of participants is shown on Figure 1.

Table 1: Number of cooks per market

Markets names	Number of participants
Plaza de Mercado La Perseverancia	6
Plaza de Mercado La Concordia	5
Plaza de Mercado El 12 de Octubre	2
Plaza de Mercado Paloquemao.	5
Total	18

Purposive sampling method was carried out, as it allows an homogenous sampling were participant share similar characteristics in terms of gender, job, culture and life experiences (Etikan et al,2016) this helps to focus on the participants that will do a better contribution to the research's aim.
Face-to-face interviews were applied to a total of 18 cooks from different restaurants on the markets, interviews were recorded with signed consents from each cook. The interview had 12 open-ended questions, towards three categories: Cultural heritage, cooks perception on their craft and gender role.
As the chosen period still had a restriction on Bogotá because of covid-cases, some restaurants were closed at the visits.

For the analysis of the data collected, multiple triangulation method was used, which is defined as the combination of two or more types of triangulations, such as methodological, theoretical, data and observer triangulation. It is based on using more than one level of analysis (Aguilar-Gavira and Barroso-Osuna, 2015) which allows determining a solution to the existing problem.

Analysis categories for the development of interviews were proposed though research objectives as shown on the following figure (1):

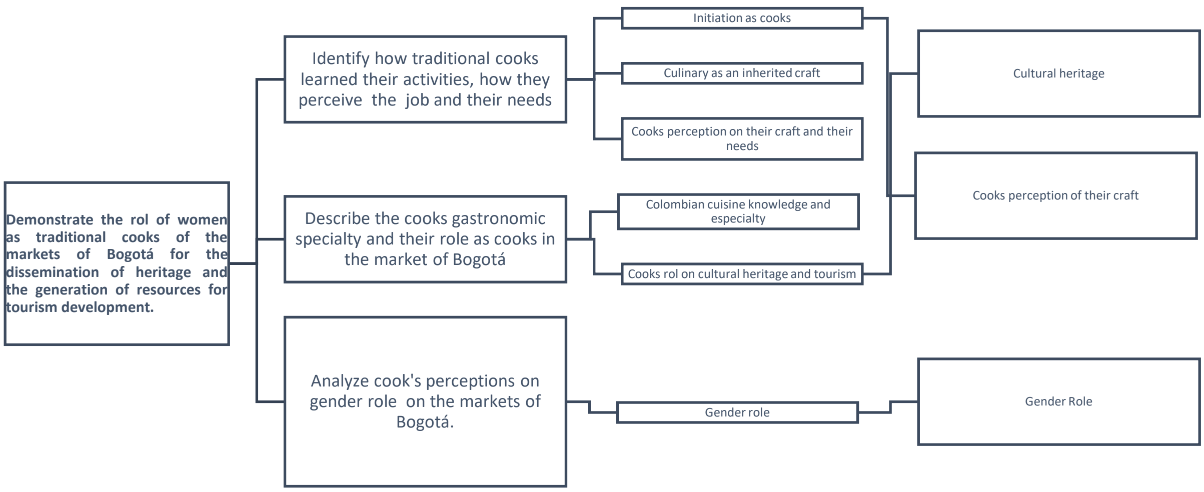

Figure 1: Development of categories of study

3. Findings and discussion

Findings on this research are presented on the following section in order to analyse the role of women as traditional cooks and as actors on gastronomic and cultural heritage for tourism.

3.1 On Culinary knowledge and Cultural heritage

Results of interviews are presented in this section; findings were obtained after an analysis and compilation of qualitative data. The following tables are descriptive data from the interviews.

Table 2: initiation as cooks

Categories	Family heritage	Job to meet needs	Empowerment	Technical studies
Answers related to initiation on cooking	Most of the cooks interviewed started cooking as a family tradition, mothers and grandmothers instilled cooking in them at a young age. Families come from cooks background.	Some of the cooks mentioned they became cooks as a need to meet their needs and responsibilities.	Other cooks mention they started their business on the markets with family support.	One of the cooks mentioned she started with courses on basic cooking and has kept an interest in cooking so she started working in this.

As described on table 2, the main starting point on cooking was family heritage, for these cooks is a craft that is inherited, taught to them on their family homes. Participants also highlighted empowerment and the need to work to meet their needs, as a reason to have started working as cooks.

Table 3: Perception on their craft

Categories	Answers
Culinary as an inherited craft	Most of the traditional female cooks mention that they learned the skills and recipes from mothers and grandmothers and learned their recipes from the family cradle. And a few of them mentioned they gained their knowledge through time and practice, working in this type of restaurants from a young age. One of the cooks mentions this craft comes with their mindsets as it was "within their souls".
Cooks perception on their craft	Female cooks mention that they like their job, although some started out of obligation, today they have grown fond of the work and carry out their tasks with pleasure, only one of them mentions that it is out of obligation, some of them mention that what they like most is how clients show gratitude towards them, when diners tell them that their dishes are good. One of them mentions that this job is a vocation since one must like it, to continue doing it with pleasure and to teach it to others.
Needs	Several of the cooks mention that one of their needs is to stay up to date, to keep learning and to be able to attend training, as it is a time demanding job. One participant said that they would like to see a greater commitment from restaurant staff, another mentioned that they would like to have more space in the market since it is very small, among other things related to the restaurants. Half say that they do not have any specific needs and one of them does mention having economic needs.

As show on table 3, not all cooks got their culinary knowledge from their family background but also got their knowledge from working, so it is an inherited and empirical craft. Cooks appreciate their jobs and feel gratitude towards it. It is not a very well-paid job for some.

On the following table (4) traditional female cooks explained the different cuisines they represent on their stalls.

Table 4: Culinary and cultural Heritage

Categories	Data
Colombian cuisine Knowledge and specialty	Five of the cooks establish that the restaurants where they carry out their work represent the cuisine of the Boyaca region, which is located on the center region. Three of them from the Caribbean Region, 5 of the ladies stated that the restaurants where they work have dishes from different regions, therefore they are traditional Colombian food restaurants but not from a particular region. In relation to the cuisines that they represent and the typical dishes that they prepare and prefer to prepare, one group represents Boyacá and Cundinamarca cuisine, these are two central regions, but only one cook represents traditional Bogotan cuisine. The other half tend to prepare dishes from all regions, without representing any, but they do stand out for a dish that is the one they usually sell the most and their preparation usually receives praise.
Cooks role on cultural heritage and tourism	The cooks feel very good in their role as cooks and state that they are satisfied and happy with their activities at the markets. They said that it is a grateful job since the gratitude of the diners feels very good and they also show gratitude towards the job as that is what they have lived on, and their families have sustained from it.

On table number information about their perception on gender roles in these kitchens is described.

Table 5: Findings on gender role

Categories	Data
Gender role	Some of the cooks mention that they see a few differences between male and female cooks. Some of them agree that there is inequality in the tasks assigned and in the amount of work, one of them says that it is more demeaning, the tasks that women must do are more humiliating than those of men, such as cleaning tasks. One of them mentions that she does see differences, but not precisely in the restaurant where she works. One of them, despite answering that she does not see any differences, says that men have taken an important role in the kitchen but there are not many men working in these kitchens, which shows that in these market kitchen's the strongest role is that of the female cook. Fourteen of the participants agree that there are no notable differences in terms of the work of men and women in the kitchen of these markets, they say that there is respect and equality of conditions, they feel that there is good teamwork.

4. Conclusion and suggestions

It was identified that traditional female cooks learning processes occurred through transfer of knowledge, inherited from the family, some learned empirically, some out of necessity, but all cooks have great passion towards their jobs and are very proud of the work they do. Gratitude towards their job and the gratitude clients show to them, are very important perceptions of their labour as cooks.

Traditional female cooks needs are educational mostly and the needs of some of them, the ones that own the stalls, are mostly towards space and capacity of the markets.

Most of the cooks say that they know how to prepare dishes from different regions. This shows that the culinary profession is varied, which demonstrates the great capacity they must adapt to their role as cooks. Additionally, most of them feel satisfied in their role and it is something very gratifying since they do a job that they like and allows them to have economic support.

Traditional cuisine and restaurants in the markets have a greater representation of women in their kitchens. Most of the female cooks in these kitchens do not feel there is great difference between the work of men and women in their restaurants. However, those who state there is inequality perceive these differences in workload. They assure it is heavier and emphasize on the assignment of tasks, since they are responsible for the cleaning tasks and prior preparation of food. It is important to mention that some participants or their families own their businesses, which shows us that they are empowered women, responsible for improving the conditions of their families through their work and effort in these kitchens.

To conclude female traditional cooks, maintain the cultural heritage of gastronomy through teaching these dishes to future generations, preparing those dishes for tourist of these marketplaces, so that more people get to know the traditional dishes of Bogota and Colombia. It is these female cooks who, with their daily work in these marketplaces, allow the gastronomic heritage to remain alive, teaching their techniques and recipes to the people who come to work with them, whether they are family members, empirical cooks or students; the cooks make it possible for more people to get to know the dishes of this city through these cultural, economic and social scenarios where the tourist knows the entrails of the city. One of the problems they face is the lack of recognition and lack of support from the community, they represent gastronomy as intangible cultural heritage and their work is not given such value, more importantly, they do not recognize the value of their work themselves.

Even though being a cook is, sometimes, an activity out of necessity, it can be concluded that most of them express gratitude for their work and say they do it with pleasure and love for what they do every day. One interesting finding is the perception of gender differences of these cooks in the marketplaces is low, contrary to expected, although they do show some differences such as workload and assignment of tasks, not all of them perceive these. One possible explanation for this is that being the head of the kitchen, the traditional female cook oversees the kitchen, or if it is a family business, or also because of the large number of female cooks who work in the marketplaces compared to a few male cooks.

These results reflect those of Baratero et al. (2020) that women cooks do use their knowledge to enhance the tourist offer of places with the support of other entities. This author agrees with Carvache-Franco et al. (2017)

since they promote cultural exchange through their work. This research coincides with that proposed by Meah and Jackson (2013), where the presentation of the domestic kitchen is feminine and the professional one is masculine, but we found that the figure of the traditional kitchen is more of a domestic kitchen than a professional kitchen.

When contrasting the revised theory, we can observe that, as mentioned by Matta (2021), women as cooks in the marketplaces represent that empowerment and that resilient capacity to get ahead on their own, with their businesses or their jobs in these restaurants. In traditional cuisine, women cooks do not perceive that there is a noticeable gender difference, contrary to what Kurnatz et al. (2018) affirm about professional cooking. However, it is necessary to highlight that the traditional cuisine of the markets is recognized by a greater participation of women than men. Home cooking and professional cooking merge at these Kitchens, through these women as the representation of empowerment, heritage and the service to clients, tourist and market workers who get traditional home cooked meals in these kitchens.

In future investigations on this area of research, other theoretical categories are recommended such as empowerment and entrepreneurship of women in the markets and traditional female cooks as entrepreneurs. Regarding gender role studies, the comparison of the activities carried out by male and female cooks can be reviewed, so that the degrees of difficulty of the tasks can be studied. Subsequently as cultural project, a proposal in which traditional cooks are the teaching bond to traditional Colombian cuisine. It is necessary that the academy sector supports these cultural actors through training processes so that they can also empower themselves in their role as bearers of intangible cultural heritage.

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empirical knowledge.

Sustainable Management Based on Sustainable Knowledge

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Abstract: The issue of sustainability has been on the minds of professionals for years, as it is on the minds of everyone involved in everyday life. Numerous studies have been carried out on various aspects of organisational operation, nature conservation, environmental protection and climate change. However, little research has been done on the potential for sustainability of organisational knowledge, a factor that fundamentally affects the functioning of organisations. This concerns the steps in the knowledge management process, organisational culture, working conditions, organisational environment, and organisational leadership that provides governance. Among these factors, this paper reviews the criteria for sustainable leadership as an effective channel for strategic decision making. Sustainable management has a significant impact on the organisation and its environment, balancing operations, people, profit, market competition and planetary sustainability. It is necessary to capture, share, incorporate and store valuable organisational knowledge for organisational performance excellence. The expectations of sustainable management that govern the sustainability of knowledge is a little researched topic in both management science and knowledge management literature. This paper aims to fill this gap by highlighting the supporting role of sustainable management for knowledge sustainability. Research to date has identified sustainable management as an alternative style of management that can significantly change organisations and society through a deeper understanding of natural and economic systems and their interdependencies. Accordingly, it ensures market performance in a holistic approach, based on the concept of sustainable knowledge, in the long term, with a focus on the efficient use of the company's internal resources. The cornerstones of these interrelationships and the conditions of the relationships are presented in a theoretical approach in the study.

Keywords: sustainability, sustainable knowledge, sustainable leadership, sustainable organisation, knowledge management, learning organisation, techno-stress

1. Introduction

Sustainability is one of the most commonly used terms in relation to the way organisations operate. It encompasses the environmental consciousness of management, the expected behaviour of managers and staff, values and mindset.

The characteristics of organisations operating according to sustainable principles have become increasingly clear in recent years, both in theoretical and practical research (Suriyankietkaew and Avery, 2016; Pastore and Massacesi, 2020).. Sustainable organisations often perform better than their peers, e.g. in terms of social responsibility, employee satisfaction, and even financially (Mura and Svec, 2018). Underlying sustainable organisational performance are the characteristics of leadership based on the principles of sustainability, which fundamentally influence organisational performance. For more and more businesses and economic actors to operate according to the principles of sustainability, they need to understand some important links outlined below.

The irresponsible way in which humans exploit natural resources and pollute the planet threatens the survival of the Earth. To address the resulting environmental problems, a rethinking of organisational functioning and governance is needed (Ordonez-Ponce and Weber, 2022). Business and society have a role to play in this process. If business does not operate in a sustainable way, its impact on local communities will be problematic. So, the question is: what can leaders of organisations do to create and manage businesses that are more sustainable, both in terms of their internal operations and their external impacts? We need organisations that create value for themselves, their environment and society. Sustainable management is therefore about helping organisations to stay at the forefront of their industry, regardless of what is happening in their environment, while keeping sustainability in mind (Tiedeman et al, 2013; McCann and Holt, 2010).

The research questions that the theoretical study seeks to explore are:
Q1. Why do sustainability-minded organisations outperform their competitors in the long run - while experiencing the same problems, crises, and market competition in their environment?
Q2. Why are they better able to adapt to changes, cutting-edge technologies, and challenges, while still performing well?
Q3. Can the operational successes of these organisations be identified?

Q4. What is the role of knowledge and knowledge sustainability in sustainable organisational performance?

In the following chapters, with a view to answering the research questions, the paper will present the basic concepts of sustainability, the concept of sustainable management, its foundations, the characteristics of sustainable knowledge and the interrelationship between the two and the conditions for combining them in a theoretical approach.

2. The concept of sustainability

Sustainability is defined in the literature in several ways (Ives et al, 2018; Mulligan, 2018; Heather et al, 2020). If we focus on the ecosystem, the most commonly used definition was formulated in 1987 by the UN World Commission on Environment and Development (WCED), also known as the Brundtland Commission. It is defined as meeting the needs of the present generation without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development, 1987). This definition means that the present population can use what it needs from the Earth's resources, but it must do so in a way that leaves sufficient resources for future generations. The three pillars are environmental, economic and social policy. It ensures a balance between economic growth, environmental quality and social equality. This requires an integrated policy and a cross-sectoral institutional framework rather than isolated policies (Hasna, 2007). The report, for all its merits, is flawed in that it does not declare that the potential for growth depends on the carrying capacity of the environment. Politicians are fond of using the term 'sustainable economic growth', even though it is not possible to grow infinitely in a finite world (Kendiukhov, 2017; Armeanu et al, 2018). The report has been criticised further, yet in its time it was revolutionary in raising awareness. In its enhanced version, sustainable development is defined as improving the quality of human life while remaining within the carrying capacity of supporting ecosystems (World Resources Institute, 1992).

Today, the most accepted term is circular farming (Corvellec et al, 2022), which in a sense goes beyond the need for sustainability. In essence, it is a return to the order of nature, since in nature almost all materials are involved in cycles and there is no waste: the end product of each process is the starting material for another process. The idea is still a kind of illusion, but responsible organisations and their management can do much to make this illusion a reality (Corvellec et al, 2022). This idea brings with it the need for organisations that practice sustainable or circular management to have management and decision-makers who understand and manage their organisations in the spirit of these expectations. These leaders are what the literature today calls sustainable leaders.

2.1 Sustainable leadership

Being a leader today is fraught with challenges that were unimaginable a decade ago (Pardey, 2016; Nani and Safitri, 2021). Today, political, corporate and government leaders face issues such as climate change, social responsibility, talent shortages, volatile financial markets, and food and water crises in many parts of the world. These are all challenges of a dynamic, global, interconnected, and high-tech world more than a decade old. The context, the environment and the decision situation for management have changed (Miao et al, 2020).

In the long term, the successful operation of an organization requires a leader and/or management that is aware of the concept of sustainable development and is able to interpret it in a complex way in decision-making (Al Muhairi et al, 2019). Sustainability has become a critical management task for success. Research to date has identified sustainable leadership (SL) as an alternative management style that can significantly change organisations and society by developing a deeper understanding of natural and economic systems and their interdependencies (Setyaningrum, 2020). Sustainable leaders see the role their organisations play in a larger context beyond immediate, short-term benefits. They define strategies and deliver results that meet the triple bottom line of social, environmental, and financial performance (Avery and Bergsteiner, 2011a; 2011b). This triple requirement covers the requirements of environmental stewardship (ES), expected behaviour, values (EBV) and conscious thinking (CT).

A sustainable leader creates lifelong value and long-term prosperity for all stakeholders, going beyond following the expectations of ‘greening’ and social responsibility. It also meets the requirements of sufficient profit for growth, business resilience and a sustainable planet at the same time. The sustainable leader challenges the neoliberal economic approach that seeks only to maximise profits (Acheampong et al, 2018). Accordingly, it takes a holistic approach, taking a long-term view and focusing on the efficient use of the company's internal resources, to ensure market performance based on the concept of sustainable knowledge. It refers to achieving visions of futures in which people live within their ecological and social potential without exploiting it (Gerard et al, 2017).

The Sustainability Leadership Institute (2011) offers another definition to characterize a sustainable leader as "individuals who are driven to achieve change by consciously deepening their relationship with the world around them. In doing so, they adopt new ways of doing things (vision, thinking and interaction) that result in innovative, sustainable solutions". According to the Institute, leadership for sustainability is "leadership for sustainability", which is not a separate school of leadership, but a distinct blend of leadership.

The Cambridge Impact Leadership Model, as one of the most widely referenced models, describes the kind of leadership needed to create value for business, society, and the environment. In their words, 'A sustainability leader is someone who inspires and supports action to improve the quality of life.' The model was developed in several phases (Avery, 2005; Avery and Bergsteiner, 2011b).

The model emphasises the contextual/environmental focus of leadership, the expected qualities, style, skills and knowledge of the leader, and the external and internal actions to be taken.

Tiedeman and colleagues (2013) also compiled a seven-element model with elements that similarly summarise the expectations of sustainable leadership.

Sustainable leadership is not about altruism or charity work, or just thinking 'green'. According to the WBCSD (World Business Council for Sustainable Development) (Mahajan, 2022), sustainable leadership makes organisations more competitive, resilient, responsive, and attractive to customers. It helps attract talented employees and makes businesses more attractive to investors. Examples of sustainable business leadership can be found all over the world. Avery and Bergsteiner (2011c) in their book "Sustainable Leadership" compare two extreme examples of leadership to the operating mechanisms of animal colonies in nature, which illustrate the results of leadership thinking and behaviour. The most extreme form of locust-like philosophy, business behaviour and decision-making mechanism is hard, ruthless, asocial, and profit-driven leadership. Managers achieve their goals by polluting the environment, driving competitors out of business, paying pittance wages or using tax evasion and avoidance methods. Unethical behaviour is part of the "global economic game". The locusts' philosophy is based on the premise that benefits can only be achieved if others suffer as a result of pursuing their interests. Contrary thinking and management philosophy is modelled on the behaviour of a community of bees (known as the "Honeybee"), sophisticated, interest group oriented, social, and divisive. It focuses on the long term and achieves results responsibly. Management starts from the premise that an organisation can only be sustainable if its operating environment is sustainable and if the basic needs of all stakeholders and the interests of future generations are taken into account. They strive to protect the planet, care for local communities, and protect the organisation's image and brand through ethical behaviour. Honeybee's approach is holistic in nature, favouring a value-based approach to stakeholders.

Gayle Avery (2005), in her book Leadership for Sustainable Futures, identified 19 elements that characterise Honeybee's leadership philosophy. Avery and Bergsteiner's (2011c) sustainable leadership philosophy builds on Avery's work and identifies four additional elements that influence long-term organisational performance. These are employee engagement, self-management, trust, and employee appreciation. Overall, the enhanced philosophy thus includes 23 desirable elements to achieve the goals of sustainable management. The elements listed form a pyramid-like shape, with 14 expectations (from a managerial perspective) providing the foundations. This is built upon by a further six elements (which can be assessed through the employee perspective), followed by the key performance determinants, which represent the customer focus. At the top of the pyramid is sustainability (performance outcome), which, by definition, represents the interests of ownership. The pyramid is a logical mapping of the sustainable management criteria, the interconnectedness of which demonstrates how the Honeybee philosophy contributes to the competitive advantage of organisations. A diagram illustrating the logic of this thinking is shown below (Figure 1).

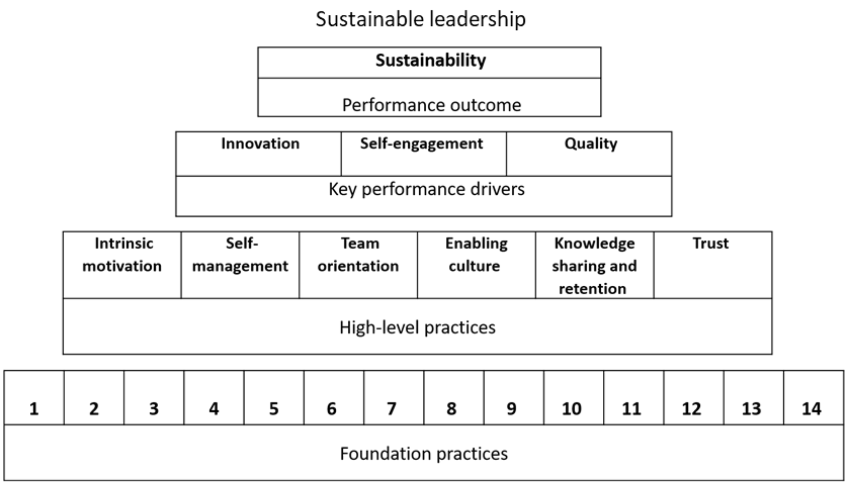

Figure 1: Sustainable leadership pyramid

2.2 Sustainable knowledge

Knowledge is the key to economic development. This knowledge will enable production companies to operate on renewable energy sources and find ways to use other natural resources more efficiently (Hallinger and Suriyankietkaew, 2018). Since knowledge indisputably belongs to humans, it is safe to say that human capital is indispensable. Good professionals and talent are needed by all organisations, and today's workers and managers need to broaden their horizons to collaborate with professionals from other disciplines (dos Santos et al, 2020). To achieve this collaboration, significant investment in education is also needed. A social model must be developed in which it is natural for people to learn and develop their skills throughout their lives. In previous years, many initiatives (Chaudhry et al, 2019) were launched to promote lifelong learning, but after the usual "hype", these initiatives were forgotten and new fads washed away the importance of their necessity. Whereas the building and functioning of knowledge management systems requires the provision of up-to-date knowledge and its integration into everyday practice (Raymond-Yakoubian et al, 2017; Eberherr, 2018). The triple requirement (people (PE), process (PR), technology (T) for a knowledge management system (KMS) to work.

Building on the elements of the knowledge management system, the steps of the knowledge management process ensure the smooth acquisition, flow, use and retention of knowledge, which, once assessed, confirms the strategy's delivery, or indicates gaps. A coherent set of steps in the knowledge management process (knowledge strategy - knowledge identification - knowledge acquisition - knowledge development - knowledge sharing - knowledge storage - knowledge use - knowledge evaluation) is the key to sustainable knowledge (Ouriques et al, 2019). Among the steps in the process, the knowledge storage phase is worth highlighting as a prerequisite for sustainable knowledge. It consists of two parts: the 'container' (IT), provided by technical means, which serves to capture and preserve explicit knowledge (sometimes as a basis for sharing). The other part is the organisational memory (OM), which contains tacit knowledge and ensures its long-term sustainability (Al Omari et al, 2019). The problem of the viability of the technical backbone can be caused by the so-called techno-stress, which can arise from excessive workload, expectations, and a sense of the need to be constantly ready and learning (La Torre et al, 2020). Therefore, from one point of view, the technical backbone is an essential requirement for knowledge sustainability, while from another point of view it is the condition that is considered most critical. It can be influenced by technical, human, software, and artificial intelligence (AI) generated problems.

Sustainable knowledge is thus inevitably intertwined with the knowledge management concept, which is based on meeting the requirements of a learning organisation culture (LO) in terms of organisational embeddedness and functionality. The principles of learning organisations are summarised in five points by Senge (2014), which he categorises into three core competences. These are Aspiration (AS), Dialogue (D) and Complexity Management (CM). Aspiration includes two core principles (out of the five), these are Personal Vision (formerly called Personal Direction) and Shared Vision. Dialogue also includes two principles, thought patterns and group learning. Complexity management can be identified with systems thinking.

The question may arise: how can the philosophy of sustainable development be linked to learning organisations? In other words, do learning organisations automatically contribute to the idea of sustainable development through systems thinking? Organisations, and groups within them, use systems thinking tools primarily to understand the complexity of their narrow business environment. If we think at a higher level, and consider the Earth as a system, systems thinking is essential (Lunday, 2018; Marginson, 2021). And this is certainly needed from a sustainability perspective. As a system, the Earth must strive for a new equilibrium, for which the idea of sustainable development can point the way. Through systems thinking we understand the current state of the organisation and the forces that influence its functioning. The thought patterns provide the framework conditions and through personal guidance and group learning we arrive at the target state defined by the shared vision.

Learning organisations do not develop and become what they are by themselves, but are determined by the personal example, values and professionalism of the leader and are also shaped by the rightly selected and knowledgeable staff (Minarova et al, 2021). In the economic sphere, good examples of sustainable development exist, and best practices can be demonstrated (Painter et al, 2019; Sharma, 2020). This means that the knowledge needed for sustainability is already largely available and manifested. Depending on the context, it will be owned by organisations through knowledge sharing or through the creation of new knowledge. In order for an organisation to become sustainable, in addition to the development of a learning organisation culture, innovation is in most cases needed. Learning organisations tend to have a significant capacity for innovation, as they are learning organisations precisely because they create knowledge (Senge, 2014).

Freedom of access to knowledge is also very important for the success of sustainability. The right leadership style, a broad stakeholder focus, open-mindedness, 'permissive' behaviour, long-term planning, foresight, and transparency greatly facilitate knowledge sharing and/or knowledge creation based on learning organisation operations for sustainability (Farooq, 208).

Building on these ideas, the next section will review the relationship between the elements of sustainable leadership mentioned earlier, the criteria for a learning organisation and sustainable knowledge.

3. The contact system

Of the models and characteristics of sustainable management presented earlier, Avery and Bergsteiner's (2011c) pyramid is the closest to the concept of sustainable knowledge. In the following, we will look at the possible linkages between them. The pyramid summarises the necessary elements of sustainable management from the basics to the final outcomes. Basic elements are: 1.Appropriate leadership culture/style, 2. Talent recruiting & retaining staff, 3. Developing people continuously, 4. Internal succession planning, 5. Respect, diversity & inclusion, 6. Ethics and virtues, 7. Good governance & accountability, 8 Long-term thinking, 9. Considered organisational change, 10. Independence from outside interference, 11. Environmental responsibility, 12. Social responsibility, 13. Broad stakeholder focus, 14. Strong shared vision and purpose. If we look at the basic elements of the pyramid, 11 of the 14 elements set out expectations that can be classified as characteristics of a learning organisation culture. Two articulate the steps of the knowledge management process (talent/knowledge acquisition and continuous improvement) and the first one declares the management style itself. This means that the basic requirement of sustainable management is based on the characteristics of the learning organisation and the steps of the knowledge management process are considered necessary. If we move to a higher level of the pyramid, 5 of the six elements are again attributes of the learning organisation culture and one of the six elements is the knowledge management steps (knowledge sharing and retention). The next level builds on the previous ones and includes the key factors that drive performance. These are quality, employee engagement and innovation. Assessing the elements of this level from a knowledge management perspective, knowledge development/deployment = innovation, knowledge application and measurement = quality, employee engagement = knowledge sharing and knowledge retention. Since previous research on the functioning of knowledge management systems (TMR) has already demonstrated (King, 2009; https://solhungary.hu) that a learning organisation culture is a prerequisite for the successful functioning of TMR, it follows from the above that most of the criteria for sustainable management (see pyramid) include the characteristics of the learning organisation and the steps of the knowledge management process. Thus, sustainable management for sustainable organisational functioning should aim at developing an organisational culture that favours those elements of the knowledge management process that contribute most to the sustainability of knowledge. The following Table 1 illustrates the relationship.

Table 1: Relationships of sustainable leadership, learning organisation and knowledge management

Elements of sustainable leadership	Characteristics of a learning organisation	Steps in the knowledge management process
Foundation practices		
Appropriate leadership culture/style	x	
Talent recruiting & retaining staff		x
Developing people continuously		x
Internal succession planning	x	
Respect, diversity & inclusion	x	
Ethics and virtues	x	
Good governance & accountability	x	
Long-term horizon	x	
Considered organisational change	x	
Independence from outside interference	x	
Environmental responsibility	x	
Social responsibility	x	
Broad stakeholder focus	x	
Strong shared vision and purpose	x	
High-level practices		
Intrinsic motivation	x	
Self-management	x	
Team-orientation	x	
Enabling culture	x	
Knowledge retention and sharing		x
Trust	x	
Key performance drivers		
Innovation		x
Staff engagement		x
Quality		x
Performance outcome		
Sustainability	x	x

Based on the table, we can say that among the steps of the knowledge management process, the acquisition of knowledge (attracting the right people/talents) and the continuous improvement of the acquired knowledge can be considered as a basic element for sustainable knowledge. The integration of the knowledge management process into organisational operations also requires the implementation of further steps in the process, and knowledge sharing and retention can be considered as a higher level of expectation for sustainability. From the point of view of sustainability, the key elements are knowledge development/implementation (innovation), knowledge application and measurement (quality), knowledge sharing and knowledge retention (employee commitment). In order to ensure the sustainability of knowledge through sustainable organisational operation and sustainable management, it is necessary to formulate a strategy that is able to translate the above expectations into implementation measures under the conditions of everyday expected behaviour and conduct. This requires the building and continuous maintenance of a learning organisation culture. The (inverted) pyramid of sustainable knowledge is shown in Figure 2.

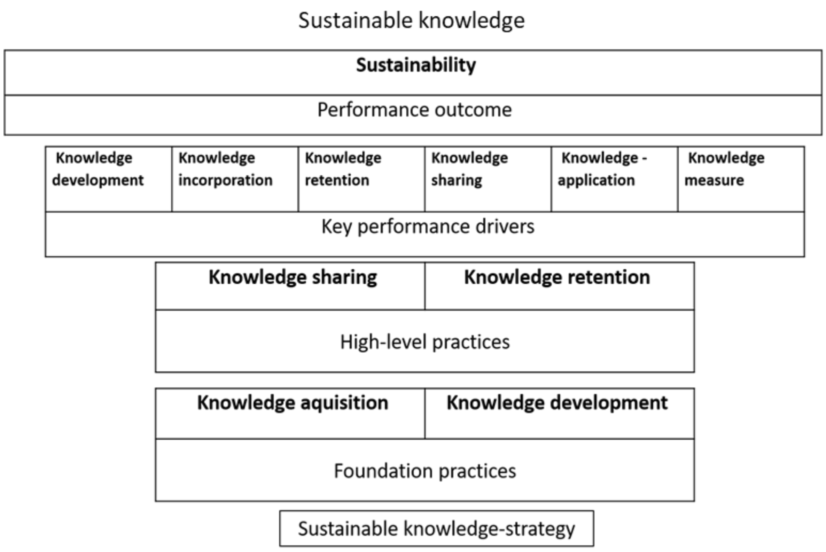

Figure 2: The (inverted) pyramid of sustainable knowledge

If we follow the logic of the two diagrams, we can see that sustainable leadership requires building a foundation of a broad cultural requirements system (learning organisation), from which the outputs that are important for the organisation at the top are then built and delivered at the highest quality. At the same time, however, the foundations for achieving sustainable knowledge are expressed in a much narrower set of conditions, which, when unfolded, form the basis for each of the elements of the knowledge management process. Increasingly, the elements of the knowledge management process are emerging as the drivers of key performance. Ultimately, the elements of the management pyramid will lead to the fulfilment of sustainable knowledge. The juxtaposition of the two pyramids illustrates the relationship between the two necessary processes (Figure 3)

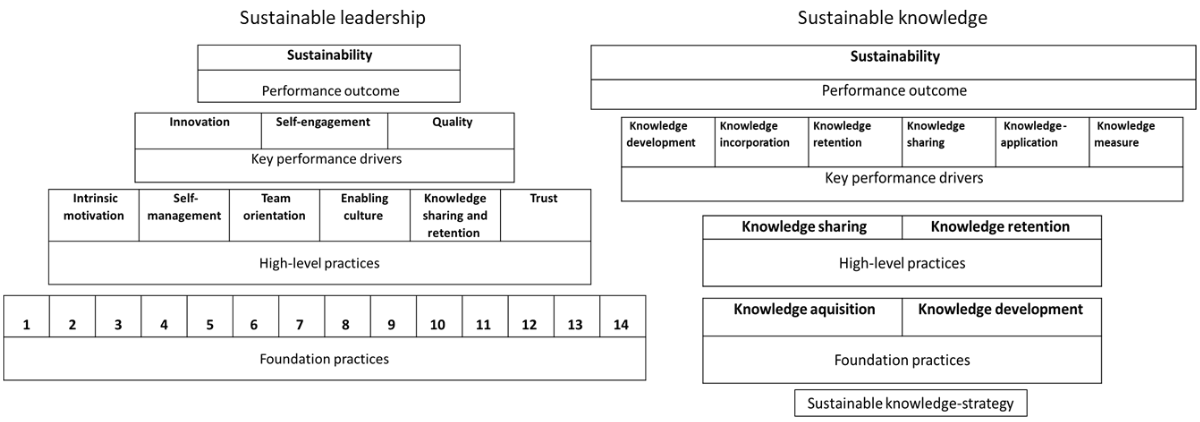

Figure 3: Pyramids of sustainable leadership and knowledge

Each of the four conditions (learning organisation (LO), sustainable management (SL), knowledge management system (KMS), knowledge repository) can be further broken down in detail, as they all represent complex entities. A full description of these elements is beyond the scope of this study. The logic described above justifies that the interplay of the four prerequisites can ensure sustainable knowledge. The area requiring the broadest base and most extensive attention of all the conditions is sustainable management.

Figure 4 shows an overview of the sustainable knowledge model composed of the above elements.

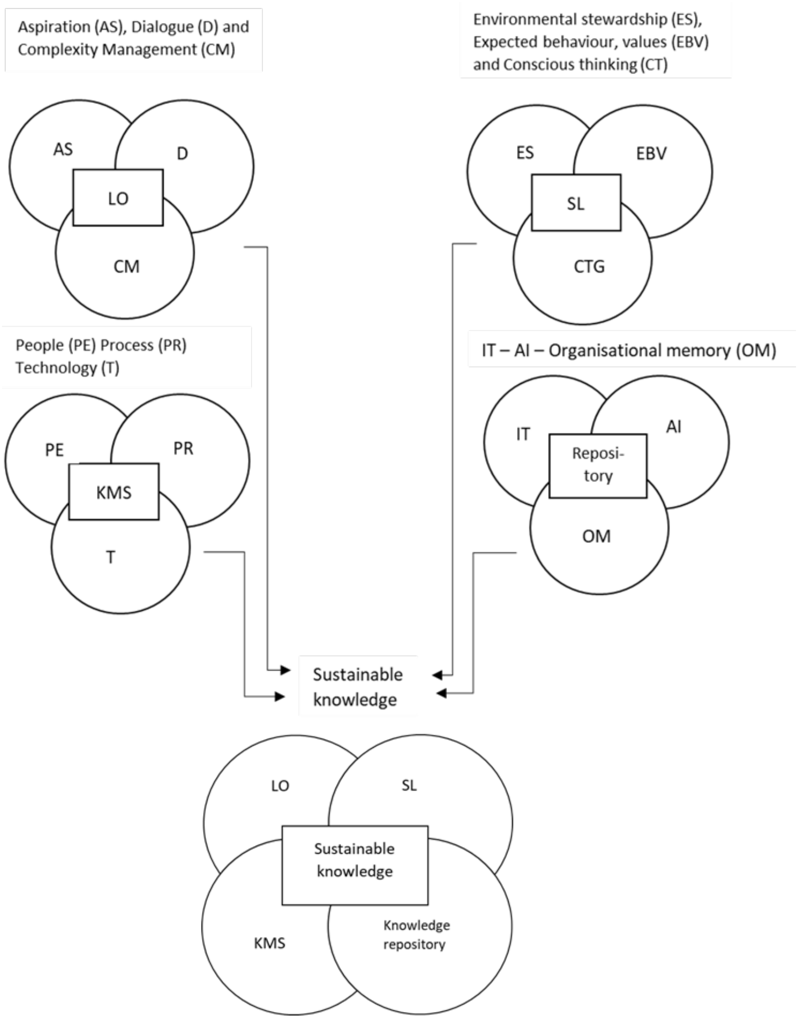

Figure 4: Sustainable knowledge model

4. Conclusions

The review of the theory and the models, supplemented by our own reflections, provide a comprehensive picture of the role of sustainable management for sustainable knowledge. These provide an opportunity to answer the research questions formulated in the introduction.

Q1. Why do organisations with sustainability in mind perform better than their competitors in the long run - while experiencing the same problems, crises and market competition in their environment?
As a result of the sustainable leader's ability to enforce the basic elements, sustainable organisations gain advantages that result in a competitive advantage in the market. We have seen that shaping culture is a powerful force in itself. This cultural atmosphere ensures that the members of the organisation are cooperative, balanced, well-informed, open to each other's ideas and have a common vision and goals. Such organisations perform better without the demands of sustainability. They think long term, attract, and retain young talent because they see career opportunities. These cultural characteristics also guarantee the sharing and transmission of knowledge, i.e. its sustainability. This, combined with the right leadership style, ethical behaviour, and due diligence, ensures that sustainable organisational operations are successful. Independence from external influences, environmental and social responsibility help to ensure balanced development that delivers results in the longer term, rather than a preference for short-term success (profit-seeking only).

Q2. Why are you better able to adapt to changes, advanced technologies and challenges, while still performing at a high level?
Willingness to change, patterns of thinking and confidence as learning organisation criteria determine the way staff think about change and the flexibility of their attitudes. Mutual help and support, leadership patterns, ethical management principles put potential worries and conflicts in the background, and a permissive (it is

possible to make mistakes) management attitude is particularly helpful in a change situation. The attributes of a sustainable leader include judicious change management, the fulfilment of which will support the adaptation of staff and the organisation as a whole. Excellent people, their knowledge, skills, values, respect, diversity and inclusion all help to overcome problems and challenges in change situations, while maintaining the quantity and quality of output.

Q3. Can the successes of these organisations be identified?
The answer to this question is clear. The secret to the success of these organisations lies in the principles of sustainability. As described above, these organisations are driven by an organisational culture and management values that are reflected in the management decisions, the image of the organisation and the image it presents to society. Their social and environmental responsibility is visible and appreciated by all. Thus, sustainable organisations do not hide the secrets of their success, but rather provide a model, a best practice, which should not be 'copied'. Of course, the internal events, rules and processes are not necessarily public, but the philosophy behind their success, the essential elements, are an example for the external environment to follow.

Q4. What is the role of knowledge and the sustainability of knowledge in sustainable organisational functioning?
It has been known for years that knowledge is a key element for successful organisational performance. The requirements of a learning organisation culture and the principles of the knowledge management system make it essential to keep knowledge up to date and to develop it continuously. Knowledge passed on to each other through joint work, information recorded in the IT system and organisational "secrets" (tacit knowledge) in the organisational memory are the guarantees of sustainable organisational functioning. Forgetting knowledge that has become redundant is a success factor in the professional management of well-considered organisational change. Incorporating knowledge into everyday operations, trust-based community behaviour and ethical leadership all contribute to the long-term use and sustainability of knowledge.

5. Research limitations and future directions

The main limitation of the research is that it only summarises the influential role of sustainable leadership for sustainable knowledge at a theoretical level. As the research has only recently started, empirical data collection has not yet been carried out. It is also a limitation that the available literature has not extensively addressed the context of this study in recent years, and therefore the number of references is limited. This limitation also points the way for future research. The aim is to test the theoretical model in practice, which will provide an opportunity to fill the gap in the literature from several perspectives. We hope to report on these results in our next study.

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Enhancing Employer Attractiveness: The Impact of COVID-19 on Generation Z

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Abstract: This paper investigates how employer attractiveness has been affected by developments in the attitudes, values, and goals of Generation Z (born between 1995-2010) due to the COVID-19 pandemic. Research shows the challenging environment for employers who are increasingly facing a 'war for talent' and the need to focus on generational needs and expectations. Work concepts in many cases have been adapted to Generation Y, but a revision of strategies is needed for the newest generation on the labour market. The insurance industry has long struggled to attract young talent and along with retail, logistics, tourism, and banking has been ranked the lowest in employer attractiveness by Generation Z. This is corroborated by the fact that larger corporations are also often perceived as unattractive by young people. While many industries have struggled with the consequences and challenges of the pandemic, the insurance sector can be seen as having mastered the crisis comparatively well. This paper questions whether the relative job security offered by the insurance sector, can be increasingly influential in post pandemic job choices. Since Generation Z was already described as security-oriented before the pandemic, this is expected to have increased as a result of COVID-19 and be reflected in their career and employer choices. The perspectives of Generation Z and employers from the German insurance industry are compared through survey and interview data. The young cohort suspects a worsening of their situation particularly in job offerings and security. At the same time, the insurance industry positions itself well in exactly these areas. Furthermore, the aspirations and expectations of Generation Z towards the professional world coincide strongly with the offerings of insurers as employers. However, the respondents see the sector's image as a deterrent. Although this paper focuses on the insurance industry, strategic recommendations given on how the sector can position itself, are relevant for other sectors facing the challenge of attracting Generation Z employees.

Keywords: Generation Z, COVID-19, employer attractiveness, security perception, insurance sector

1. Introduction

We live in "[…] an age of chaos, an era that intensively, almost violently, rejects structure" (Cascio, 2020, para. 1). The coronavirus pandemic is a clear example of such a nonlinear and incomprehensible crisis (Cascio, 2020; ugm consulting, 2020) and it can be assumed that the continuous state of uncertainty created since the beginning of 2020, has significantly intensified the 'chaos', impacting society and economy alike (Ciesielski & Schutz, 2021). Above all, it is expected that especially young people are shaped by the pandemic, making this event the defining moment of their generation (McCrindle & Fell, 2020).

Past studies have already shown how crucial it is for companies to be aware of the specifics of each generation with the majority of work concepts being adapted to Generation Y. The need for employers to revise their strategies in approaching the newest generation on the labour market has become evident (Böhlich, 2017) as demographic changes contribute to a challenging environment for employers who are increasingly facing a 'war for talent' (Klaffke, 2014, p. 5). Especially for larger corporates, who have lost attractiveness for youth, this shortage of skilled workers has become a major challenge (Onaran, 2020). Generation Z (Gen Z), born between 1995 and 2010, is perceived as more likely to be affected by the coronavirus pandemic than any other generation due to their position between school and entering the job market (McCrindle & Fell, 2020). This paper analyses the impact of the pandemic on Gen Z and what this can mean for employer attractiveness. The analysis looks at the challenges facing employers and, with a focus on the German insurance industry, asks how the industry can reposition itself to appeal to Generation Z.

2. Literature Review

2.1 Generation Z

Prolific research on Gen Z consistently reveals a safety and planning focused outlook. So-called "helicopter parents," have shaped the young generation with the aim of protection from persistent insecurity (Böhlich, 2017; Scholz, 2018). This is accompanied by a demand for clear structures in terms of work (Scholz, 2014). McDonald's Deutschland LLC (2019) found that job security and job fulfillment are of much greater importance to the young cohort than material aspects. Satisfaction is the most important factor, as well as a job that is enjoyable whilst surrounded by pleasant colleagues (Weitzel et al., 2020). In general, friendships and close relationships with other people are very important to Generation Z, followed by family and romantic relationships (Statista, 2020). For women in particular, the compatibility of family and career is a priority when choosing an employer, while compensation is of great importance for men. In addition, individual career and salary development opportunities are of interest (Ernst & Young, 2018,). For Generation Z, the purpose of the company is very important (McCrindle & Fell, 2019). In addition, the modernity of the company, flat hierarchies, and collegial cooperation are among the aspects most valued (McDonald's Deutschland LLC, 2019). However, loyalty to employers is limited, with half of the cohort willing to change jobs within two to three years (Bittner & Kiell, 2019, Deloitte, 2020, Jayathilake et al, 2020). The company size, benefits including a company car or sabbatical arrangements, are of lower relevance to Gen Z (Ernst & Young, 2018; McDonald's Deutschland LLC, 2019). Furthermore, tradition, products and image, company brand appearance or working in a reputable industry are not considered important (Bittner & Kiell, 2019; Prund, 2021).

The COVID-19 pandemic hit Gen Z in the key years of their lives on the cusp of the working world. In this phase usually shaped by diverse social and personality-forming experiences such as studying, partying, travelling and other leisure time activities, Gen Z must, in the middle of a complex crisis, decide their future career (Dohmen 2021). In 2019, Gen Z reported the highest stress levels of all generations, with nearly one-third taking time off work due to stress or mental health issues (Deloitte, 2020). In a study by Deloitte (2020) in the first months of the pandemic, significant effects were already apparent. Mental health, wellbeing and resilience were strongly challenged, although a reduction in stress levels was indicated by Gen Z. Moreover, less physical activity, boredom and loneliness were significant (McCrindle & Fell, 2020). These developments have led to expectations of Gen Z becoming an even more anxious generation (Deloitte, 2020; McCrindle & Fell, 2020) whilst increasing financial savings, importance credited to family, off-screen activities and time spent outside in nature should not be disregarded (McCrindle & Fell, 2020). The study also described Gen Z as having remained optimistic, believing in a better world after Covid and a desire to actively lead change (Deloitte, 2020). For this reason, Deloitte (2020) emphasised that it will be crucial to consider Gen Z in the New Normal, in both the social as well as professional context.

2.2 The German Insurance Industry Employer Attractiveness

The German insurance industry clearly faces significant challenges in attracting new professionals (AGV, 2020). In 2018, the age of employees including apprentices averaged 43.2 for women and 44.3 for men, with only 13% of the workforce younger than 30 (Wenig, 2019). The industry's conservative and outdated reputation and negative image are regarded as the major challenge when competing on the fierce labour market as the advantageous working conditions are often unknown to potential candidates (AGV, 2020, Mylius, 2018). This is also reflected by Ernst & Young (2018), where students ranked insurance as the second most unattractive industry. A study by YouGov (2021) and GDV (2003-2021) confirms that only 8% could imagine working in the industry, while 53% said they would not work in this sector at all. Moreover, 27% of the 18 to 24 age group associated a negative image with the industry.

3. Methodology

An exploratory study was chosen based on a critical review of the literature (summarized briefly above). Research leads to an expectation of a significant impact on Gen Z of the Covid pandemic including an increased need and demand for security and structure. This change in outlook and perspective can increase the attractiveness of the, often perceived as outdated and conservative, insurance industry for Gen Z.

A self-completed online questionnaire with a set of 20 questions was used to measure the perceptions of Gen Z. German Gen Z, the focus of the research, was defined as the study population and non-probability sampling based on accessibility was applied (Saunders et al., 2015). To ensure maximum sample size, the link to the online survey was distributed via social media as well as email. A total of 268 completed Gen Z responses were analysed in Microsoft Excel.

Complementing the survey strategy, seven interview partners consisting of three executives of German insurance companies, two industry associations and two experts with an overall expertise in the field under research were selected based on expertise and accessibility. The interview structure was developed based on the survey questions. All interviews were conducted virtually via *Microsoft Teams* in March 2021.

4. Research Findings

4.1 Gen Z Perspective

The respondents were 65% female, 34% male and 1% non-binary, aged between 12 and 26, with the average age 21.9. 7% were still at school, half had already gained a high school diploma (German*:* Abitur*)*. Consequently, the majority were students (45%) or completing an apprenticeship (25%). Furthermore, 12% had completed their bachelor's and 6% their master's degree, resulting in 12% with two or less years of work experience, and 9% with more than two years.

4.1.1 Values, Attitudes and Goals

A deeper understanding of the values, attitudes and goals of Gen Z was investigated by asking the respondents about the importance of 15 pre-listed values, attitudes and goals. Figure 1 shows the 10 most significant values chosen. Good friends and close relationships proved to be of highest importance to the generation, with 79% regarding these as very important and 17% as important. Similar results were obtained about the relationships to their parents, with 71% indicating 'very important' and 22% 'important'. Love partnerships were shown as 'very important' or 'important' by 88%, as well as having family and children (75%). Apart from these social relationships, about 90% of the respondent's indicated independence and self-determination (91%) or having fun and experiencing adventures (89%) as of major importance ('important' and 'very important'). Lastly, the values attributed to security and long-term planning (79%), material and financial prosperity (78%) as well as structure in everyday life (73%) were notably 'very important' or 'important'.

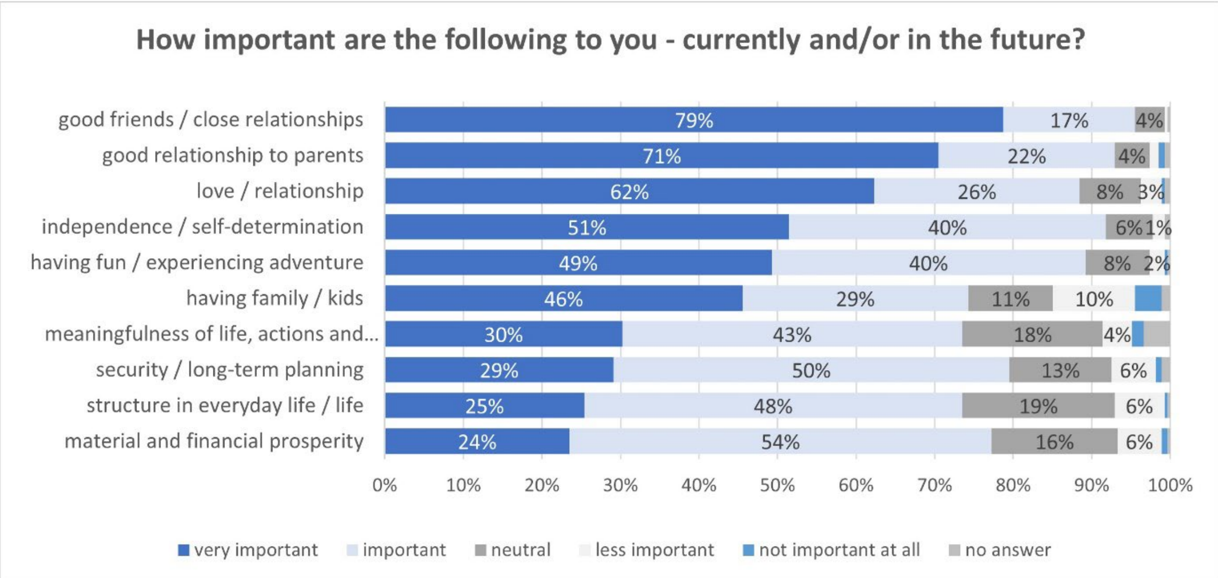

Figure 1: Current and/or future importance of values, attitudes and goals

4.1.2 The COVID-19 Pandemic

The next section aimed at obtaining Gen Z's perspective on the pandemic's impact on their personal self (Figure 2, referring to March 2020 - March 2021). Overall, only 6% indicated feeling unchanged whereas two thirds (76%) felt different from before the pandemic. More than half agreed they had felt socially isolated (65%), sad or depressed (66%) and anxious or worried (52%). Furthermore, by indicating 'not applicable' or 'not applicable at all', a large proportion had not felt carefree (63%) or relaxed (52%) or inspired (63%). Instead, feelings of stress (63%) and boredom (59%) during the past pandemic months were indicated as (extremely) notable.

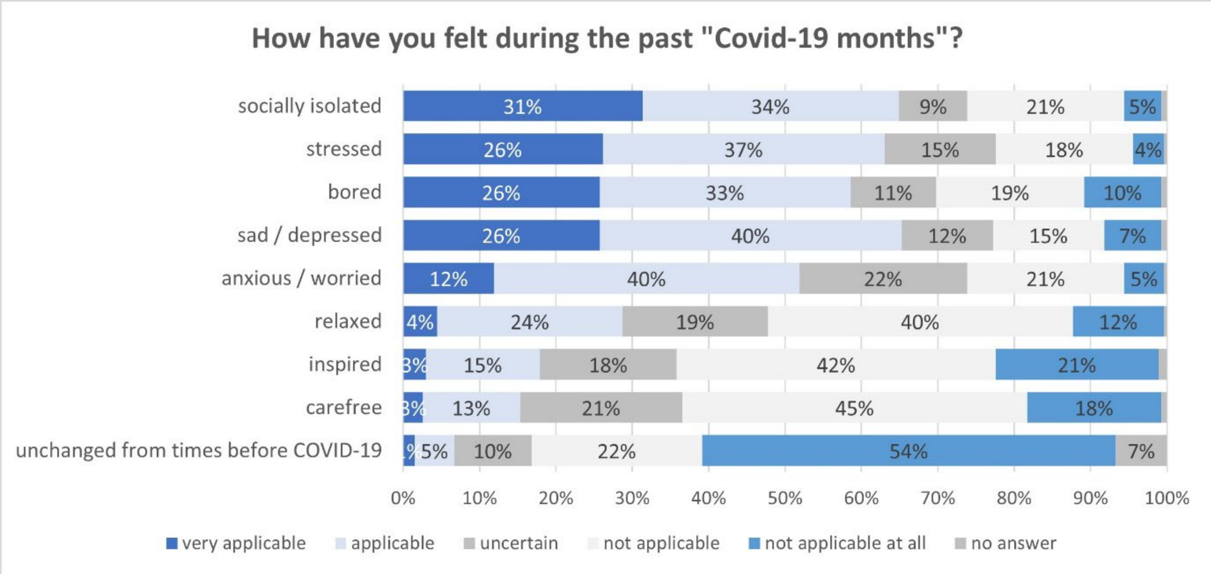

Figure 2: Feelings during the past 'COVID-19 months'

The same list as in Figure 1 was repeated to obtain an idea of what might have changed for Gen *Z* due to the pandemic (Figure 3). Two aspects stand out as particularly significant. Firstly, 66% valued 'having fun and experiencing adventures' as more important ('much more' and 'more') and 61% stated 'good friends and close relationships' have gained in importance. However, further aspects were rather contradictory. Half of the respondents agreed with 'structure in everyday life' having become (much) more important (45%), while half of them (49%) indicated it remained unchanged. Also, opinions regarding 'security and long-term planning' were rather inconsistent, with 41% indicating it has become (much) more important, whereas 53% stated that it has not changed. On the contrary, the importance of 'material and financial prosperity' (56%), or 'having family and children' (77%) remained unchanged for most respondents compared to pre-pandemic times.

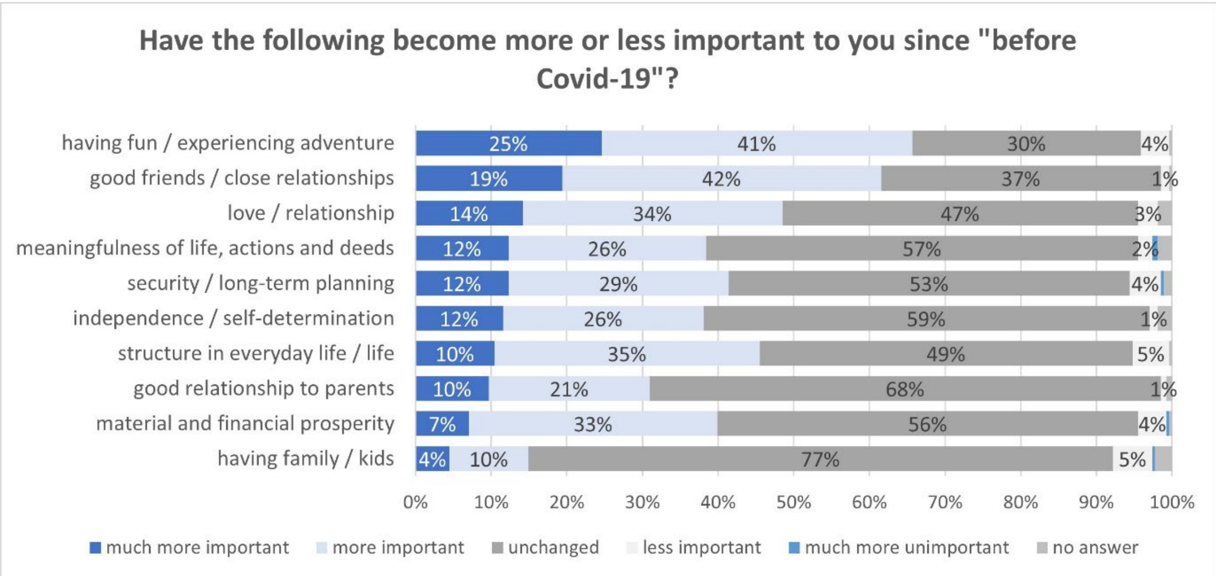

Figure 3: Pandemic vs pre-pandemic importance of values, attitudes, and goals

The last question related to the pandemic, assessed the development of specified factors due to the pandemic's impact (Figure 4). The most frequently selected answer was 'unchanged', except for 'social cohesion'. The highest frequency for 'unchanged' (63%) was the development of financial and material well-being. However, especially for work-related aspects a worsening of the situation was stated by a large proportion of the respondents. 47% indicated the realisation of life goals was unchanged while 43% of the respondents perceived a worsening due to the pandemic. Similarly, 44% regarded the situation on the labour market to have worsened. Moreover, 35% indicated job security and career opportunities (30%) have declined through the impact of COVID-19. Another quarter saw reduced chances to work in their dream job. On the contrary, 34% perceived work-life-balance to be better than in pre-pandemic times, which, however, was countered by 49% of the respondents indicating no change. As stated, social cohesion and care for each other was the exception in this overall assessment. At 36%, the most frequent response was that social cohesion developed for the better, while 32% perceived it as unchanged.

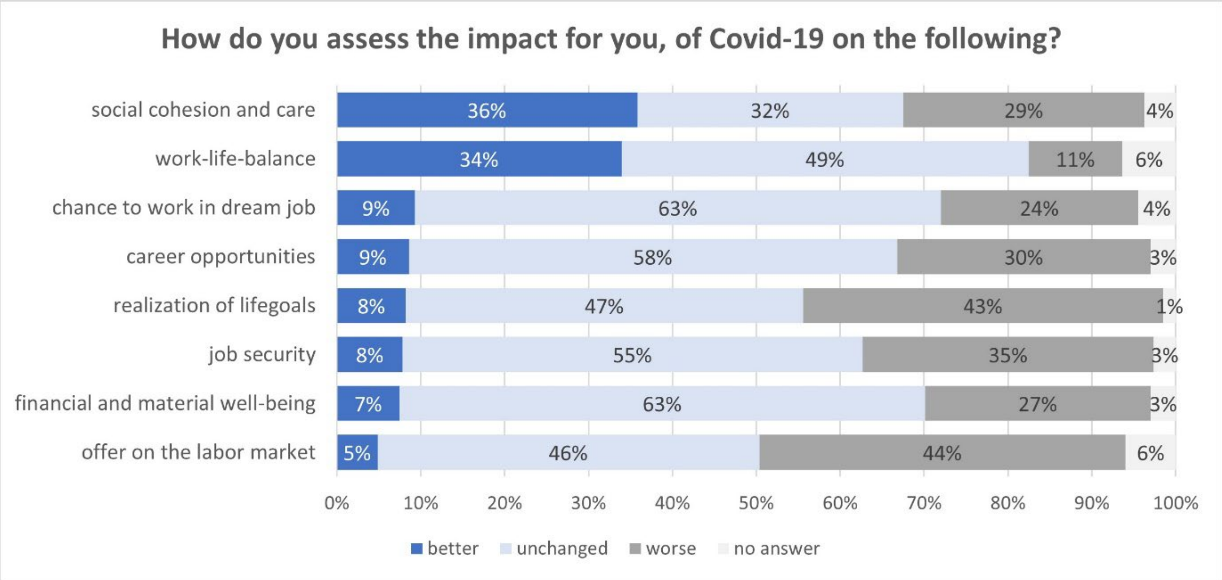

Figure 4: Assessment of changes due to COVID-19

4.1.3 Professional Life

Approximately one quarter (26%) of the respondents, indicated employment with a large company or group as their preferred type of employment, while 24% were still undecided about which employment relationship corresponds with their long-term ideal. In addition, 23% indicated that self-employment or working freelance would be their desired working situation. 15% indicated a position as civil-servant or employment in public services to be of interest (Figure 5).

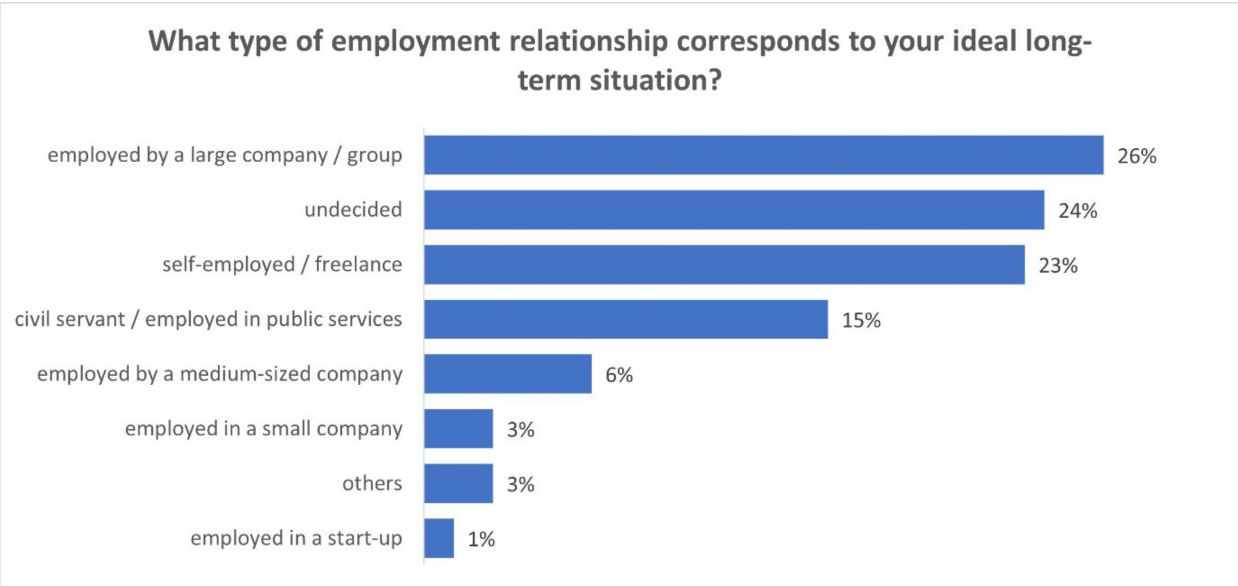

Figure 5: Long-term preferred employment relationships

Furthermore, respondents were asked to select potential industries by attractiveness. The insurance industry with 29%, was selected most frequently, followed by medicine (27%), banking and finance (24%) and information technologies (23%).

In order to gain general insights into the generation's attitude towards the professional world, the importance of work-related aspects was ranked. Here, 99% stated job satisfaction as very important or important, followed by another 98% for whom fun at work was (very) important. 96% indicated a sustainable profession as (very) important. Moreover, a safe workplace, recognition and a collegial environment were selected by 93% of the respondents. 80% answered similarly in terms of career and advancement opportunities as well as long-lasting employment relationships.

Finally, respondents were asked about the most critical factors in choosing an employer. Most respondents (79%) found good earning opportunities relevant. 78% stated a guaranteed industry or employer future and 71% selected continuing education and training opportunities. After these salient attractiveness factors, 38% indicated sustainability and environmental awareness to be important for employer selection.

4.1.4 The Insurance Industry

Finally, respondents were asked to assess the insurance industry as a potential employer. While 35% indicated they had already thought about working in the insurance industry, 60% clearly stated they had not. 4% were unsure about this question. 42% perceived insurance as conservative and outdated, and 25% regarded the branch to be invisible. Moreover, the insurance industry was connected with disreputable and dishonest (23%), and hierarchical (22%). 24% also thought that the sector will have a promising future. 'Reputable and renowned', 'modern and innovative' and 'agile and dynamic' were indicated by only 13%.

These perceptions were then related to the answers concerning interest in working in insurance. Out of those who had thought about working in the industry, 45% believed that the insurance sector has a promising future, in contrast to only 14% who have not yet thought about it. The differences in perception as 'modern and innovative' or 'agile and dynamic' were alike: in both cases 20% to 22% of yes-respondents and 7% of no-respondents. Negative associations including 'conservative and outdated' or 'disreputable and dishonest' were more frequently chosen by respondents who have not yet thought about working in insurance.

The final question asked respondents to indicate the five most appealing reasons for working in this industry (Figure 7, maximum five answers possible). The majority regarded job security (58%) as the most appealing reason to work in insurance. Above-average salaries plus social and special benefits (44%), the compatibility of family and career (43%), high employee satisfaction (41%), continuous education and training (40%) and long-term employment relationships (36%) were among the most selected reasons. The following figure shows the 9 items selected most frequently.

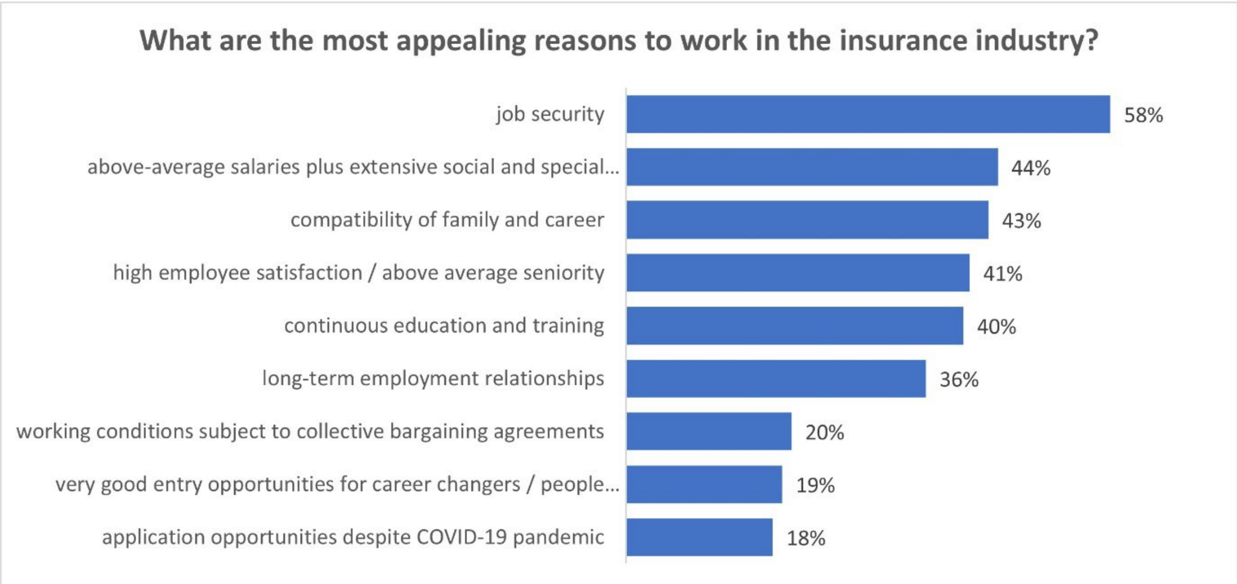

Figure 7: Most appealing reasons to work in the insurance industry

46% of those who thought about working in the insurance industry and 62% who were unsure indicated long-term employment relationships as an attractiveness factor. In contrast only 28% of those who have not yet thought about it, did so. 54% of yes-respondents and those unsure indicated high salaries as decisive, compared to only 38% of the no-respondents.

4.2 Expert Perspectives

4.2.1 *Gen Z and Covid-19*

According to the experts, the extensive media coverage of globalisation, terror and crises is leading to a strong need among Gen Z for structure and security, with family and friends playing an important role, as well as the pursuit of freedom, individualism and health. Interviewees agreed that the pandemic will have a particular impact on Gen Z as they are at a crucial point in their lives. Experts believe that the generation's values will strengthen as they seek even more security and structure in both their personal and professional lives. As humankind is intrinsically social, the majority of interviewees expected an increase in the importance of close relationships, especially with family, for Gen Z. However, since the majority of Gen Z are in a phase of life where relationships often have to be built from scratch, one expert foresaw great difficulties. The impact of having limited social interactions and missing out on experiences that are typically gained at this stage of life may be often underestimated. Two experts warned that not only would an individual's personality development be severely impacted, but also their mental health. However, not only students will feel the effects of the pandemic, but also schoolchildren. Children who lacked appropriate equipment or support for homeschooling may experience considerable disadvantages, whilst others may in fact become stronger.

4.2.2 *Gen Z in the Workforce*

Gen Z's increased need for structure and security was also noted in a move toward employers who represent this security. A general interest in long-term and stable employment relationships and thus rather larger companies was mentioned, including conventional industries such as banking, insurance and the public sector, which may not have previously been of interest. Experts emphasised the need for security, especially with regard to jobs with guaranteed employment after apprenticeships or professional degrees. Insurance companies can offer security and win over Gen Z in particular by guaranteeing permanent employment after successful completion. Correspondingly, Gen Z demands a clear definition of their daily routine.

According to the experts, Gen Z's focus tends to be on their private lives and work is subordinate. Two experts emphasised a strict separation of private and work life. One expert believed that the generation lives according to the principle of "duty by the book," in which, for example, overtime must be announced in advance. Gen Z chooses a job not just for the money, but because it serves a purpose and adds value. Criteria also include team spirit, task variety, and continuing education. Overall, the respondents noted that young professionals have high expectations of employers. In general, loyalty to the employer had decreased. Contracts are terminated much more easily, if working conditions change or do not lead to the desired results. Therefore, the experts hoped that the increasing rivalry and uncertainty on the labour market could also be an opportunity to reinvigorate employee loyalty, as voluntarily changing jobs is perceived as risky for Gen Z.

4.2.3 *The Insurance Industry as an Employer*

One important factor mentioned by all respondents was the image of the insurance industry as ‘conservative and outdated’. All experts agreed that this image is not easy to change and represents a major challenge for the industry. If this could be overcome, the many opportunities for young professionals would be clearer. The pandemic has helped reinforce the perception of the industry as safe and crisis-proof, one expert explained. This allows the industry to position itself as an attractive employer that not only attracts young talent, but also makes them want to stay.

Usually, the advantages of insurers as employers only become apparent when someone comes into contact with insurance by chance or through a family member who works in the industry. Among the advantages cited by experts are: strength and stability, excellent collective bargaining agreements, good compensation terms and training programmes, and parental leave options for both men and women. Finally, the many initiatives focused on promoting women in leadership positions, diversity and sustainability were highlighted, as they serve many of the issues relevant to Generation Z. The experts confirmed that insurers have begun to reposition their employer brands aware that in an industry with an intangible product, human capital is the real resource. While other industries already advertise very visibly in the job market, the insurance industry has long neglected to position itself as an attractive employer. As a result of the pandemic, one expert said, the industry may be reaching out to so-called ‘Plan B applicants’ who may be shaken by the economy and therefore seeking a new direction. One expert confirmed this perception, reporting on member companies that were attracting young talent that might have chosen a different industry under normal circumstances.

5. Discussion and Recommendations

The quantitative survey data was analysed with Microsoft Excel. Results were consolidated by the qualitative interview data. The primary data supported the expectation that the Covid pandemic has significantly impacted Gen Z.

Literature prior to the pandemic identified very high levels of stress among Generation Z, and research at the onset of the pandemic showed that mental health, well-being, and resilience were severely impacted. This was confirmed by the survey. More than two-thirds of respondents reported feeling socially isolated, sad or depressed, and anxious or worried. Comparing the main statements of the generation and the experts, it is clear that from the external perspective, far greater effects are noted and expected than Gen Z itself may be aware of.

Insecurities felt during COVID-19 additionally strengthened the generation’s need and demand for security and structure. The literature has previously pointed to Gen Z's strong desire for stability and structure, fostered by parental protection from perceived insecurity. The fact that a large proportion of respondents rated security and long-term planning, as well as structure, as very important in their daily lives and placed a higher importance on these aspects as a result of Covid-19 confirms the impact of the pandemic on Generation Z's values. The importance of a secure job, a future-proof profession and interest in long-term employment and working for large companies also confirms Gen Z's increased need for security and structure. These findings were also confirmed by the experts. They agreed that the uncertainties that prevail increase Generation Z's need for structure and security.

The data supported the claim that due to the impact of the pandemic; insurance companies can increase their attractiveness among Gen Z. In the survey, Gen Z associated the insurance industry primarily with job security. The experts also emphasized that the insurance industry was one of the few industries that had weathered the pandemic comparatively well. As a result, the perception of the industry as safe and resistant to crises has improved, providing the job security sought by this age group. Other factors cited by Generation Z as crucial to their choice of employer were also cited by the experts as reasons to work in the insurance industry, such as attractive compensation, support for work-life balance and opportunities for further training.

However, only a small group of Gen Z is interested in the insurance industry. Only one-third of respondents have ever considered working in it. It is all the more surprising, that the insurance industry was ticked most frequently among potential employment sectors by Gen Z, but still only 29%. While insurance companies could position themselves as an attractive employer for post-pandemic Gen Z, they are not perceived as such, at least not now. Overcoming the image problem remains a key challenge for insurers to be perceived as an attractive employer.

The study indicates that in order to successfully position themselves as attractive employers for Gen Z the insurance industry should pursue a two-fold approach.

1. Increase the perceived attractiveness of the industry: Gen Z is seemingly not aware of how well the insurance industry can meet their needs - the image as ‘conservative and outdated’ is too dominant. The advantages of the industry should be more clearly communicated in order to attract talent. This also includes addressing Gen Z at an early stage in schools or universities.
2. Emphasise employer attractiveness in employer branding: The Employer Value Proposition (EVP) answers the question "Why should I work for this company?" Here, companies in the insurance industry should make it clear what they can offer Generation Z. This includes the purpose, but also the work-life balance, incentive systems and development opportunities. Even during apprenticeships or professional degrees, it can be shown what development opportunities are available in the company and how Generation Z's need for security and long-term planning can be met.

6. Conclusion

An inevitability of generational research limits this research, in that it is based on averages and cannot reflect the characteristics, preferences and attitudes of each member, especially since the generations cannot be sharply separated from one another. Additionally, most of the survey participants were still in the educational system so that their touch points with the work environment are currently few. Their opinion naturally might change once they enter the labour market and cannot be seen as representative for the whole generation. Due to the ongoing COVID-19 situation, new research on the pandemic and its impact is constantly being published, which could not all be included in the paper. Clearly, the significance of the pandemic for Generation Z, which is currently in transition between school and work, can only be established in future years, yet it can already be stated that the pandemic was significant in shaping the attitudes, value, and goals of this generation. The study confirms that the characteristics of the generation are not changing fundamentally, but that the need for structure and security is increasing. Companies offering the right conditions can take advantage of this in effective employer branding tailored to this target group.

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Impact of Personality and Communication Style on Transformational Leadership

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Abstract: This study is interested in leaders' individual qualities and leadership style, focusing on personality and communication style, and how they impact on transformational leadership. In addition, this study is also interested in the influence of age, gender, and leadership experience of the leader on transformational leadership. The data consisted of 385 Finnish leaders who rated themselves in regard of personality, communication style and transformational leadership. SPSS Statistics 26.0 was used to test the relationships. Several statistically significant associations were found, indicating that both personality and communication style have an impact on transformational leadership. Leadership experience and gender also had some effect, but interestingly, age had no effect on transformational leadership style.

Keywords: Transformational leadership, communication, personality

1. Introduction

The concept of transformational leadership (Antonakis & House, 2002; Avolio, 1999; Bass, 1998) is one of the most widely researched paradigms in the leadership field and has shown substantial validity for predicting several outcomes including leader performance and effectiveness ratings in addition to subordinates' satisfaction and motivation (Judge & Piccolo, 2004; Sashkin, 2004). Transformational leaders act as mentors to their followers by encouraging learning, achievement, and individual development. They provide meaning, act as role models, provide challenges, evoke emotions, and foster a climate of trust. Leaders should inspire and motivate others with their visions, example and especially with their verbal skills. This kind of inspiring and motivating behavior requires well-developed verbal communication skills.

It has been known for long that high self-awareness of leaders is connected to effectiveness (Atwater and Yammarino, 1992; Bass and Yammarino, 1991). Multiple studies have focused on the leaders' individual qualities, and the area has lately attracted increasing interest. For example, it has been noted that certain personality preferences have an inherent tendency towards transformational leadership (Hautala 2006; Brandt & Laiho, 2013). Leaders' communication style has been noted as an important quality and it is specially connected to enhancing self-awareness, but surprisingly this area still lacks research. There are only a few studies, which confirm the importance of the topic and show that leaders who pay attention to their own communication are more effective change agents than those who do not (Gilley, Gilley, & McMillan, 2009), and that leaders' communication styles are linked to their subordinates' levels of satisfaction (Infante, Elissa, & Gorden, 1982) and motivation (Kay & Christophel, 1995).

Moreover, there is still uncertainty about gender differences in relation to leadership. Some studies indicate that women are better at transformational leadership (e.g., Bass, 1999; Brandt & Edinger, 2015; Carless, 1998; Northouse, 2007), while others indicate that gender does not make a difference (Brown & Reilly,2008; Kent et al., 2010; Manning, 2002). Personality is a stable construct and, thus, cannot be changed, but behavior and communication style can be modified and developed. The purpose of this study is to examine the impact of personality and communication style as well as the personal characteristics of leaders, such as age, experience, and gender, on leadership style.

2. Earlier studies

Transformational leadership improves the morale and performance of employees and motivates them with various apparatuses. It gives employees a sense of belonging, making each employee and manager feel like a collective unit (Fassina et al., 2008). Transformational leaders show concern towards the needs of their subordinates, motivating and inspiring them to achieve organizational goals and objectives. Transformational leaders are not solely focused on the task at hand; they mentor subordinates, help employees create a bond within the organization, developing individuals into leaders. These types of leaders are able to boost the performance level of their staff and ensure that they are satisfied within the working environment thus making them fully committed to the organization (Chen et al., 2014). Transformational leaders express social and emotional intellect and are often charismatic, and they instill organizational vision and goals in their employees (Bass & Avolio, 1993). A study by Daus & Ashkanasy (2005) also indicates that emotional intelligence is significantly related to transformational leadership.

Looking at personality and leadership, Hautala's (2006) study of Myers-Briggs personality types and transformational leadership indicated that the extraverted, intuitive and perceiving preferences favor transformational leadership. On the contrary, subordinates' ratings indicated that leaders with sensing preference are associated with transformational leadership. These results have been supported by Brandt & Edinger (2015) and Brandt & Laiho (2013).

Among the few studies on communication and leadership, De Vries et al. (2010) reported on charismatic, human-oriented, and task-oriented leadership and concluded that leadership is very much grounded in communication style in relation to charismatic and human-oriented leadership. They found charismatic leadership to be characterized by communication styles incorporating assuredness, supportiveness, argumentativeness, and preciseness. Berson and Avolio (2004) found that leaders assessed as transformational were more effective communicators in all three areas factored in—that is, they were careful listeners, open, and careful transmitters. According to Brandt & Uusi-Kakkuri (2016), those leaders who judged themselves to have a strong transformational leadership style also reported they had an emotionally intelligent, controlled, and transparent communication style. Their leadership style was marked by the absence of the avoiding or dominating approaches. According to Brandt (2021), highly transformational female leaders communicate differently than less transformational female leaders, indicating that the highly transformational leaders are using more Impatient, Self-Controlled, Dominant and Clear communication styles than less transformational female leaders.

Several studies have discussed the role of gender in transformational leadership and whether female leaders are more effective (Susanty et al., 2013). Some studies indicate that females are undervalued by male subordinates and colleagues (Northouse, 2007). Overall, female managers are seen to be more considerate and caring than the male managers and thus the female managers tend to be more concerned with the well-being of their subordinates than male managers (Sun et al., 2016). In case of transformational leadership, multiple studies indicate that female leaders exceed male leaders (Bass, 1999; Brandt & Edinger, 2015; Carless, 1998; Northouse, 2007). In terms of gender, personality, and leadership, it has been noted that females are more Enabling leaders, while males are more Challenging, and personality, together with gender, influences leadership behavior (Brandt & Laiho, 2013).

There are very few studies on age and leadership experience. As Spisak et al. (2014) have stated, to role of age in leadership emergence and selection of leadership is given surprisingly little attention. According to their study, people look for younger leaders in times of exploratory change, but when they need stable exploitation, they look for older leaders. Their study also indicated that younger leaders were seen more attractive, charismatic, and trustworthy, while older leaders were seen as more masculine.

3. Data and method

To test the proposed model, a questionnaire survey method using structured questions was adopted. The data was collected between the years 2019–2021 from various adult leaders in different leadership courses in Finland. The sample represents 385 Finnish leaders. Most of the respondents (70.4 percent) were female. Respondents ranged in age from 19 to 66, with an average age of 36. On average, respondents had 5 years of leadership experience. We used age, leadership experience and gender as control variables. For the statistical analyses, gender was transformed into a dummy variable.

3.1 Questionnaires

3.1.1 Personality

Personality was measured with the Finnish version of Myers-Briggs Type Indicator (MBTI), which has proven to be a reliable measure in multiple studies (e.g. Gallen, 1997; Routamaa et al., 1997). It measures personality with four dimensions: extraversion (E) – introversion (I), sensing (S) – intuition (N), thinking (T) - feeling (F), judging (J) – perceiving (P). These dimensions make up 16 different personality types, e.g. ISTP, ESTJ, INTP etc.

3.1.2 Transformational leadership

Transformational leadership was measured with the Finnish version of the Leadership Practices Inventory (LPI), which is originally developed by Kouzes and Posner (1988). The Finnish version of the LPI used in this study has been in use since 2005 (see e.g. Hautala, 2006; Brandt & Laiho, 2013; Brandt, 2021). The items in the questionnaire were rated on a Likert scale with options ranging from 1 (very rarely if at all) to 5 (frequently if not constantly). The dimensions of transformational leadership are: Enabling, Visioning, Challenging, Modeling, Trusting others and Rewarding.

3.1.3 Communication

Communication style was measured with 34 items, examining different perspectives on communication styles with a 7-point Likert scale from 1 (I never behave like this) to 7 (I always behave like this). Following factor analyses with Varimax rotation, six communication styles were designated: Emphatic, Insecure, Impatient, Controlled, Dominating and Unclear.

Emphatic style means that a person can notice the other person's feelings, if in doubt that s/he has been insulting, s/he is apologizing, and s/he can easily put his/her soul into the other's position. The *Insecure* style means that a person does not want to state his/her opinions if there is a threat that others might not agree, and the person has tendency to avoid or delay the critical subjects. The *Self-Controlling* style means that a person does not show his/her feelings and can control them well. The *Impatient* style means that the person is not necessarily listening very carefully, gets easily bored with listening, and has a tendency to interrupt others. The *Dominant* style means that person takes a big role in the discussions and can raise his/her voice during the discussions; others might be a little bit scared of his/her presence. The *Unclear* style means that the person communicates in an unclear way, so that there are often ambiguities (e.g. Brandt & Uusi-Kakkuri, 2016).

3.2 Results

Table 1 shows the results of the hierarchical regression analysis predicting the dimensions of transformational leadership: creating atmosphere, visioning and showing example. Table 2 respectively shows the results in relation to rewarding, trusting and challenging others. The results are valid after controlling gender, age and leadership experience.

The results indicate that Intuitive personalities are more Visioning leaders than Sensing personalities (Model 3: β =-.259, $p < 0.05$) and Intuitives are more Challenging than Sensing types (Model 3: β =-.295, $p < 0.001$). Thinking personalities are more Visioning (Model 3: β =-.225, $p < 0.05$) and Challenging (Model 3: β =.191, $p < 0.05$) than Feeling personalities. Judging personalities are more active in Modeling than Perceiving ones (Model 3: β =-.289, $p < 0.01$). In contrast, Perceiving personalities are more Challenging leaders than Judging types (Model 3: β =-.208, $p < 0.05$).

In terms of communication styles, the results show that leaders with a more empathic communication style put more effort into Enabling leadership (Model 3: β =.306, $p < 0.01$) and have a stronger Trust in others (Model 3: β =.325, $p < 0.01$). Leaders with an insecure communication style, in turn, put less effort into Enabling (Model 3: β =-.370, $p < 0.001$) and Challenging (Model 3: β =-.230, $p < 0.05$) leadership. The more impatient (Model 3: β =.367, $p < 0.001$) or dominant (Model 3: β =.216, $p < 0.05$) the leader's communication style, the more likely s/he is to be a Visioning leader.

The personal characteristics of the leaders also had some, albeit very little, influence on transformational leadership. Results show that males are more challenging than females (Model 3: β =.228, $p < 0.01$). In addition, those with more leadership experience are more enabling than those with less experience (Model 3: β =.238, $p < 0.05$). Age had no effect on any of the dimensions of transformational leadership.

Table 1: Results of hierarchical regression analyses predicting transformational leadership dimensions

	Enabling			Visioning			Modeling		
Variable/ parameter	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Age	-.124	-.081	-.101	-.172	-.192	-.068	.091	.068	.010
Leadership experience	.309**	.293*	.238*	.227*	.195	.131	.145	.116	.087
Gender [a]	-.136	-.078	-.109	.000	-.057	-.094	-.026	-.061	-.069
E vs I		.081	-.099		.121	-.036		.068	.026

Variable/ parameter	Enabling			Visioning			Modeling		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
S vs N		-.040	-.009		-.230*	-.259*		-.161	-.132
T vs F		-.179	-.108		.196	.225*		.129	.122
J vs P		.010	.090		-.008	.091		.346***	.289**
Empathic			.306**			.014			.124
Insecure			-.370***			-.155			-.086
Impatient			.118			.367***			-.196
Controlled			-.018			-.028			-.008
Dominating			.101			.216*			.064
Unclear			-.006			-.049			-.139
R^2	.081	.118	.349	.040	.137	.321	.045	.189	.282
ΔR^2	.081	.037	.232	.040	.098	.184	.045	.144	.093
F	3.108*	1.943	3.964***	1.451	2.298*	3.457***	1.659	3.398**	2.895**
ΔF	3.108*	1.064	5.696***	1.451	2.856*	4.285***	1.659	4.536**	2.061

E vs I: extroversion or introversion; S vs N: sensing or intuition; T vs F: thinking or feeling; J vs P: judging or perceiving.

$*p < .05$; $**p < .01$; $***p < .001$. [a] (0=female, 1=male).

Table 2: Results of hierarchical regression analyses predicting transformational leadership dimensions

Variable/ parameter	Rewarding			Challenging			Trusting others		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Age	.156	-.138	-.087	.191	.165	.144	-.130	-.071	-.106
Leadership experience	.200	.161	.157	.103	.095	.059	.229*	.206	.201
Gender [a]	-.086	-.089	-.061	.345***	.278**	.228**	.020	.097	.131
E vs I		.178	.155		.080	.045		.125	.117
S vs N		-.165	-.185		-.350***	-.295***		-.063	-.015
T vs F		.015	.057		.226**	.191*		-.240*	-.173
J vs P		-.032	-.028		-.216*	-.208*		-.042	-.033
Empathic			.097			-.013			.325**
Insecure			.091			-.230*			-.051
Impatient			.111			.022			-.044
Controlled			-.036			.136			.074
Dominating			-.021			.036			-.123
Unclear			-.111			.072			.015
R^2	.033	.096	.123	.159	.405	.463	.040	.118	.152
ΔR^2	.033	.063	.027	.159	.246	.057	.040	.078	.134
F	1.195	1.547	1.035	6.702***	9.937***	6.356***	1.461	1.951	2.493**
ΔF	1.195	1.785	0.491	6.702***	10.552***	1.701	1.461	2.265	2.875*

E vs I: extroversion or introversion; S vs N: sensing or intuition; T vs F: thinking or feeling; J vs P: judging or perceiving.

$*p < .05$; $**p < .01$; $***p < .001$. [a] (0=female, 1=male).

4. Conclusions, limitations and future studies

This study focused on the impact of personality and communication style on transformational leadership. The impact of gender, age and leadership experience on transformational leadership was also of interest.

Concerning the *Enabling* dimension of the transformational leadership, the results indicated that the more leadership experience leaders have and the more emphatic their communication style is, the more Enabling they behave. Also, the less insecure the leader's communication style is, the more Enabling the leadership is. The Enabling dimension means that the leader is including subordinates and team members in projects and meetings, nobody is an outsider and employees are getting committed to the work. It may be that insecure leaders might be a bit shy to behave in an Enabling way, but also that more experience the leaders get, the easier it is to create team spirit and include everyone. Enabling behavior seems to be natural to more emphatically communicating leaders – it may be that those leaders show positive feelings easily and they do not even have to make strong efforts to include others.

In case of *Visioning*, intuitive and thinking personalities were more Visioning than sensing types and feeling types. Intuitive personalities have a tendency to think of broad constructs first, are future-oriented and like to innovate possibilities, so this result fits well with the theory and earlier studies on intuitives. In terms of thinking, it may be that their more task orientated and strategic thinking compared to feeling types advances Visioning behavior. The more Impatient or Dominating the leader is in communication, the more Visioning s/he is. It may be that highly Visioning and future-orientated leaders are very impatient in their communication, when their minds are already in the future, and they do not like to speak about the details and get frustrated easily in the details and long talks. This can also cause them to communicate in a dominant way.

In the *Modeling* dimension, the only statistically significant associations were with personality dimensions. The judging personalities were more Modeling than perceiving types. Modeling refers to showing example and acting according to plans. This kind of orderly and systematic behavior is more typical of judging types, who like to make strict plans and also stick to the plans. Spontaneous people go more with the flow, and they do not like to follow routines or plans.

In case of *Rewarding* dimension of transformational leadership, no statistically significant results were obtained. In case of Trusting others, the Emphatic communication style increased this behavior.

The *Challenging* dimension of the leadership dimensions was impacted mostly by the studied factors. The Challenging leadership behavior refers to innovative behavior and mindset, where the leader constantly improves the work and also asks others to think about and suggest possible improvements and opportunities. Intuitive, thinking and perceiving personality types were more Challenging. The less insecure communication style the leader has, the more Challenging s/he is. Men were more Challenging than women. Personality dimension intuition vs. sensing had the most impact, gender being the second most influential. Intuitive people see opportunities, tend to think from different angles and viewpoints, and thus are inherently Challenging. Men may be culturally more empowered to behave in the Challenging way than women, who sometimes are still expected to behave in a feminine way. For example, concerning risk-taking related to entrepreneurship, men are more risk-oriented compared to women (Brandt & Helander, 2020).

In conclusion, these results suggest that personality had the most impact on transformational leadership. Also, communication style had some impact, albeit not so much. When looking at the background information (age, gender, leadership experience), there was almost no impact on the leadership behavior.

In case of Enabling, Visioning and Challenging dimensions of transformational leadership, the personality and communication style impacted the most. The results confirm earlier results when indicating that the personality types intuitive, thinking and perceiving have an impact on the transformational behavior (Hautala, 2006; Brandt & Laiho, 2013). The results emphasize the importance on choosing the right kind of personality types on the right positions. If there is a need to innovate and challenge the current way of working, the intuitive, thinking and perceiving personalities would be most suitable for that. Also, when needing to have new visions, the intuitive and thinking leaders are the best fit, even when their weakness can be that their communication style can be a bit impatient and dominant. When wanting to create team spirit and trust, emphatic communication is good tool for that.

Age did not have an impact at all, indicating that age does not impact on the leaders' behavior; either young or old leaders can be transformational leaders. Gender did have an impact in case of Challenging, indicating that men had more tendency to behave and demand from others the developing way of thinking. However, it should be noted that respondents in this data were mostly women (70.4%), and thus there might be also only a limited number of differences. In case of experience, the more experience the leader has, the more Enabling way s/he behaves. The result that leadership experience does not impact on transformational leadership dimensions is a surprising and also quite de-motivating result, because it implies that leadership behavior does not change with age or experience. However, more research should be done on this aspect, because concerning both age and leadership experience the data was limited. The average leadership experience of the respondents was five years and the average age was 36 years (the age range was 19 to 66 years). More research would be needed about the impact of age and experience on the leadership development. Additionally, it should be noted that the data is based on self-appraisals and subordinates' insights would be an interesting addition.

This study awakes the need for further studies, for example, to look at personality as a scale or as a combination of preferences. It would also be interesting to explore moderating models of the interaction between personality and communication style in order to gain further insights.

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Psychological Contract Disruptions by Uncivil Behavior

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Abstract: This research focuses the conceptualization and modeling of psychological contract (PC) dynamics in co-worker communication under the conditions of counterproductive or uncivil behavior acting as a PC disruption. It also studies differences of individual responses when having the exposure of the difficult person behavior. A sample of 98 experienced working professionals responded to an open-ended questionnaire regarding the difficult person behavior in their place of work. The content analysis was used as analyzing method. Findings indicated that different strategies that people employed in repairing PC following a negative disruption were identified. These included the call to supervisors for mediation, launching a straightforward opposition to contain difficult person behavior, using acquiescence and accommodation as tactics, responding with avoidance and/or praise. According to analyzes the dynamics of PC-model impacted by uncivil disruption is presented. The results of the research benefit organizational leaders and HR in facilitating the processes of organizational support of supervisors in mitigating negative PC disruptions that are caused by difficult person behavior. This study is among the firsts when studying different individual responses when facing uncivil behavior and this study fulfils this gap. This study extends the psychological contract theory, showing how the uncivil behavior impacts on PC.

Keywords: Uncivil behavior, narcistic behavior, psychological contract

1. Introduction

Workplaces without shared organizational values or attentive leaders can become places where uncivil behavior flourishes and spreads causing negative outcomes, including taxing individuals' mental health and work withdrawal (Bunk and Magley, 2013). Survey conducted by Cortina *et al.* (2001) found that up to 71% of the 1 162 employees in the U.S. Eighth Circuit federal court system reported that they experienced such kinds of behaviors within the five years time.

Common uncivil behaviors include ignoring coworkers, or making demeaning comments about coworkers or subordinates (Cortina *et al.,* 2001). Difficult behavior practiced by difficult persons or narcissists is defined as "low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect. Uncivil behaviors are characteristically rude and discourteous, displaying a lack of regard for others" (Anderson and Pearson, 1999: 457). As consequence, the uncivil or disruptive behavior is always upsetting to the milieu and arouses high emotions in all of those involved (Myers, 2008).

There are increasing amounts of studies about narcissistic leadership and their uncivil behavior, but fewer about narcissistic behavior executed by colleagues, additionally studies of individual responses in this uncivil behavior are rare. Studies of narcissistic leaders indicate that they inflict damage on others, for example, by bullying and coercion (Aasland *et al.,* 2008). Narcissists have strong propensity for self-enhancement (Rhodewalt *et al.,* 2006; Zuckerman and O'Loughlin, 2006) and sense of entitlement (Davis *et al.,* 2008; Reidy *et al*, 2008). Further, narcissistic leaders use all the resources available to them to attract the admiration of others as a way of confirming their feelings of superiority (Higgs, 2009; Maccoby, 2007).

When entering a psychological contract (PC) construct, uncivil behavior will act as a disruption and impact the contract. Psychological contract is utilized in employment context, addressing an employee's relationship with the employer. At the same time, it is increasingly applied to other exchange contexts, in reference to the relationships with customers, suppliers, and especially notable for the present study, relationships with colleagues (e.g., Laulie & Tekleab, 2016). Psychological contract refers to a cognitive schema, or system of beliefs, representing an individual's perceptions of his or her own and another's obligations, defined as the duties or responsibilities one feels bound to perform (Rousseau, 1989). In contrast to legal commitments, psychological contracts are informal and often implicit and indirect, casting perceptions and interpretations of the other's attitudes and behavior in a central role.

The present research responds to the current call for the additional work on how social influence affects psychological contract dynamics (Rousseau *et al.*, 2018), in the context of facing narcissistic behavior by colleagues or leaders. This research builds on psychological contract theory to advance the understanding of the processes and outcomes behind the exposure of employees to difficult people's behavior in the workplace. Our interest is to study how people experience behavior by difficult persons and how this might impact on their state of their psychological contract. Also, the interest is to study how this negative behavior affect the workplace's milieu, what are the psychological contract repair strategies and finally what are the outcomes of negative psychological capital disruption? More specifically, the present research was designed to address the following questions:

- RQ1: How do the individual responses of the exposure to difficult person behavior reflect the current state of their PC?
- RQ2: How does the exposure to difficult person behavior affect the workplace's social and organizational context?
- RQ3: How does the organizations' responses to negative PC disruption impact on forming on PC?
- RQ4: What are the PC repair strategies following a negative disruption caused by difficult person or narcissistic behavior?
- RQ5: What are the outcomes of negative PC disruption and how these reflect PC phases and transitions?

2. Earlier studies

2.1 Uncivil behavior

The phenomenon of uncivil behaviors has been studied in different fields, e.g. industry, health care, and higher education (Stecker & Stecker, 2014). Reasons for uncivil behaviors are various, and they can include professional jealousy; unclear, amplified, competing, and/or overly demanding work expectations; low salaries and salary compression; the need to adopt new technologies; stressful, volatile work settings; competition for scarce resources; and pursuit of professional advancement (Clark, 2013; Clark et al., 2013).

Studies describe uncivil behavior as a specific type of workplace deviance (Andersson & Pearson, 1999), usually experienced as a workplace mistreatment (Sliter et al., 2012); but distinguished from aggression (Ferguson, 2012). It is defined as a low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect (Andersson & Pearson, 1999; Pearson, et al., 2000). Low intensity behavior means that the uncivil acts are less intense; do not carry transparent intent (Ferguson, 2012). According to study of Andersson and Pearson (1999), incivility is a minor form of mistreatment, but can significantly impact an employee's attitudes and behaviors towards the organization.

In general, incivility is a kind of psychological harassment and emotional aggression that disrupts the workplace norm of mutual respect (Felblinger, 2008). It exhibits an absence of respect for others (Cortina et al, 2013) and its harmful on employees as well as on organizations (Zhou, 2015). Workplace incivility has been found to be associated with numerous negative effects including increased absenteeism (Sliter et al., 2012), higher turnover (Johnson, 2001), decreased productivity (Pearson et al., 2000) and negative affect employee's psychological and physical health (Lim et al., 2008).

2.2 Social exchange and negative PC disruption caused by uncivil behavior of narcissistic personalities

Social exchange influence is constructed around the notion that one party needs to trust in the other that the benefits received will be reciprocated. The foundations for the social exchange lie within the idea that the parties to the relationship develop trusting, loyal and mutual commitments over time, given that the parties abide by certain rules of exchange, with reciprocity being the main one (Cropanzano and Mitchell, 2005). Reciprocity implies that one party's actions are contingent upon those of the other party. In a work setting, this means employees repay a favorable work environment and conditions, with positive work-related attitudes and behaviors. In contrast, unfavorable treatment is likely to result in downwards adjustments of those attitudes and behaviors (Parzefall and Salin, 2010), with the exposure to difficult people behavior by a colleague as the case of such unfavorable treatment.

2.3 Emotional responses in negative PC disruption

Emotions have been considered as an important mechanism for explaining why incivility is related to some negative outcomes. Majority of research shows the effect of incivility on general emotional states such as negative affect (Sakurai and Jex, 2012). Anger occurs when the event is seen as being caused by an entity outside of oneself, while guilt is experienced once the event is regarded as self-caused. Fear or anxiety is experienced when people have low coping potential and low future expectancy (Lazarus, 2001). Studies have demonstrated the associations between workplace mistreatment and anger/guilt (e.g. Bunk and Magley, 2013).

There is a positive link between narcissism and the propensity for aggression in the form of verbal or physical violence toward others (Barry *et al.,* 2009; Reidy *et al.,* 2008) which can be seen, for example, as bullying and coercion towards others (Aasland *et al.,* 2008). Narcissistic people have insensitivity to social constraints that undermine appropriate behavioral adjustments (Collins and Stukas, 2008). The narcissistic behavior causes strong emotional responses.

2.4 Individual differences in negative PC disruption

The individual differences have been acknowledged to play an important role in PC processes (e.g. Rousseau *et al.,* 2018), reflected in their recognized impact in the PC literature (e.g., Raja *et al.,* 2004). There are multiple studies showing that individual differences, such as one's personality, impact employees' behavior in the working place (see e.g., meta-analysis Chiaburu *et al.,* 2011).

In the uncivil behavior situation people essentially try to meet their individual needs in their own ways. Central to the causal processes underlying the PC is the dynamics of self-regulation in response to external conflict or cues. This socio-cognitive process allocates effort and attention over time as a function of an individual's goals and the feedback regarding goal progress (Lord *et al.,* 2010). Feedback mechanisms are processes for detecting discrepancies between an environmental cue and a standard (Carver and Scheier, 1990).

2.5 Dealing with difficult behavior: outcomes and strategies

Introduced by Rousseau *et al.* (2018), "negative disruption occurs when employees encounter circumstances at odds with their personal goals and beyond their capacity or willingness to assimilate into their existing PC, thus shifting employees into repair". When an employee is in the situation, where the negative affect is not or cannot be mitigated, research shows that (s)he is likely to withdraw leading to turnover intentions and even quitting one's work (e.g., Thoresen *et al.,* 2003). Another possible scenario is for the employee to be too dependent on the work to leave it, the cost of doing so would be perceived as too high, and s(he) chooses to stay with the employing organization (Meyer and Allen, 1997), in which case, however, the motivation drops and so does his/her perception of the employment-associated obligations.

3. Research design and methodology

In selecting the research design, the focus was maintained on the lived workplace experiences, with the aim to give the research participants the space and confidentiality to reflect and express their inner thoughts, feelings, share their stories.

3.1 Data

The data was collected during 2019-2020. The questionnaire was sent to people who have been taken part via Open University and University of Applied Sciences courses based in Finland. Altogether, the questionnaire was sent to 323 persons, and 98 persons responded and filled in the questionnaire, indicating the response rate 30%. All the participants had professional background in business settings and possessed work experience. The minimum age of respondents was 30 years. The research data technique included an anonymous open-ended questionnaire survey. The topic under the exploration was sensitive, personal, potentially emotional and difficult for the respondents. Therefore, it was believed that the data collected by questionnaires would be more appropriate, the subject may then remain anonymous and distant, leading to more straightforward and honest answers.

3.2 Questionnaire

The open-ended questions were formed based on the earlier studies of counterproductive and narcistic behavior at work (see, e.g., Bennett & Robinson, 2000; Raskin & Terry, 1988). The purpose was to keep the questions open and not restricted or leading questions to give the possibility for variation of the answers. The respondents were asked to think about one person who has been acting in a destructive way and think about his/her behavior when answering the questions. There were four open-ended questions in total. The questionnaire was kept short, in order to get answers as much as possible. The following four questions were stated:

- Who believed in s/he?
- How his/her behavior could have been restrained?
- What kind of impact s/he had on your workplace?
- What else do you want to say?

3.3 Data analysis

The focus of the data analysis was on interpreting phenomena in terms of the meanings people bring to them, giving voice to people and co-creating relevant constructs (see, e.g., Charmaz, 2006; Denzin and Lincoln, 2011).

The data was collected and transcribed in Finnish language, with key parts of it translated to English by the authors. The data analysis was conducted in two stages. *First,* the first author and the lead in the data collection coded the responses utilizing four broad themes: 1) individual responses on how people tolerate or get along with difficult people, 2) strategies that people adopted in interacting with difficult people, 3) the observable outcomes of a difficult person' behavior. *Second,* the authors placed portions of the text for these interviews under these broad themes and allowed various codes to emerge. The goal of this process was to attain what Kvale termed "dialogical intersubjectivity" (1994, 152). This form of reliability was achieved by discussing complex phenomena. Each coded portion of text was compared and, if differences existed, discussed until consensus was attained.

4. Findings and analysis

The findings are presented and analyzed under three themes. The first subsection 5.1 introduces a scope of individual responses in how people tolerate and get along with difficult people. The second subsection 5.2 analyzes the strategies people employed in interacting with difficult people, and thirdly in subsection 5.3, the overall outcomes of a difficult person's behavior. Findings and analysis build up towards the links and relations to psychological contract; and subsections 5.2 and 5.3 work towards an understanding of what kind of interaction strategy might result from different kinds of PCs, what is the impact of a difficult person's behavior and respective organization's response on an employee's PC.

4.1 Individual responses to difficult person behavior

The respondents were asked what kind of a person believed in or got along with a difficult person. The respondents gave the most mentions to the kind and nice people, followed by narcissists. In addition to these two categories, other responses included singular, random comments that could not be grouped.

4.1.1 Kind, insecure, naïve

The respondents mentioned that nice and conscientious people are easily influenced by difficult people. The reasons mentioned are that such people want to believe the best or the most positive things about everyone, insecure people are easily influenced by flatter, seek to adapt to situations and want to avoid conflicts. They are easily led by fear or are young and have limited life experience.

> *"The sentimental, the kind, the humble, who respect authority. Those who are timid, afraid of losing their position, afraid of change."*

4.1.2 Narcissists

Some respondents said that other narcissists also get along with a difficult person. Many said both; kind people and narcissists, do.

> *"People who are too naive or who are themselves narcissistic and, therefore, do not recognize narcissistic traits."*

4.1.3 Many others; those under the sphere of influence, indifferent

Some respondents said that those who are too close to a difficult person, that is, are under his influence, do not clearly see the problems caused by his behavior. Some commented that not everyone notices problems if they work in different departments and are not in contact often. Other people recognize problems, but if they think they benefit from the person in some way, then they do not care about his/her behavior.

> *"Those who are not motivated by their own work or content themselves with it. They don't want to take a stand and let the other person treat them as they please."*

These results support the discoveries of Wallace *et al.* (2015) where narcissistic qualities were reliably viewed unfavorably, but narcissistic participants were comparatively less bothered by target narcissism and less positive in their judgments of targets without narcissistic qualities. In each study, symptoms of the presence or absence of narcissism had less impact on the social judgments of participants who were narcissistic.

From the perspective of PC processes, the findings advance the impact of the individual differences and their importance for the PC formation (e.g. Rousseau *et al.,* 2018).

4.2 Different strategies to interact with difficult persons

The responses were analyzed based on the strategies people think that should be used with difficult persons, resulting in five different strategy groups. The first group believed that organizations or supervisors should do something about the problem and mitigate the situation. The second group consisted of people who found that straightforward opposition is the best strategy. In contrast the third group thought that agreeing and accommodating is the best strategy. In the fourth group there were the respondents who thought that avoidance or praise strategies are the most effective. The fifth and last group offered a combination of the above.

4.2.1 Contacting the supervisor about the problem

It was felt that managers should take a hard line with how things are done and set clear rules of acceptable workplace behavior. Some said the supervisor should be contacted immediately, if unacceptable behavior arises. In some work communities, work guidance had been tested or senior staff had tried to control the behavior of a difficult person. Sometimes, these would provoke retaliations from a difficult person.

> *"The only way to restrain behavior was by the higher authority, when the power of the person got limited. All other attempts, such as discussions and warnings, were ignored. On the other hand, higher authority intervention then led to deliberate neglect."*

4.2.2 Being straightforward and outspoken in restraining difficult person behavior

The plenty of comments came from the fact that a difficult person should be restrained. People found that it should not be allowed for the behavior to continue. The respondents said that other employees need to be able to speak up, refuse their requests and speak directly and firmly. Some said you have to stand up for yourself and not let the person "get the better of you". Responding back and staying professional came up in several comments. One had to be firm with a difficult person and communicate strongly: to state it clearly, if you disagreed.

> *"By holding on to the grounded opinions, with good self-esteem, by minimizing interaction."*

4.2.3 Acquiescence

Instead of opposing, some of the respondents used agreeing as a getting along tactic. Perhaps more timid people who avoid conflict prefer to use this tactic. In this context, avoidance was also mentioned as a tactic, i.e., the defendants both acquiesced and avoided. One defendant said he acts extremely positive about the difficult person. Not all respondents said they would use compliance, but said that it would be the only way for some people.

> *"By flattering and doing exactly what he wants. Be a humble lamb without opinions of your own."*

4.2.4 Avoidance or praise or both

Several respondents said that the only way to get along with someone who is difficult is to avoid them. Avoidance was also included in the mentions of the previous paragraph, for example, saying directly to a difficult person and avoiding when it is possible to do so, as well as flattering and avoiding.

It was also mentioned that it was not worth bringing forward your own opinion out loud or otherwise telling your own stories in the presence of a difficult person, who always had a dissenting opinion and an answer to everything. While some commented that it is worth minimizing interaction, you can still keep your own reasoned opinions. Some of the respondents commented that you should not get into playing the game of a difficult person.

> *"That's quite an issue – when you can't get along. Or you can only get along by avoiding his company or cooperation with him was possible."*

4.2.5 Other comments; manipulation, no possibility of influence

Some of the respondents felt that there was no way to control the behavior of a difficult person, or mentioned that they themselves did not know what they could have done. Some of them said that the only workable solution was the dismissal of the person. Some protected more sensitive members of the working community, others manipulated a difficult person.

"In the past, I sometimes acted as an 'armor' to suppress or absorb this person's reactions so that they are not directed at the most sensitive of the working community, because I felt that as a tough person I can handle conflict situations better than someone else."

"Present ideas and things in such a way that the difficult person can bring them as his own ideas into practice."

The polarity of the answers in interaction strategies were notable. Most of the answers were completely opposites, indicating either acting against the difficult person or then trying to please him/her. These response strategies from opposing sides of the spectrum are likely to cause extra tensions in organizations because employees with different strategies might feel cross with each other. Thus, a difficult person directly impacts other employees as well indirectly via other people's responses to his/her behavior.

From the PC perspective, the study brings forward a scope of emotional responses that are generated by the exposure to difficult person's behavior, which interrupts the ongoing state of affairs and existing exchange. Conditional also to individual differences, it may arise feelings, negative emotions, such as anger, fear, disappointment. The results show that the exposure to difficult person behavior results in individual outcomes, such as those portrayed e.g. by Laulie and Tekleab (2016) and including, for example, turnover intentions, attitudes and emotions. The transition from the negative PC disruption to individual outcomes takes place through the lens of individual differences and the influence of social and organizational influence. In support of Rousseau *et al.* (2018), the study demonstrates that ultimately a negative disruption leads to PC repair or exit in terms of employment termination. In support of Rousseau *et al.* (2018), the research participants demonstrated twofold motivations of PC repair following the difficult person exposure: to reduce negative affect and reestablish a functional and goal-consistent PC.

4.3 Workplace outcomes due to difficult people behavior

Here, the answer was sought as to the effects that difficult people have had or still have in respondents' workplaces. Common to the answers was that various kinds of difficult people's behaviors directly or indirectly weakened the working atmosphere. The plenty of comments came from the tightening of or even falling out of the workplace atmosphere.

Numerous comments were received about the fact that the troublesome person brings down the atmosphere by dominating, bossing or being negative. Some respondents described that a difficult person "in his own opinion raises and creates a good spirit, but in reality, heats up the mood and makes coming to work tenuous".

In some cases, the entire working community had gone into lockdown. The crumbling of the atmosphere affected the company's ability to achieve results and in some work communities the decrease in motivation was reflected in the results metrics by the difficult person's management style. A few comments mentioned that a difficult person made the work atmosphere negative internally, but according to the respondents, outsiders and external partners would have received a very well-liked impression of the difficult person. Some of the troublesome people were outright workplace bullies, who always had a member of the working community targeted. In general, the strong will of difficult people was reflected in the fact that there was no alternative but to behave in a certain way, otherwise even to be dismissed.

"Broke the whole working community. At first showed strong results, but at the end it was a big loss and the whole work unit had to be shut down."

According to Thoresen *et al.,* (2003), when an employee is in the situation, where the negative affect is not or cannot be mitigated, it appears that the person is likely to withdraw leading to turnover intentions and even quitting one's work. From the social exchange perspective, the present research supports the notions of reciprocity in the workplace and the discoveries made by Parzefall and Salin (2010), where unfavorable treatment is likely to result in downwards adjustments of employee's attitudes and behaviors with those colleagues that exhibit unfavorable treatment.

5. Toward the conceptualization of PC dynamics in exposure to difficult people in workplace

Based on the research finding, we advance that when the exposure to difficult person behavior occurs, it creates a negative PC disruption, which results outcomes based on current strength of PC and the outcomes of the disruption form the new state of PC (Figure 1).

If the PC is strong and members have good faith to the organization there is strong probability that a person noticing negative behavior is responding in an active way, turns to the supervisor for help and asks the supervisor to mitigate the problem. Also, individual differences impact the next transition phases of PC. This is in support of, e.g., Rousseau *et al.* (2018) on the role of individual differences in PC dynamics and, e.g., Chiaburu *et al*. (2011) in portraying individual personalities' impact on employees' behavior in working place (see ch. 2.2.). Social networks and social information processing play a role in PC phases and in application to exposure to difficult person behavior in particular: as a result of the exposure, employees may seek information from higher status employees to update their PC, whereas during repair they may seek out similar-status peers for support and confirmation.

The organizational response to the negative disruption and social influence effect whether the disruption and is consequences will be positive or negative for the individually held PC. Ultimately, the interplay of individual differences, organizational response and social influence that impact the PC dynamics following a negative disruption, lead towards either positive or negative PC effects. For example, if the organizational response to difficult person behavior is strong and achieved via the support of co-workers and a supervisor, handling of the negative disruption is perceived as positive, offering the transition to PC renegotiation and further to the maintenance stage. In contrast, a negative disruption leads to PC repair, which may be followed by achieving the maintenance stage or exit in terms of employment termination.

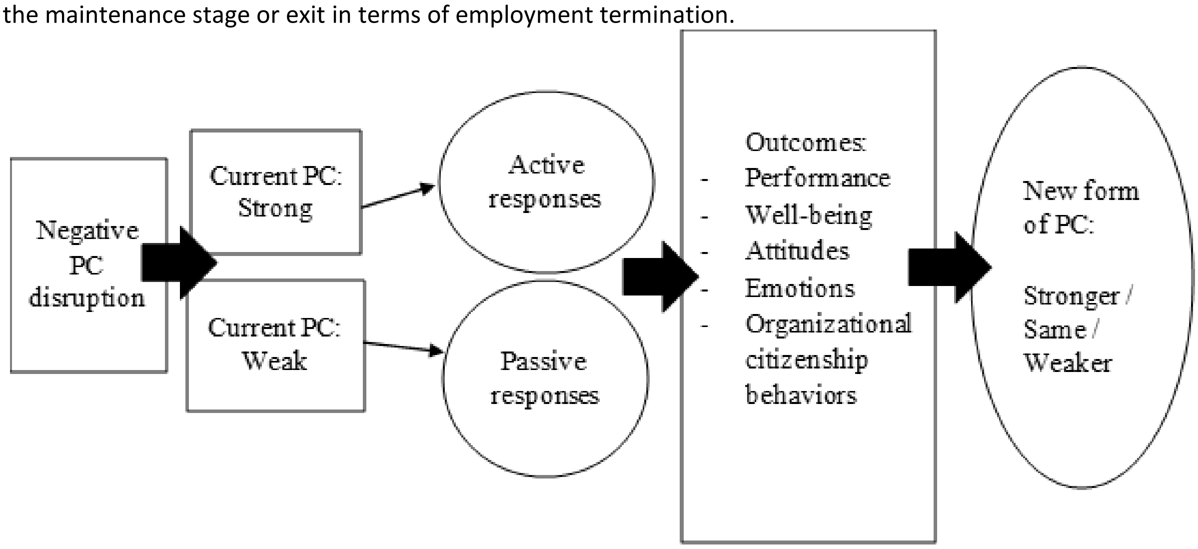

Figure 1: Relationship of PC and negative disruption when forming the new PC

Salin and Notelaers (2017) had concluded that when an employee is exposed to difficult person behavior in the workplace, (s)he is likely to perceive a failing on the part of the employer to fulfil its obligations. Psychological contract captures a highly subjective interpretation of the employment relationship (e.g. Robinson & Rousseau, 1994; Rousseau, 1995; 2001). Therefore, the precise contents of such contracts are challenging to define and establish. Salin and Notelaers (2017) argue that even prior to employment, employees have certain schemas related to “acceptable” workplace behavior, which are further refined through actual employment experiences and implicit and explicit promises made. We argue that employees are likely to have expectations of organizational intervention in case of exposure to various forms of difficult people behavior incorporated into their pre-employment schemas as part of the employer's obligations. For example, Hoel and Einarsen (2010), who studied the effects of anti-bullying legislation in Sweden, found that although the legislation was not necessarily successful in preventing and ending bullying, it clearly raised employees' expectations of swift and effective intervention.

The model focuses on the employee's lived experiences and transitions through the emotional and respective cognitive stages reflected in PC. At the same time, organizational culture is in the play in the background of this individual process and projects as a behavioral feedback loop on other employees, organization's shared values, beliefs and norms.

6. Conclusions

According to this study, the negative disruptions can be poisoning to work communities and cause serious negative outcomes to the whole organization. Many respondents said that eventually the whole team was damaged in terms of work spirit and efficiency. The negative disruption gets people to be on guard when encountering a harmful person and that is not normal in workplaces with a positive atmosphere and supportive organizational culture. Employees should not have to operate in fight-or-flight mode, neither try to avoid or manipulate those harmful colleagues.

Workplaces are becoming increasingly diverse, with the differences in views and approaches appreciated and fostered, and the difficulties encouraged to be mitigated by getting along for the overall benefit of organizational goals and success. The results of the present research may be employed by organizational leaders and HR in order to facilitate the processes of organizational supports of supervisors in mitigating negative PC disruptions that are caused by difficult person behavior, even if they are sometimes regarded as only minor accidents. As our research shows, even negative PC disruptions may be supported into the transition to revision phase with the positive connotation – handling a challenging situation well might reinforce an employee's PC rather than lead to exit.

It is the increased leadership challenge to learn separate the genuinely unacceptable disruptive behavior from the different communication styles of a diverse body of employees, each with their own backgrounds, views, work approaches. Appreciating and learning to lead the differences in people is essential for keeping a team together and everybody in it getting along.

The research offers multiple avenues for future exploration. It would be essential to address the phenomenon of successful mitigation in order to give organizations different tools and ideas of how to solve the problems caused by negative interruptions. The conceptualizations presented in the paper are derived via qualitative exploration and their validation with quantitative methods would reinforce the body of knowledge on PC dynamics in the negative disruption context, and with the consideration of individual outcomes. Further investigation is needed into organizational and leadership tools for identifying, acknowledging and mitigating difficult person behavior as well into fostering constructive response strategies to such behavior – as individuals, teams and organizations.

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Cultural Differences in Communication and Leadership: A Comparison of Finland, Indonesia and USA

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Abstract: For expatriate employees to adapt to different cultures, it is important to understand cultural differences and how these differences affect leadership processes in different countries. Communication plays a significant role in the implementation of leadership in different cultures. The purpose of this paper was to investigate the effects of culture and interactions with various leadership and communication attributes. Our study was based on three countries: Finland, Indonesia and United States. The sample consisted of 162 respondents from the three countries. Transformational leadership and coaching were measured using a survey instrument with six dimensions. Communication was measured with six dimensions that included emotional intelligence, clear dialog, insecure, impatient, dominating and avoiding. SPSS Statistics 28.0 and Hayes PROCESS macro were used to test the moderating effect of communication style on the relationship between culture and transformational leadership. Results indicated several statistically significant results between countries in both communication and leadership styles. Our findings indicate that cultural factors impact leadership and communication.

Keywords: Culture; Communication; Transformational Leadership; Finland; Indonesia; USA

1. Introduction

Interactions with people of different cultures is common in the working place, neighborhoods, social settings and classrooms. Within organizations, such interactions are the norm of conducting business effectively. Many international organizational teams have diverse membership from different national cultures, often spanning different continents. On a broader level, intercultural communication permeates all aspects of human life, leading Hall (1977) to conclude that culture is communication and communication is culture. Communication activates culture as a continuous process (Dai, 2010). Once cultural habits, principles, values, and attitudes are formed, they are communicated to each member of the culture (Dai and Chen, 2015). The heart of the culture is language, religion, values, traditions, and customs (Porter & Nohria, 2018). In line with previous cultural studies, Triandis' definition of culture emphasizes that it is a set of human-made objective and subjective elements which has been become common pattern during the history via communication with the people

in the same areas (Triandis, 1994). When people from different cultures try to communicate, difficulties may arise due to idiosyncratic values, beliefs, communication styles, expectations, norms, and behaviors. These difficulties can be effectively managed by individuals with communication competence. Communication

competence is the ability to identify and choose among available communicative behaviors to successfully accomplish goals during an interaction within a certain context or situation (Dai, 2010). According to Kedrowicz (2016), interculturality consists of the interactions between cultures that are flowing and evolving, which provide connections, relationships, negotiations and growth among culturally different individuals. Interculturality penetrates cultural boundaries, increases cultural awareness, and facilitates the proper development of intercultural relations. Interculturality requires proper, insightful and competent communication (Dai 2010; 2015). Communication is complex and involves controlling, informing, persuading and relating to others. In leadership positions the higher you go the more the complexity and nuances of communicating. Followers increasingly pay more attention to verbal and nonverbal cues, especially in modern organizations that are characterized by constant communication. The leaders' work is communicating and the higher you go the more there is communication with in-groups and out-groups (Porter & Nohria, 2018). Leaders serve as key channels for communicating values and strategic changes and motivating followers within the organization. For example, Schnurr (2008) notes that, "Communication not only constitutes one of the crucial aspects of leadership performance, but leadership can productively be viewed as a communication process" (p. 1), and some say leadership equates to communication (De Vries, Bakker-Pieper, & Oostenveld, 2010).

This study focuses on the communication and transformational leadership and coaching leadership style in different cultures in order to explore cultural differences in organizational behavior. The knowhow is helpful for expatriates and especially in leadership and management positions to modify their leadership behavior in culturally effective. The research questions are as follows:

- Are there country differences in case of the transformational leadership and coaching leadership style?
- Are there mediating effects of the communication style, culture and leadership?

2. Background Theories

2.1 Transformational leadership and coaching leadership style

Transformational leaders have been found to be more effective communicators than other types of leaders (Berson & Avolio, 2004) and the theory of transformational leadership has been proven to be effective for over 40 years of research. The foundation of transformational leadership theory was laid out by Burns (1978), and over the years the topic has been advanced through thousands of studies (see meta-analyses by Crede et al., 2019; Dumrum et al., 2013; Harms and Crede, 2010). Recent studies have focused on impact of transformational leadership on organizational performance (Noruzy et al., 2013; Wang et al., 2011), leadership performance (Boer et al. 2016; Deinert et al. 2015), followers' satisfaction (Cummings et al. 2010; 1990), optimism and engagement (Tims et al., 2011), and performance (Bass and Riggio 2006; Ng 2016). Transformational leaders have huge positive impact on organizations in all these measurements.

Quite close to transformational leadership is coaching leadership style, and leaders can simultaneously use both transformational and coaching to complement each other. Coaching style means that leaders are not providing answers but helping followers to think independently, when asking the questions about the current situations. The term is usually connected to sports, but it is becoming popular in organizations as well.

2.2 Hofstede's cultural dimensions

The description of Hofstede's culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another'' (Hofstede, 1994) implies that cultural norms are manifested in individuals' values, norms, cognitions, motivations, beliefs and behaviors.

2.2.1 Power Distance

Power Distance (PDI) expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. Societies exhibiting a large degree of PDI accept a hierarchical order, control and obedience to those with power. Everybody has a place that needs no further justification. Individuals from high power distance cultures accept power as part of society. Superiors consider their subordinates to be different from themselves and vice versa. People in those countries believe that power and authority are facts of life (Hofstede, 1994).

2.2.2 Individualism

Individualism (IDV) refers to societies that prefer a social framework in which individuals are expected to take care of themselves and their immediate families. On the other hand, collectivist societies take care of the larger extended family in exchange for loyalty. Collectivism here is not to be understood in a political sense. It does not refer to the power of the state over the individual but to the power of the group. For these societies, instead of "I", there is "we" group (our family, our school, our society, our ingroup), that is distinct from other people in society who belong to "they" groups, of which there are many. The ingroup offers protection and identity. In return lifelong loyalty is given to one's ingroup, and breaking that loyalty is one the worst things a person can do. In individualist societies everyone is expected to look after herself or himself and his or her immediate family. People from individualist countries place great importance on individuality and self- reliance. Evidently, also work should be organized in such a way that employee's self-interest and the employer's interest coincide (Hofstede, 1994).

2.2.3 Uncertainty avoidance

Uncertainty avoidance (UA) dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. High UA implies that the society exhibits strong beliefs and norms of behavior and is uncomfortable with new ideas and the unknown situations. Human societies have developed different ways to mitigate anxiety. For example, technology offers tools that help to avoid uncertainties caused by nature. Religion is a way for accepting the uncertainties, including perceived supernatural forces that one cannot defend oneself against. Laws and rules try to prevent uncertainties in the behavior of other people [9]. In uncertainty avoiding countries there are many formal and informal laws, internal rules and regulations controlling the rights and duties and work processes. Sometimes the need for laws and rules lead to dysfunctional behaviors, for example the waiter cannot change the meal in the menu, because it cannot be changed in the ordering system. Countries with weaker UA have more relaxed attitude towards problems and issues can be solved without formal laws (Hofstede, 1994).

2.2.4 Masculinity

Masculinity (MAS) represents a preference for achievement, heroism, assertiveness, and material rewards for success. MAS has also been associated with traditional male values such as compensation, recognition and career advancement [10]. The masculinity (and femininity) index measures how society views assertiveness, competitiveness, and toughness versus modesty, tenderness, and compassion. The two terms are derived from what nations consider important in life: masculine attributes include financial success, recognition, advancement, and challenge. On the other hand, feminine attributes include cooperation, nurturing and employment security. MAS index values were computed separately for women and men for each country. The results show that in the most feminine or tender countries, both women and men expressed similar tender and nurturing values. In more masculine countries, both women and men became more masculine. However, men became more masculine than women on higher values of the dimension [9]. Masculine countries try to resolve conflicts by fighting, while feminine countries by compromise and negotiation. The masculine manager is assertive, decisive and aggressive, maybe macho. Manager makes the decision alone without involving group discussions in the process. In feminine cultures the manager is less visible, intuitive rather than decisive, and used to seeking consensus (Hofstede, 1994).

2.2.5 Long-Term Orientation

This dimension was not originally found in Hofstede's IBM results, but after being discovered by Michael Bond and his research group in 1987, it has joined in Hofstede's studies as well [9]. A difference in a country's orientation can affect business. A short-term orientation is concerned with the bottom line, control systems, respecting tradition, preserving face, and fulfilling social obligations. The East Asian respondents emphasized face-saving and tradition-respecting consciously. Excessive respect for tradition hinders innovation. Western countries scored relatively higher on short-term orientation because they are used to look for rapid economic growth as well as consume rather than save money (Hofstede, 1994).

2.2.6 Indulgence

The sixth and the last dimension is called indulgence versus restraint. It measures happiness and life satisfaction, aspects that correlated quite well together, although exceptions were found. The dimension was found by Misho Minkov after reanalyzing the results of the World Values Survey. Indulgence measures about subjective feeling of wellbeing (i.e., happiness), feeling of life control, and importance of leisure. Opposite is restraint which measures pessimism, cynicism, being careful about trusting people (Hofstede, 2010).

2.2.7 Global Leadership and Organizational Behavior Effectiveness Research Program (GLOBE Studies)

The GLOBE Studies were designed to address some of the weaknesses and criticisms of Hofstede's research. In the GLOBE studies, societies were clustered into ten different groups to provide a "convenient way of summarizing intercultural similarities as well as intercultural differences" Related to this study USA belongs to Anglo, Indonesia to Southern Asia, Finland to Nordic Europe and Russia to Eastern Europe groups (Gupta and Hanges, 2004). The Globe study has the following dimensions (House et al., 2004). *Performance orientation* measures encouraging and rewarding of members of accomplishments. *Uncertainty avoidance* describes how much members want to avoid uncertainty by relying on for example social norms, rituals. *Humane orientation* is the degree to which an organization or society encourages and rewards individuals for being fair, altruistic, friendly, generous, caring, and kind to others. *Institutional collectivism* is the degree to which organizations encourage of collective distribution of material and behavior. *In-Group collectivism* is the degree to which individuals in organizations or societies engage and support team-oriented behaviors. *Assertiveness* is the degree to which an organization or society are assertive, confrontational, and aggressive in social relationships. *Gender egalitarianism is* the degree to which an organization or a society minimizes gender role differences while promoting gender equality. *Future orientation* is encouragement in future-oriented behaviors such as planning. *Power distance* describes thinking that members expect and agree that power should be concentrated at higher levels.

The researchers found that there was wide variation in the values and practices relevant to the nine core dimensions across the 10 cultural groupings. However, some universally endorsed leadership qualities appeared in the GLOBE study including being trustworthy, just, and honest; having foresight and planning; being positive, dynamic, encouraging, motivating, and building confidence; and being communicative, informed, a coordinator, and a team integrator (House et al., 2004). Cultural dimensions that are most likely to show affect communication are power distance (PD), UA, humane orientation (HO), and assertiveness (AS).

Recent studies have found interrelationships between national culture and communication (Leonardi and Rodriguez-Lluesma, 2013; Martin and Nakayama, 2013; Park et al., 212; Smith, 2011). A study by Woestenkuehler et al. (2015) indicated significant influences of PD, HO, UA, and AS on various communication variables. Our study advances the knowledge by identifying similarities and differences in communication style between four national cultures that are culturally, linguistically and spatially isolated from each other.

3. Relevant Countries and Cultural Differences

Finland has 5,5 million population. GDP per capita is 43 500 USD. Largest sector of the economy is service sector, followed by the manufacturing and refining. Finnish people are sometimes regarded as slow in interaction and more closed than Anglo-Saxon cultures. Finns are also regarded as certain, serious and reliable (Chhokar, Brodbeck and House, 2007). According to Hofstede's findings (see Fig. 1) Finland's national culture is characterized by high individualism, UA, and indulgence. There is low PD and MAS and moderate long-term orientation. GLOBE studies found that Finland had high values of performance orientation, future orientation and HO. The society reflected low AS and PD (GLOBE, 2020).

Indonesia's population is 268 million; it is the 4th largest country in the world after China, India and United States. GDP per capita is 4 450 USD. Indonesia has the largest economy in Southeast Asia and is considered one of the most important emerging market economies in the world (Statista, 2020). Indonesia is a collectivist country with a strong hierarchy in all relationships. This means that for example leaders have a paternalistic status, and they are expected to put group interest ahead of individual interest. Indonesian employees do not consider working for the organization, but they are working for the leader (Iranwanto, 2009). According to Hofstede's findings (Fig. 1), Indonesia had high PD and long-term orientation. It had moderately high MAS and UA. According to GLOBE studies, Indonesia reflected relatively high values of AS, future orientation, and collectivism. There was relatively low gender egalitarianism (GLOBE Project, 2020).

USA has a population of 330 million, and its GDP per capita is 65 100 USD. Largest sector of the economy is the service sector. Culturally contingent values in the US include the right to pursue liberty, personal wealth, and a longingness for something greater than individual narrow interests. This combination of values can also be detected in the characteristics of successful leaders that stress an entrepreneurial mindset, passion, ambition, and courage, as well as a sense of communal responsibility (Chokkar and Brodbeck, 2007). USA reflected high values of individualism, MAS and indulgence of Hofstede's values (Fig. 1). There was relatively low PD and long-term orientation. GLOBE studies indicated high performance orientation, HO and in-group collectivism. On the other hand, there was low PD (GLOBE Project, 2020).

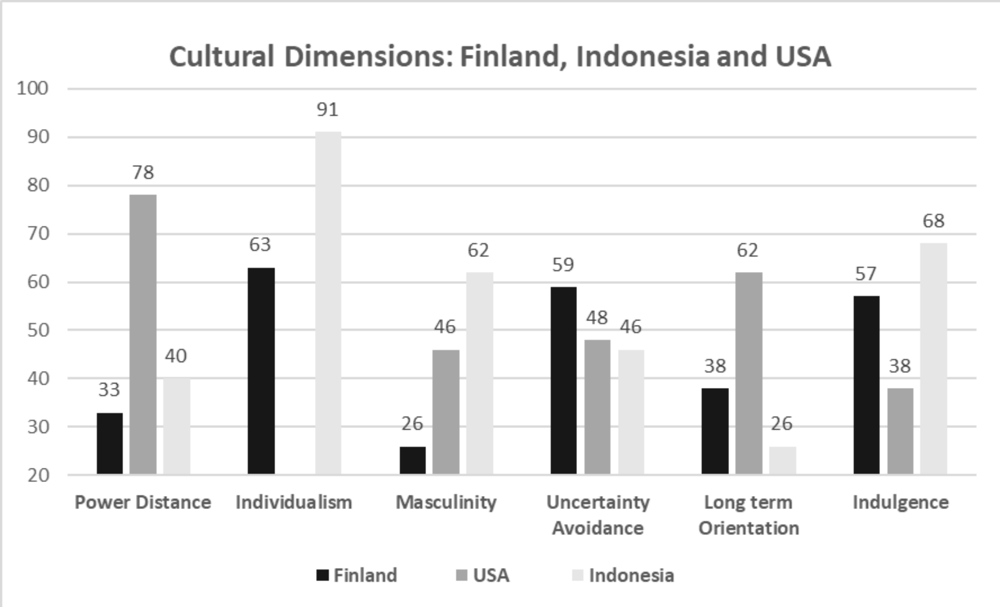

Figure 1: Hofstede's Cultural Dimensions: Finland, Indonesia and USA

Source: https://www.hofstede-insights.com/fi/product/compare-countries/

4. Methodology

4.1 Sample and Procedure

To test the proposed model, questionnaire survey method using structured questions was adopted. Two questionnaires were used to collect the data. The dataset consists of 162 valid cases. USA and Indonesia are represented by 61 respondents (38 percent) each. The remaining 40 respondents (25 percent) are from Finland. Most of the respondents (55 percent) were male. Biographic data were not included in the survey.

4.2 Measurement

Transformational leadership. Transformational leadership was measured with seven items; an example item being, *"I give a lot of appreciation and support to team members."* Responses were given on a 7-point scale ranging from "strongly disagree" (1) to "strongly agree" (7). The Cronbach's alpha was .890. *Coaching leadership.* A 7-item scale was used as a measure of coaching leadership. The respondents rated their leadership style on a 7-point scale ranging from "strongly disagree" (1) to "strongly agree" (7). *Communication style.* The communication style questionnaire with established scales had been previously used in leadership studies (Brandt Uusi-Kakkuri, 2016). It measures communication with 34 items with Likert scale of 1-7. Communication styles included were emotional intelligence, clear dialog, insecure, impatient, dominating and avoiding. Our measurement constructs showed high reliability, as the Cronbach's alphas for each scale exceeded the generally accepted level of 0.7.

Control Variables We used gender as control variable. For the statistical analysis gender was dummy-coded.

4.3 Analysis Strategy

The analysis of the data was conducted using SPSS Statistics 28.0. Hierarchical regression analysis was used to investigate the hypothesized model. Hayes (2013) PROCESS macro version 4.1 (model 4) was utilized to test the mediating effect of communication style on the relationship between nationality and 1) transformational leadership and 2) coaching leadership. We extracted 5.000 bootstrap samples to obtain the 95 percent bias-corrected confidence intervals (CI) and to examine the statistical significance of the proposed model.

5. Results

5.1 Descriptive Statistics

Table 1 shows the means, standard deviations, and correlations between the study variables. The relationship between communication style and transformational leadership was positive and statistically significant (r =.658) with regards emotional intelligence, but not the other dimensions. In addition, the relationships between communication style and coaching leadership was positive and statistically significant (*r* =.677) with respect to emotional intelligence. Table 2 shows the mean values for transformational leadership and coaching by country. The comparison of mean values shows that the highest levels of transformational leadership are found among Finnish leaders and the lowest among Indonesian leaders. The USA is between the two countries.

5.2 Testing the model

Table 3 shows the results of the hierarchical regression analysis predicting transformational and coaching leadership. The results indicate that emotionally intelligent (Model 3: β =.829, $p < 0.001$) and dominant (Model 3: β =.169, $p < 0.001$) communication styles have positive relationships with coaching leadership. In addition, Finnish leaders exercise more coaching leadership than leaders in other countries (Model 3: β =-.170, $p < 0.01$). The results also depict that that emotionally intelligent communication style has a positive relationship with transformational leadership (Model 3: β =.744, $p < 0.001$) after controlling for gender. Nationality has no statistically significant relationship with transformational leadership.

The results of the mediation analysis are presented in Tables 4 and 5. The results depicted in Table 4 show that emotionally intelligent communication style mediates the relationship between nationality and coaching leadership when comparing Finland and USA (effect = -0.3071, boot SE = 0,1274, 95 percent bootstrap CI = [-0.5495, -0.0559]), and, Finland and Indonesia (effect = -0.9356, boot SE = 0,2009, 95 percent bootstrap CI = [-1.3565, -0.5651]). Similarly, dominant communication style mediates the relationship between nationality and coaching leadership when comparing Finland and USA (effect = 0.0997, boot SE = 0,0508, 95 percent bootstrap CI = [0.0182, 0.2132]), and Finland and Indonesia (effect = 0.1053, boot SE = 0,0531, 95 percent bootstrap CI = [0.0203, 0.2246]).

With regards to transformational leadership, findings shown in table 5 indicate that emotionally intelligent communication style mediates the relationship between nationality and transformational leadership when comparing Finland and USA (effect = -0.2468, boot SE = 0,1155, 95 percent bootstrap CI = [-0.4703, -0.0142]), and Finland and Indonesia (effect = -0.8089, boot SE = 0,1826, 95 percent bootstrap CI = [-1.1817, -0.4674]).

6. Conclusion

According to these results the culture impacts communication style and communication style is closely related to transformational leadership style. Culture has an impact on two communication styles, emotionally intelligent and dominant style. Both communication styles are correlated with coaching leadership style. Emotionally intelligent communication style is connected to transformational and coaching leadership style.

Finnish leaders use more coaching leadership style than Indonesia and USA. According to Hofstede's dimensions, Finnish people are far lower in power distance, masculinity and have higher uncertainty avoidance than Indonesian and US nationals. These qualities tend to enhance discussions and mutual agreements, and usually Finnish people dislike hierarchy and dominant leadership. Also coaching style is becoming very common style for leaders in Finland.

Our results indicate the relevance of specific communication styles with and cultures. Our results also reinforce widely acknowledged relevance of emotional intelligence in aspects of effective communication and leadership. The global society is characterized by significant cross- cultural communication, real time flow of information and global travel. These interactions have led cross-cultural scholars to hypothesize cultural convergence on certain cultural attributes, and a less central role of culture on communication styles. Our findings indicate that communication style is a distinct and idiosyncratic cultural artifact that continues to represent our cultural identities. The results are somewhat surprising for younger generations whose lives have been shaped by globalization, homogeneous external environments, education and information. Thus, despite globalization, national culture continues to influence managerial behaviors.

Our results have managerial and practical implications for organizations. Despite the march towards globalization, national culture continues to have a significant effect on managerial artifacts. There is a need for leadership coaches such as mentors and supervisors to be aware of how they communicate to their proteges and also enhance their communication skills in order to be more effective. Our results provide a foundation for cross-cultural leadership development that is relevant to expatriates. Country-specific matrices for effective leadership-communication styles can be developed from these findings. Emotional intelligence continues to be relevant. Clearly, individuals with emotional intelligence are more effective as leaders across all cultures. The question of whether emotional intelligence is culturally-contingent is interesting and deserves more attention in future studies.

Culture is a crucial factor for expatriates, the wrong kind of communication and leadership style can have negative outcomes for whole team. More studies are needed from this field to explore more cultural differences in communication and leadership. Subordinates' opinions of their foreign leaders would offer new insights in this field.

Table 1: Mean, standard deviation, and correlation for the scale variables

Variable	*M*	*SD*	Gender	USA	Indonesia	COM-EI	COM-CD	COM-INS	COM-IMP	COM-D	COM-A	TF
1. Gender [a]			–									
2. USA [b]			-.073	–								
3. Indonesia [c]			-.239**	-.604**	–							
4. COM-EI	5.01	1.15	.217**	-.005	-.325**	–						
5. COM-CD	4.04	1.29	-.191*	.094	.299**	.010.	–					
6. COM-INS	3.40	1.36	.055	.108	.094	-.053	.461**	–				
7. COM-IMP	3.17	1.23	-.019	-.060	.067	.070	.323**	.311**	–			
8. COM-D	3.10	1.30	-.163*	.071	.135	.036	.347**	.210**	.383**	–		
9. COM-A	3.62	1.73	.079	-.017	.009	.098	.348**	.356**	.245**	.232**	–	
10. TF	5.13	1.26	.235**	.015	-.200	.658**	.039	-.013	.080	.030	.018	–
11. CL	5.08	1.24	.128	-.179*	-.121	.677**	-.028	-.046	.029	.134	.038	.726**

COM-EI: emotionally intelligent; COM-CD: clear dialog; COM-INS: insecure; COM-IMP: impatient; COM-D: dominant; COM-A: avoiding; TF: transformational leadership; CL: coaching leadership.
*p < .05; **p < .01; ***p < .001. a (0=male, 1=female), b (0=other countries, 1=USA), c (0=other countries, 1=Indonesia).

Table 2: Mean values for transformational leadership and coaching by country

Country		Transformational leadership	Coaching leadership
Finland	Mean	5,6227	5,7393
	SD.	,75911	,55836
USA	Mean	5,2857	5,0562
	SD	,84676	,81327
Indonesia	Mean	4,6815	4,6862
	SD	1,62409	1,68059

Table 3: Results of hierarchical regression analyses predicting coaching and transformational leadership

	Coaching leadership			**Transformational leadership**		
Variable/ parameter	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Gender [a]	.189*	.083	-.030	.262***	.189*	.081
USA [b]		-.235*	-.170**		-.056	.007
Indonesia [c]		-.380***	-.065		-.285**	-.006
COM-EI			.829***			.744***
COM-CD			-.005			.070
COM-INS			.052			.010
COM-IMP			-.077			.029
COM-D			.169***			.023
COM-A			-.042			-.062
R^2	.036	.116	.743	.069	.128	.630
ΔR^2	.036	.080	.627	.069	.059	.502
F	5.827*	6.791***	48.098***	11.569***	7.569***	28.181***
ΔF	5.827*	7.050**	60.925***	11.569***	5.256**	33.696***

COM-EI: emotionally intelligent; COM-CD: clear dialog; COM-INS: insecure; COM-IMP: impatient; COM-D: dominant; COM-A: avoiding. *p < .05; **p < .01; ***p < .001. a (0=male, 1=female), b (0=other countries, 1=USA), c (0=other countries, 1=Indonesia).

Table 4: Results of the bootstrap for the indirect effects of nationality on coaching leadership via communication style

Indirect effect	Effect	Boot SE	Boot LL 95 percent CI	Boot UL 95 percent CI
FIN vs. USA => COM-EI => TF	-.3071	.1274	-.5495	-.0559
FIN vs. IND => COM-EI => TF	-.9356	.2009	-1.3565	-.5651
FIN vs. USA => COM-CD => TF	-.0051	.0811	-.1717	.1513
FIN vs. IND => COM-CD => CL	-.0060	.0961	-.1994	.1786
FIN vs. USA => COM-INS => CL	.0411	.0473	-.0368	.1534
FIN vs. IND => COM-INS => CL	.0394	.0467	-.0325	.1523
FIN vs. USA => COM-IMP => CL	.0071	.0232	-.0369	.0620
FIN vs. IND => COM-IMP => CL	-.0024	.0229	-.0495	.0494
FIN vs. USA => COM-D => CL	.0997	.0508	.0182	.2132
FIN vs. IND => COM-D => CL	.1053	.0531	.0203	.2246
FIN vs. USA => COM-A => CL	-.0021	.0184	-.0445	.0353
FIN vs. IND => COM-A => CL	-.0046	.0186	-.0487	.0308

CI: confidence interval; COM-EI: emotionally intelligent; COM-CD: clear dialog; COM-INS: insecure; COM-IMP: impatient; COM-D: dominant; COM-A: avoiding; LL: lower limit; UL: upper limit; CL: coaching leadership. Gender was controlled for.

Table 5: Results of the bootstrap for the indirect effects of nationality on transformational leadership via communication style

Indirect effect	Effect	Boot SE	Boot LL 95 percent CI	Boot UL 95 percent CI
FIN vs. USA => COM-EI => TF	-.2468	.1155	-.4703	-.0142
FIN vs. IND => COM-EI => TF	-.8089	.1826	-1.1817	-.4674
FIN vs. USA => COM-CD => TF	.0710	.0608	-.1154	.2729
FIN vs. IND => COM-CD => TF	.0846	.1139	-.1375	.3189
FIN vs. USA => COM-INS => TF	.0085	.0608	-.1025	.1436
FIN vs. IND => COM-INS => TF	.0082	.0586	-.0932	.1456
FIN vs. USA => COM-IMP => TF	-.0042	.0178	-.0493	.0269
FIN vs. IND => COM-IMP => TF	-.0008	.0164	-.0332	.0381
FIN vs. USA => COM-D => TF	.0128	.0370	-.0604	.0939
FIN vs. IND => COM-D => TF	.0135	.0395	.-.0591	.1058
FIN vs. USA => COM-A => TF	-.0026	.0250	-.0530	.0561
FIN vs. IND => COM-A => TF	-.0061	.0261	-.0613	.0533

CI: confidence interval; COM-EI: emotionally intelligent; COM-CD: clear dialog; COM-INS: insecure; COM-IMP: impatient; COM-D: dominant; COM-A: avoiding; LL: lower limit; UL: upper limit; TF: transformational leadership. Gender was controlled for.

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Digital Transformation: A Foundational Capability Building Block Perspective on Maturing the IT Capability

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Abstract: The enterprise-wide scope of an organisation's IT capability in sustainably leveraging technology for business value is well-researched, and the level of maturity of this capability is a key determinant of an organisation's success. IT capability maturity has become more critical as technological developments continue at an accelerated pace and as whole industries are being disrupted by digital developments. Maturity in terms of IT leadership, IT processes, IT infrastructure, and a myriad of other supporting organisation-wide capabilities is required. Since the 1980s, maturity models in the literature have focused on specialist niche areas, with few adopting a holistic perspective. Across these models, a lack of consensus is evident on the key capabilities that should be matured and on what the important sub elements or building blocks of these capabilities are. How does the organisation achieve an adequate level of maturity if the required capabilities are unclear? As one of the most holistic IT capability maturity models identified, this paper undertakes a systematic analysis of the 36 IT capabilities within IT Capability Maturity Framework (IT-CMF) and the 315 sub elements (Capability Building Blocks (CBBs)) that comprise these capabilities. This research aims to identify the common sub elements or building blocks inherent across the 36 capabilities, which we will refer to as Foundational Capability Building Blocks (FCBBs), and a high-level definition of these FCBBs abstracted from the relevant sub elements and discussed in terms of their recognised importance to effecting successful digital transformations. From an academic perspective, the research provides deeper insight on common themes that are pertinent to IT capability improvement. From an industry practitioner perspective, it breaks down the complexities of IT capability maturity with a focus on a manageable number of considerations.

Keywords: IT/digital capability, maturity model, IT/digital maturity, digital transformation, foundational capability building blocks

1. Introduction

Research indicates that IT capability maturity is a key determinant of an organisation's success and a key consideration in digital transformation. Developing IT capability necessitates, firstly, understanding the broad spectrum of capabilities that require organisational focus, and secondly, determining how mature these capabilities should be. Across the literature, a lack of consensus is evident on the key capabilities that should be matured (Carcary et al, 2016). Throughout the course of this research, only one model was identified that presents a comprehensive view of the broad range of IT capabilities (IT Capability Maturity Framework (IT-CMF)) (Curley et al, 2016); this model identifies 36 distinct IT capabilities and 315 sub elements or building blocks. Singularly, this demonstrates the expansive scope of an organisation's IT capability and the potential challenges organisations may face in planning a capability improvement programme.

This paper seeks to increase clarity on the process of maturing the overall IT capability through investigating whether there are recurring themes across the different capabilities' sub elements or building blocks. Identification of recurring themes would help simplify IT capability development through enabling organisations focus on a manageable number of areas that are generically applicable to overall IT capability improvement. The research question is as follows: To what extent do common sub elements or building blocks exist across the broad spectrum of IT capabilities? To answer this question, this study undertakes a concept-centric examination of IT-CMF in order to distil and conceptualise any recurring building blocks and their focus areas. It outlines core learnings on the identified areas, enabling practitioners to break down the complexities of beginning to design an overall IT capability improvement programme.

The paper is organised as follows. Section 2 discusses the pertinent literature around capability and maturity model research. Section 3 details the research methodology while section 4 presents results of the research analysis, outlining a concept matrix of what we term 'Foundational Capability Building Blocks' (FCBBs) and their associated definitions and areas of focus. Sections 5 presents a discussion of the research findings in light of the existing literature on digital transformation, while section 6 highlights avenues for future research and draws the paper to a conclusion.

2. Literature review

2.1 Capabilities and IT capabilities

Organisational capabilities reflect an organisation's capacity to '*perform a set of co-ordinated tasks, utilising organisational resources, for the purposes of achieving a particular end result*' (Helfat and Peteraf, 2003). According to Curley et al (2016), '*collectively, capabilities coordinate the activities of individuals and groups – linking individual actions into seamless chains of actions, leading to repeatable patterns of interaction that become more efficient and effective as they are practised and internalised*'. To stay competitive, organisations must not only develop these capabilities, but must innovatively manipulate and re-configure them to respond to environmental changes. This makes them difficult to replicate by other organisations. Termed '*dynamic capabilities*' (Eisenhardt and Martin, 2000; Yeow et al, 2017), difficult to replicate capabilities support the continuous creation, extension, upgrading, protection, and relevance of the organisation's asset base (Teece, 2007) and are associated with improved capacity for organisational learning (Curley et al, 2016).

Within the context of IT, the importance of developing an effective capability cannot be understated. Without a (dynamic) capability to react to the accelerated development of innovative technologies, any advantage held by an organisation can be quickly eroded. The work of Peppard and Ward (2004) was foundational in re-orienting organisations towards a capability centric view of how to optimise value from their IT investments. Such value realisation is contingent on the creation and deployment of unique IT capabilities and the related IT-enabled business changes that are supported (Pavlou and El Sawy, 2011). Drnevich and Croson (2013) define IT capability as the organisation's '*ability to mobilise and deploy its IT-based resources, creating value in combination with other resources and capabilities, and the firm-specific IT-enabled knowledge and routines that improve the value of non-IT resources*'. Li and Chan (2019) expand current research to define the concept of dynamic IT capability and highlight its constituent components.

However, developing an organisation's (dynamic) IT capability is a multifaceted challenge. An organisation must understand the enterprise-wide scope of IT and its impact on every aspect of the business ecosystem in value co-creation activities, identify new strategic opportunities that are enabled by technological innovations, and manage the significant complexities associated with IT-enabled business change (Carcary et al, 2016; Li and Chan, 2019). In the era of digital transformations, technology is at the forefront of how a business operates and how it seizes advantage; hence technology must be considered in tandem with the broader organisational capabilities needed to leverage the technologies successfully.

Two of the most pertinent challenges organisations face include:

- *Understanding what IT capabilities are required*: The overall IT capability reflects a plethora of different capabilities and those required to deliver business value may differ depending on the industry sector, the business context, and the organisation's specific requirements (Carcary et al, 2016). While hundreds of IT frameworks/management tools exist, a lack of consensus is evident on the key capabilities that should be matured and on their inherent sub elements or building blocks.
- *Adequately developing the required capabilities*: Research indicates that when organisations possess superior IT capabilities, they perform above average (Santhanam and Hartono, 2003; Mithas et al, 2011). However, the maturity of different IT capabilities may differ greatly within the organisation and from that of industry benchmarks. The use of maturity models to assess capability maturity and develop improvement plans has received expansive treatment in the literature, however, many maturity models focus on niche areas as opposed to holistically focusing on the overall IT capability.

In section 2.2, we discuss the importance of the maturity model concept as a mechanism to support organisations in maturing the IT capability, and hone in on one maturity model that adopts a holistic perspective on the overall IT capability.

2.2 Maturity models

Maturity models are 'conceptual models that outline anticipated, typical, logical and desired evolution paths towards maturity' (Becker et al, 2010), where maturity denotes 'an evolutionary progress in the demonstration of a specific ability' (Mettler, 2010). Maturity models detail the criteria associated with different maturity levels; they provide the basis for an organisation to determine their 'as is' and desired 'to be' maturity state (Carcary, 2011) and serve as a tool to define an improvement path in alignment with best known practices (Proença, 2016;

Aguiar et al, 2018). Since the 1980s, maturity models have attracted considerable interest from the research community (Achi et al, 2016; Pereira and Serrano, 2020). Many models reported in the literature are applicable to IT but they adopt a narrow focus, concentrating on specialist niches or specific aspects of IT management (Table 1).

Table 1: Maturity model examples in specialist IT niches

Maturity Model	Source
Data analytics/management	Carvalho et al (2018), Grossman (2018).
Information governance	Proença et al (2017).
Knowledge management	Serna (2015).
Business process management	Cleven et al (2014).
Risk management	Carcary (2011), Rae et al (2014).
Information security management	Proença and Borbinha (2018).
Incident management	Aguiar et al (2018).
Supply chain management	Mendes et al (2016).
IT service management	Nord et al (2016), Mazzarolo et al (2015).
Virtual/augmented reality	Hammerschmid (2018).

Only some of those maturity models adopt a capability perspective, with many focusing on the narrower process view. From an industry practitioner's perspective there are inefficiencies and complexities from using so many tools to advance the IT capability (Curley et al, 2012). One maturity model that provides comprehensive coverage of IT management domains from a capability perspective is the IT Capability Maturity Framework (IT-CMF). This framework provides a '*single integrated enterprise IT approach*' and is designed '*to cover the range of IT capabilities needed in an IT function to deliver agility, innovation, and value for the organisation*' (Curley et al, 2016).

IT-CMF is developed by the Innovation Value Institute (IVI), leveraging the principles of open innovation (Chesbrough, 2003) and design science research (Helfert and Curley, 2012). A comprehensive body of knowledge guide to this framework was published in 2016 (Curley et al, 2016) and this serves as the basis for analysis undertaken in this paper. IT-CMF comprises a modular library of 36 IT Critical Capabilities (CCs). In line with research by Savaneviciene et al (2021), each IT-CMF CC is broken into a number of sub elements which are termed 'Capability Building Blocks (CBBs)' (315 in total). For each CBB IT-CMF defines what maturity looks like across five incremental levels and provides a series of assessment questions to determine the maturity state. To enable improvement, IT-CMF provides a set of *'practices, outcomes, and metrics (POMs)'* – practices to drive maturity progression, business outcomes anticipated from implementing those practices, and metrics to measure progress.

2.3 Breaking down the complexities? In search of common building blocks…

Given the breadth of IT capability domains (as detailed in IT-CMF), it is evident the extensive effort required by organisations to ensure an adequate IT capability maturity. The challenge is amplified by the need to not just develop those capabilities but to reconfigure those capabilities to adapt to changing business circumstances. Given the challenges organisations face in digitally transforming (Carcary et al, 2016; Sousa-Zomer et al, 2020), can the process of IT capability development be streamlined in some way? The authors assert it is worth considering the extent to which common building blocks exist across the full spectrum of IT capabilities. Identification of recurring themes would help break down the complexities for practitioners by providing visibility of common focus areas that are pertinent to advancing the overall IT capability. In other words, even if an organisation is focused on improving a specific IT capability domain such as risk management, there may be building blocks of this capability that are generically applicable to improving the overall IT capability. Hence, identification of recurring building blocks would provide practitioners with a manageable number of considerations, around which they can begin to design an overall IT capability improvement programme.

3. Research Methodology

This study involved a concept-centric examination of IT-CMF to identify recurring building blocks across different IT capabilities. The IT-CMF body of knowledge (Curley et al, 2016) was analysed with the aid of Computer Aided Qualitative Data Analysis Software (CAQDAS), specifically N-vivo. CAQDAS supported data coding of concepts, hierarchical structuring of concepts into higher order categories, memo creation, model development, and the ongoing exploration of relationships between concepts (Jackson and Bazeley, 2019; O'Kane, 2020). Relevant material associated with each IT-CMF capability was initially imported into N-vivo as textual documents. This included details on the contextual background of each capability; the capability scope including its definition and CBBs; maturity at the CC and CBB level; capability evaluation assessment questions; improvement POMs; and management artefacts to support capability improvement. Each of the 36 capability documents was examined in two stages. In stage one, analysis focused on the CC and CBB definitions to identify all inherent building blocks. The concepts identified were coded using N-vivo's free node structure as in vivo codes or in vitro codes (Strauss, 1987). In stage two, analysis was extended to the remaining artefacts in order to expand on the building blocks identified in stage one. As coding progressed the concepts were categorised into a taxonomy of higher order categories. Memos were created to clarify the emerging categories and record the authors' reflections on this categorisation.

Seven higher order categories were extracted from the data. These represent recurring building blocks across the majority of capabilities; we refer to these as Foundational Capability Building Blocks (FCBBs). N-vivo's visualisation tools enabled qualitative cross tabulation of these FCBBs with each IT-CMF capability, providing the foundation for development of a concept matrix (Webster and Watson, 2002) (see Table 2). Closer analysis of the FCBB nodes in N-Vivo facilitated greater understanding of the scope of each FCBB and enabled abstraction of the key focus areas applicable to each FCBB, expressed in generic terms (Table 3).

4. Foundational capability building blocks (FCBBs)

Table 2 presents the FCBB concept matrix, detailing the IT-CMF capabilities from which they derive. In Table 3, a high-level definition of each is abstracted, detailing in generic terms the focus areas an organisation needs to invest in to improve FCBB maturity.

Table 2: Concept matrix of FCBBs identified across IT-CMF capabilities

	Foundational Capability Building Blocks						
	Governance	Resourcing	Roles, responsibilities, & accountabilities	Skills and competence development	Culture	Stakeholder management	Communication
IT-CMF capabilities							
Accounting and Allocation (AA)	x					x	x
Benefits Assessment and Realisation (BAR)	x	x	x		x	x	x
Budget Management (BGM)	x		x			x	x
Budget Oversight and Performance Analysis (BOP)	x						x
Business Planning (BP)	x	x	x			x	x
Business Process Management (BPM)	x	x	x	x		x	x
Capability Assessment Management (CAM)		x			x	x	x
Capacity Forecasting and Planning (CFP)							x
Demand and Supply Management (DSM)				x			
Enterprise Architecture Management (EAM)	x	x	x	x		x	x
Enterprise Information Management (EIM)	x			x			x
Funding and Financing (FF)	x	x				x	x
Green IT (GIT)							x
Information Security Management (ISM)			x	x			x
Innovation Management (IM)		x	x	x	x	x	x
IT Leadership and Governance (ITG)	x		x		x	x	x
Knowledge Asset Management (KAM)			x	x	x		x
Organisation Design and Planning (ODP)	x		x			x	x
People Asset Management (PAM)		x	x	x	x		x
Personal Data Protection (PDP)	x		x	x			x
Portfolio Management (PM)	x	x					x
Portfolio Planning and Prioritisation (PPP)		x				x	
Programme and Project Management (PPM)	x		x	x		x	
Relationship Management (REM)	x		x	x	x	x	x
Research, Development and Engineering (RDE)	x	x			x		
Risk Management (RM)	x		x	x	x	x	x
Service Analytics and Intelligence (SAI)						x	x
Service Provisioning (SRP)							
Solutions Delivery (SD)							
Sourcing (SRC)	x	x			x		x
Strategic Planning (SP)		x	x			x	x
Supplier Management (SUM))			x			x	x
Technical Infrastructure Management (TIM)		x		x			
Total Cost of Ownership (TCO)						x	x
User Experience Design (UED)							x
User Training Management (UTM)		x		x			

Table 3: Definition of FCBBs

FCBB	Definition
Governance	Establish governance structures (e.g. matrixed, line of business). Outline the composition and scope of governance bodies, decision rights, and authorisation. Identify and establish reporting arrangements, issue escalation protocols, roles in complying with obligations and overseeing governance activities, and rules to govern (e.g. evaluate, direct, monitor) and control the application of authority within the organisation.
Resourcing	Establish the human, financial, and technical resource requirements to achieve objectives. Consider resource availability and suitability for deployment to new activities. Coordinate the allocation of resources accordingly and monitor resource utilisation.
Roles, responsibilities, and accountabilities	Complete job and business process designs to identify the required roles for the identified tasks. Assign employees with the requisite knowledge and experience to the identified roles. Define and allocate the associated responsibilities/obligations, and assign accountabilities to those who will be answerable for the achievement of objectives.
Skills and competence development	Identify the enabling knowledge base, and define the requisite employee skills and competences to complete task assignments and achieve objectives. Establish and make available a training curriculum and other employee developmental mechanisms (e.g. education programmes, developmental job assignments, mentoring, coaching). Record employee participation in training and developmental initiatives, and recognise and acknowledge their achievements (e.g. courses completed, certifications, skills and competence levels acquired).
Culture	Establish a culture that enables the organisation to pursue its strategic objectives and business operations (e.g. foster a work environment that instils principles of mutual respect and trust, positivity, accountability, collaboration, and teamwork into how employees think and work). Embed and sustain the customs and social behaviours required to support achievement of objectives.
Stakeholder management	Identify relevant stakeholders and through engagement, determine a path to achieving desired objectives. Establish and apply approaches that are effective in motivating and securing stakeholder support, buy-in, commitment, and ownership of key initiatives (e.g. by providing visible sponsorship, empowering stakeholder interactions, collaborations and involvement in decisions, managing expectations, providing incentives, responding to stakeholder feedback).
Communication	Establish a communication plan, and agree the communication channels (e.g. emails, reports, briefing papers, and forums) based on the target stakeholders and message criticality and sensitivity. Inform stakeholders of key developments (e.g. strategic decisions, goals and objectives, plans, policies and principles, activities and progress, outcomes, key lessons, and opportunities) to build, foster, and maintain a shared understanding and awareness of how they can contribute to the realisation of key objectives. Manage any bi-directional information exchange and respond to/action stakeholder feedback.

5. Discussion

The importance of the seven FCBBs for overall IT capability improvement is firmly grounded in the literature. In this section, we discuss key insights pertaining to those FCBBs, with a particular emphasis on their importance to organisational digital transformation.

Governance: Research indicates a correlation between effective IT governance and enhanced organisational performance (Wu et al, 2015). In the digital context, temporal, structural, and procedural dimensions of IT governance require consideration. To promote accelerated decisions, the locus of decision-making lies at lower hierarchical levels (Vaia et al, 2022). Decision-making rules and a transparent record of decision rights, delegated authority, and decision boundaries are required, as well as mechanisms to hold individuals to account. The process of IT governance centres on evaluating how IT currently supports and enables the organisation’s objectives; directing development and implementation of strategies to realise the desired future state use of IT; and monitoring IT performance and progress against plans. Appropriate reporting, exception handling, escalation and audit practices are required to track the impact of the transformation programme and oversee compliance with internal and external obligations (ISO 2015).

Resourcing: Digital transformations are resource intensive. From a finance perspective, traditional funding models do not effectively support digital service delivery (Bender-Samuel, 2018; Clanton and Waters, 2019); a shift is evident towards dynamic financial management practices leveraging pay-for use models or service-based cost models (Sebastian et al, 2017). From a technical perspective, investment is required in a stable operational backbone to enable efficiency, scalability, and operational excellence, and a digital services platform to foster business agility and rapid innovation (Sebastian et al, 2017). In terms of human resources, the organisation needs to consider how to attract, recruit, develop, and retain individuals in a landscape where there is a digital talent shortage (Carcary et al, 2016). The organisation requires ongoing visibility of resource availability, suitability, and utilisation, and capability to adjust resource allocation to optimise resource usage (Curley et al, 2016).

Roles, responsibilities, and accountabilities: New or expanded job roles are characteristic of digital transformation; these include, for example, chief digital officers, data analysts, data scientists, security and risk managers, compliance specialists, and so on. As demand for digital talent is rapidly outpacing its supply (Feijao et al, 2021), organisations are adopting more inventive approaches to finding such talent. These include leveraging external communities of expertise, social network referrals, expertise location software, internal venture funds, and crowdsourcing new digital business ideas (Carcary et al, 2016). Clear role responsibilities need to be defined and accountabilities assigned to those who will be answerable for IT-related decisions and performance. Such individuals need to be empowered to act with autonomy and responsiveness to changing environmental circumstances (ISO, 2015).

Skills and competence development: This importance of employee digital skills was amplified during the Covid-19 pandemic with the expansive transition to virtual work and commerce (Feijao et al, 2021). For digital transformations, skills are required in areas such as artificial intelligence, augmented/virtual reality, analytics and data science, cloud, internet of things, blockchain, cybersecurity, customer experience, and agile development (RedHat, 2021). In a recent survey of IT decision-makers, skillset gaps were the top barrier to successful digital transformation (RedHat, 2021), highlighting the importance of training curriculums and employee development mechanisms. Technology skills training was the top non-technology funding priority for 2022, followed by people and process skills training (RedHat, 2021). Upskilling and reskilling initiatives, industry experience opportunities, lifelong learning programmes, and cross-cutting stakeholder partnerships are suggested approaches to building a resilient, digitally saavy workforce (Feijao et al, 2021).

Culture: In a study of 40 digital transformations, 80% of organisations that addressed cultural change realised sustained improved performance (Hemerling et al, 2018). Cultural change, particularly in the context of digital transformation, requires a ‘tectonic change’ from long standing practices, as a more traditional culture based on hierarchical power structures, decision-making authority, and resource competition between functions is antithetical to a digital culture that emphasises delegation and collaboration (Hemerling et al, 2018). Digital organisations require a capability to sense and respond, embrace ambiguity and uncertainty, take risks, experiment, and continuously innovate without fear of failure (Hemerling et al, 2018). Employee autonomy, teamwork, and collaboration require greater emphasis, as facilitated through engagement and community sharing in learning networks and co-developing with business ecosystem partners (Catlin et al, 2015). The required customs and social behaviours need to be scaled at all organisational levels, for example, by embedding the practice of disruptive idea generation into strategic planning or incorporating DevOps/agile continuous iteration approaches at a tactical level.

Stakeholder management: Research indicates that capability to work with stakeholders is an indicator of organisational performance (Johnson and Filippini, 2013). Stakeholder theory emphasises the criticality of considering stakeholder interests in key organisation decisions (Barrane et al, 2021), cognisant that stakeholder importance is a function of their degree of power, legitimacy, and urgency (Mitchell et al, 1997). Critical to securing stakeholder support and ‘psychological ownership’ of digital initiatives is trust-building (Barrane et al, 2021), as it enhances multi-stakeholder co-operation and buy-in, and helps alleviate problems caused by stakeholders with alternative agendas (Zafari et al, 2020). Co-operation of and collaboration with stakeholders become more critical in the digital landscape to promote effective responses to technological change. Attention is increasingly focused on synchronised internal and external collaboration (Jagtap and Kamble, 2019) to promote innovation and value co-creation through the sharing of complementary knowledge, resources, and capabilities (Ndubisi et al, 2019).

Communication: Establishing and executing a communication plan provides transparency of digital transformation initiatives. Open and frequent communication keeps stakeholders abreast of 'the big picture' and the goals, objectives, and anticipated business impact of digital initiatives, builds mutual stakeholder understanding of what change is expected, and promotes trust to foster proactive, collaborative partnerships. Informal conversations between those leading a digital transformation and other stakeholders are also important, promoting '*collegiality, bonding, rapport building and a spirit of camaraderie*' (Barrane et al, 2021). Bi-directional information exchange needs to be effectively managed – one instance is listening and responding to stakeholder feedback, thereby demonstrating respect and increasing trust; a further instance is validating all stakeholders share a similar understanding of the project vision and aims (Barrane et al, 2021).

6. Conclusion and further research

This paper has highlighted the expansive scope of an organisation's overall IT capability – it is reflective of the maturity of several distinct capabilities each of which can be decomposed into building blocks and described in terms of a particular maturity state. Considering the scope of the IT capability can be overwhelming when planning a capability improvement programme or considering digital transformation. This paper has distilled seven FCBBs that recur across the spectrum of IT capabilities. It takes a step towards simplifying IT capability development through enabling organisations focus on a manageable number of areas that are generically applicable to maturing the overall IT capability. The importance of the FCBBs distilled is firmly grounded in the literature and it can be argued, perhaps, that they should be afforded a heightened importance in the current era of digital transformation and disruption.

The authors assert that maturity in these FCBBs is critical to enabling continuous improvement of the overall IT capability in the digital context. Mature FCBBs would help to institutionalise the required improvement practices and provide greater visibility to organisations of their capacity to drive improvement. As a useful avenue of further research, the authors recommend the development of a generic maturity framework pertaining to those FCBBs. For each FCBB, the framework should include a set of maturity assessment questions and responses, and a set of improvement practices, outcomes, and metrics to support capability improvement planning and monitoring. Testing and refinement of this framework in the organisational context, including firms that are undertaking digital transformations, would enhance its utility and credibility.

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Leadership in the Context of Corporate and Employee Social Responsibility in a Czech Company

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Abstract: Nowadays CSR research concentrates mainly on the macro-level analysis of the phenomena connected to CSR. However, differences exist among the members of stakeholder groups concerned with CSR, which can cause different results in implementing CSR strategies, it is crucial to study CSR also on the individual (micro) level. The article aims to analyse the Czech brewery's corporate and employee social responsibility in the context of leadership. Several studies reveal how important ethical leadership is because it can affect not only organizational culture, which fosters employee commitment to corporate values but also the range of CSR activities, individuals' engagement and participation. The authors of these studies stress the importance of ethical leadership, managers' encouragement, and supervisors' attitude toward the topic. The method chosen for the research is the micro-level analysis of employee perceptions, reactions, and attitudes towards the company's CSR together with their determinants. The model of psychological micro-foundations and the ESR-CSR congruence model are used. We opted for semi-structured interviews to gain in-depth and detailed inside into the thinking and perceiving of 13 administrative employees of the company. The coding and content analysis of the respondents' testimonies was conducted in the program MAXQDA. We found amongst our respondents, who represent the group of administrative employees of the Czech brewery, that the most important determinant of their CSR engagement was corporate socialization. Many of the respondents engaged in CSR activities that were related to their job. Therefore, we found room for improvement in the extra-role CSR participation of administrative employees, but also in the encouragement from the part of their supervisors. The chosen group of employees framed their CSR perceptions by trying to look at the issue from the point of view of different stakeholders. They saw the sense of doing CSR in the need for sustainability, and a positive for the company is that these employees regarded its CSR as authentic. We found mainly positive CSR reactions on the side of respondents, such as job satisfaction, organizational pride, or job pursuit intention.

Keywords: Employee social responsibility, Corporate social responsibility, Leadership, Model, Czech company

1. Introduction

Corporate Social Responsibility (CSR) is a term that is being defined very diversely. The European Commission (Corporate Social Responsibility & Responsible Business Conduct, 2020) defines CSR only as of the responsibility of enterprises for their impact on society. This definition points to another problem connected with the confusion about the term CSR. The concept is sometimes perceived as a synonym, sometimes told to be linked to or even called an umbrella term for other terms like corporate responsibility, corporate responsiveness, corporate citizenship, sustainability, sustainable development, triple bottom line management, or corporate social performance (CSP) (Ruschak, 2008). Further on, the Commission states that companies can become socially responsible by integrating social, environmental, ethical, consumer, and human rights concerns into their business strategy and operations while following the law. This definition corresponds with the view of many authors (e.g. Trynchuk et al., 2019; Tetrevova and Patak, 2019) and embraces all the three types of CSR models (economic, social and environmental).

Based on the literature research, we concluded that CSR can be defined as the social, economic and environmental issues that a company voluntarily decides to take responsibility for and consider in its decision-making while trying to take into account all the possibly contradicting requirements of its stakeholders. In this work, we will analyze the overall level of the company's CSR, employee perceptions of all the CSR activities of the chosen company and as the voluntariness plays a significant role in the employee CSR perceptions and affects subsequent employee CSR engagement (Heijas et al., 2019), all the five dimensions of the Dalshrud's definition will be taken into account.

The CSR research until today concentrated mainly on the macro-level analysis of the phenomena connected to CSR. However, as there exist differences among the members of stakeholder groups concerned with CSR, which can cause different results in implementing CSR strategies, it is crucial to study CSR also on the individual level. Nevertheless, the micro-level analysis has been neglected for a long time and today there are raising calls for micro-level research and theory development in this field. Most importantly, it is the group of employees whose perceptions of CSR should be measured because they can explain these perceptions' outcomes like employee engagement or disengagement. It is the employees who implement CSR and the consequent positive results depend on their willingness to do so. For these reasons and to be able to meet the limits of a diploma thesis, we decided to narrow our focus and concentrate on the employee CSR perceptions in the selected company. For these reasons, the article aims to analyse the Czech brewery's corporate and employee social responsibility in the context of leadership.

2. Theoretical Background

Proponents of CSR emphasize that even though CSR comes with certain costs, these costs cannot be viewed as an illegitimate waste of money as they bring benefits that, in the end, might outweigh the costs. This notion solves the problem of justification of expenditures on CSR as it shows that they have not only moral but also economic reasons (Schreck, 2009). Moreover, according to Idowu et al. (2015), embracing CSR in the everyday functioning of a firm is about solving the problem with the sustainability of our era by binding together growth, profit and innovation and sustaining them in the long run at the same time.

Anderson (1989) cites Kenneth Dayton's statement that profit is just the company's recompense for serving society well. He explains that if the company did not do so, society would tolerate neither its profit nor its existence.

Czech Business Leaders Forum sees the primary positive outcome of engaging in CSR as the long-term competitive advantage for the companies. Among other benefits not mentioned before is differentiation from the competition, building a good reputation, loyal employees, lower risk management costs, direct financial savings connected to ecological measurements, and, therefore also increase in company turnover (Steinerová, 2008). Ruschak (2008) adds the argument of strengthening the market position of the company. Santos (2011) also mentions that it has been empirically proven that through socially and environmentally responsible practices, companies can gain operational efficiencies, economies and more effective processes.

On the other hand, Blaha and Dytrt (2003) explain what a narrow approach to CSR is, by defining it as responsibility only towards the company shareholders. They recall the ideas of Milton Friedman, which are, until today, the most recalled CSR criticism. Friedman's argument against CSR activities was founded on the presumption that it is the owners of an organization that should receive the profit and that any attempt to redistribute this profit leads to ineffectiveness. From his point of view, redistribution is the task of the state, which has developed apparatus for it and the private sector should not try to substitute for it. Moreover, he argued that corporate managers are self-interested and would make un-reliable and inefficient social responsibility agents (Zu, 2009). Ruschak (2008) calls this phenomenon the contribution to the general inequality. However, Friedman did not refuse the concept of CSR as such, but he saw its essence only in legal and responsible entrepreneurship (Blaha and Dytrt, 2003).

Whether we agree with one or another side, the question today is not anymore if an enterprise should engage in CSR but to what extent it should do so. Furthermore, managerial ethics, business ethics and legality are already taken for granted in business, and companies only consider their capabilities to pursue other dimensions of CSR. Ruschak (2008) answers the question of social efficiency and effectiveness by saying that CSR activities can improve social efficiency, but the impact on social effectiveness remains unanswered. He also calls for a designated obligation of the CSR level of companies as he assumes that it cannot be based solely on their voluntariness. We doubt this is necessary as it may hamper the company's creativity and ruin its image creation process through voluntariness. Ignoring all the criticism of Friedman, a rather radical proposition of Bommier and Renouard (2018) inspired by the teaching of Elinor Ostrom is that to make a company a common (common-pool resource), we have to bring to the fore the social and ecological issues and subordinate to them the creation of shareholder's value.

The CSR research on the institutional level frequently turns back to stakeholder theory and the task to comply with possibly conflicting stakeholder demands (Heijas et al., 2019). The organizational level of research examines how CSR affects the organization and tries to understand the instrumental and financial benefits of CSR (Heijas et al., 2019). Said differently, macro-level research of CSR concentrates on the business case for CSR. These studies reveal how important ethical leadership is because it can affect not only organizational culture, which fosters employee commitment to corporate values but also the range of CSR activities, individuals' engagement and participation (Heijas et al., 2019).

3. Methodology and Data

To achieve the goal of the article, we conducted a case study research, defined by Ridder (2017) as a scientific investigation of a real-life case in-depth and within its context. He sees the advantages of case study research in detailed description and analysis, which brings a better understanding of the studied phenomenon (Ridder, 2017). We chose a Czech brewery company, one of the most transparent companies in the Czech market when it comes to CSR reporting (Kasparova and Kunz, 2013) and its CSR activities are very diverse, which makes it interesting enterprise to study.

We analyzed, namely, the CSR of the Czech brewery company through its CSR report and the interviews with the administrative employees. According to the classification of Mares (2015), we conducted a partly descriptive, partly explorative case study within the limits given by this diploma thesis. He defines the descriptive case study as a case study that is being used for a complex and comprehensive description of a real phenomenon within its context. Furthermore, we should use the explorative case study when we search for answers to real-life causal relations that are too complex to be studied through questionnaires or experiments (Mares, 2015). We opted for semi-structured interviews to gain in-depth and detailed inside into the thinking and perceiving of the administrative employees of the company.

As Ridder (2017) states, it is typical for case study researchers to use non-random sampling that does not represent the larger population. We aimed to drive conclusions for a specific group of administrative employees and possibly generalize them for administrative employees as such. The validity when conducting qualitative research is assured, according to Saunders et al. (2009), with more thorough data collection than through the size of the sample. However, Saunders et al. (2009) argue that using data saturation (the moment when new interviews do not bring any new information) may be helpful but also may not determine the needed number of participants. In general, they admit that in non-probability sampling, there exist no rules when deciding on the accurate sample size. Taking into account the limited time and frame of this research (to have the similar period of time for all the respondents), we decided to narrow the research sample frame and omit manufacturing employees to be able to drive credible conclusions. We supposed, based on our internal observation of the company's functioning, that the results for the manufacturing and administrative workers would differ significantly and we found this observation to be supported by the findings. We analyzed a homogenous group and got valid results after conducting 13 interviews when already after ten interviews, we could talk about data saturation in the fundamental areas of interest. It must be admitted that certain answers would always differ depending on the concrete CSR project in which the participant was involved (such as the CSR activity that they knew the most about) or depending on his/her characteristics (such as personal values). These variables are also discussed in the results part. Nevertheless, our aim was also to distinguish individual differences.

To gain respondents for interviews, we used the technique of volunteer sampling, more precisely self-selection sampling, where individuals volunteer to take part in the research in reaction to an advertisement. Saunders et al. (2009) suggest publicizing the need for the cases through appropriate media and subsequent collection of data from the individuals that respond to the advertisement. Thanks to our membership in the company aking into account the limited time and frame of this research," , we were able to send a bulk e-mail through our team leader to all the administrative employees of the company working in the central office in Prague. Thirty-two employees responded positively to this e-mail and 13 were interviewed regarding the limited time frame but also their time constraints and function in the organization. The interviews were conducted between 15/10/2020 and 13/11/2020 via teleconferences due to the ongoing pandemic of COVID-19 during the time of the collection of data. All the interviews were transcribed and qualitatively analysed with the help of MAXQDA software. We interviewed nine departmental specialists, two departmental directors, one trainee, and one member of the Executive Committee from six different departments. There were eight women and five men participating. We asked these questions and the area can be read in parentheses:

1. What are the company values of the company according to you? What is important for the company, according to you? (values alignment)
2. How would you describe the CSR of the company in general? (company CSR awareness)
    1. Where do you source the information about the company's CSR? (communication channels)

    2. Did you know something about company's CSR also before joining the company? (employee attraction)
    3. Did it influence your decision to join the company? (employee attraction)
3. Can you name some concrete company's activities in the field of CSR? (company CSR awareness)
    1. Do you participate in some of these activities? In which activities concretely do you participate, and how? (reaction to CSR, ESR behaviour)
    2. If yes, why did you decide to participate? If not, what impedes you from participating? (determinants)
    3. How did you get the information about these activities? Do you perceive it as enough? (communication channels and their perceived sufficiency)
    4. How do your managers react to your participation/not participation? Do you feel some kind of encouragement from their side? Do you talk about these CSR activities? (ethical leadership)
4. What do you think about the company's CSR program? What is your opinion on it? (evaluations)
5. How can you participate (if you can) in the creation of the company's CSR strategy or activities? Do you feel that you are involved? (evaluations)
6. Do you have some suggestions for the company concerning its CSR? (evaluations)
7. How did the company's CSR and its values influence you personally if they did? (ESR identity, reactions)
8. What are your personal values in life (at least 3)? (values alignment, ESR identity)
9. Do you perceive yourself as socially responsible? Why yes/no? (ESR identity)
10. Do you feel happy and satisfied in the company? Why yes/no? (reactions)

4. Results and Discussion

The Sustainable Development strategy of the selected Czech brewery stems from the corporate strategy of Asahi breweries and is adapted to the local needs and requirements. However, the main areas of interest and the general goals for these areas stay the same. CSR of the company is internally managed by the Public Affairs and Sustainable Development manager and his team. The company has a long history in CSR reporting and the sustainability report 2019 is already its fourteenth CSR report. In this report, the company stresses the fact that the report is not being printed as they believe it to be another way to save paper and be more sustainable. The goals of the company are in alignment with the priorities identified by the United Nations, and the program is complex enough to cover all three possible impacts (social, environmental and economic) of the company's activities. The company states that their goals of publicizing an SD report are to share their experience but also to highlight the areas in which they could improve.

The most important part of the report for this article talks about the company's care for its employees as we assume that they should be most aware of these activities, which concern them directly. The company presents care for the welfare and well-being of its employees through activities such as collective agreement negotiations with fair remuneration and wage growth assured in this document. Further, the company offers its employees many benefits. These include, for example, additional pension insurance, five weeks of leave allowance, flexible working hours, home office, learning and development schemes, days off on wedding day or their child's first day at school, free beer for employees, Family day, Health day, blood donation compensation and many more. Employees can collect points and claim various gifts and benefits through the company benefit shop. Recently, the company also introduced a new employee assistance program, which provides employees with free psychological, financial, health, and legal counselling.

Secondly, the company sets a goal in occupational safety to zero injuries in the company and makes efforts to attain it through preventive measures. Also, the company declares fostering diversity and creating an inclusive environment mainly through the promotion of women in the company management and the support for families and mums. Lastly, the company provides its employees with an ethical line where they can whistle-blow unethical behaviour spotted in the company.

In our previous paper (Cincalova and Toporova, 2021) we answered the questions about the assessment of the CSR of the company with the help of the Haski-Leventhal et al. (2017) congruence model (ESR-CSR). Furthermore, the level of socially responsible identity and behaviour levels were identified to find the company's position in the social responsibility matrix. This positioning was compared with the positioning of the interviewed employees to determine the type of ESR-CSR congruence of the company and its administrative employees with the connected outcomes and challenges discussed at the end of the chapter. In Figure 1 our work with the coding of interviews in MAXQDA could be seen. The codes are dedicated to the number of the respondent and the number of the question.

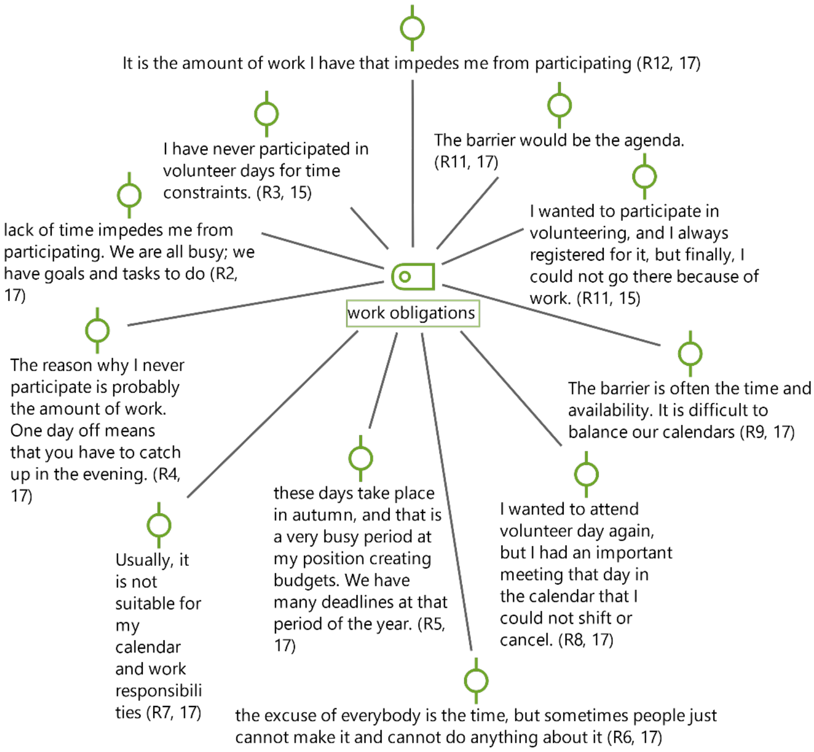

Figure 1: Segments with the work obligations code

One of the parts of the interviews was dedicated to the model of psychological micro-foundations of CSR as developed by Gond et al. (2017). Nevertheless, the part concerned with CSR engagement individual determinants was enriched by the determinants of Haski-Leventhal et al. (2017), such as the relational determinants considering the relationship between the company and the employee or the whole category of external determinants. Furthermore, the perceived CSR involvement (Pavlík and Bělčík, 2010) and the role of ethical leadership (Heijas et al., 2019) were added to the analysis. The answers of our respondents were analyzed by searching for direct but also the indirect pronunciation of CSR employee engagement determinants, company CSR evaluations, and employee reactions to the company CSR. The results showed the most important determinants, the most common evaluations and reactions amongst the respondents on which we based our recommendations for the company.

We identified a spread understanding among the administrative employees of the company as being a leader in the Czech market and the reasoning of CSR as the mission of the leader. The administrative employees think that the company should be the first one to take brave steps in the field of CSR and inspire other companies. The company could take advantage of this perception and incorporate it into its internal communication in the form of a motto. This motto could be an official motto used when communicating anything connected to the company's CSR. This way, the company

could foster organizational identification as the employees would recognize their thoughts in the motto. Another advantage would be the unification of the CSR connected communication that was also suggested by the respondents. We would propose, for instance: "(Together) we inspire/lead a better future."

We could see that the respondents perceived the internal communication connected to CSR, which went mainly through mail distributors, intranet portal, and conversations with colleagues, as enough. On the other hand, Men (2014) suggested deriving more from using the internal social networks, and we see possible advancements in this area also. Sedlacek et al. (2012) also describe the advantages and disadvantages of internal communication. The internal social network Yammer could be taken advantage of to drive more attention to the CSR program and opportunities for participation. Just like with traditional social networks, a series published regularly could be used to introduce some interesting facts about social responsibility, environmental protection, etc., while always being linked to company activities. We suggest also using more videos than text and using more informal wording as we want the employees to feel like on any other social network and not perceive it as a part of their job to use it. The goal is that they enjoy using it, and consequently, it can become an effective internal communication channel.

Four of our respondents said that they would appreciate clearer communication about CSR as, for now, it seems messed up to them. Some information goes through the portal, some through e-mail, another through Yammer, and some information go through all of these and other channels. As a result, the employees do not know where to find which type of information. One respondent had an interesting suggestion: "I would welcome a portal page with all the information about CSR and the possibilities to participate in one place. Moreover, I think that it would be fine to provide employees with complete information about where and in what they can take part because I think that many of us do not know what the options are." (R12, HR specialist) We see a big potential in such an internal portal page accessible to everyone within the organization with all the possibilities to take part individually or as a team, with CSR activities listed there. Haski-Leventhal et al. (2017) also recommend publishing an internal CSR report, which could also be part of the CSR portal page, including all the information about what is being done and what the plans and the future projects are. Consequently, everybody in the company interested in the company's CSR could find anything connected to this field in one place. This page could also include quizzes, external links, and tips for a sustainable lifestyle to make it more attractive and useful for the employees.

During our interviews, we asked explicitly about the attitude of the respondents' team leaders towards the respondents participating in CSR activities. Even though a slight majority described their team leader as encouraging, there was still a large notion of "we do not talk about this". However, many authors cited in our literature research stress the importance of ethical leadership, managers' encouragement, and supervisors' attitude toward the topic. It is an important factor, which determines the participation rate of employees in extra-role CSR activities. Therefore, we would suggest the company introduce ethical leadership training for the supervisors in the company. During this training, they would be explained the causal chain starting from their encouragement and proper communication through increased employee CSR engagement leading to all the benefits for their team and also the company. They must be explained what behaviour in this field is expected from them and how it can contribute to the company's success. We believe that gradually, the rate of employee participation in the extra-role CSR activities would increase, and the subsequent positive results would be delivered.

We think that the company does very well in the field of CSR and its communication. Nevertheless, our research showed where the spaces for improvement still exist. Therefore, we provided various measures that can be taken to fulfil these spaces and become even better in this field. The table below summarizes our suggestions for the company described before with their estimated costs and benefits. A measure is always assigned to the department under which competence it comes, then the possible costs and benefits of taking this measure. The costs are considered to be added as all the proposed measures become new projects of the already existing departments and added to the agenda of already hired employees. However, as we also discussed the workload of the employees, we provide another alternative to taking on this extra agenda. We consider hiring two interns – one for the Corporate Affairs team (CA), who would manage the internal social network Yammer and shoot the videos about CSR projects, and the second for the Public Affairs team (PA), who would help with the creation of the CSR portal page and the creation of CSR workshops for newcomers.

In Table 1, we can see that all the measures can be taken by the already existing departments and their employees without employing any additional budgets. However, if the company wanted to spread the workload, it could hire one or two interns for these CSR and communication projects. According to the information from the company, the costs of one student intern employed based on a performance agreement are approximately €6.240,00 per year. Therefore, two interns would generate a cost of approximately €12.480,00 if the internships lasted 12 months. Even if the company wanted to hire a professional graphic studio for the filming of the videos about CSR projects, it would cost approximately €7.200,00 per year (12 videos, one video per month) according to the price lists of graphic studios available on the internet. However, these costs should not threaten in no way the liquidity or rentability of a company with revenue accounting for €680 millions in 2019. Contrarily, these negligible costs would generate or foster long-term benefits that are hard to quantify and that are listed in the last column. Therefore, we think that nothing stands in the way of adopting at least some of the presented recommendations.

Table 1: Summary of proposed measures with their estimated costs and benefits

Measure	Department	Additional costs	Benefits
leader motto	CA (IC)	0	unified CSR communication, corporate identification
Yammer management	CA (IC/intern)	0/€6.240,00	enhanced effectivity of this communication channel
CSR portal page	CA (IC) + PA/intern	0/€6.240,00	clear and gathered information about CSR, higher participation in CSR activities, bigger CSR involvement
more external communication of CSR	CA (EC)+PR agency	0	organizational pride and prestige, attraction of job candidates, enhanced corporate image
video about CSR projects	CA/intern/graphic studio	0/€6.240,00/ €7.200,00	enhanced corporate image, organizational identification, higher CSR awareness
ethical leadership training	PA+HR	0	higher CSR participation, job satisfaction, employee retention
CSR workshops for newcomers	PA+HR/intern	0/€6.240,00	higher CSR awareness, the proper understanding of CSR, organizational identification, job satisfaction, employee engagement

5. Conclusions

To the conclusions, we found amongst our respondents, who represent the group of administrative employees of the selected company, that the most important determinant of their CSR engagement was corporate socialization. The relational determinants as meeting new colleagues and socialization with others seemed to influence the most whether the employee engages in the CSR activities of the company or not. Many of the respondents engaged in CSR activities that were related to their job. Therefore, we found room for improvement in the extra-role CSR participation of administrative employees, but also in the encouragement from the part of their supervisors. The chosen group of employees framed their CSR perceptions by trying to look at the issue from the point of view of different stakeholders. They saw the sense of doing CSR in the need for sustainability, and a positive for the company is that these employees regarded its CSR as authentic. We found mainly positive CSR reactions on the side of respondents, such as job satisfaction, organizational pride, or job pursuit intention. Consequently, we provide recommendations on how to take advantage of these findings. However, the respondents engaged again almost solely in the job-related CSR activities, and we were surprised by the poor effect of the company's CSR on their decision to join the company. With regard to the recent studies confirming the effect of CSR on job candidates' attraction, we provided suggestions to improve in this field.

We used the program MAXQDA for the coding of the transcripts and subsequent analysis. Based on the presented findings and the ability to provide a substantial amount of recommendations to the company, we consider the aim of the article to be achieved. We found the congruence model of Haski-Leventhal et al. (2017) and the model of psychological micro foundations of Gond et al. (2017) to be very useful in guiding the research. Even though these models had to be combined in the part that explores the CSR engagement determinants and they had to be enriched by the corporate communication factor, they proved to be helpful in the attempt to contribute to the micro-level qualitative CSR research development.

We see the limits of this research in its limited time and frame. It was impossible within the time and word limits of this paper to interview more employees or to include more groups of employees to drive more complex results. Therefore, we suggest studying also the perceptions of the manufacturing employees to see the differences in perceiving CSR. Another limit of this research may have been the interviewees' answers biased by them knowing our position within the company, as we were a part of the Corporate Affairs department at the time of the interviews' conduction. The interviewees, therefore, could have weighted their words regarding our role in the company.

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Development of Dark Triad Scales for Machiavellianism, Psychopathy and Narcissism from the Hogan Development Survey

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Abstract: Dark Triad personalities (DT: Psychopathy, narcissism and Machiavellianism) adversely affect organisational functioning. This research was designed to answer three questions: (1) Can DT personality measures be derived from the Hogan Development Survey (HDS)? (2) Will age, tenure, and gender moderate the relationships between the DT personality measures and job performance? (3) What are the relationships between scores on the DT personality measures? Three new DT scales were derived from the HDS. Scales' scores are discrete and measure independent constructs. Controlling for age, tenure, and gender showed significant negative correlations between the DT and job performance. Four hypotheses, derived from the research questions, were tested based on a sample of 918 managers' responses to HDS and independent ratings of their job performance. Mapping of HDS scales was based on Ferrell and Gaddis's (2016) correlations between HDS scales and two widely used independent DT scales. Three new DT scales were produced from the HDS. Six HDS scales map onto Machiavellianism, five onto psychopathy and four onto narcissism. All the new DT scales showed acceptable Alpha reliabilities. The mapping exercise provided evidence of construct validity. An analysis of high scorers on pairings of the three DT scales showed divergent validity. Partial correlation results after controlling for the effect of age, tenure, and gender showed significant negative correlations between psychopathy, narcissism, Machiavellianism and job performance, demonstrating criterion validity. Divergence between the three scales was found. Organisations can use the new DT scale scores for screening applicants and for identifying future management potential and provide developmental feedback to employees.

Keywords: Dark Triad; Machiavellianism; Psychopathy; Narcissism; Job Performance; Splitters

1. Introduction

1.1 Background and Purpose

A problem for researchers investigating relationships between personality disorders and the DT (Paulhus & Williams, 2002) within normal populations is that measures designed for clinical samples may not have an appropriate range of scores to allow discrimination between respondents (Douglas et al, 2012: 237). Douglas et al advise that the HDS may be a more suitable alternative. This is because it is designed to predict maladaptive symptoms in normal workforce samples, applying a continuum of scores rather than cut-off points. In addition, a study that assesses all three elements of the DT simultaneously is warranted as it represents an opportunity to isolate associations to a particular personality trait by controlling for shared variability (Jonason et al, 2012: 449).

There are three research questions: (1) Can Dark Triad personality measures be derived from the Hogan Development Survey? (2) Will age, tenure, and gender moderate the relationships between the DT personality measures and job performance? (3) What are the relationships between scores on the DT personality measures? In this research, the Hogan Development Survey will be mapped onto measures of the DT and hypotheses derived from the research questions will be tested.

1.2 The Hogan Development Survey

The HDS is designed to identify and measure dysfunctional personalities within a working population. With the passage of the American's with Disabilities Act, 1990, it became clear that instruments designed for clinical diagnoses could be viewed as evaluations of mental disabilities which are prohibited in pre-offer employment enquiries. Consequently, a need emerged for a nonclinical inventory to assess interpersonal behaviours that adversely affect the performance or reputation of people at work. This was the impetus that saw work on the HDS by Hogan Assessments to begin (Hogan and Hogan, 1997).

The Hogan 'dark side' measure is now extensively used in organisational research and practice to measure dysfunctional personality in the 'normal population.' It also has the advantage of being psychometrically valid (Furnham, Trickey and Hyde, 2012: 908). Furnham et al, (2012) report that factor analytic studies of the HDS have yielded three factors: Moving Against Others, Moving Away from Others and Moving Towards Others

(Horney, 1950). Table I provides details of the 11 scales: Moving Against (Bold, Mischievous, Colourful, Imaginative), Moving Toward (Diligent, Dutiful), and Moving Away (Excitable, Cautious, Skeptical, Reserved, Leisurely).

Table I: HDS Factors, Scales and Definitions

HDS Factor	HDS Scale	Concerns seeming…
Moving Away	Excitable	Moody and inconsistent, being enthusiastic about new persons or projects and then becoming disappointed with them
	Skeptical	Cynical, distrustful, overly sensitive to criticism, and questioning others' true intentions
	Cautious	Resistant to change and reluctant to take even reasonable chances for fear of being evaluated negatively
	Reserved	Socially withdrawn and lacking interest in, or awareness of, the feelings of others
	Leisurely	Autonomous, indifferent to other people's requests, and becoming irritable when they persist
Moving Against	Bold	Unusually self-confident and, as a result, unwilling to admit mistakes or listen to advice, and unable to learn from experience
	Mischievous	To enjoy taking risks and testing the limits
	Colorful	Expressive, dramatic, and wanting to be noticed
	Imaginative	To act and think in creative sometimes unusual ways
Moving Toward	Diligent	Careful, precise, and critical of the performance of others
	Dutiful	Eager to please, reliant on others for support, and reluctant to take independent action

Source: Gaddis and Foster (2013: p.8)

1.3 The Dark Triad

1.3.1 *Machiavellianism*

Machiavellianism, the manipulative personality, emerged from the work of Christie and Geis in 1970. They published a measure of normal personality, the Mach IV, based on items and statements from Machiavelli's original work, *The Prince, The Discourses.* Respondents that agree with these statements are more likely to behave in a cold and manipulative fashion.

1.3.2 Narcissism

Nonclinical or normal narcissism emerged with the publication of the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). Certain facets were retained from the clinical syndrome including grandiosity, entitlement, dominance, and superiority. Whether clinical or nonclinical, others find the narcissist to be socially aversive.

1.3.3 Psychopathy

Even at the nonclinical level, psychopathy is considered the more malevolent of the three DT elements. Core character elements include impulsivity, thrill-seeking, low empathy (callousness), an absence of anxiety and a lack of remorse (Ferrell & Gaddis, 2016: 2).

It is possible to consider the three dimensions of the DT as dark side personality or behavioural characteristics that can degrade job performance and interfere with an individual's ability to capitalize on his or her strengths (Hogan and Hogan, 2009).

1.4 Job Performance and The Dark Triad

Job performance is linked to competence and the technical tasks of a job (Motowidlo, Borman & Schmit, 1997). Personality has an impact on job performance and ultimately influences individual job success (Hogan & Hogan, 2009).

LeBreton et al (2018) note that research on the link between DT traits and job performance has been inconclusive. Evidence linking psychopathy to job performance is limited. This is partly because of the difficulty in securing the active co-operation of business organisations, which has limited research to a few small sample studies (Babiak, Neumann & Hare, 2010), and also because there is a lack of reliable, valid, and generally accepted tools for the assessment of psychopathy (Hare & Neumann, 2008: 219).

The role of Machiavellianism and its links with job performance has been examined intensively. However, *"there is still no consensus about Machiavellianism's function and value with respect to this important outcome"* (Zettler & Solga, 2013: 545).

Research evidence linking narcissism with job performance is mixed. Some studies have a found a positive association (Maccoby, 2000), some a negative association (Soyer, Rovenpor and Kopelman, 1999) and others no relationships (e.g., Judge, LePine & Rich, 2006). The mixed evidence emanates from the use of different measures of both narcissism and performance, either self-reported or by use of objective measures (Campbell, Hoffman, Campbell & Marchisio, 2011).

Other studies have found that reductions in the quality of job performance were consistently associated with increases in Machiavellianism and psychopathy (O'Boyle et al, 2012). Gaddis & Foster's (2013) meta-analysis found that scores on dark side personality measures (HDS) significantly predict critical leader behaviours and call for more research into possible links between dark side measures and job performance.

1.5 Demographic variables

This study includes the demographic variables of gender, age, and organisational tenure as potential moderating variables in the relationship between the DT and job performance. These demographic characteristics have long been considered important variables in psychological research. One of the principal reasons for this is because they often play a role in both human resource decisions and performance evaluations (Cohen, 1993; Griffeth et al, 2000; Sturman, 2003).

The DT personalities share a common capacity to be callous and malevolent in their day-to-day dealings with others (Paulhus and Williams, 2002). Because of these features and positive intercorrelations, some authors (e.g., McHoskey, Worzel, and Szyarto, 1998) have viewed the DT personalities as indistinguishable in normal samples and have *"lumped"* them together. The *"splitters"* argue that they would expect to see some overlap but also *some unique variance*. The correlations reported by Paulhus & Williams (2002) amongst measures of narcissism (NPI: Raskin and Hall, 1979), Machiavellianism (Mach IV: Christie and Geis, 1970) and psychopathy (The Self-Report Psychopathy Scale (SRP): Forth, Brown, Hart & Hare, 1996) show fairly moderate results. The correlation between psychopathy and narcissism is 0.50, the correlation between psychopathy and Machiavellianism is 0 .31, while the correlation between Machiavellianism and narcissism is 0.25. Despite their common "core of darkness," Paulhus & Williams (2002: 562) argue that narcissism, Machiavellianism, and psychopathy are distinct traits that warrant separate theorising and measurement.

2. Hypotheses

The research questions and references above led to the framing of four hypotheses:

H1. There is a statistically significant and negative relationship between the Psychopathy measure and Job Performance, moderated by Age, Gender and Tenure.

H2. There is a statistically significant and negative relationship between the Narcissism measure and Job Performance, moderated by Age, Gender and Tenure

H3. There is a statistically significant and negative relationship between the Machiavellianism measure and Job Performance, moderated by Age, Gender and Tenure.

H4. Pairings of Psychopaths, Narcissists and Machiavellians scales show significant divergence between scores.

3. Research Methodology

3.1 Procedure and Sample

The dataset (secondary) for this study was provided by the US-based Hogan Assessment Systems who had collected the data in 2012 from a large company in the US. They provided HDS scores, age, gender, tenure, and job performance data. Respondents are all managers. Their mean age is 37.83 with a range of 49 years and a standard deviation (SD) of 10.7. Mean job tenure is 23 months with a range of 200 and a SD of 22.2 months. Regarding gender,73% (649) were male and 27% (240) were female while 29 respondents did not disclose their gender.

3.2 Scales

3.2.1 Dark Triad Scales

The Hogan Development Survey (HDS) is described above in Table I. It comprises 11 scales and 154 items in the form of statements to which a respondent indicates a 0 to "disagree" or a 1 to "agree". Each HDS scale has fourteen items, incorporated into three subscales. Items are scored so that higher scores represent more dysfunctional tendencies. (Hogan & Hogan, 2009: 14). Ferrell & Gaddis (2016) sought to examine correlations between existing DT measures and the HDS at the subscale level. They correlated the 11 HDS scales with two widely used independent DT scales: The Short Dark Triad (SD3: Jones and Paulhus, 2009), a proxy measure for Machiavellianism, psychopathy, and narcissism as well as the Narcissistic Personality Inventory (NPI-40, Raskin & Terry, 1988), each a validated instrument. Their results suggest some overlap between scales across measures but indicate that DT measures assess part of the dark side personality space, but with two HDS Scales, Diligent and Dutiful, unrelated to DT dimensions.

Ferrell and Gaddis's (2016) results were used by the author as the study provides evidence of the links between the DT and the HDS. This current study extends their work. The overall results are shown in Table II, while details of the research are provided by XXXX (2021) which shows the significant correlations for Machiavellianism, psychopathy, and narcissism. Where all three subscales of an HDS scale are significantly correlated with a DT scale, they are then included in the taxonomy of the final scales used in this study. Table II shows that six HDS scales map onto Machiavellianism, five onto psychopathy and four onto narcissism. Bold and Mischievous map onto all three DT profiles whilst Skeptical and Imaginative, map onto two. There were no significant correlations with all six subscales of HDS Diligent and Dutiful scales.

TABLE II: Mapping the Dark Triad and Hogan Development Survey

Dark Triad Scale	HDS Scale	Description
Machiavellianism	Excitable	Moody, hard to please, intense but short-lived enthusiasm for people, projects, or things.
	Skeptical	Cynical, distrustful, and doubting others' intentions.
	Reserved	Aloof, detached, and uncommunicative, lacking interest or awareness of the feelings of others.
	Leisurely	Independent, ignoring people's requests and becoming irritated or argumentative if they persist.
	Bold	Unusually self-confident, feelings of grandiosity or entitlement, over-evaluation of one's capabilities.
	Mischievous	Risk taking and testing the limits, needing excitement, manipulative, deceitful, cunning, and exploitative.
Psychopathy	Skeptical	Cynical, distrustful, and doubting others' intentions.
	Bold	Unusually self-confident, feelings of grandiosity or entitlement, over-evaluation of one's capabilities.
	Mischievous	Risk taking and testing the limits, needing excitement, manipulative, deceitful, cunning, and exploitative.
	Colourful	Expressive, animated, and dramatic, wanting to be noticed and needing to be the centre of attention.
	Imaginative	Acting and thinking in creative and sometimes odd or unusual ways.
Narcissism	Cautious (Reversed)	Reluctant to take risks for fear of being rejected or negatively evaluated.
	Bold	Unusually self-confident, feelings of grandiosity or entitlement, over-evaluation of one's capabilities.
	Mischievous	Risk taking and testing the limits, needing excitement, manipulative, deceitful, cunning, and exploitative.
	Imaginative	Acting and thinking in creative and sometimes odd or unusual ways.
Not relevant	Diligent	Meticulous, precise, perfectionistic, inflexible about rules and procedures, critical of others' performance.
	Dutiful	Eager to please and reliant on others for support and guidance, reluctant to take independent action or go against popular opinion.

3.3 Demographics and Job Performance Scale

Demographic data on age in years, tenure in months and gender (male or female) were available. Job Performance was based on supervisor ratings collected using an online performance rating form with a 5-point scale: 1=Not Effective; 2=Needs Improvement; 3=Meets Expectations; 4=Highly Effective; and 5=Exceptional.

4. Findings

4.1 Hypotheses and Validity Testing

Results reported in Table III show that Hypotheses 1, 2 and 3 are supported. The partial correlations show a statistically significant relationship between each of the DT elements and job performance when controlling for the influence of age, gender and tenure. Evidence is also provided regarding criterion validity. The table presents the Partial & Bi-variate correlations between Dark Triad Scales and Job Performance. The right-hand column, Bivariate, shows Pearson product-moment correlations for each of the DT scales with Job Performance but not controlling for age, tenure and gender. The negative correlations are significant at the 5% level for Narcissism but not significant for Psychopathy and Machiavellianism. All three demographic variables were then entered together. The left-hand column in Table III, Partial, shows the partial correlation results after controlling for the effect of age, tenure, and gender. There are significant negative correlations between job performance and psychopathy, narcissism, and Machiavellianism. This suggests that controlling for age, tenure and gender has a greater effect on the strength of the relationships between the DT and job performance, with psychopathy and narcissism significant at the 1% level.

TABLE III: Partial and Bi-variate Correlations between Dark Triad Scales and Job Performance

	Partial			Bivariate	
Psychopathy	-0.100	**		-0.060	
Narcissism	-0.097	**		-0.067	*
Machiavellianism	-0.069	*		-0.038	
df	856		N	918	

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

4.2 Reliability

Cronbach alpha scale *reliability* values (Cronbach, cited in Field, 2013) were determined. Hair et al (2018) state that 0.6 and above is acceptable for exploratory research, whilst Nunnally suggests that values of 0.5 and above will also suffice in the early stages of research (Field, 2013). This study showed that the Cronbach alpha for Narcissism is 0.6, Psychopathy is 0.8 and Machiavellianism is 0.6. Therefore, all of the DT scale's Cronbach alpha values are within the acceptable ranges just cited and so are reliable.

4.3 Relationships between Dark Triad Variables

In order to identify those with high scores on each DT scale, new variables were developed whereby 'high scorers', those cases with scores above one-half a standard deviation above the mean, i.e., the top one-third (33%) of the sample, were assigned 1 and 'lower scorers', those in the bottom 33%, were assigned 0. Three pairings of the DT constructs, Psychopathy-Narcissism, Narcissism-Machiavellianism and Psychopathy-Machiavellianism were compared using Crosstabs (2 by 2) and Pearson Chi-square.

TABLE IV: Dark Triad Variable Pairings and High Scores on the DT Scales

DT Pairing	High scores on both %	Other scores %	Chi Sq. Value	Sig Level
Psychopathy-Narcissism	28.5	71.5	529.8	0.001
Narcissism-Machiavellianism	20.5	79.5	154.1	0.001
Psychopathy-Machiavellianism	24.2	75.8	284.6	0.001

Results presented in Table IV show highly significant divergence on all three DT pairings, thus providing support for H4 and evidence of discriminant validity. For Psychopathy-Narcissism, 28.5% of the sample shared higher scores (1) while 71.5% did not. The Chi-square value from the Crosstabs was highly significant, reflecting a clear divergence of scores on these two DT constructs. With Narcissism-Machiavellianism, 20.5% of the sample shared higher scores and 79.5% did not. The Chi-square value was also highly significant, reflecting a clear divergence of scores on these two DT constructs. For Psychopathy-Machiavellianism, 24.2% of the sample shared higher scores while 75.8% did not. The Chi-square value again was highly significant, reflecting a clear divergence of scores on these two DT constructs.

5. Discussion

5.1 Correlations between the Dark Triad and Job Performance

LeBreton et al (2018: 393) consider that simple bivariate relationships between DT traits and job performance may be an oversimplification and that researchers should consider possible moderators of the relationships between the DT and job performance. The aim of the partial correlations was to test hypotheses H1 to H3. They posited that the demographic variables of age, gender and tenure will moderate the relationship between each of the DT personality variables and job performance. The partial correlation results support the case for moderation. Controlling for age, tenure and gender has a greater and significant effect on the strength of the relationships between the Dark Triad and job performance.

O'Boyle et al (2012) hypothesised that Machiavellianism, narcissism, and psychopathy will all be negatively related to job performance. They found that in authority roles, narcissism showed a significantly stronger relationship to job performance (-.48) at the .05 confidence level. For individuals in positions of authority, such as managers, the higher the level of narcissism, the lower the quality of their work product (p.564). Other literature also indicates that authority acts as a moderator, strengthening the relationship between narcissism and job performance (Judge, Piccolo and Kosalka, 2009: 863).

O'Boyle et al (2012) also found that elevated scores on Machiavellianism were associated with lower performance. The r_c value was relatively small but was statistically significant and supports the finding in this research. They note that the negative relation may not be particularly consistent across subpopulations (p.564). They also found that psychopathy was negatively related to job performance (r_c -.100). Even though a small effect size, it is significant and replicates the finding made in this research. However, O'Boyle et al (2012: 564) found that narcissism has no overall relationship with job performance, although it was significant for positions of authority which is also in line with this study.

5.2 Reliability and Validity of Dark Triad Scales

The findings show that all the DT scales have acceptable alpha reliabilities above threshold levels recommended by Hair et al (2018) and Nunnally (cited in Field, 2013). The partial correlation results shown in Table III demonstrate criterion validity with significant results for all three DT scales against job performance. The mapping exercise, correlating HDS scales with scores from two valid external scales, provide evidence that the three DT constructs are covered by some HDS scales, demonstrating *construct validity*. The findings from Table IV provide some evidence of discriminant validity, see below. These overall results provide sufficient evidence to support the use of the new DT scales in applied settings.

5.3 "Lumpers" versus "Splitters"

The DT constructs share some common traits. As a result, some authors (e.g., McHoskey, Worzel, and Szyarto, 1998) view the DT constructs as indistinguishable and have "lumped" them together. The "splitters" argue that they expect to see some overlap but also some unique variance. Paulhus & Williams (2002) argue that narcissism, Machiavellianism, and psychopathy are distinct traits that warrant separate theorising and measurement. O'Boyle et al (2012) found a high percentage of non-common variances in correlations between all three DT pairings and concluded that Machiavellianism, narcissism, and psychopathy are distinct constructs (p.571).

The findings from this research support the "splitters" argument. The research adopted a different approach to correlation by identifying high scorers and comparing frequencies on pairs of DT constructs. Using case scores is more precise than broad relationships as they focus on each individual's score. Results showed a clear majority of respondents did not share high scores on each pair of DT constructs and highly significant divergences on all three, thus providing support for H4. Results thus confirmed that the partitioning or "splitting" of the DT variables should be treated as distinct constructs for theory, for measurement, assessment, and development purposes.

6. Limitations and Further Research

This research is based on a large sample (N=918) but, is a single study of managers from a US company with a western culture. Demographic data only covered age, gender, and tenure because the study was based on secondary data. HDS sub-scale data were not available which ruled out a more rigorous analysis which could have been beneficial by identifying sub-scale facets that differentiated DT behaviours. The secondary nature of the data meant that further information was not available on supervisor ratings. Given these limitations, further research would be beneficial to extend the application to other organisations to broaden validity and generalisability. Other studies should consider the use of the new DT scales for selection, identification and development purposes. Future research could benefit from looking at the context around those with dark personalities rather than looking just at those aversive personalities in isolation.

7. Contribution to knowledge

One aim of this study was to assess the viability of the Hogan Development Survey (HDS) as a single, valid and reliable test to measure the three Dark Triad personality scales. It answers the call from researchers (Rauthmann, 2012; Wu and LeBreton, 2011) for improved measurement of the DT as current measures appear "inadequate", relying almost entirely on the use of clinical instruments (O'Boyle et al, 2012).

Construct validity of the new DT scales was demonstrated by the scale mapping exercise conducted in this research. *Criterion validity* was established by applying the three new DT scales against measures of job performance. By controlling for the effects of age, gender and tenure, the partial correlations show that all three DT variables significantly and negatively predict job performance. The results answer the call from O'Boyle et al (2012) for a different set of control variables or moderators that better explain the variance in effect sizes.

Another contribution is related to the "lumpers" versus "splitters" debate. Whilst there is evidence of expected overlap, the findings in this research show that for each of the three DT personality pairings, a clear majority of respondents did not share high scores, supporting the "splitters" case, therefore providing some evidence of *discriminant validity.* Finally, Cronbach's alpha test of *reliability* for the narcissism, psychopathy and Machiavellianism scales were all above the acceptable ranges cited in the literature and so are reliable.

8. Contribution to practice

As the DT becomes more integrated within applied psychology and organisational behaviour, its application to employee selection (and by implication, identification of potential and development) becomes one of the most important criteria in judging worth (O'Boyle et al, 2012). One contribution is to employee selection and the potential application of the HDS incorporating measurement of all the DT constructs to a normal (nonclinical) population. As LeBreton et al (2018) point out "One of the principal advantages of using the HDS is that it provides information not only about the DT traits but also about other maladaptive or problematic tendencies that may be particularly disruptive in organisational contexts" (p.405).

Organisations could apply the HDS as a single instrument to measure all three DT constructs' scores, thus saving time and money. The DT scores could be valuable in complementing the job interview. Furthermore, the behaviours associated with the dysfunctional dispositions assessed by the broader application of the HDS can be enhanced by viewing high scores on the individual scale scores in the context of the other scales (Hogan and Hogan, 2009).

9. Conclusion

This paper is of interest to those who are involved in identifying the potential of new personnel, their selection and development. It describes how measures of narcissism, psychopathy and Machiavellianism can be derived from a single personality questionnaire, the HDS, which is more efficient and cost-effective than using separate scales to measure them. Confidence in applying these new scales for employee selection, identification and development is provided by the findings presented on the reliability, and the construct, criterion and discriminant validity of the new scales. Finally, this paper answers the three research questions posed earlier. First, can DT personality measures be derived from the Hogan Development Survey? Secondly, will age, tenure, and gender moderate the relationships between the DT personality measures and job performance? Third, what are the relationships between scores on the DT personality measures?

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DIVE Project: Sharing Experiences of non-formal Education in Social Entrepreneurship

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Abstract: The social entrepreneurship approach is presented as a basis for helping to solve problems that exist in society. Social economy activities play a key role as they combine innovation with the execution of solidarity relations between the community and the involved environment, thus highlighting their mission and contribution to sustainable development. This study aims to share the reflection of the European project "DIVE" of non-formal education on social entrepreneurship, presenting editions, main developed activities, and involving partner entities. It also aims to understand its impact on the perceptions of project participants and coordinators, as well as its evaluation and recommendations. Additionally, it tries to understand if changing the world through social entrepreneurship is or is not a utopia of contemporary society. For these purposes, research based on a mixed approach was developed and materialized through 2 surveys: one for the project participants and another one for the coordinators. This study shows the high impact of DIVE, both for the participants and for the coordinators and society. Indeed, the results reveal a great approach by all involved in the community, with a strong connection between the Academy's formal education and non-formal education. The project seems to have provided and developed tools that allowed young people to successfully face the challenges of the labor market, encouraging the creation of social enterprises and a closer look at sustainability issues. Through the involvement and active participation of young people, the promotion of modern European values is strengthened and a more equitable approach towards developing countries and stakeholders is attempted. Important skills are worked on and a more critical and reflective mentality, necessary for building the desired future, is built.

Keywords: Innovation; Formal and Non-formal Education, Social Entrepreneurship; Social Innovation; Sustainability; Utopia

1. Introduction

Globalization, uncertainty, and change mark an era of all kind's huge problems, namely economic, social, and environmental ones. Nowadays a community approach to "fight" against these issues and social economy organizations emerge as pillars, their mission based on the fulfillment of community solidarity relations between the surrounding environments (Mendes, 2017). Paradigms are changing and new solutions are required to expand human development, allowing its valorization and its growth as a changing agent. Education can thus inspire social change (Yami et al., 2021; Ramus et al., 2018; Papadopoulos & Hegarty, 2017) by opening new horizons and making the individual aware of its power in building a better future (OECD, 2018).

The concepts of social entrepreneurship and sustainable development intersect (Picciotti, 2017) and social entrepreneurs use corporate means to provide systemic solutions for social and environmental problems Partzsch & Ziegler, 2011), while guaranteeing their autonomy and sustainability (Mair & Marti, 2006). Most of the literature on social entrepreneurship focuses on the relevance of small and medium-sized enterprises (SMEs) and entrepreneurship for economic development (Simón et al., 2017). However, the recognition of opportunities is conditioned by the entrepreneurial knowledge and innovative skills of entrepreneurs (Hall et al., 2010; Santos et al., 2020), which are recognized as the engines of sustainable development (Patzelt & Shepherd, 2011). Academic discourse on how this process is done is very scarce among entrepreneurs (Onwuegbuzie & Agwu, 2018).

The concept of social entrepreneurship is recent and overlaps with the notion of corporate social responsibility (Campinho et al., 2020). In its kernel, entrepreneurs are seen as social agents and their main purpose is the creation of social value instead profit value, therefore meaning that both paths do not can coexist (Marques & Dhiman, 2020). Situations, where a part of society is neglected or disadvantaged, are identified, and paths are designed to find solutions and resolve their causes rather than resolving only the symptoms they manifest. Networked partnerships and cooperative work are central to the sustainability of their ventures (Ferreira et al., 2019).

This study is divided into 4 main sections. After a Literature review of concepts on social innovation, social entrepreneurship, sustainability, and innovation, section 3 shows the methodology, data, and results of gathered data. Discussion is presented in section 4 and Conclusions in section 5, as well as limitations and suggestions for future research.

2. Literature Review

2.1 Social Innovation and Social Entrepreneurship

Social innovation is an important research theme, being especially highlighted by Western academics and political management (Bassi, 2018). There is no consensus on what concerns its definition, but all definitions seem to acknowledge the fulfillment of social needs and the upgrade of social inclusion as a mainstay (do Adro & Fernandes, 2020). It can be analyzed through a perspective of solving particular social problems and systemic and structural issues (Nicholls et al, 2015).

In this context, social innovation is perceived as projects and ventures that aim to solve social problems, while endorsing social transformation, across empowerment, inclusion, participation, and new relationships (Lévesque, 2012; Quandt et al., 2017). It matches innovation with different social players (do Adro & Fernandes, 2020), with a profit or non-profit goals (Schumpeter, 1961), driven by social distress and challenges (Dawson & Daniel, 2010).

Social entrepreneurship may be seen as a novel activity that intends to create producer surplus by reducing negative externalities and/or creating positive externalities via the incorporation of the core of society as well as entrepreneurship constructs (Newbert, 2014). The theme is sensitive because it reflects the mix of a passion for a social mission and the image of discipline linked to management, innovation, and determination (Dees, 2012). Social entrepreneurship may require higher support for social legislation and policies (Peredo & McLean, 2006), and its role is crucial for the achievement of the Sustainable Development Goals (Campinho et al., 2020).

2.2 Sustainability, Innovation, and Society

Sustainability is a global challenge demanding innovation and innovation is critical to business (Luqmani & Leach, 2017). Innovation and sustainability shape an important link in the search for environmental, economic, and social development (Michelino et al., 2019), being innovation an important tool for achieving sustainability (Adams et al., 2016). Research stresses the relevance of innovation for sustainability as well as the goals of sustainable development (Christensen, 2019). Due to these copious studies, innovation is recognized as the main engine of industrial growth, as well as one of the main reasons of social and environmental disorders (Hall & Vredenburg, 2003) However, innovation is an important development device, particularly if encouraged by public policy or voluntary initiatives. Despite the presupposition that innovation raises sustainability, innovations should generate positive economic, social, and environmental outcomes at the same time (Kuzma et al., 2020).

The benefits of innovation may grow to individuals, groups of people, communities, industries, societies, nations, regions, and the world. They all follow innovation for better preparation for the future (Canton, 2016). However, innovation should not passively be future smart by preparing to meet the uncertain future by being predictive, adaptive, and agile. Instead, innovation should be more assertively active in creating a smart future that provides more opportunities for a better quality of life (Lee & Trimi, 2018). The world is changing and there is a clear need for paradigm shifting. Civil society is the kernel for the needed change strategy, based on identified collective shared visions (Dieguez, 2018).

2.3 Education for Sustainable Development

According to the United Nations, Education for Sustainable Development permits every human being to acquire the necessary knowledge, skills, attitudes, and values to build a sustainable future (UNESCO, 2005). Education is what identifies the essential framework conditions for action for the members of any society (Dieguez, 2012). However, sustainability is a longitudinal multidisciplinary issue, being the focus of Education for Sustainable Development (ESD) knowledge, skills, and attitudes as related to and affecting a sustainable future (Lockart, 2016). It promotes general competencies such as criticality, ethical imagination, creativity, and collaboration, among others.

One critical component of education is non-formal education (Kieu & Singer, 2015), being especially critical in developing countries (Kieu & Singer, 2015). Therefore, the non-formal sector enables access to education for marginalized groups (Mahruf et al., 2011). The value of the non-formal education sector is an important supplement to formal education, not just for ESD, but for education in general (Adam et al., 2021). Non-formal education can be just as effective as, if not more effective than, the formal sector (Brennan, 1997).

Non-formal education can significantly contribute to developing a supportive, sustainable, and inclusive ecosystem for social entrepreneurship: playing a tremendous role in addressing the issue of skills shortages; involving key stakeholders in the process of support; modernizing education; providing young people with high-valued skills, abilities, and knowledge (Borzaga & Galera, 2012). In addition, the skills through youth work and participation in non-formal education activities can help to promote social entrepreneurship and contribute to the personal development of young people in general. This is the form of education of choice for a better and more prosperous future for the young generation (Kimmerle, 2015). Non-formal education can take different forms and can include programs such as school training, seminars, forums, job shadowing, study visits, and many others, preparing young people for their active involvement in the social entrepreneurship field. As a voluntary, participatory, and learner-centered process, non-formal education can take place in a diverse range of environments and situations that can be staffed by professional learning facilitators and by volunteers. It can be based on involving individual and collective process-oriented approaches based on experience, and action and applied in different contexts (McLaughlin et al., 2016).

3. Methodology

This study intends to share the reflection of the European project "DIVE" of non-formal education on Social Entrepreneurship, presenting editions, main developed activities, and involved partner entities. It also aims to understand its impact on project participants and project coordinators, as well as their evaluation and eventually recommendations. A further aim is also to realize whether changing the world through social entrepreneurship is a utopia of contemporary society, their interpretation as well as the experimental conclusions that can be drawn.

3.1 Methodological paradigm and procedure

The present research used a mixed methods approach, combining quantitative and qualitative research to address a research question. The aim of this option is related to the possibility of establishing a more complete understanding of the issue, triangulating findings, developing a complementary picture, identifying trends, and validating results, as argued by McLaughlin et al. (2016).

This study was developed through a case study of the European project "DIVE". For this purpose, 2 questionnaires were conducted: one for project participants and another for coordinators. The population under study relates to all participants (165) and coordinators (30) who were involved in this project throughout the 3 editions. The obtained sample was formed by 79 participants (response rate of 48%) and 21 coordinators (70% response rate). The questionnaires were carried out between June 1 and September 22, 2019, through the DIVE Alumni (closed group) on the Facebook platform.

Within the scope of the present study, the 2 used questionnaires were simplified in terms of structure and are mostly composed of closed questions. Responding to the case study objectives, the questions were grouped into 4 dimensions, namely: demographic characterization, perception of the Project´s impact, project evaluation, and changing the world.

3.2 Dive Project editions

The DIVE project arose from the perception of mass migration of young people out of the country, as well as the need to create alternative and innovative approaches to solving social, environmental, and economic problems through intersectoral cooperation and using effective tools and business models. The "DIVE" is a capacity-building project co-founded by the European Commission through the Erasmus+ Action KA2, and consists of 3 editions, namely Dive 1: "Dive in Social Entrepreneurship", Dive 2: "Dive deeper" and Dive 3: "Dive 3: Zero to One > 1 to N". The main objectives of the project were to provide for the active development of human capital, as well as encourage the practice of social activities. It is also intended to establish effective paths for job creation for young people in cooperation with the different involved parties. The project leader was Youth Alliance, a non-profit association in Macedonia.

3.2.1 Dive into Social Entrepreneurship

The main objective of this edition was to provide a path to the active development of human capital and a practical incentive for social entrepreneurship. It occurred between December 2016 and 2017 and included various activities. It had the participation of young people, project coordinators, and representatives of institutions and authorities.

Table 1: First edition framework (own elaboration)

Involved countries	Main developed activities
Macedonia, Bulgaria, Turkey, Greece, Romania, Brazil, South Africa and Costa Rica	Initial seminar in Skopje: December 15-18, 2016
	Local research studies in Skopje: January to February, 2017
	Seminar in Iasi: 16 to 22 February, 2017
	Training course I in Florina: March 17th to 24th, 2017
	Training course II in Istanbul: 5 to 11 May, 2017
	Study visits in Sofia: June 12th to 19th, 2017
	Job shadowing in the countries involved: June to September, 2017
	Evaluation meeting in Krusevo: December 1-4, 2017

3.2.2 Dive Deeper into Social Entrepreneurship

While DIVE 1 focused on understanding young people regarding the meaning of social enterprise, the second edition concentrated its study in deepening matters, such as legal forms of business, youth policies, and financing for start-ups, as well as the development of ideas. It occurred between December 2017 and 2017. During the Dive Deeper in Social Entrepreneurship edition, numerous mobility activities were implemented, in which several aspects of social entrepreneurship and skills development to combat youth unemployment were considered.

Table 2: Second edition framework (own elaboration)

Involved countries	Main developed activities
Macedonia, Bulgaria, Turkey, Greece, Romania, Portugal, South Africa and Costa Rica	Initial seminar in Skopje: December 1-4, 2017
	Training course I in Krusevo: January 21st to 27th, 2018
	Training course II in Iasi: March 3-8, 2018
	Activities (public awareness): January 1 to April 30, 2018
	Training course III in Sofia: 3 to 8 May, 2018
	Training course IV in Barcelos: June 22-28, 2018
	Activities (public awareness): May 1 to July 31, 2018
	Evaluation meeting in Krusevo: December 3-6, 2018

3.2.3 Dive Deeper

DIVE 3 is based on collaboration for innovation and exchange of good practices, in which the main objectives establish the link between the concept of social entrepreneurship and the formula "Zero Poverty, Zero Unemployment, Zero Emissions Carbon". During this edition, several mobility activities were developed, in which the themes of poverty, unemployment, and the environment were addressed, to create solutions to these problems.

Table 3: Third edition framework (own elaboration)

Involved countries	Main developed activities
Macedonia, Romania, Peru, Italy, Slovenia, Poland, Bulgaria, Nicaragua, Greece, Romania, Portugal, South Africa and Costa Rica	Initial seminar in Skopje: February 7-10, 2019
	Study visit in Ljubljana: May 13-18, 2019
	Training course in Iași: September 18th to 24th, 2019
	Study visit to Cape Town: August 5-10, 2019
	Jobshadowing (Peru, Costa Rica, Nicaragua): August to September, 2019
	Seminar Dive 3 in Skopje: October 24-27, 2019
	Final evaluation meeting in Skopje: February 7-10, 2020

3.3 Dive Project main Partner Entities

During the 3 editions of the project, some countries were involved through their entities that contributed to the cooperation and development of activities. The respective entities were Macedonia, represented by the Youth Alliance-Krusevo (YAK), Bulgaria by the National Youth Forum of Bulgaria (NYF), Turkey by the International Blue Crescent Relief and Development Foundation (IBC), Greece by the Association of Active Youths of Florina (OENEF), Romania by EuroDEMOS, Portugal by Association For all (IAFA), Peru by Social Work Lab, South Africa by Belle and Company (Belle & Co.) and Costa Rica by ACI Costa Rica. Each of these entities bases its purpose on improving the quality of life in society in a sustainable way, through several areas of performance.

3.4 Results

3.4.1 Analysis of Participant Perception

Considering the 79 respondent participants (response rate 48%), they were mainly male (51%), aged 25 and 35 years old (48,10%), already got an academic degree (67%), and came mainly from Romania (18,99%), Costa Rica and Turkey (12,8%).

The main acquired skills within Dive Project are linked with the development of creative thinking (24.17%), intercultural skills (21.80%), encouraging an entrepreneurial mindset (18.96%), and positive attitudes toward change (17.54%). With the development of these skills, and in accordance to Santos (2012) research, the results reveal that the most valued values among participants were multiculturalism (17%), participation (14.99), cooperation (14.41%), mutual support (11.82%) and solidarity (11.24%). The most widely used values during the project are multiculturalism (17%), followed by participation (14.99%), and cooperation (14.41%). According to the results, it was verified that 62.53% of the participants totally agree/agree that after they participated in the project they got to know the concept of social entrepreneurship, and 45.56% of the participants fully agree that they acquired an entrepreneurial mindset and developed more creative thinking.

Concerning the impact that the project had on each participant, it seems that it had a very significant impact on the participants (48.17%). Participants highlighted the development of creative thinking (12.50%), the incentive to entrepreneurial mindset (11.98%), intercultural skills (11.72%), development of skills in the area of social entrepreneurship (10.16 %), and positive attitudes toward change (9.38%). They also consider that it enabled the creation of accessibility, cooperation, support, and inspiration in social businesses (8.33%), helped in the collaboration and exchange of good practices in social entrepreneurship (8.07%), and offered non-formal education activities (7.81%). Most participants got to know the concept of social entrepreneurship (62.53%).

After the project, 18.34% of the participants started companies linked to social. Regarding the evaluation of the project, it was found that 55% rated the project as "very good" and 30% as "good". 95% of the participants would recommend participation in this project. To understand whether changing the world through social entrepreneurship is a utopia of contemporary society, 40 respondents answered that it is not a utopia.

3.4.2 Analysis of Coordinator Perception

Considering the 21 respondents (response rate 70%), they were mainly male (62%), aged 25 and 35 years old (71,43%), already got an academic degree (61,9%), and came mainly from Greece (18,18%) and Bulgaria (13,64).

The majority (12) of the respondents referred to the existence of collaborations/partnerships within Dive project partners. However, of the 21 coordinators, 61.67% entered into partnerships with local organizations. Regarding the evaluation of the project, 62.15% of the responding coordinators rated the project as "good", and 17.68% as "very good". Regarding the question about the recommendation to participate in this project, every coordinator would recommend it.

All the project coordinators think that changing the world through social entrepreneurship is not a utopia of contemporary society. Since the social impact of organizations is a direct consequence of their mission and structure, the stakeholders are committed to it and the organization remains faithful to the interests of its members and its community.

4. Discussion

Considering the main developed skills by the 79 respondent participants during the project, the development of creative thinking competence is the one with greater representativeness (24.17%), followed by intercultural skills (21.80%). With less representation, there appeared an incentive for mentality (18.96%), language development, and positive attitudes toward change (17.54% each). It is important to note that all the developed skills during the project fall between 17% and 24%, showing a balance between all.

Of the 79 participants in the sample, it appears that multiculturalism corresponds to the most work (17%), followed by participation (14.99%) and cooperation (14.41%). The least worked values during the project are understanding (6.92%) and democracy (7.49%).

35.31% of the participants agree that they got to know the concept of social entrepreneurship after participating in the project. 39.66% agree that they developed their intercultural skills during the project. 45.56% of the participants fully agree that the project awakened them to an entrepreneurial mindset and helped them to develop and create more creative thinking, In what relates to acquired skills, the responses of the participants were very balanced and followed the literature (Bornstein, 1998; Dees, 2012). The authors should discuss the results and how they can be interpreted in the context of previous studies and the working hypotheses. The findings and their implications should be discussed in the broadest context possible. Future research directions may also be highlighted.

Participants highlight that participation in non-formal education activities can help to promote social entrepreneurship, contribute to personal development, and helping to build a better and more prosperous future for the younger generation (Lockhart, 2016).

After the project, 18.34% of the participants started companies linked to the social area (Table 3), which occupy a prominent place for smart, sustainable, and inclusive growth in contributing to the objectives of the "Europe 2020" strategy.

However, of the 21 coordinators, 61.67% entered into partnerships with local organizations. And these collaborations/partnerships meet one of the objectives of the DIVE project: the development of new practices based on intersectoral cooperation in the participating countries (YAK, 2018).

The participant's and the project coordinators' opinions are balanced on this topic. Both assume that changing the world through social entrepreneurship is not a utopia of contemporary society. Since the social impact of organizations is a direct consequence of their mission and structure, the stakeholders are committed to it and the organization remains faithful to the interests of its members and its community. YAK promoted new ways for young people to express their opinions and to accept and develop modern European values for young people; it also contributed to the promotion of youth activism in society and allowed us to create (some) necessary conditions for sustainable economic development. In this way, it is demonstrated that the project had a significant impact on its participants and coordinators, who, for the most part, would recommend participation in this project. One of the strongest impacts of the DIVE project is the innovative way in which it sets out to value and develop the personal talents of young people. Another one is providing tools that enable young people to successfully face the challenges of the labor market, encouraging the creation of social businesses. Also important is the potential for "sharing" and dissemination among the various participating countries from different regions of the world, guaranteeing the sustainability of its effects.

5. Conclusion

Social entrepreneurship emerges as a phenomenon for the potential of human development, and this project presents evidence in terms of "acquired competencies", namely creative thinking, intercultural competencies, encouraging entrepreneurial mentality, and positive attitudes to change. The results point to multiculturalism, participation, cooperation, mutual support, and solidarity as the values most worked on by the participants. Different types of organizations operate in pursuit of social values, to promote human rights, economic justice, equal opportunities, freedom of expression, and environmental protection, among others.

Social entrepreneurship is based on cooperative work, mainly by civil society actors through voluntary organizations or groups of citizens. Throughout this research, it was also found that collaborations/partnerships were created through cooperation between the coordinating entities. Most of the participants who did not know the concept of social entrepreneurship before the project did know it, showing that skills in working with young people and participation in non-formal education activities can help promote social entrepreneurship, thus contributing to personal development and shaping a better and more prosperous future for the younger generation.

This study shows the high impact of DIVE, bringing the community closer and linking the Academy's formal education with non-formal education. The project provided/developed tools that would enable young people to successfully face the challenges of the labor market, encouraging the creation of social enterprises. Through the involvement and active participation of young people, the promotion of modern European values is strengthened and a more equitable approach towards developing countries and stakeholders is attempted.

The main limitations of the study are the relative importance given to the perceived impact of the project on environmental sustainability and possibly the low focus on economic issues. For future research, it is suggested that, with the DIVE project study, more emphasis be given to the issue of non-formal education and its impact on youth and local communities. It would also be interesting to benchmark other projects (European and/or global) to identify good practices to improve the design of future projects in the field of social entrepreneurship. Important skills are worked and a more critical and reflective mentality, necessary for the construction of the desired future, is built.

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Modelling and Measuring Innovation Culture

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Abstract: We aim to provide a conceptual model of innovation culture in organizations and build a survey tool to measure it. Innovation management focuses often on formalized processes whereas unwritten rules related to organizational culture are also a major factor for innovation and firms' performance. We first position the role of culture with regard to innovation processes, then provide a model of innovation culture relying on five branches (External links, Teams, Organizational context, Individuals, and Leaders). Following the elaboration of this model called ETOILe, we address the issue of measuring it. In this paper, we focus on the less-known components such as External Links and design an ad hoc questionnaire. The validation study is performed through a laboratory test with 115 professional participants followed by reliability analysis of data and principal components analysis. The results of the study enabled us to refine the diagnosis tool as well as the underlying model of innovation culture. The current version includes four branches (Team, Organization, Individuals, Leaders) and ten sub-dimensions including promotion and prevention regulatory focus, managerial practices, discovery and delivery skills, etc. Because of its implicitness and intangibility, culture is often disregarded in the analysis of key ingredients of firms' performance. Our model of innovation culture gathering such unwritten rules contributes to understanding why innovation is so natural and efficient in some companies, and why it is sometimes painful, despite robust managerial structure and methodological processes. Finally, we provide a diagnosis tool intended for all hierarchical levels of the organization, and not only for managerial staff. Our model and tool could be used at several levels: at the company's level to grasp the overall cultural profile, at the department or team level to assess differences in innovation culture between subdivisions in a given company, and at a trans-company level to characterize cultural differences associated to business sectors (e.g., manufacturing sector, consulting sector, retail sector).

Keywords: Organizational culture, Innovation, Survey

1. Innovation as a driver of firms' performance

Innovation is considered as central to solve the major problems of societies (e.g., social and demographic challenges, climate change) while still supporting economic growth. In the long term, innovation is believed to fuel society's transformation towards more wellbeing and more prosperity (OECD, 2016). However, the concept of innovation is polysemous in itself (Battistelli, 2014; Beylat and Tambourin, 2013). The last version of the Oslo Manual defines innovation as a result (new or improved product or process differing significantly from the unit's previous products or processes and made available to potential users or brought into use; OECD, 2018). However, measuring innovation remains a challenge, as existing assessment tools still mix outcomes and process indicators (Edquist et al, 2018; European Commission, 2018). Furthermore, in our view, a third side, namely innovation culture, is missing to gain a complete view of firms' innovation.

We model innovation factors through an analogy with the interactionist paradigm known as the Lewin equation (Lewin, 1936), which models human behaviour (B) as the result of interactions between personal characteristics (P) and situational features (S): *B = f(P,S)*. In our case, the target is innovation performance. The situational features may correspond to all observable innovation rules that were formalized as a process, or a framework to innovate. The personal characteristics, in the case of an organization, may refer to implicit cultural features influencing innovation. We therefore model innovation as follows: *Innovation performance = f(innovation culture, innovation process).*

Both process and culture define how people act in firms, but they are fundamentally different: we consider that innovation process gathers rules that are explicit, and usually written, whereas innovation culture refers to the rules that are implicit and seldom officially described. Culture and process may be independent orthogonal dimensions that are not necessarily consistent within a given organization. One can imagine an organization with formalized processes regarding innovation activities, but a culture inhibiting innovative thinking at the same time. Conversely, some organizations may possess a culture prone to innovation but weak innovation processes structuring these activities. The aim of this paper is to set out the basis for a model of innovation culture and a method to assess it. The other terms of the equation (innovation performance and innovation process) are usually approached through declarative, objective or observational data.

Culture constitutes the unwritten rules of the social game (Hofstede et al, 2010). Organizational culture may mainly rely on practices: people gathered for work come with their own values that can hardly be changed, but they can adopt common symbols, heroes and rituals. In line with this approach, we consider organizational culture as a set of habits, behaviours, and representations shared by its members (Davies and Buisine, 2018). Innovation culture is a particular configuration that makes innovative thinking natural within the organization and encourages innovation activities at all levels of the organization.

Two dimensions of national culture may particularly influence innovation process, namely power distance and uncertainty tolerance (Hofstede, 2016; Hofstede et al, 2010; Chai and Xiao, 2018; He and Lee, 2020). Innovation is encouraged by a low power distance and a high level of tolerance for uncertainty (Hofstede et al, 2010). An organization's culture may also depend on its stage of evolution (Laloux, 2015). According to this evolutionary model, Amber (i.e., conformist and stable structures with well-defined functions and processes, like many public administrations) and Orange organizations (which promote innovation, responsibility, and meritocracy, like many multinationals) are predominant in today's society. More recent and marginal forms of organizations are named Green (fostering empowerment, inclusiveness, and meaningfulness) and Teal (based on self-management, wholeness, and evolutionary purpose, or reason for being). The Orange stage flourished with the development of industry and resulted in an innovation strategy mainly driven by economic performance. Green organisations will stress environmental and social innovation, and Teal ones will emphasize the societal impact and sense of purpose in innovation activities.

2. Building a model of innovation culture

Innovation culture has specific characteristics that can be observed from five viewpoints. The first one is the presence of *innovative leaders and managers*. The most innovative organizations are led by innovators who are equipped with high discovery skills (e.g., who have created new products, and believe they can change the world; Christensen et al, 2013). Leaders have a central role to play in supplying all company departments with innovative individuals (Christensen et al, 2013) and in encouraging staff creativity (Amabile et al, 1996; Mathafena and Grobler, 2021). Leaders and managers are therefore key to approaching an organization's innovation culture.

Innovation culture is also implemented at *teams' level* (Barnhill, Smith and Oja, 2021). Promotion-oriented teams (seeking benefits aimed at an ideal, as opposed to prevention-oriented teams focused on avoidance of losses) perform better on idea generation and diffusion (Rietzschel, 2011). In addition, innovative teams gather individuals with complementary skills, some excelling in discovery skills (Christensen et al, 2013), others with good communication, openness to new ideas, ability to challenge, trust, and help each other (Amabile et al, 1996). To enhance team's capacity to innovate, it is recommended to increase its diversity (Jones et al, 2020; Park et al., 2021).

The third level of innovation culture is supported by *innovative individuals* (Volery and Tarabashkina, 2021) exhibiting higher discovery skills (Christensen et al, 2013). Among factors contributing to innovation culture, Dobni (2008) identified several individual characteristics such as empowerment, freedom, creativity and commitment to the innovation process. In addition, the results of work engagement surveys also suggest that there is a direct link between individual engagement and firm-level innovation (Gallup, 2013). Engaged individuals are those who work with passion, in accordance with their company's vision. They stimulate innovation and are strong driving forces.

Innovation culture can also be inferred from how *external links* are managed (Fu, 2022). Networking is one of the discovery skills (Dyer et al, 2008). In innovative companies (Christensen et al, 2013), one will find this skill at all levels (individuals, teams, management), to develop both internal relationships inside the company and external relationships outside. Innovation culture is characterised by numerous and easy relationships with the outside (Cameron and Quinn, 2011; Hwang and Horowitt, 2012). In Laloux' model (2015), organizations develop a specific type of external relationship at each stage of evolution. At the Amber stage, the organization seeks to have no connection with the outside world, wants to be self-sufficient and aims for monopoly. Others are suspicious. In the Orange stage, competition reigns. Others are rivals, and you have to be better than them. With the Green stage, justice, equality, and harmony are sought with stakeholders, shareholders, management, employees, civil society and nature. Others are valuable partners. With the Teal stage, the organization integrates humans as a whole; each relationship is possibly fruitful, whether internal or external. Borders of the company tend to disappear. Thus, depending on the type of organization, external relationships can be denied, suspected, or trusted. In highly innovative start-up companies (Hwang and Horowitt, 2012), relationships with the external environment favouring innovation have three characteristics: first, a benevolent view of the external environment, then a multiplicity and variety of internal/external contact points, and finally the ease and speed of setting-up collaborations.

The fifth level of innovation culture is the *organizational context* in itself (Nani and Safitri, 2021). For Christensen et al (2013), innovative companies are characterised by a general philosophy that includes four principles: Innovation is everyone's business, disruptive innovation is central, small and structured project teams are preferred, intelligent risks are taken. Most of the key factors proposed by Dobni (2008) to evaluate innovation culture are related to organizational context and philosophy of action: social representation of innovation, organizational learning capacity, market orientation (product, customer, competitor), value orientation, and agile and flexible context. Another school of thought focuses on the work environment, and how it enables and promotes innovation (Amabile et al, 1996; Amabile and Kramer, 2011; Amabile and Pratt, 2016). A work environment which will enable innovation is characterized by the absence of organizational obstacles, meaningful work, a good level of challenge for everyone, and motivation to innovate. Hwang and Horowit (2012) compare the Silicon Valley with the Amazonian forest (hence the title of their book, The Rainforest). This model implies that innovation would occur preferentially in luxuriant contexts, rich in exchanges, and would often emerge from "weeds" that develop spontaneously without having been expected or encouraged. This image contrasts with that of the field (planted with “seeds”), with a well-defined process, everything all lined up, in which weeds are regularly eliminated. A parallel could be drawn with Laloux's (2015) model: When innovation is natural, it does not need a formalized process, it develops no matter what happens, like a weed.

3. The ETOILe model

We gather these insights from the literature in a model called ETOILe, which stands for External links, Team, Organization, Individuals and Leaders. The word “étoile” also means “star” in French, which seems appropriate to refer to innovation. Table 1 summarizes the aforementioned references used to ground this model.

Table 1: Innovation culture model ETOILe sources

Branches		References
E	*External links*	(Amabile et al, 1996; Amabile and Pratt, 2016; Cameron and Quinn, 2011; Christensen et al, 2013; Fu, 2022 ; Hofstede et al, 2010; Laloux, 2015)
T	Innovative *Team*	(Amabile et al, 1996; Barnhill, Smith and Oja, 2021 ; Christensen et al, 2013; Rietzschel, 2011)
O	*Organization* context	(Amabile et al, 1996; Amabile and Pratt, 2016; Cameron and Quinn, 2011; Dobni, 2008; Hofstede et al, 2010; Hwang and Horowitt, 2012; Laloux, 2015; Nani and Safitri, 2021)
I	Innovative *Individuals*	(Amabile et al, 1996; Amabile and Kramer, 2011; Amabile and Pratt, 2016; Christensen et al, 2013; Dobni, 2008; Gallup, 2013; Hwang and Horowitt, 2012; Volery and Tarabashkina, 2021)
Le	Innovative *Leaders* and managers	(Amabile et al, 1996; Amabile and Pratt, 2016; Cameron and Quinn, 2011; Christensen et al, 2013; Hofstede et al, 2010; Laloux, 2015 ; Mathafena and Grobler, 2021)

On the basis of this model we designed a tool to diagnose innovation culture, as elaborated in the following section.

4. Diagnosing innovation culture

4.1 Design of the questionnaire

The questionnaire we built actually addressed only four branches of the ETOILe model, namely External links, Team, Organization and Individuals. The Leader’s branch was disregarded for several reasons. First, our preliminary investigations on the issue of evaluating leadership in organizations suggested that it was a sensitive matter. Therefore, leadership evaluation may be highly prone to a social desirability bias. Secondly, the literature regarding leadership style evaluation is already abundant and we felt it was not necessary to build a new tool on this topic. For example, the MLQ (Multifactor Leadership Questionnaire; Bass et al, 2003) is a validated and widely used tool to do so.

The questionnaire we designed draws on existing scales measuring sub-dimensions of the ETOILe model. Table 2 details the sub-dimensions included, the relevant references, the total number of items selected for each sub-dimension, and an example of these items. Some items were directly extracted from existing validated scales; others were translated, rephrased, or written by us, which further justifies that a laboratory validation was required. The final questionnaire was written in French.

Table 2: Innovation culture questionnaire sources

Branches of the ETOILe model		**Sub-dimensions**	**References**	**Item's examples**	**Number of questions**
E	External links	**Outward-links**: multiplicity and diversity of relations with the external environment	(Bertelli et al, 2016; Hwang and Horowitt, 2012; Mercan and Goktas, 2011)	"In my company, I can easily and quickly launch a project with external partners."	8
T	Team	**Encouragement** to use discovery skills	(Christensen et al, 2013)	"We are encouraged to ask questions even if it means changing habits."	5
		Promotion regulatory focus	(Rietzschel, 2011)	To which extend this proverb is representative of your work team: "Nothing ventured, nothing gained."	9
		Prevention regulatory focus	(Rietzschel, 2011)	To which extend this proverb is representative of your work team: "Prevention is better than cure."	9
O	Organization	**Significance** of innovation	(Dobni, 2008)	"In my company, we invent and propose new products and services."	5
		Focus on products and customers	(Dobni, 2008)	"In my company, every employee knows the customers and their needs."	4
		Managerial practices: position with regard to Laloux' model (Amber, Orange, Green and Teal stages)	(Laloux, 2015)	"In my company, leaders are mainly focused on short-term objectives."	12
I	Individuals	**Engagement**	(Gallup, 2013)	"There is someone at work encouraging my development"	12
		Discovery skills	(Christensen et al, 2013)	"I often experiment new methods."	10
		Delivery skills	(Christensen et al, 2013)	"I am extremely careful to avoid mistakes in my job"	10
Demographics		Age, gender, tenure			6

4.2 Laboratory test

4.2.1 Hypotheses

In order to validate our questionnaire, we hypothesized that:

H1: Each branch is consistent and the chosen items are coherent with one another.

H2: The four branches (External links, Team, Organization and Individuals) are independent from one another.

4.2.2 Participants and procedure

115 French-speaking participants volunteered to take the survey; the sample was composed of 60 women, 52 men and 3 persons who did not identify their gender. They were on average 29.1 years old (SD = 7.75). All of them were working for different companies; 34% had less than 2-year work experience, 42 % between 2 and 5 years, and 24% for more than 5 years. Respondents were all engaged in a one-year executive training program that they followed as initial or as continuing training in our institute and were recruited in this context. The

participants filled out paper forms of the questionnaire during their training time, during a 30-min dedicated session.

4.2.3 Results

To test H1, we performed a reliability test on each branch of the ETOI model, as detailed in Table 3. In the Managerial-practices sub-dimension of the Organization branch, only the items related to Green and Teal stages proved reliable, hence we decided to remove the items related to Amber and Orange stages. With this new set of items, the three sub-dimensions (Significance, Focus and Managerial-practices) are consistent as a branch (α = 0.708). We then kept 10 sub-dimensions allocated to four branches of our model: External links, Team, Organization and Individuals.

Table 3: Reliability of the branches and sub-dimensions of the ETOI model

Branches		**Sub-dimensions**		**Cronbach's alpha**	**Reliability**
E	External links	**Outward-links**: multiplicity and diversity of relations with external environment		0.809	α=0.809
T	Team	**Encouragement** to use discovery skills		0.841	α=0.686
		Promotion regulatory focus		0.690	
		Prevention regulatory focus		0.825	
O	Organization	**Significance** of innovation		0.841	α= 0.708
		Focus on products and customers		0.690	
		Managerial practices: position in Laloux' model	Amber	0.178 (items removed)	
			Orange	0.378 (items removed)	
			Green and Teal	0.842	
I	Individuals	**Engagement**		0.914	α=0.673
		Discovery skills		0.787	
		Delivery skills		0.787	

To test H2, we performed a principal component analysis (rotation method: Varimax with Kaiser normalization) with the 10 aforementioned sub-dimensions. Analysis converged after five iterations. Three components appeared, that are presented in Table 4 together with factors loadings of each sub-dimension.

Table 4: Components matrix after rotation

		1	**2**	**3**
External links	Outward-links	0.687	0.38	0.009
Team	Encouragement	0.607	0.315	0.479
	Promotion	0.269	0.789	0.218
	Prevention	0.095	0.839	0.171
Organization	Significance	0.768	0.296	0.224
	Focus	0.714	-0.231	0.169
	Managerial-practices	0.703	0.29	0.164
Individuals	Engagement	0.447	0.371	0.469
	Discovery	0.024	0.151	0.863
	Delivery	0.305	0.128	0.743

The first component gathers the branch External links, the three sub-dimensions of Organization (Significance, Focus, Managerial-practices), and the sub-dimension Encouragement, which we had initially positioned in the Team branch. This component best matches the Organization branch of our model. The second component gathers two Team sub-dimensions (Promotion and Prevention) and therefore matches the Team branch of our model. The third component gathers 2 of the 3 sub-dimensions related to Individuals (Discovery and Delivery skills) and matches our Individuals branch. The sub-dimension Engagement is equally distributed on the three components. The principal component analysis shows that all ETOILe branches are not independent, as External links and Organization fall within a unique component. H2 is therefore partly validated.

4.3 Discussion

As our results show, the External links branch appears to be part of the Organization branch. This result is not so surprising. Our initial model was in line with Cameron and Quinn's (2011) vision which classifies organizations along two orthogonal axes (flexibility vs. control and internal vs. external focus) but the results of our study are consistent with Laloux' (2015) model, in which all the characteristics of an organization evolve concurrently at the same time: individuals and hierarchy roles, perception of the outside of the organisation, interest in and naturalness of change and innovation… Besides, the innovative ecosystem described in Rainforest (Hwang and Horowitt, 2012) highlights the absence of border between the inside and the outside of an organization. The same rules apply with collaborators, external stakeholders and society as a whole. This analysis supports the view that Organization and External links can be seen as a single branch and operate alongside in innovation culture.

Concerning the Team branch, we hypothesized that it has three sub-dimensions. One of them (Encouragement) appears to be part of the Organization branch. Encouragement is related to how far the use of discovery skills is supported and rewarded within a team. Our results suggest that the level of encouragement in teams, in this sense, is actually representative of the level of encouragement in the organization. Although one may observe some teams with practices non-aligned to their parent organizations (Amabile and Pratt, 2016), our data appear to be consistent with Christensen et al's (2013) view that, in innovative firms, the organization core processes drive the possibility to implement extensively and reward the discovery skills at all levels.

The Team branch of our model is now restricted to Promotion and Prevention regulatory focus. These two sub-dimensions appear to correlate positively whereas we expected them to correlate negatively at the team level, with teams particularly used to risk taking (Promotion), or to uncertainty avoidance (Prevention), but not to both. It seems possible that, at the individual level, promotion and prevention regulatory focus are independent, but can be positively correlated at the team level, each team being composed of individuals with different profiles and building on everyone's dispositions. In this respect, it could be interesting to replicate Rietzschel's (2011) protocol to study individual regulatory focus of each team member, and confront it to the team-level regulator focus. This would enable us to understand if the team is structured as the intersection or as the union of its members. Furthermore, group's mechanisms might be different depending on the team mission (e.g., control laboratory, innovation project).

Regarding the Organization branch, two of the three sub-dimensions are consistent (Significance of innovation and Focus on product and customers). However, concerning Managerial practices, neither Amber items nor Orange ones were reliable. In contrast, Green and Teal items were aggregated to create a Teal index which gathers elements dealing with the terms in which missions and responsibilities are defined, and the role of every member of the organization. It seems conceptually related to power distance (Hofstede et al, 2010). Power distance is indeed defined as the extent to which the less powerful members of organizations expect and accept that power is distributed unequally. The higher the Teal Index, the lower the power distance. However, power distance may vary within a given organization. According to Hofstede's studies, educational level, type of job and social class are highly interdependent and power distance strongly decreases with higher education, more qualified and socially recognized jobs (Hofstede et al, 2010). In our sample, the respondents were highly educated (master's degree). It would be interesting to check out the reliability of the Teal index with a sample from a single organization, with varying types of job and levels of qualification.

Concerning the Individuals branch, the three sub-dimensions are reliable. The Engagement sub-dimension appeared in the three components of the Principal Component Analysis: Organization, Team and Individuals. Therefore its contribution to the model of innovation culture is not clear. One can even wonder whether it may not be a result of innovation culture rather than a precondition. Hence we decided to remove it from the ETOILe model.

Further validation of the diagnosis tool would be necessary. We should notably include a leadership metric and study its relation with the other branches of the model. Furthermore, a predictive model including metrics of innovation performance would also enable to test the respective predictive power of each branch of our innovation model with regard to the final results of innovation. Such a study would be consistent with our analogy to Lewin's equation (1936) supporting the view that innovation performance partly results from innovation culture. In order to test a full equation of innovation performance, the study could also include metrics measuring the presence and importance of innovation process, in OECD's (2018) framework. Hence the respective predictive power of implicit cultural traits and explicit organizational processes could also be evaluated.

It would also be necessary to run complementary validations of our tool with a new type of population in the context of a case study. Our sample was generic but heterogeneous. In particular, we had only one respondent for each company, which was acceptable to check out the psychometric properties of our diagnosis tool (internal reliability of each branch, relations between branches) but would be insufficient to characterize a given organization's culture. To be reliable, the diagnosis of an organization's culture should be performed by several members representing several departments and hierarchical levels and building a consensual view (Cameron and Quinn, 2011; O'Reilly et al., 1991).

5. Conclusion

On the basis of the results of this study, we proposed to refine our initial model and corresponding tool to measure innovation culture. Even if we did not study the Leaders' branch in the present experiment, we still believe that it is a major factor to understand innovation culture. Therefore, to date, we consider that a fruitful model of innovation culture should include four branches: Team, Organization, Individuals, Leaders. We rename it TOILe accordingly, which has several meanings in French: a "toile" may be a plain weave, a robust and sustainable material for everyday life; it is also used to designate canvas, which support artwork – canvas being also a concept frequently used in innovation to structure its spreading.

Overall, we view our contribution as threefold. First, from a theoretical viewpoint, our model intends to introduce an evolutionary approach and go beyond previous models of organizational culture which were thought in the Orange paradigm. Secondly, we also set the basis for a specific model of innovation culture to meet a contemporary need of companies to transform towards more innovation. Finally, from a methodological viewpoint, we provide a diagnosis tool for helping companies identify their strengths and weaknesses with regard to innovation.

All in all, organizational culture appears as a critical factor to master innovation strategy, implement relevant and efficient processes, and develop innovation performance and growth. Through our model of innovation culture and our diagnosis tool, we hope to contribute to supporting organizations to question themselves, gain awareness of their own position with regard to innovation requirements, existing drivers, limitations and barriers in their mindset and behavior. Such consciousness-raising process could be the first step towards a deeper transformation. In an evolutionary perspective, this transformation may meet current demands for sustainable innovation and be consistent with sociocognitive evolution of mankind.

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Enhancing Social Innovation through Active Methodologies in Higher Education

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Abstract: Social innovation is now part of the political agenda, funding programs, and economic development policies. The world is changing, and, among other factors, digital transformation is assuming a key driver in the paradigm shift. Challenges appear, and solutions are needed, especially in what concerns human wellbeing and innovative approaches. Higher education can have an important role in this ongoing process, as it can supply an open, transformative platform for collective knowledge creation through research, education, innovation, and culture. In fact, it can shape the future of a knowledge-driven society if it works closely with its stakeholders and tries to meet their needs. Implementing new educational methodologies where students can participate and have a more dynamic and active role can be an effective answer. Combing formal education with non-formal education seems to develop the needed 21st -century skills. This article aims to share some best practices already developed at the Polytechnic Institute of Cávado and Ave, based in Portugal. It reflects students' perceptions of their participation in nonformal projects during their formal education. Students seem to get more involved, more committed, and empowered, while they are learning by doing and contacting real cases in real conditions. The results seem to reinforce the notion that there is a strong relationship between learning, innovation, and social innovation. Students feel more holistically integrated into the world and with a lot of developed skills that will differentiate them in the future, in a more sustainable approach.

Keywords: Higher Education; Social Innovation; Nonformal Education; Skills; Education for Sustainable Development; Methodologies

1. Introduction

Globalization, uncertainty, and challenges are, among others, some of the buzzwords that characterize our days. The world is changing, and even if 2020 and 2021 have been unforeseen and challenging, 2022 is another testing year: from the continuing COVID-19 pandemic to aggravating climate impacts, shocking humanitarian crises, and the persistent unwinding of hard-won gains in everything from poverty reduction to bridging the gender boundary (Brown, 2021).

The multitude of challenges require commitment and determination in people´s ability around the world to stimulate and build trust within and across communities.

Higher education institutions (HEI) can have an important role in this ongoing process, as it can supply an open, transformative platform for collective knowledge creation through research, education, innovation, and culture (Dieguez, et al., 2021). However, HEI is a change-resistant organization (Blass & Hayward, 2014), and there is no specific framework and guidelines on how HEIs should contribute to the social innovation process (Kumari et al., 2019).

Indeed, the process of social innovation in HEIs has been studied in academia from two perspectives: the first, focusing on the process of institutional adaptation of HEIs to the challenges of internal (institutional) (Kezar & Eckel, 2002) and external (ecosystem) change (Cunha, & Benneworth, 2013). These institutional changes can be clarified by the institutional entrepreneurship theory, which investigates the role of HEIs as change agents that support the causes and settings required to start such changes and dynamically contribute to the application of these changes. Changes in the institutional environment improve innovation in teaching and research practices to increase student involvement in social innovation initiatives. Likewise, system change theory focuses on understanding the organization as a system and focuses on the interrelation of constituents that raise work efficiency (Kumari et al., 2019).

The needed changes can be carried out by HEIs by innovating the learning environment and introducing new approaches that help develop the knowledge and skills needed to facilitate social innovation. And there are several ways in which HEIs can engage with society (CERI, 2021). However, for these changes to be facilitated, HEI needs to broaden its scope to facilitate new learning processes and experiences that require a disruptive innovation model.

Implementing new educational methodologies where students can participate and have a more dynamic and active role can be an effective answer, as education has a vital role to play in developing the knowledge, skills, attitudes, and values that empower people to provide for and benefit from an inclusive and sustainable future (Abdurashidovich & Botir, 2020). Learning to form clear and purposeful goals, working with others with different perspectives, finding unexploited opportunities and detecting several solutions to great problems will be vital in the upcoming years. Education needs to be more ambitious than preparing young people for work; it needs to equip students with the needed skills to become active, proactive, responsible, and engaged citizens (OECD, 2018).

2. Literature Review

2.1 Social Innovation

The The concept of social novation is not easy to define, since it can be related to a research field, a process, a phenomenon, or a concept (Benneworth & Cunha, 2015). It has evolved over time and today is understood by Pinto et al. (2021) as a sense that consciously attempts to better fulfil explicit or latent social needs and problems, through developing capabilities, social and power relations transformation. It aims social change and new social practices that impact people´s lives (Mulgan, 2006; Cajaiba-Santana, 2014; Nogueira et al., 2017; Westley & McGowan, 2017).

From its beginning, the expression had a "highly socio-political and ideological connotation" (Moulaert et al., 2017, 13) making social leaders reflect and struggle to change the status quo that has kept economic, social, political, cultural and educational systems stagnant (Godin, 2015). It relates to practices and processes linked with collective initiatives, involving private and public initiatives between citizens, individuals, communities, and organizations. It generally aims to promote greater equity and envisages socio-political transformation, while state and market players appear involved in collaboration (Moulaert et al., 2007; Moulaert et al., 2013; Moulaert et al., 2017; Moulaert & MacCallum, 2019).

These initiatives are basically bottom-up initiatives evolving from the local communities, regarding a substitute model of local innovation (Moulaert et al., 2005) and gathering people in formal or informal networks (Moulaert, 2016). How they collaborate, co-create, and manage power during resource integration is what will determine the modes and approaches of social innovation (Kumari et al., 2019).

Concerning co-creation, it should be noted that the co-creation process involves four phases, namely: i) preparation, ii) project design, iii) creation, and iv) implementation. This means that the co-creation process involves the understanding of challenges and problems, while delivering time to think about all possible solutions, team building, and capacity building. It is also linked with challenges' definition, stakeholders' engagement, and process definition. The connection with similar challenges, pilot work resources, and collective creation of solutions is needed before the application and testing of the solution (figure 1).

The resource capabilities of other actors will constrain co-creation activities between actors. Also, resource integration and knowledge diffusion will influence networking and relations between actors (Adner & Kapoor, 2016). Relational capacities to interact with external partners transform social relations by reorganizing resources and power amongst players. Actors with superior relational capabilities can better interact, have greater access to knowledge and resources, and improve the co-creation process. This dissemination of knowledge and research by the combination and change of social relations, governance, and power arrangements are the fundamental components of social innovation (Howaldt & Kopp, 2012): new and innovative solutions to achieve sustainability in society (Schröder & Krüger, 2019).

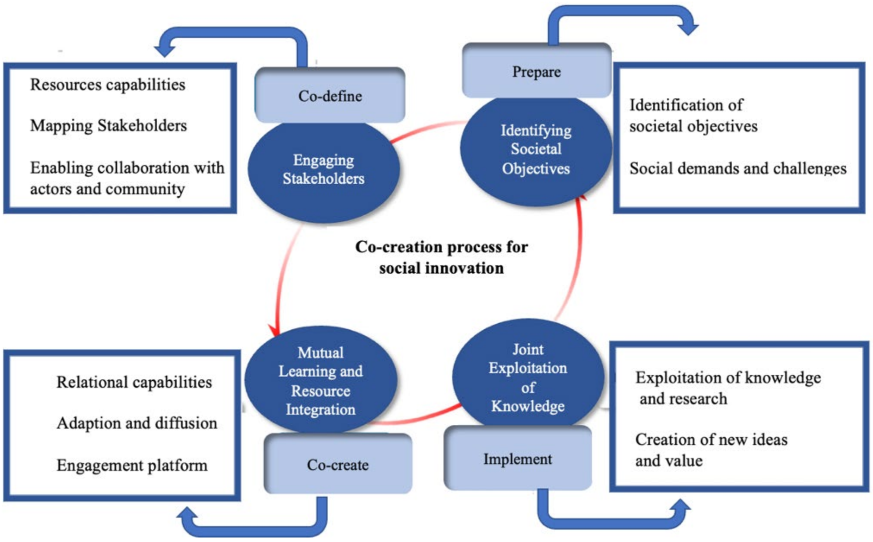

Figure 1*:* Co-Creation stages for the Social Innovation Process. Source: Nagore and Bynon (2018).

2.2 Social Entrepreneurship and active learning methodologies

The concept of social entrepreneurship (SE) designates entrepreneurial activity with a centered social purpose (Austin, Stevenson, & Wei-Skillern, 2006). The singularity of social entrepreneurship tests our postulations about human behaviour and economic action. It also defies our viewpoints on the role of entrepreneurship in society. Social entrepreneurship is as complementary economic approach that is based on value creation and, through its own rules and logic, seems to be able to face and solve some of the most demanding problems in modern society (Santos, 2021).

Social entrepreneurship is the process where social value is created by creating social value through an open range of entrepreneurial activities and initiatives carried by individuals, non-profit organizations, public agencies, or non-profit organizations in partnership with for-profit enterprises, envisaging the equilibrium between corporate profit and social responsibility (Kamran et al., 2022). In recent years, social entrepreneurship has become a social, economic, and cultural phenomenon, especially due to the importance given to social impact instead of economic one (Petrella & Richez-Battesti, 2014). It is an innovative process as it requires being able to attract both entrepreneurs and the society at large to socially pressing issues that do not directly impact profit (de la Garza Carranza et al., 2020).

Some academic research suggests that differences in the knowledge, attitude, and awareness concerning entrepreneurship between business and non-business students are not exploited enough in what relates to the entrepreneurial potential of non-business students (Hussain et al., 2022). Chengalvala and Rentala (2017) argue that understanding of social entrepreneurship was among the most important influences that affected the intention of students in favor of social entrepreneurship. Given this probability, it seems to make sense to explore a teaching program based on the understanding of the learning process (Collins & Robertson, 2003).

Previous studies in entrepreneurship courses (Täks et al., 2014; Williams Middleton et al., 2014; Heinze, 2020) stressed the importance of understanding the entrepreneurial learning experience in an early phase of a student's course degree. In fact, it seems that when students are engaged in their learning process, develop meaningful learning activities, and critically think about them, they present better results and better prepare them for the challenges of professional situations (Dieguez et al., 2019).

Thus, it is crucial to design undertakings that encourage other important skills, among which are collaboration and problem solving. Active learning is one of the best methods to potentiate learning (Marín & Espinoza, 2021), ranging from simpler to more complex activities (Innovation Institute for Teaching and Learning, 2018). The generated interactions enable students to have an improved understanding of different learning processes that they should go throughout: learning is an active mechanism that differs on the learner’s cognitive activities and facilitates to get holistically integrated into the world (Kolb & Kolb, 2005). The Non-formal education was considered to learn "in situ", and one of the most relevant foundations of it is "learn by doing", making non-formal education a basis for active learning and an effective means of education (Marín & Espinoza, 2021).

3. Case Study

3.1 Method

This article aims to share some best practices already developed in the Polytechnic Institute of Cávado and Ave, based in Portugal. It aims to investigate the developed skills of the Management students in a public management bachelor under a curricular unit called "Coursework Project", whose aim is to enhance students' needed skills while working with IAFA (Intercultural Association For ALL), a nonprofit association for the development of international youth mobility projects. For this purpose, a constructivist approach or worldview was selected, which focuses on the subjective meanings that individuals connect with their experiences (Creswell & Creswell, 2017). The emphasis throughout was on the meanings that the students of Management assigned to the different aspects of the course project, taking into account their opportunity to study abroad for a non-formal learning experience. Data was collected between March 2020 and June 2022. Twelve students participated in different activities, and this sample was taken as the respondents following the purposive sampling technique, which is the most commonly used technique of sampling in qualitative research (Miles et al., 2014). As the research is based on a social constructivist approach, it is important to understand the meanings that the students of a specific discipline attach to their learning experience of a Coursework Project. Therefore, purposive sampling best fit the research approach as it helped to first-rate participants whose experiences were most relevant to the research questions (Hussain et al., 2022).

As for research questions, this article aims to understand if formal education combined with non-formal education can be of added value to students and their learning process. It also intends to reflect on how it can help people to become more aware of its potential role in building a better future. Questions related to motivation, practical knowledge, fears, expectations, and learning outputs.

The data was collected through semi-structured interview questions for the research, and the students were requested to write detailed responses. This approach increases the self-interpretation, which enriches the quality of the data and allows the respondents to be free to say what they really think (Handy & Ross, 2005).

3.2 Coursework Project and IAFA

Public Management Bachelor in IPCA has one special curricular unit, in the 3rd year, that aims to develop some of the needed skills for the 21st century, such as leadership, creativity, and critical thinking (Dieguez et al., 2021). It also targets enhancement of communication, intercultural collaboration, coordination with others, and emotional intelligence, among other skills (Dieguez et al., 2022). This unit can be developed with more theoretical or more practical work. Students usually prefer to work in a more theoretical way, even if the management school encourages students to work near the community and, if possible, internationalize themselves. Unfortunately, the take-up of ERASMUS mobility (formal education) by students is very low. In the last 2 years, only 4 students went to Slovenia, University of Economics and Business, in Maribor.

IAFA is a nonprofit organization that helps to organize eramus+ projects and activities, encompassing volunteering projects, non-formal educational workshops, and internships. It helps foreign students fit in with Portuguese culture while navigating and overcoming the obstacles of new experiences. It also assists Portuguese students with finding projects abroad and getting past the usual bureaucracy and logistics.

The most recent projects promoted by IAFA and where IPCA’s students were involved are: i) Fashion for Tomorrow: a project designed by Kasta Morrely, Romania, in partnership with Portugal and the University of Sfax, in Tunisia; ii) European Solidarity Corps (ESC): previously known as the European Volunteer Service (EVS), ESC is the European Union's volunteering programme and has been supplemented with a focus on the social area; iii) Expanding soft skills borders, PasSPORT in education: a project carried out in an international consortium of partners formed by Sport Club Association "Kasta Morrely Star" Iasi, Romania, Gambitul Damei Chess Club Romania, Gambitul Damei Chess Club Romania, IAFA Portugal, Development Youth & Sports Association, Turkey Exchange: a Centre for youth activism in KRIK, North Macedonia; iv) Cancer Awareness of Young People – Youth Exchange: a project that aims to help young people with cancer by enabling volunteers, increasing knowledge and skills about health rights, and enhancing cooperation between organizations from participating countries by creating a solid and trustable network of partners.

Students participate in these projects, being these projects of short duration, between 1 to 3 weeks, depending on the event.

3.3 Data analysis and Findings

3.3.1 Sociodemographic data

The participants on this study are twelve students, being 8 men and 4 women, all aged between 18 and 21 years old. They don´t work and are willing to go further in their studies, as they want to get a master. 50% of them want to go abroad and 20% of them already have experience in some projects in their local communities. They have good skills in digital media and love to travel and have fun. They prefer to do practical things instead of studying theoretical contents. They care about future and sustainability.

3.3.2 Motivation

The participants identified why they chose to participate in these events. One of the most frequent reasons mentioned in the data was the proximity to the teacher of the unit and her teaching methods.

> *"My teacher was always full of energy when talking about these projects. She told us what she had done when he was our age, and he made me dream and feel alive.*
>
> *"I prefer to participate in more practical activities." I feel more engaged, and I learn more and better".*
>
> *"I was too upset. With COVID, we lost contact with everyone. We could no longer go out and travel. Taking part in the project could be a way to cheer me up and, who knows, be useful to anyone who might need me".*
>
> *"Well, my teacher had good teaching methods and wanted our opinion. It included discussions and debates. We all have opinions, and this is important to me. "*
>
> *Another reason seemed to be the opportunity to participate in a completely unique experience that will be valorized for evaluation. an experience where students could have contact with social and societal problems.*
>
> *"I was very curious. I have done some volunteering when I was young. I liked it. I felt proud of doing volunteer work and, with time, I lost that feeling. Maybe I can feel the same now".*
>
> *"I had never worked with social associations and projects. I was just curious and wanted to learn more".*
>
> *Some students referred to the development of some skills related to sustainable development and a better world.*
>
> *"I felt I could learn something to realize my dream: open an association to help people and make a better world".*
>
> *"I want to really change life in my community and make it better. If I can see and work what others are doing, maybe I can replicate it".*

3.3.3 Practical Knowledge

The participants revealed their interest and curiosity in directly contacting successful social entrepreneurship organizations, applying theoretical concepts in real life, and, in some cases, starting a social entrepreneurship organization.

> *"Sometimes I see in newspapers and media so much information about NGO's in areas where catastrophic things happen. I always felt curious about it: about logistics, stress, comfort, people, volunteers…"*
>
> *"It is easy to find solutions in exams. But how about in real life? How difficult is it? How can we gather people to jointly embrace a challenge? I think I will be able to understand the process if I am there. "*

"I always wanted to have my project turned into reality. my dream.Maybe with this I will be stronger"- I will do my best. I must enter in".

3.3.4 Fears

The participants confessed that they were afraid of not knowing and understanding other cultures, traditions, or habits. Some other students declared that they do not know enough English or any other foreign language to communicate.

"I always wanted to have my project turned into reality; my dream." But if I do learn nothing? If I do not understand, how can I talk about the experience itself? When will it be my grade?"

"And if my experience is not good? If I choose a project with really very different people? Or in a geographical place far from where you are? "

Another fear seemed to be the small knowledge of social entrepreneurship concepts among general companies, future employees, and relatives.

"After my graduation, what is more valuable in the marketplace? Theoretical or practical coursework? Future employees will appreciate a candidate with this experience?".

"I never been abroad. And if I go alone and no one who cares about my security and wellbeing?".

"No, my relatives think that if I travel, I only go on holidays. I have to prove them that I am going to work, and I need to feel alive".

3.3.5 Expectations

The participants admitted that they want a more practical way of learning and a more proactive involvement in their learning process.

"I am much better when I am working on a real problem".

" I need to see and feel to engage in the process".

"I want to define my future. Maybe I can go abroad and find a new world and a future".

"I want to run a project. I want to run a sustainable startup".

"I want to see things that I never imagined and be able to help/save people".

3.3.6 Learning Students' Output

The participants seem to be very enthusiastic about the overall experience. They feel, at the end of the project, that they are more holistically integrated into the world and have developed a lot of skills that will differentiate them in the future.

"I was afraid of my English, but now I survive, and I want to go to the institute to better learn it. I want to be able to communicate everywhere".

"I want to go abroad to do my master's and see the world".

"Now it is time to go to rest for a year. I just wanted to finish my studies. What I would do in the future is not relevant. Now, I think in a completely different way. I want to go out and see… and know people… and find solutions for problems".

"I just loved it and I think this should be mandatory for all students"-

"Now I have a big network and I believe it is important for professional future".

3.4 Discussion

The Coursework Project, if worked under the protocol with IAFA, boosts the concept of entrepreneurial Higher Education Institution resulting in a collaboration between HEI, IAFA (nonprofit association), and other public and private institutions. The role of HEIs is no longer limited to education, research, innovation, and development. Social engagement with the surrounding society involves collaboration, networking, and collaboration, as well as sustainability and social engagement (Frondizi et al., 2019).

The teacher's profile and methods seem to be one of the major reasons why students choose to get involved, as they are in contact with someone who has already experienced similar situations. Also, it seems important to have contact with entrepreneurs and volunteers who are engaged in big challenges to understand how they can help. The opportunity to participate in a unique experience is also important as it makes them feel more valuable and with a more precise knowledge of the problem and solution at the end.

Fears are some of the constraints to getting involved, namely fear of different cultures, habits, traditions, loneliness, and logistics in a foreign country. It seems important to give this opportunity to students, as the world is more globalized than ever, even in our country, with different citizens.

More practical and active learning processes are expected from the students, and students want to have more proactive engagement while they are in the HEI. As an output of their experience, participants seem very enthusiastic about the overall experience.

4. Conclusion

This article aims to share some best practices already developed in the Polytechnic Institute of Cávado and Ave, based in Portugal. Students seem to get more involved, more committed, and empowered, while they are learning by doing and contacting real cases in real conditions. Multicultural projects, different backgrounds, and profiles, combined with volunteering and joy, can result in unique value proposition experiences, able to develop skills and prepare students to successfully enter the market. Students can have a more active and dynamic role in their education, getting more satisfaction and performance from it.

The results seem to reinforce the notion that there is a strong relationship between learning, innovation, and social innovation. And this can be achieved by combining formal with non-formal education. Individuals, teams, and organizations learn and co-create to find societal solutions and define the process of developing social innovation. Students feel more holistically integrated into the world and with a lot of developed skills that will differentiate them in the future, in a more sustainable approach.

The main limitation is related with the sample size, and findings cannot be generalized for all the HEI

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Strategizing Digital Transformations: Sensing Threats and Opportunities with the Digital Disruption Analysis

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Abstract: Managers need to navigate the increasing complexity of their business environments due to emerging technological developments and digital disruption. Strategic threats and opportunities to their business must constantly be assessed, but organizations often lack the time and resources to develop a structured approach. With the Digital Disruption Analysis, Voß et al. (2020) published a systematic methodology to assess emerging innovations and to derive digital transformation strategies. In this paper, the Digital Disruption Analysis is tested with technology foresight experts of an established enterprise in the energy sector and improved in an iterative approach. In an initial application, opportunities for improvement are identified through participatory observation and direct feedback. Then, the Digital Disruption Analysis is revised and applied again in the same company to assess the improvements, using the same evaluation method and an additional qualitative questionnaire. The main adaptations of the Digital Disruption Analysis are the integration of a weak signal analysis based on a data and text mining approach to identify relevant emerging innovations, the integration of a multidimensional digital disruption scoring model, and a new Trajectory Mapping approach. The experts note improved applicability and overall enhanced functionality of the revised Digital Disruption Analysis. Our findings contribute to future research on applicable management tools for digital transformations and serve as a foundation for understanding the nature of digital disruptions and how they can be identified and monitored.

Keywords: Digital Disruption; Digital Transformation; Technology Foresight; Business Environment Analysis; Weak Signal Analysis

1. Introduction

Over the past decade, digital technologies have led to far-reaching changes in business environments of companies. They lead to changes in customer requirements, the way business is conducted, competition and interaction between businesses (Osmundsen et al. 2018). Digital technologies foster new ways of collaborating, organizing resources, designing products, matching complex demand and supply, and developing new standards and solutions (Markus and Loebbecke 2013). In this context, the term digital disruption has gained attention in research and practice. Digital disruption is a rapid, technology-induced, and difficult-to-anticipate market change process that overwhelms leading companies to adapt to the new environment (Skog 2018). It requires strategic and operational transformation in incumbent companies (Hanelt et al. 2021; Vial 2019; Skog 2018). Technology foresight, the continuous monitoring and evaluation of technological trends, reduces the risk of being surprised by such threats. In addition, opportunities are identified to transform business, thus progressing the digital transformation, and generating a competitive advantage (Reger 2006). Technology adoptions are determined by high-level decision makers. In the process, some companies have leveraged the evolution of digital technologies to achieve a dominant position in the market, while others have been unable to select and adopt them efficiently (Klos and Spieth 2020). Consequently, in a fast-paced environment where managers are confronted with a flood of information from different sources, it is even more important to develop decision-making routines to cope with the complex reality (Rauch et al. 2016).

Therefore, we identify a need for a practical approach for facilitating technology foresight activities in incumbent companies. We aim to contribute to meeting this need by developing a Digital Disruption Analysis (DDA) methodology. We thereby apply the Design Science Research Method Process Model by Peffers et. al. (2014). In a previous published article, Voß et al. (2020) presented the results of the first design phase. We derived relevant requirements on a DDA in incumbent companies, especially SMEs, from literature. Then, we conducted a systematic literature review identifying methods that can be used to manage digital technologies and their trajectories. Subsequently, relevant methods were selected and linked that meet the derived requirements according to the authors. The resulting DDA was structured into two subsections *business environment analysis* and *organizational impact analysis*, and three subordinate functional areas *information generation, information* *processing,* and *information derivation*. Having the literature based DDA designed, the first iteration phase including the steps of demonstration and evaluation will be completed in this paper. This article is structured as follows. The methodological approach of this paper is described in section 2. The results of the empirical validation phase are presented in section 3. The resulting adaptations of the DDA are presented in section 4. In section 5, we discuss the adapted DDA. Lastly, we close the paper with a conclusion and summarize limitations and elaborate directions for future research in section 6.

2. Research Method

With this paper, we present the results from a process iteration including the demonstration, evaluation and a second design phases according to the Design Science Research Method by Peffers et al. (2014). Thus, the following empirical study investigates the extent to which the theoretical DDA, our created artefact from the first design phase (Voß et al., 2020), can be used as an instrument for the structured analysis of disruptive digital innovations in business practice. For this reason, the DDA was initially conducted as an online workshop series involving three technology foresight experts, including a digital in-house consultant, an innovation manager, and a business analyst in a large European energy company. The participants are qualified by several years of practical experience in the field of technology foresight and are part of a cross-organizational tech- and trend-scouting team that develops new methods for business environment analysis.

Using three exemplary innovations of H2 networks, low-code/no-code platforms and electromobility, the DDA was used to assess the risks and opportunities of disruption. However, the main objective of the workshops was not to accurately predict disruption potential. Rather, the participants were meant to get a feeling for the logical arrangement and design of the DDA process phases and methods to uncover potential complications in the application. Therefore, the results on the disruption potential of the innovations are not a part of this paper. The workshop results were evaluated by participative observation and direct feedback, using the agile tool of the Starfish Method, as an alternative form of lessons learned according to Grundner (2021), at the end of each workshop day.

The application of the DDA resulted in several suggestions made by the experts. In section 3, we compare the most important points of criticisms with the context- and application-related requirements for a DDA defined by Voß et al. (2020). Based on the given feedback, the requirements are evaluated in terms of their degree of fulfilment, using a four-point value scale, ranging from: *[1] The requirement is fulfilled: The underlying processes and methods do not need to be modified to [4] The requirement is not fulfilled: The underlying processes and methods must be modified completely*, as shown in Table 1 in section 5. This procedure shows which components of the DDA require adaptation or further development, carried out in section 4.

Similar to the first demonstration, we conducted an online workshop series to test the enhanced DDA, under section 5. The evaluation was carried out in February 2022, spread over three workshop days. Two participants from the expert team for tech- and trend-scouting, two participants from the corporate foresight unit and four participants from the IT Strategy and Architecture department of the European energy company took part in the workshops. Feedback on the DDA was gathered on each workshop day using the proven Starfish Method and a questionnaire, which was used to determine the degree of fulfilment of the context- and application-related requirements. In line with the first application, the participants went through the DDA process phases using an exemplary digital innovation, the Internet of Things, which was identified using the analysis presented in section 4.1.

3. Fulfilment of the requirements by applying the DDA in business practice

To comprehensively search the business environment for disruptive innovations, Voß et al. (2020) define a set of contextual- and application-related requirements for a DDA. These are derived from the characteristics of a disruption, such as technological progress in combination with social drivers and the archetypical constraints of SMEs, i.e., lack of resources (Kugler and Anrich 2018) and the lack of digitalization know-how and business development experience (Demary, Engels and Röhl 2016). Based on the first-time application of the DDA in corporate practice, the context- and application-related requirements were assessed according to their degree of fulfilment, as shown in Table 1 in section 5.

3.1 Fulfilment of context-related requirements

For a company, disruption brings risks, but also opportunities (Christensen et al. 2018). Therefore, the DDA must promote the exploration of *new opportunities for digital transformation*. First, this requires a suitable *scanning approach* to identify new types of digital innovations in the corporate environment. From the experts' point of view, this is contradicted by the fact that the information generation phase has been insufficiently implemented in the DDA so far. It is not specified how relevant information can be collected and combined in a meaningful way. Therefore, the *scanning approach* was rated as [4] not fulfilled. Second, *the exploration of new opportunities for digital transformation* requires the identification of suitable interventions and thus a *solution orientation* (Baumfeld et al. 2014). By using a value proposition canvas, basic ideas for a digital transformation project can be developed, but the experts criticized that no concrete strategic recommendations can be derived from the SWOT-Canvas introduced by Voß et al. (2020), which compares the opportunities and risks of digital innovations for the own company. It remains unclear how the results of the DDA should be dealt with from a management perspective. For this reason, the *solution orientation* is rated as [3] mainly not fulfilled and consequently *the exploration of new opportunities for digital transformation* is also rated as [3] mainly not fulfilled due to the sum of criticism.

The Five Forces Model turned out to be an effective tool for identifying the different driving forces that emerge from an innovation and change the industry structure. However, the model does not give any indication of the extent to which the company is at risk of becoming disrupted. It was therefore recommended to illustrate the impact of an innovation on an appropriate scale. Disruption must also be analyzed in its *causes*. While the macro- and microeconomic drivers in the emergence of a digital technology become visible by combining the PESTEL Analysis and the Five Forces Model, drivers that might be characteristic for the emergence of digital disruptions are not considered. The DDA does not offer any guidelines on how digital disruptions in particular should be identified. The expert team fundamentally questioned whether a phenomenon such as disruptive innovations, with its highly controversial theoretical basis, can be analyzed at all. The *cause orientation* is therefore just considered as [2] mainly fulfilled because *the identification of risks from digital disruptions* is limited and must therefore be considered [3] mainly not fulfilled. However, considering the suggestions for improvement, the investigation area is considered to be [2] mainly fulfilled at the *macro- and microeconomic level*.

To monitor macroeconomic changes, the DDA introduces the Technology Map. Based on the results of the PESTEL Analysis, the Technology Map compares the technological maturity of an innovation with its social acceptance. Significant problems were caused by summarizing the information obtained in the PESTEL Analysis under the dimension of social acceptance, as suggested by Voß et al. (2020). The current DDA does not provide a methodical procedure, which results in the assessment being subjective. The graphical presentation of the Technology Map, on the other hand, was highlighted as very helpful. Apart from this problem, the *monitoring approach* can therefore be considered as [2] mainly fulfilled.

It is necessary to introduce a suitable system that brings together all the objective information obtained in the preceding process phases. *Trajectory Mapping* was rated [4] not fulfilled and therefore cannot fulfil the requirement of *future orientation,* [4] not fulfilled. This leads us to one of the most important criticisms of the DDA, its *system orientation*. Even though the methodology is highly *system-oriented*, a major weakness of the DDA is the insufficient integration of the DDA process phases and methods. The observation was repeatedly made that interim results of one process phase could not be transferred to the following one. Therefore, previously gained information was lost at these breaking points. This problem was attributed to the lack of scales and KPIs, which is why the *system orientation* is rated [2] mainly fulfilled.

3.2 Fulfilment of application-related requirements

It can be noted that the DDA is generally *resource-efficient* in its use. However, the identification of numerous innovations and their subsequent assessment require a considerable amount of time and resources. A preselection of relevant technologies is hence required. Additionally, integrating data-driven approaches in the DDA, can drastically reduce the required resources. Against this background, the requirement must be regarded as [2] mainly fulfilled.

The practical testing of the DDA, on the other hand, has shown that after a brief introduction to the topic of disruptive innovations and the methods used, the practical application of the DDA does not require any *deep methodological know-how*. Consequently, this requirement can be considered as [1] fulfilled. Furthermore, it can be stated that the DDA is universally applicable and therefore *adaptable to individual organizational* *contexts*. But problems can arise when integrating the DDA into already existing tech- and trend-scouting processes. Therefore, the requirement is rated as [2] mainly fulfilled. The workshops have shown that the DDA is suitable for an *iterative application*. This might only be limited by a high resource demand. Nevertheless, this requirement can be assessed as [1] fulfilled.

From the perspective of the workshop participants, there are no barriers in linking the DDA with the *internal business analysis*. This is countered by the fact that the insights gained in the DDA are difficult to transfer into a direct strategic recommendation. For this reason, the requirement is considered [2] mainly fulfilled. Same applies to the *development of a transformation strategy;* [2] mainly fulfilled. Using a value proposition canvas, initial approaches of a potential *business model innovation* can be developed. However, the identification of environmental changes and disruption potentials is not synonymous with the development of disruptive ideas and business models, whereby complementary methods would have to be integrated into the DDA. The requirement is therefore [2] mainly fulfilled.

4. Adaptations to the Digital Disruption Analysis

The adapted methodology is illustrated in the figure below. As outlined in the application the DDA is embedded into a digital transformation process. It serves as a linkage between the creation of strategic awareness, and the definition of a digital transformation roadmap. Embodying a digital maturity model could be helpful to identify a first list of focal technologies for further investigation, while also supporting a shared understanding of the internal digital capabilities and implementation gaps. This means that, in our view, technology adoption and creating organizational change are most relevant when, on the one hand, there is a low level of technology adoption, and on the other hand, this technology can cause significant disruption to the business. The DDA is designed to derive digitalization opportunities and threats and hence is a suitable starting point to define measures of digital transformation. These measures can be detailed in a subsequent implementation plan, using project management tools.

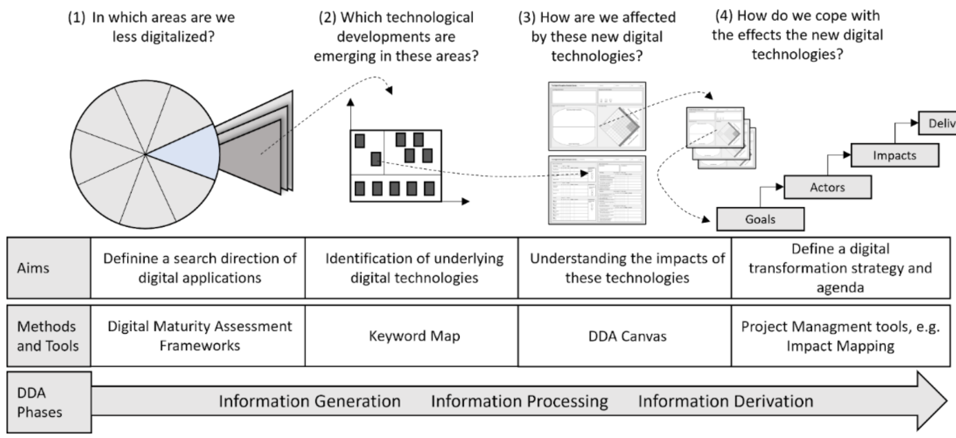

Figure 1: Digital Disruption Analysis in a Digital Transformation Process

4.1 Information Generation

For more guidance in the information generation phase, we include a structured process to identify emerging and potentially disruptive technologies for further analysis. This aligns to the demand of reducing the effort of technology identification. A digital maturity model may provide guidance for a first search direction for relevant digital technology application areas (Osorio et al. 2021). This can be combined with data mining, for a more refined technology identification. As data mining can be automated, it is characterized by a better efficiency compared to qualitative data assessments (Gibson et al. 2018). Integrating a data mining-based approach of technology scanning could help to identify weak signals of emerging trends in digital technology domains of low maturity. Following Yoon (2012), a keyword analysis of literature is incorporated to identify early-stage technological advancements. A suitable approach to detect such signals has been developed by Griol-Barres et al. (2020) and leads to a visualized Keyword Map that assigns keywords on two dimensions, the average frequency and the weighted growth rate of keywords in the literature. The later dimension gives more weight to recent publications. The keywords are clustered by predefining median value boundaries for the two dimensions (Lee and Park 2018). The resulting Keyword Map is depictured below. Strong and weak signals are both further investigated to select the sample for the subsequent information processing phase of the DDA. This selection process can be supported by further qualitative assessment as proposed in the former version of the DDA, such as expert interviews and lead user or supplier analyses.

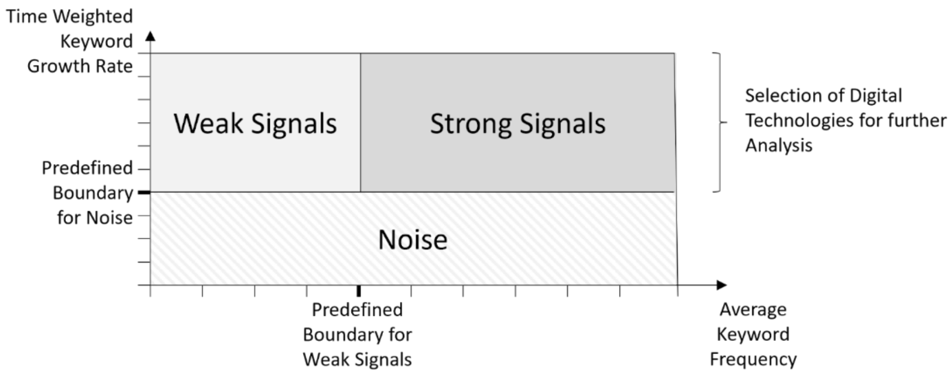

Figure 2: Signal Clustering with the Keyword Map

4.2 Information Processing

In the macro- and microenvironment analysis quantitative questionnaire-based assessments are implemented to calculate disruption index values. First, the macroenvironment is assessed in three main categories: *Technology, Market* and *Context*. In addition, three related conditional factors for digital disruption are introduced.

The *Technology* category relates to the capabilities of the innovation. The first evaluation relates to the capability of digital solutions to *simplify* complex processes (Guo et al. 2019; Urbinati 2018). Therefore, it is assessed whether it leads to a reduction of complexity when applied or rather increases it. Secondly, the emergence of disruption depends on the capability to substitute existing technologies and achieve a monopolization (Schuessler and Nagy 2014). A high rating of the *substitutability* dimension corresponds with this capability, while a low level means that the digital technology itself can easily be substituted by alternative solutions. Then the *integrability* of the innovation is assessed based on its ease of adoption. The evaluation is positively influenced if the technology relates to well-established infrastructures and is characterized by low-cost development and application (Govindarajan and Kopalle 2006; Rafii and Kampas 2002). Finally, the technology *maturity* level is assessed as a driver of disruption (Lyu et al. 2021). Yet, an imminent disruption requires a sufficient degree of maturity, which is also included as a conditional factor in the evaluation.

The *Market* category consists of three assessments. First the *mainstream market potential* is assessed. This refers to the categories of Habtay (2012) of technology- and market-driven innovations. Technology-driven innovations have longer development times and tend to penetrate niche markets first before entering mainstream markets and hence require more time for diffusion. Market-driven innovations, such as the creation of new value propositions, are often designed for mainstream market diffusion and thus have a higher chance of disruption. However, a potential niche market is a prerequisite for an innovation to develop any potential disruption. This is considered by integrating *pioneer market adoption* as a conditional factor. Another driver of disruption is the ability of a technology to support customers, specifically by creating new values, or reducing cost and efforts (Lyu et al. 2021; Klenner et al. 2013). This is assessed in the subdimensions Customer value. Finally, the potential *diffusion* of the innovation is evaluated. This sub-category relates to two major aspects of digital technologies, the exploitation of network effects and the decreasing marginal costs for diffusion (Guo et al. 2019; Koch and Windsperger 2017). A high level in this dimension corresponds to active network effects and low-cost diffusion, while a low level describes barriers due to these effects in already established alternative products and business models.

In the *Context* category, a PESTEL Analysis remains a part of the DDA. The five dimensions are assessed individually to describe factors that promote or inhibit digital disruption. The *political* context refers to the government's willingness to promote the technology. It can also be a barrier to innovation if the government seeks to preserve old economic structures from disruption (Urbinati et al. 2018). The *economic* dimension refers to the general business environment, such as the availability of necessary competencies, the propensity to adopt the innovation on the market, or cost-related drivers and constraints. The *social* dimension focuses on the general acceptance of the technology in society. The *technology* dimension takes the existing macroeconomic technology-related infrastructure into account. The *ecological* dimension reflects on the importance of sustainable digital solutions and resources as adoption factor that might accelerate or inhibit digital disruption. Finally, the *legal* dimension assesses the legal conditions for innovation and the associated facilitation of technology diffusion. *Lawfulness* of the innovation is also a pre-requirement for disruptions and is thus also added as a conditional factor.

The subsequent micro-environment analysis shifts the focus to the impact of a digital innovation on the individual company and its readiness to cope with it. The Five Forces Analysis is maintained but detailed by concrete evaluation items and more disruption specific questions, as shown in figure 5 Also, the value proposition of the technology remains part of the DDA analysis.

Finally, the technologies are mapped on a diagram that illustrates the degree of disruptive potential and the magnitude of disruption. Individual assessments can be weighted by the company to emphasize the most relevant aspects of the technology. Finally, the Disruption Map aggregates the results by indexing the macro- and microenvironment analysis by summing up the weighted items and indexing them on the 10-point scales. For the analysis of future developments, both assessments can be repeated, focusing on the expected differences and then visualized on the Disruption Map as illustrated below. This substitutes the Trajectory Mapping of the former DDA to anticipate future-oriented developments.

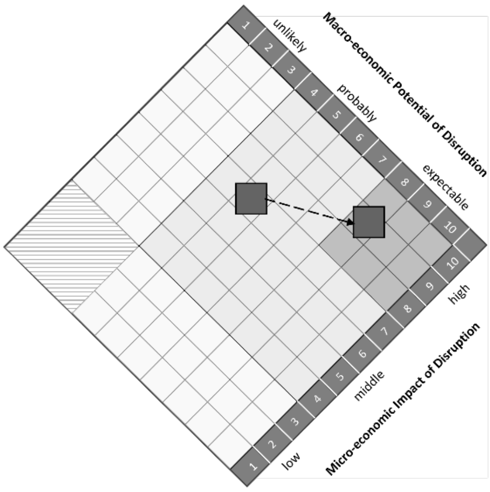

Figure 3: Monitoring Digital Technologies with the Disruption Map

4.3 Information Derivation

The information derivation phase is adapted in less intensity and still includes the exploration of opportunities and threats. It serves as an aggregation of all reflections from the information processing phase. In addition, three kinds of measures are categorized for more guidance. These strategic responses are called *Watch, Think* and *Act* (Dörge and Wirth 2021). For low disruption potential or estimated small effects on the company, the technology should be monitored to react if changes may occur. Responses under the Think category are characterized by further investigations to estimate the necessity to fent off threats or to exploit digital transformation opportunities. This is relevant when macro-perspective disruption is probable or there is a mid-level impact due to the concerning digital innovation. It requires measures of the Act category if digital disruption is imminent and vastly affects the individual business situation. Then immediate strategic action is required.

4.4 Introducing the Digital Disruption Analysis Canvas

The figures below show a two-page canvas, which can be used as a template in corporate practice to carry out the analysis. The first page summarizes key findings of the DDA. The opportunities of digital transformation and threats of digital disruption are explored as well as interventions. Also, the Disruption Map is illustrated on this page to visualize the macroeconomic potential of disruption and the micro-economic impact.

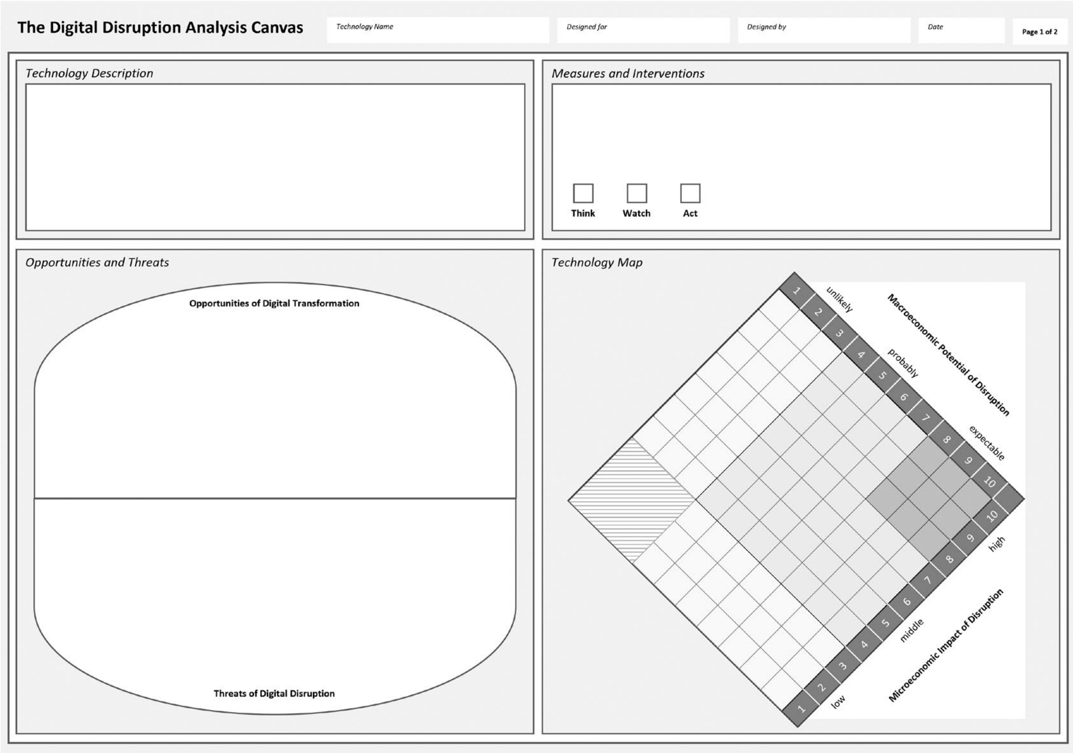

Figure 4: The Digital Disruption Analysis Canvas (Page 1)

The second page of the DDA canvas consists of the macro- and microenvironment analysis questionnaires and the exploration of gain creators and pain relievers of the digital technology.

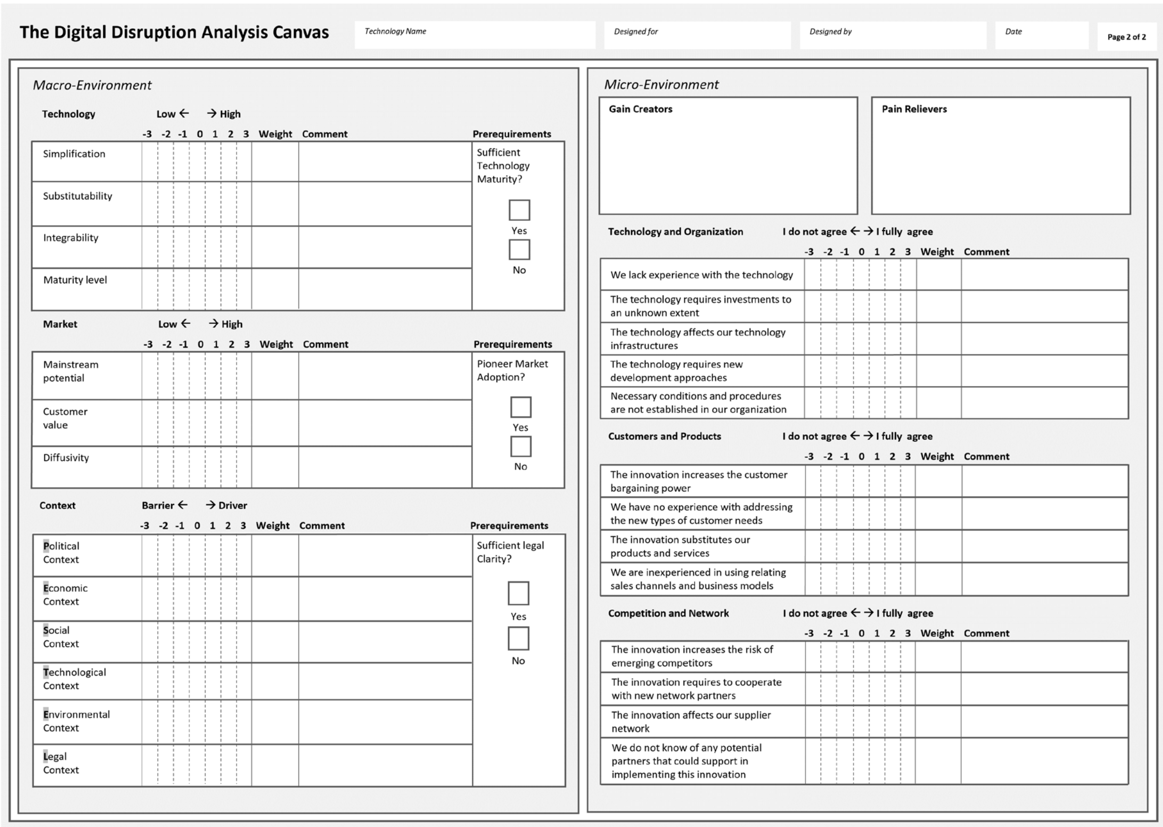

Figure 5: The Digital Disruption Analysis Canvas (Page 2)

5. Discussion

With a re-application of the DDA in practice, we assess if the adaptations lead to improved evaluations, as shown in Table 1. Most of the criticisms were not re-claimed in the final feedback rounds.

Table 1: Degree of fulfilment of context- and application-related requirements of the 1st and 2nd iteration

Context-related Requirements		1st Iteration	2nd Iteration	Change
Serving the DDA Target	Exploring new opportunities for digital transformation	[3]	[1]	↗
	Identifying risks of digital disruption	[3]	[2]	↗
Area of Investigation	Macro-environment	[2]	[1]	↗
	Micro-environment	[2]	[2]	→
	Technological trajectories	[4]	[2]	↗
Systemic Approach	System orientation	[2]	[1]	↗
	Cause orientation	[2]	[2]	→
	Solution orientation	[3]	[2]	↗
	Future orientation	[4]	[1]	↗
Data Collection Approach	Scanning	[4]	[2]	↗
	Monitoring	[2]	[2]	→
Application-related Requirements		**1st Iteration**	**2nd Iteration**	**Change**
Suiting to Constraints of SMEs	Not resource demanding	[2]	[2]	→
	Not requiring deep methodological know-how	[1]	[1]	→
Approach	Adaptable to individual SMEs	[2]	[2]	→
	Suitable for iterations	[1]	[1]	→
Digital Transformation Project Integration	Can be integrated into the internal business analysis	[2]	[1]	↗
	Supports transformation strategy development	[2]	[1]	↗
	Stimulates business model innovation	[2]	[1]	↗

In contrast to the first application, the difficulties in interlinking the process phases and methods were no longer observed. This can be explained by the introduction of the quantitative assessment frameworks, now linking the process phases and interim results. However, it was noted that the examination of disruption potential from a macroeconomic perspective is too detailed. Caution was also advised in using absolute numbers in the assessments. While they are helpful for the structured evaluation, they should not become the subject of discussion. While the derivation of direct strategic recommendations was previously very limited, participants highlighted that innovation work can now be given a clear direction by applying the Act, Think and Watch principle. In addition, the new Disruption Map enables the innovation landscape to be viewed from a portfolio perspective and provides a basis for focusing on the most urgent technologies. However, uncertainties were expressed regarding the measurability of disruptive innovations. Nevertheless, according to the experts, being aware of the assumptions of the theory of disruptive innovation gives new directions of creative work in developing business models. In this context, not only including participants from the strategic management level in DDA workshops, but also employees from the operational level, is another valuable impulse from participants. This emphasizes that the strengths of disruption analysis lie in the creative work. To focus resources on this part of the DDA, a more data-driven analysis may be integrated. This corresponds to the experts' assessment that DDA is neither time- nor resource-saving. The only way to save resources, and not at the expense of the quality of the results, is to increase the degree of automation.

The DDA provides SMEs with a set of tools to examine the business environment for digital technologies and their impacts. It may be concluded that the adapted DDA meets the requirements to a high degree. Nevertheless, it remains a question whether the factors introduced in this paper for the ex-ante anticipation are suitable for measuring a phenomenon whose characteristics are still not based on a proven scientific foundation. Analyzing from the perspective of disruptive innovation theory was, however, affirmed by the experts as a clear advantage over other methods. This is largely in line with the view of other researchers such as Kumaraswamy (2018), King and Baatartogtokh (2015) or Hopp (2018).

6. Conclusion

It is a major challenge for established enterprises to recognize the latent impacts of technological advancements and to estimate the strategic implications. With the DDA, Voß et al. (2020) provide decision-makers with a tool to systematically analyze the business environment for digital disruptions. In this study, we were able to identify considerable need for adaptation through the application of the DDA in practice. We propose several changes that, in the view of the technology foresight experts in our study, lead to improved applicability and functionality and overall better requirement fulfilment. The integration of text-mining-based technology identification helps to automate and simplify the scanning phase of the DDA. The scoring model facilitates the assessment and comparison of relevant technological trends as well as the monitoring of developments on the Disruption Map. However, this research is subject to considerable limitations. Due to the single-case approach of our empirical application and the subjective evaluations by the experts, and the authors' interpretations of the qualitative feedback, future research is needed to further validate the DDA. Another focus topic for future research is the integration of the DDA into the creative process of digitalization strategy development. The DDA can also be further adapted by integrating more data-driven tools to further automate the assessment of technological disruptiveness. However, the disruption theory is still at an early stage and needs to be substantiated for a more accurate ex-ante analysis.

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The Adoption of Digital Technology in SMEs

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Abstract: This research aimed to study the factors affecting the adoption of digital technology in SME entrepreneurs. Questionnaire were used as a tool to collect data from 375 samples of SME entrepreneurs in the northern region. The data were analyzed using the Structural Equation Model (SEM). The results showed that the factors of digital technology adoption among SMEs consisted of 3 main components: (1) technological context, (2) SMEs context, and (3) environment context. Technological context is a key factor contributing to the perceived usefulness of using digital technology. The environmental context is the main factor that contributes to the perceived ease of use of digital technology and lead to the adoption of digital technology by entrepreneurs. The research results can be used as a guideline to promote and support the use of digital technology among Thai SME entrepreneurs to increase their competitiveness in the current business environment and get ready for the digital economy era.

Keywords: technology adoption, SMEs, digital technology

1. Introduction

Digital technology has increased the efficiency of work and life, resulting in the transformation of the economic structure into the digital economy that creates opportunities for growth and radically transforms business processes, leading to the 4th Industrial Revolution. The emergence of digital technology has changed the concept of doing business from mass production to reduce costs to personalized production or to create opportunities for virtual products and services in a virtual world. The World Economic Forum predicts that by 2030, global gross product (GDP) about 70% comes from doing business under the digital economy. This forecast reflects that digital technology has played an important role in shaping the future global economy. A digital economy can be defined as an economy in which consumers, manufacturers, and governments apply digital technologies to increase economic value. In the ASEAN region, the survey conducted by EY (2019) found that 81% of the ASEAN entrepreneurs plan to invest in digital technology-related factors, and 80% of the sample are trying to train personnel in the organization to have up-to-date knowledge, while the proportion of entrepreneurs who invest in fixed assets or traditional technology has decreased to about 75%. In addition, according to the data of World Manufacturing Production, in 2019, the world's manufacturing sector had a 2.5% increase in productivity compared to 2018 from 2.3%, due to the application of digital technology by entrepreneurs.

Although digital technology is an important tool in creating competitive advantages for entrepreneurs, for SMEs, there are still problems and obstacles in applying digital technology. The Office of Small and Medium Enterprises Promotion (OSMEP) has divided the problems and obstacles of Thai SMEs into 12 problems. One of the major problems or obstacles of SMEs is the barriers to production technology. This is a problem that directly affects production efficiency (productivity). The government has a policy to support and focus on SMEs in using digital technology to modify and apply in business operations to create speed of adjustment and release new products and services to meet customer needs to create cost leadership, which is the use of technology to reduce costs such as solving problems of overstock, reducing production errors, reducing delivery time to customers, and differentiating in products and services by applying technology to the business.

However, from the data, it was found that the survey data of the Office of Small and Medium Enterprises Promotion (OSMEP) in 2019 found that one of the weaknesses of Thai SMEs is that entrepreneurs in traditional businesses are not aware of the importance and use of digital technology. At present, the old business model may not survive in the long run. Adoption of digital technologies to be used in business operations, therefore, is an important variable for existence in the market. It is also an important part that makes Thai SME entrepreneurs have more competitiveness or at least be able to maintain competitiveness on par with competitors in the market. Therefore, upgrading SMEs with the application of digital technology is important to act that leads to the research question “What are the factors affecting the adoption of digital technology in SMEs?” with an objective to study the factors affecting the adoption of digital technology in SMEs.

2. Literature Review

Technology Acceptance Model (TAM) is a theory that is widely used in the field of technology and innovation management for technology and innovation that occurs, spreads, or is widely accepted and used in society (Davis, 1989). In this study, Technology Acceptance Model (TAM) was applied to study the factors affecting the adoption of digital technology among Thai SMEs (Nurqamarani, Soegiarto & Nurlaeli, 2021). The principle of TAM is the study of factors that influence the adoption and use of new things, whether new products to the market, technology, and innovation, etc. External variables refer to the influence of various external variables that affect the perceived usefulness (PU) of technology, information technology or innovation and the perceived ease of use (PEOU) of such technology, information technology or innovations. If both perceptions occur, it will result in attitude towards using and will result in the adoption of the technology, information technology or innovation eventually (King & He, 2006). There are external variables that affect the perceived usefulness of technology, information technology or innovation, and the perceived ease of use of technology, information technology or innovations.

This study also used Tornatzky and Fleisher's concept of Technology-Organization-Environment (TOE) that defined the components of technology adoption or technology adoption decision-making processes. There are 3 main components: technology, organization, and environment (Tornatzky & Fleisher, 1990; Chong & Olesen, 2017). These three components are considered external factors that affect the perceived usefulness of technology, information technology or innovation, and the perceived ease of use of technology, information technology or innovation that leads to the adoption of digital technology among Thai SME entrepreneurs. The conceptual framework can be summarized as shown in Figure 1.

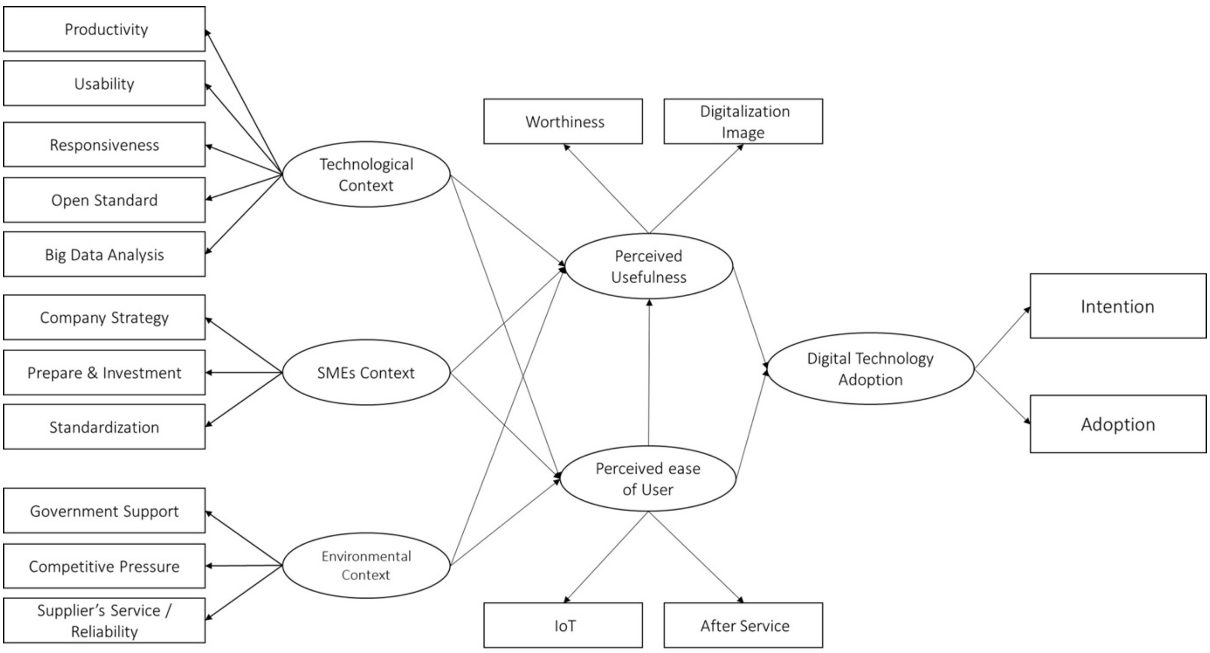

Figure 1: Research Model

3. Methodology

The process of the study can be divided into 4 main steps as follows:

1. Literature study of the main theories and concepts used in this study includes Technology Adoption Theory Model (TAM) and Technology-Organization-Environment concept for developing a research model.
2. A questionnaire was developed as a tool for collecting data. The questionnaire was created and modified by studying various related documents, as well as interviewing with experts relevant to the study. The questions in the questionnaire consisted of closed-ended questions. The use of factors from the conceptual framework and research modeling process to create research tools or design questionnaire. Then, the index of item congruence (IOC) was then taken to test content validity with 3 experts who have experience in policy and teaching. They are digital technology professionals and entrepreneurs who

have successfully applied digital technology. The IOC (Item Objective Congruence Index) was at .50 or higher which is considered consistent with the research objective and can be used (Orapan Khongmalai and Anyanitha Distanont, 2018). The questionnaire was tested with a virtual group of 30 people (pilot test), in order to test its reliability by means of determining the appropriate Cronbach's Alpha coefficient, which must be at least .7 (Lunneborg, 1979).

3. Data Collection and Data Analysis: This study is quantitative research. The population consisted of Thai SME entrepreneurs who were selected by random sampling method. The population includes 375 Thai SME entrepreneurs in the northern region who participated in the Small Entrepreneur Upgrading Project with Digital Technology in 2021. The sample size was determined by using Maximum Likelihood according to the criteria of Lindeman, Merenda & Gold (1980). The research data was analyzed using the data collected from the questionnaire distribution. Exploratory factor analysis (EFA) was used to study the structure of variables by grouping variables and increasing or decreasing existing variables to have a clearer combination and structural equation modelling (SEM) analysis.
4. Conclusion: After the data were analyzed, the research results were synthesized and concluded.

4. Results and Discussion

Exploratory Factor Analysis (EFA) is a correlation test that shows that observed variables can be divided into how many groups of factors that reflect latent variables. The criteria used in the analysis were: (1) the Kaiser-Meyer-Olkin Measure of Sampling Adequacy or KMO, which was used to show the suitability of the data. The value obtained must be at least .5. (2) Total Variance Explained is a confirmation of how much a component can describe the data. (3) Rotated Component Matrix is a value that describes how variables should be in the composition. The value obtained must not be less than .5. All of the values obtained were according to the specified criteria. It can be inferred that the data was suitable for use. The analysis results were divided into 7 components: 1) technological context, 2) technological context, 3) company SMEs context, 4) environmental context, 5) perceived usefulness, 6) perceived ease of use, and 7) adoption to use. All of the components complied with the Exploratory Factor Analysis (EFA) criteria. The data are shown in Table 1.

Table 1: Results of EFA analysis

Factor	KMO (>0.5)	Approx. Chi-Square	Total Variance Explained (>65)	df	Sig.
Technological Context	.618	3647.15	73.065	55	.000
SMEs context	.684	2614.640	85.315	28	.000
Environmental Context	.654	4469.147	90.879	28	.000
Perceived Usefulness	.762	923.196	71.547	6	.000
Perceived ease of use	.773	2509.316	81.672	6	.000
Digital Technology Adoption	.780	847.388	69.422	6	.000

After using the exploratory component analysis, the obtained factors were entered into the Structural Equation Model (SEM), which is a type of statistical analysis. It was used to confirm the research hypothesis, in order to show the relationship in the form of path analysis and evaluation of the relationship both directly and indirectly between observed variables and latent variables by using exploratory component analysis to examine the relationship between variables, in order to create consistency with the studied model. The suitability analysis of the model can be seen from the Goodness-of-fit which is a model indicator created to be consistent and appropriate to the context of the study. It must consist of various values which makes the model fit accordingly. The criteria include CMIN/df must be less than 2 (Ozlem et al., 2017), GFI is greater than .9 (Zhengwei et al., 2017), AGFI must be greater than .9 (Yıldırım et al., 2017;), RMSEA must be less than .05 (Kwon, and Shin, 2016), and p-value must be .05 (*), .01 (**), .001 (***). The coherence of the models was assessed by adjusting the statistical values to fit between an empirical model and a theoretical model (Tathem et al.,2006) as shown in Table 2.

Table 2: Goodness-of-fit-indices and measure

Measurement indices	Recommended value	Value
CMIN/df	< 2	1.953 (acceptable)
GFI	≥ 0.9	0.921 (acceptable)
AGFI	≥ 0.9	0.964 (acceptable)
RMSEA	< 0.05	0.038 (acceptable)

After that, the model was analyzed using the structural equation modeling technique to test the hypothesis according to this model which will be determined from the Regression Weights table by considering the P-Value at the significance level of .001 (***) and the Standardize Regression Weights less than 1.00. The results of the model adjustment by using advanced statistical program can be used to show the relationship among variables as shown in Table 3.

Table 3: Results of EFA analysis

Parameter			Standardized	Sig.
PU	<---	Technological Context	.458	***
PEOU	<---	Technological Context	.269	***
PU	<---	SMEs Context	.340	**
PEOU	<---	SMEs Context	.269	***
PU	<---	Environmental Context	.142	***
PEOU	<---	Environmental Context	.355	**
PU	<---	PEOU	.509	***
Digital Technology Adoption	<---	PU	.247	***
Digital Technology Adoption	<---	PEOU	.492	***

Note: *** >.001, ** >0.1, * >.05

Path analysis is an analytical technique to study the causal relationship between independent variables and dependent variables. The relationship between observed variables and latent variables can be summarized as follows: 1) perceived usefulness and perceived ease of use together affects digital technology adoption 31% (R2 = 30.59), with the perceived ease of use having the highest coefficient with a coefficient of .492*** and followed by the perceived usefulness with a coefficient of .247***. 2) Technological context, SMEs context, and environmental context together affect the perceived usefulness 51% (R2 = 51.40). 3) Technological context, SMEs context, and environmental context together affect the perceived ease of use 39% (R2 = 39.10). The details are shown in Figure 3.

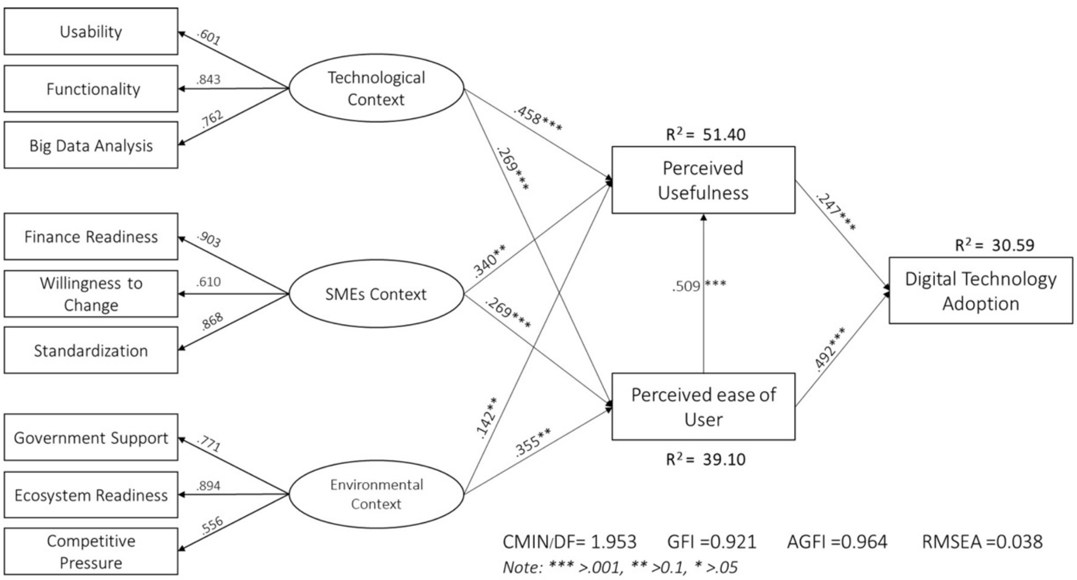

Figure 3: Relationship of Digital Technology in SMES

5. Conclusion and Recommendation

This research aimed to study the factors affecting the adoption of digital technology among SME entrepreneurs. The results of the statistical analysis showed that government agencies or the private sector involved in the policy of promoting and supporting the application of digital technology of SMEs should focus on communicating and educating SMEs on the use of each type of digital technology that is appropriate for each SME in order to achieve recognize the usefulness of using that digital technology, as well as the government should support both in terms of knowledge skill development, access to funding, and the development of ecosystems to be ready for the application of digital technology by SMEs in order to create awareness of the ease and not to see that digital technology as an obstacle or burden that SMEs have to bear. If both of them can be implemented, it will lead to upgrading the old business to a new business model that will help increase efficiency and make better operations. It can also reduce costs, as well as increase productivity and business revenue.

The approach to implementing it may start from 1) the efficiency and performance of digital technology. It should encourage SMEs to recognize and realize the importance of digital technology that can effectively help solve problems, reduce costs, as well as increase efficiency and income in business. The government should also support in providing such training and knowledge to entrepreneurs and help SMEs in choosing digital technology that is suitable for the type of SMEs and the size of the business in order to avoid increase the burden on entrepreneurs. 2) The government sector should have the expertise to provide knowledge and advice to SMEs during the digital transformation by helping to analyze the problems of the existing system and give advice on the transition to the new system. 3) Recommend the full utilization of digital technology. In addition to the use of digital technology, knowledge of data collection and analysis must also be introduced, as well as storing various data in a database to be analyzed and processed in the form of big data analysis for use in business planning that meets the needs of the market and customers.

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Shared Leadership and Learning

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Abstract: The aim of this study is to describe the links between shared leadership and learning. The method of this study is an integrative review that combines the results and findings of chosen studies focusing on the keyword "shared leadership" from the Scopus database and their relations to learning. As a result, this paper presents three basic topics – shared leadership as a stimulus for training and development, shared leadership as an incentive for learning and a summary of conditions supporting the relationship between shared leadership and learning.

Keywords: adult learning, integrative review, learning, shared leadership, training.

1. Introduction

The aim of this study is to describe the relationship between shared leadership and learning. Shared leadership is defined differently by various authors, so we appreciate the efforts of some authors to provide a comprehensive view. Thus, from the summary provided by Wu and Cormican, we can conclude that shared leadership is a way of organizing the work of a team in which the role of leader is assumed alternately by individual team members or by the team as a whole. Leadership in this type of leadership is distributed among the individual team members both in the form of the role of the leader and in the form of the responsibilities and functions of this position. Decision making may also be distributed among individual team members (Wu and Cormican, 2021, p. 3). A similar review of definitions and theories is provided by Zhu et al (2018, p. 836) who place more emphasis on the phenomenon of peer influence. Fletcher and Kaüfer define shared leadership versus vertical team organization and single leader models through three differences in leadership approach. According to them, shared leadership is distributed and interdependent, embedded in social interaction, and leads to more intensive learning for individual team members (Fletcher & Kaüfer, 2003, p. 22). A very condensed overview of definitions and characteristics is also provided by Kocolowski (2010).

The areas where shared leadership can be applied are varied according to Pearce and Manz and include "top management teams, change management teams, teams of volunteers, research and development teams, virtual teams, and even military squads", finding it particularly beneficial "in the knowledge-worker context" (Pearce and Manz, 2005, p. 134). This list is interesting by mentioning military squads, which in the classical management literature tend to be considered the domain of the autocratic approach. The scope of the use of shared leadership according to Pearce and Manz above is complemented by O'Toole, Galbraith and Lawler with examples of big organisations (Intel, Apple, Citigroup) in which leadership was shared by two co-leaders (O'Toole, Galbraith and Lawler, 2002).

Some authors present results on leadership effectiveness research. Pearce and Manz (2005, p. 134) state that the more dispersed leadership patterns the higher performing teams, while low performing teams are "dominated by the team leader" (Pearce and Manz, 2005, p. 139). However, it is questionable whether the use of dispersed leadership patterns is a consequence of the development of the team while looking for its most effective position, for example in the form of shared leadership, or whether the success of the team is determined by the leadership style chosen. This question is partly answered by Bergman et al. who found in empirical research that "shared leadership among team members can increase team effectiveness, and teams that overlook this potent source of leadership are likely left at a disadvantage" (Bergman, 2012, p. 37). The positive impact of shared leadership on team performance and trust is also described by Drescher et al (2014, p. 778) and Wang, Waldman, and Zhang (2014, p. 192), who highlight that this approach is particularly appropriate for complex tasks.

As we can see, shared leadership is a debated topic. We can observe its use in different forms in different teams, and we can expect higher team effectiveness, which is partly correlated with the type of tasks that are solved by the team. When using shared leadership, team members often have to divide their roles or acquire competencies that allow them to participate in the work of the team both as a member and as a (temporary) leaders. Not only the acquisition of these roles but many other competencies are developed in the team through learning, which can be considered at a general level almost synonymous with consciousness (Jarvis, 2009, p.

187). For this reason, we have focused on how the literature views the combination of these two processes - shared leadership and learning. For this study, learning is defined by UNESCO as a "complex and long-term psychosocial process consisting of individual acquisition or change in information, knowledge, understanding, attitudes, values, skills, competencies or behaviour" (UNESCO, 2022).

2. Methodology

For this paper, the integrative review method was chosen, which allows "the simultaneous inclusion of experimental and non-experimental research to more fully understand a phenomenon of concern. Integrative reviews may also combine data from the theoretical as well as empirical literature" (Whittemore & Knafl, 2005, p. 547). Whittmore & Knafl (2005) define the steps in which this method is to proceed. These are Problem identification, Literature search, Data evaluation, Data analysis and Presentation (see Figure 1).

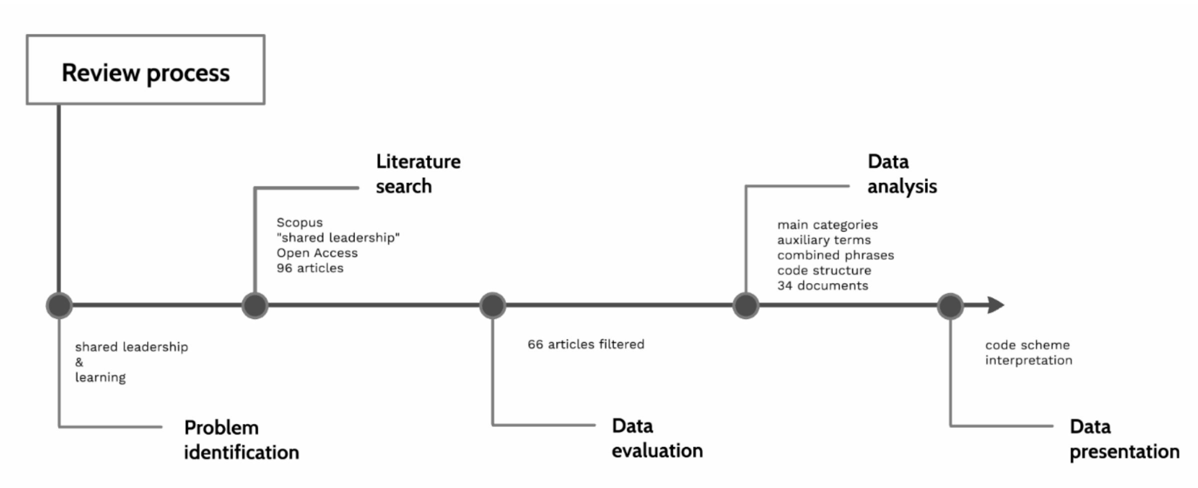

Figure 1*:* Integrative review process

First, we identified the problem/phenomenon to be investigated - this is the link between learning and shared leadership. Subsequently, a strategy for selecting appropriate literature was chosen. Here we decided to use the Scopus database with the following search strategy. The keyword phrase was "shared leadership", thereafter articles in Open Access mode in English were filtered. The number of articles with these criteria was 94. Articles were then downloaded (when available) and subjected to data evaluation. Articles related to shared leadership only vaguely and some articles focusing on shared leadership directly in teaching were eliminated. After this step, the remaining 66 articles were uploaded into the MAXQDA software. In this program, a support structure was created through lexical search and the results of this search were coded. The terms "shared leadership" and "learning" were selected as the main categories, and the auxiliary terms - information, knowledge, understanding, attitudes, values, skills, competency, behaviour, and others (need, requirement, etc.) were added following the definition of learning. All terms were used for the search in shortened form to capture other variants with the same word root. These terms were then also encoded. Combinations of terms (e.g., leadership, skill, learn) were also searched to identify more saturated passages of all articles. The documents were then explored with the support of the established code structure and significant passages for the study objective were coded with new separate codes – these were present in 34 documents. The cluster of these new codes was then processed in MAXQDA's Creative Coding tool, creating a scheme of relationships between the individual themes and subthemes (see Figure 2). The coded passages within each theme were then analysed, and the results of this analysis are presented in the Results section of this paper.

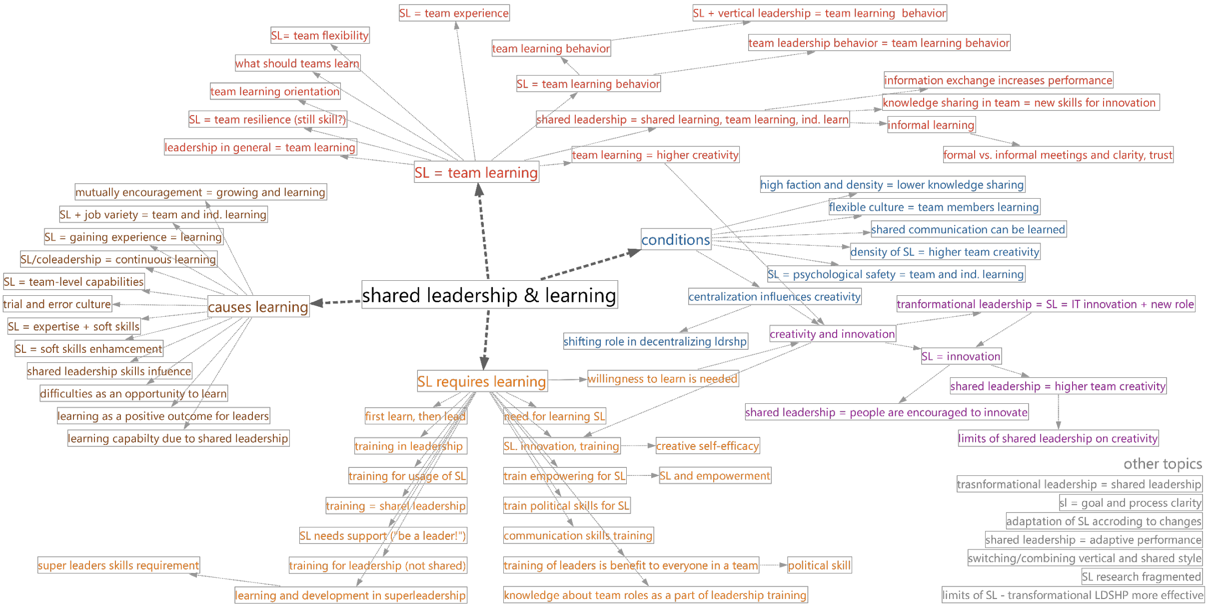

Figure 2*:* Creative coding result (created in MAXQDA 2018)

3. Results

As a result of the analysis of the literature, there are four main areas that the shared leadership literature addresses in conjunction with the issue of learning. Shared leadership was revealed as a stimulus for training and education, as a concept that promotes learning, and the conditions that are conducive to learning and development were identified. The last section deals with other interesting findings but of a rather marginal nature. It is important to mention that the areas overlap or build on each other either loosely or very strongly in some parts.

3.1 Shared leadership as a stimulus for training and development

Shared leadership offers opportunities for training and development. A general impulse may be to expand the portfolio of leaders' behaviour. "In general, organizations should consider the concept of shared leadership and facilitate the emergence of this phenomenon. Team development and training programs can help teams to utilize shared leadership for their team and task work" (Klasmeier & Rowold 2022, p. 51). A common situation that may arise that requires training leaders for shared leadership is the absence of prior experience with shared leadership combined with a desire to use this style. This situation is mainly related to novice leaders whose "previous experiences included vertical leadership with the formal leader being hierarchically placed above the followers. Therefore, there was also a demand for learning shared leadership" (Toivonen et al., 2021, p. 7). As we will show later in this text, "other personnel besides formal leaders may benefit from leadership training" (Tafvelin et al. 2019, p. 40) which would have probably helped these novice leaders to acquire required skills earlier. Agnihotri & Kapoor highlight a key activity of leaders - sharing responsibility - in their article on Super Leaders (which according to Manz and Sims describe leaders who lead others to lead themselves). This approach creates a double opportunity for learning. The first facet of this approach is the acquisition of experience by the managers themselves; the second is the need to train other team members in taking responsibility for shared decisions. Through this opportunity, the leader "encourages initiatives taken by the team members and their creativity (...) because this is how team members can develop their skills of sharing in responsibility of leading" (Agnihotri & Kapoor, 2018, p. 881). Support for shared leadership through training is also expressed by Tillmann et al. (2022), who argue that organisations can focus on gradually incorporating these practices into formal leadership because there is already evidence of the trainability of this empowering leadership. However, Toivonen et al. (2021, p. 2) point out in the development of leaders that "giving (...) autonomy and responsibility too early in their training, and without providing them with sufficient instruction (...), may negatively impact their ability to cope with their role and may also undermine their confidence. Therefore, responsibility and leadership should be shared (...) when they are ready for it and to the extent, they are ready" (Toivonen et al., 2021, p. 2). This approach also points to the importance for leaders to acquire this skill gradually.

Another skill requirement for leaders is formal communication skills. "The cost of developing this skill may be just as important as pilot funding that covers direct costs" (Morgan et al, 2021, p. 104). However, these authors do not stop with their recommendation only for team leaders. "Team trainings should focus on communication practices that improve shared leadership and shared communication. Additionally, teaching best practices for formal (task-oriented) meetings can help improve goal clarity and decrease role ambiguity" (Morgan et al., 2021, p. 84). Agnihotri & Kapoor confirm the requirement for a developed skill of communication - "oration, way of communication, language competence may help in motivating the team" (Agnihotri & Kapoor, 2018, p. 882). Other authors claim that shared communication is a skill which "can be taught and enhanced through practice" (Morgan et al., 2021, p. 101) which can lead to development of this important skill.

An unusual, yet understandable competence is brought by Tillmann et al. It is a political skill, which they define "as a unique set of social competencies that enable team members to appear as prototypical leaders and thus get others to rely on their leadership, as well as to appear as prototypical followers, which allows them to rely on others for leadership." (Tillmann et al., 2022, p. 4). With this definition, we see that the authors do not only focus on the position of leader but also emphasize development for the role of follower, which supports the definition of shared leadership. This focus on team members at the time outside the leader role is also one of the key perspectives of Bunjak et al. who point out the appropriateness of linking hierarchical transformational leadership and shared leadership behaviours. The authors reveal "an alignment between followers' active behavior (i.e., taking a role of leader) with a perception of leaders' encouraging vision and a supportive management innovation from an organization-level perspective" (Bunjak et al., 2022, p. 7). However, the stimulation of team members to engage in shared leadership behaviour is only a marginal issue, so we will not explore it further.

Leadership competence should include some knowledge in addition to skills. For example, Bachmann (2022) states that part of the training of leaders should include knowledge of how group dynamics models work and the principles applied in collaborative processes. This recommendation is complemented by (Hoch, 2013) with an emphasis on innovative behaviour and its implementation in the life of teams.

3.2 Shared leadership as an incentive for learning

The definition of shared leadership is based on one of its fundamental characteristics - the interaction of team members with each other. "Under this circumstance, team members can serve as behavioral models for others when providing leadership for certain aspects of team functioning and also learn from others when following others' leadership guidance for different functions" (Liu et al. 2014, p. 285). The effect of shared leadership on organizational learning climate due to members learning from each other is mentioned also by other authors (Fu et al., 2020). This mutual influence is likely to have a greater effect if there are competence differences within the team, which according to Döös & Wilhelmson brings not only "synergy through complementary skills" but also "capacity to continuously learn, create ability to handle change and development" (Döös & Wilhelmson, 2021, p. 729). The relationship between shared leadership and learning is also confirmed by (Antinluoma et al., 2001), who, among others, cite an increase in staff expertise as a positive impact of shared leadership. Positive impacts on learning are confirmed by Döös & Wilhelmson (2021) who cite enhanced learning as the most frequently mentioned positive impact of shared leadership on the leaders themselves in the articles they reviewed. Similar findings are presented by Klinga et al. on the topic of co-leadership (practised by pairs of managers) who talk about emerging continuous learning. However, impacts can also be registered for rank-and-file team members. Charernnit et al. come up with the finding that the higher the level of shared leadership, the more soft skills enhancement occurs along with problem-solving, work ethics, flexibility, and interpersonal relationship (Charernnit et al., 2021, p. 9). At the broadest level, there is also an enhancement of team-level capabilities such as team reflectivity (Fu et al., 2020).

An important element of shared leadership mentioned by individual authors is mutual encouragement, which promotes "taking initiative, diligently share information, support each other in decision making and help others understanding new challenges and topic" (Sousa et al., 2016, p. 4). Encouragement is also closely related to the willingness to make mistakes, which is a central quality in the so-called experimental culture. The latter promotes learning through informed trial and error (Rose et al., 2021, p. 9). The positive effects of encouragement are then also e.g. learning by less knowledgeable members (Sousa et al., 2016). This theme also touches on the topic of conditions, which is the topic for the next chapter.

3.3 Conditions suitable for the development of shared leadership

In the previous section, we outlined some suitable conditions for individual and group learning. Apart from the actual possibility to alternate between the roles of leader and follower, there is diversity (of roles, functions and competencies) and appropriate organisational culture as other convenient conditions. The first set of conditions (i.e., shared leadership and the associated role rotation) is associated with key characteristics - centralization, density, and faction. The result of the study of Wu & Cormican implies that in shared leadership networks where centralization is strong, the level of interdependence and cooperation among team members is reduced, which hinders team creativity" (Wu & Cormican, 2016, p. 9). Wu & Cormican go on to look for links and argue that high density of a team also brings a positive effect - "a large number of interactions among team members can effectively accelerate the process of information flow, and consequently, promote team creativity" (Wu & Cormican, 2016, p. 9) This is supported by Sun et al. (2021) who state that a lower number of communication nodes (members) reduces the possibility of sharing the expertise of individual members, which negatively affects team creativity. This, according to these authors, is negatively influenced by a high number of factions in a group.

Another prerequisite for the positive effect of shared leadership on learning is diversity - the diversity of competencies/skills in the team has already been mentioned, but we can also talk about job variety, which positively affects both team and individual learning (Liu et al., 2014).

In the field of organizational culture, flexible culture is often mentioned, which is characterized by diversified information-seeking paths, where people learn from each other in various unstructured ways (Sun et al., 2021). We should not forget about mutual trust or psychological safety (Liu et al., 2014) which can be associated with the already mentioned encouragement and trial and error culture. The mutual trust associated with the concept of empowerment is reflected e.g. by Ramstad (2014), who talks about a greater tendency of team members to take the lead. According to He et al. (2020), an openness to experiment regardless of the success of the experiment in unknown situations and a willingness to learn from these situations seem to be essential requirements for the development of creative exploration in individuals with the potential for high creative self-efficacy. Psychological safety climate is identified as a mediating mechanism by Liu et al. (2014), who consider it as an element that supports individual and group learning. These elements appear to be key to team members' willingness to take leadership and unlock the potential for creative collaboration.

3.4 Other findings

This chapter presents topics unrelated to the main goal which are still interesting in the discussion about learning and shared leadership. A noteworthy conclusion is reached by Bunjak et al. (2022, p. 5), who argue that transformational leadership "has an implicit power to motivate employees to also lead themselves" and is thus a kind of acceleration factor (and perhaps a condition) for the realization of shared leadership. Koeslag-Kreunen et al. (2018) also come up with similar suggestions of alternating and linking styles. Tran & Vu (2018) come up with critical insight, presenting the finding that "to enhance team effectiveness including team performance, quality of team experience, and team viability, implementation of transformational leadership will create more effectiveness compared to the application of shared leadership" (Tran & Vu 2021, p. 158).

A large number of authors (He et al., 2020; Hoch 2013; Sun et al. 2016; Klasmeier & Rowold 2020; Cobanoglu 2021) talk about the high impact of shared leadership on creativity and innovation. This seems to be a very frequent topic, however, the articles view creativity as a process of generating creative solutions and implementing innovations rather than as a skill or competence of individuals and teams. For this reason, they are not discussed further in this article.

4. Conclusion

The aim of this study is to describe the relationship between shared leadership and learning. This relationship appears to be inevitable - shared leadership appears to be both a cause (or impulse) of learning (education and training) and a consequence or phenomenon dependent on the development of individuals (leaders and followers. The conditions that support personal and team growth play an important role. Unsurprisingly, support for leader training is expressed, not only in the area of soft skills but also in the scope of knowledge of team roles etc. However, prior to the analysis, we expected to see more mentions of the need to prepare leaders and teams to practice shared leadership. However, this need is not presented in the literature (or was not captured by this review). Thus, the ability to practice shared leadership may appear to be an intuitively acquired skill that does not require any systematic education or training. This finding could be addressed in the future and the structure of training courses on shared leadership could be tested. Further research could also reveal a set of competencies important for all team members where shared leadership is applied and define a competency model for leaders of these teams.

The present studies attribute an important role to social learning from other team members. In this respect, shared leadership seems to be an inspiring approach in which, by rotating in the leadership position, members can learn from the behaviour of others. At the same time (although this is not directly linked to learning) they can help each other overcome their weaknesses and amplify the influence of their strengths by sharing their knowledge and skills. Through knowledge sharing, the development of the learning organization as described by Senge (1993) can occur. The effect of shared leadership on the creative process is often mentioned, but the studies do not primarily focus on creative ability. The effect of this style on the development of this particular skill is such a suitable topic for some future research.

Shared leadership as a stimulus for learning is followed very smoothly by terms that emphasize diversity as an important factor for learning. The greater the diversity of roles and competencies represented, the more opportunities members have for being influenced by other members in learning. Structural conditions such as high density, low faction, and low levels of centralization of decision making (which by the nature of shared leadership is low) play an important role here. These conditions can be also related to the term 'flexible culture'. Elements of the psychosocial environment - mutual trust and a sense of psychological safety - appear to be very important, and are linked to a culture of trial and error. The combination of these conditions, their specific settings and examples of good practice can be also a suitable topic for further research.

The results of this study should be put under discussion because of the research procedure used. A more detailed content analysis of the sources could be beneficial in the future as well as the searched database choice. It would also be possible to broaden the list of keywords, especially in the area of shared leadership and its synonyms, for a larger number of articles included in the analysis. Books dealing with this issue could also be added. The topic in general offers possibilities for exploration using different strategies (quantitative or qualitative) and different research approaches.

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An Examination of Governance Failure by the Irish State: The critical case of the 'Mica'/Defective Blocks issue

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Abstract: This paper examines how governance failure on behalf of the Irish Government led to the 'mica'/defective blocks catastrophe. It will examine the governance process adopted by the Irish state in the 'mica' case and review the recommendations made in 2012 (Pyrite Panel, 2012) following a similar crisis – 'pyrite' and whether the Irish Government's response to these recommendations were acted upon in a timely manner. It will further examine whether the government's action/inaction in relation to these recommendations could have contributed to the scale of this mica crisis and whether it may have exacerbated this crisis further. This paper will also establish the key lessons to be learnt from this crisis. The findings of this research will be of value to Public Sector organisations /Government departments when considering governance approaches at a local and a national level that should be in place, in particular when permitting concrete products to be placed on to the marketplace. Finally, it will be of interest to other researchers/ academics interested in Governance at both an organisational and at a governmental level.

Keywords: Governance, Governance failure, Public Sector Governance, Defective blocks, Mica

1. Introduction

> *"From a public policy perspective, what happened with pyrite should not have happened and there are important lessons to be drawn from the experience. We hope that this report and the recommendations we have made in it will not only assist you in dealing successfully with the specific problems caused by pyrite but that they may help prevent such a problem ever arising again"* (Tuohy, 2012, p.8)

This statement made by Brendan Tuohy, Chairman, Pyrite Panel in his report on the 'pyrite' (or pyrite heave) issue is pertinent in that he concedes it should not have happened. The 'pyrite' issue first came to the attention of the Irish Government in 2007 when at first a small number of private properties in the Fingal area of Dublin reported issues of their homes exhibiting significant cracking. However, it soon became clear that the problem was more widespread than first thought and over the subsequent years as many as 20,000 homes were thought to have been affected by this issue (Rawicz, 2012). More recently, figures suggest that this number may be much lower as up to the end of December 2020, 2,784 applications had been received under the Pyrite Remediation Scheme and 2,342 have been approved for inclusion However, this remediation programme is still open and applications are still being received (The Housing Agency, 2021).

Pyrite (FES2 – iron sulphide) is a very common mineral with traces of it are found naturally in the rock that is used to make crushed stone for backfill used in construction. If the level of pyrite in the stone is below a certain percentage, no problems occur. However, if this level is greater, problems can arise which in this case caused the homes built using this backfill in the foundations of these properties to collapse (Rawicz, 2012). In 2021, it was concluded by a government panel appointment to investigate this issue that:

> *"… at the time, there was not an effective testing and inspection regime in place in quarries to identify the presence of pyrite or to ensure that the hardcore material being supplied was of an acceptable quality."* (Pyrite Panel, 2012, p.11).

The cost of this to the Irish state was exorbitant and to date has cost in the region of approx. 140 million euro (Oireachtas, 2020). Subsequently, a number of key recommendations were put forward by this panel to ensure that nothing like this should ever happen again (Pyrite Panel, 2012).

However, the following year, in 2013, similar problems with defective building materials started to emerge in Donegal, in the north of the country. The presence of muscovite mica in abundant quantities in the aggregate constituent of the concrete blocks used in the construction of these homes was deemed to be one of the main factors contributing to their deterioration (DHLGH, 2017). This deleterious mineral absorbs water and through the cyclical freezing and thawing process when exposed to the elements, was believed to result in the blocks disintegrating (O'Reilly, 2016). In December 2013, at a public meeting of homeowners in the county who had started noticing unusual cracking to their homes, a lobby group, called the Mica Action Group (MAG), made up of affected homeowners, was formed with the aim of seeking Government redress to enable families to fix their homes. As indicated in the Primetime investigation and documentary on this issue of crumbing blocks in Donegal: "After Pyrite … bad building control has come back to bite again" (O'Reilly, 2016). See Figure 1 below for a timeline of the emergence of the Pyrite and mica issue in Ireland.

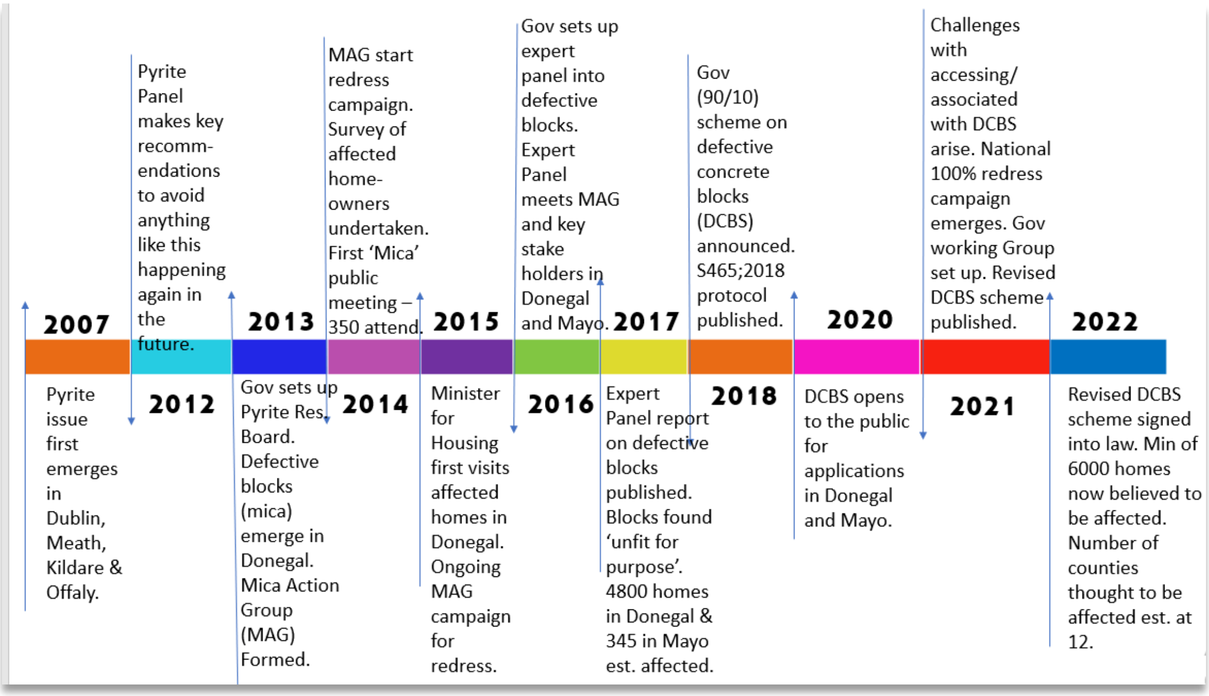

Figure 1: Pyrite and Defective Blocks timeline (Source: author's own).

This paper examines how governance failure on behalf of the Irish Government led to the 'Pyrite' and subsequent 'Mica' crises. In particular, the key aims of this paper are to:

1. review and examine the recommendations made by the Pyrite Panel in 2012 and whether or not these recommendations were acted upon in a timely manner;
2. examine whether the government's action/inaction in relation to these recommendations could have contributed to the scale of this mica crisis and whether it may have exacerbated this crisis further; and
3. establish the key lessons to be learnt from this

The paper is presented as follows; section 2 provides an overview of the emergence of defective building materials in Ireland – Pyrite and Mica. It will also outline the key research aims of the paper. Section 3 presents the methodological approach adopted. Section 4 discusses the key findings and section 5 presents the overall conclusions and future direction of the research.

2. The emergence of defective building materials – 'Pyrite' and 'Mica'

In 2007, following the emergence of the problem of pyrite heave first evident in five local authority areas, Fingal, Dublin City, Meath, Kildare and Offaly with thousands of properties suspected of being affected, attempts to remediate or 'fix' the properties, proved unsuccessful. The cracks simply reappeared. Further testing found high levels of the mineral pyrite in the hardcore beneath ground floor slabs (Pyrite Panel, 2012). The oxidation of pyrite, its expansion and resultant heave was found to be the main cause of the damage to the buildings concerned (Pyrite Panel, 2012). This damage to properties included:

- the cracking of floors, internal partitions and external walls;

- outward movement of external walls; and/or
- the heaving of ground floors and bulging of internal partition finishes (Pyrite Panel, 2012).

When this issue came to light, a number of legal actions were instigated through the courts with the Quarries involved. However, all but one of the quarries were closed by 2012. Additionally, Homebond - the main insurer of these homes for structural defect guarantees, refused to reimburse or pay out on these properties insurance policy (Pyrite Panel, 2012). Government intervention was required to address this crisis and as such the Pyrite Resolution Board (PRB) was established under the Pyrite Resolution Act 2013. The Housing Agency took over the role of assessing and remediating these homes (The Housing Agency, 2022). In the Housing Agency's annual report (2021) they indicated that they had remediated just over 200 properties in 2020 bringing the total number of homes remediated under the pyrite remediation scheme to 2091 since its inception (The Housing Agency, 2020).

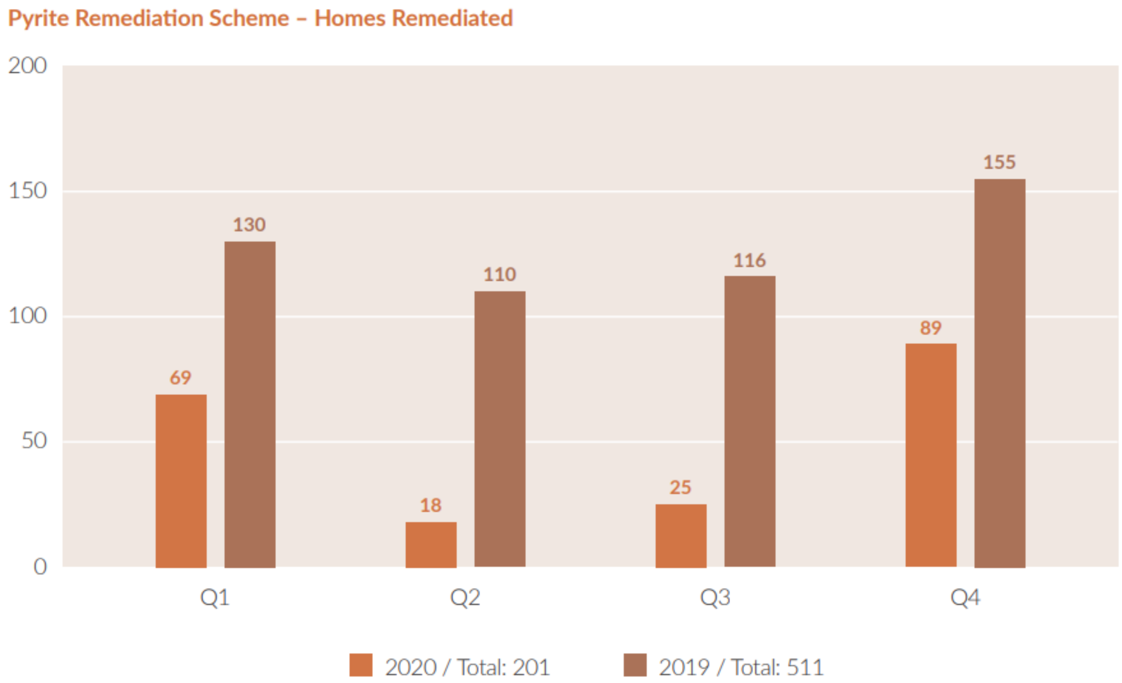

Figure 1: Pyrite Remediation Scheme – Homes Remediated 2019/2020 (The Housing Agency, 2020)

The costs of this Pyrite remediation scheme to the Irish state is significant with the cost of remediating each property averaging €70,000 (Oireachtas, 2020). This equates to an estimated cost of €140,000,000 to the Irish taxpayer to date. The Pyrite Panel in its report in 2012 made a number of key recommendations to avoid anything like this happening again in the future.

A number of these key recommendations by the Pyrite panel are outlined below:

Table 1: Extract from key recommendations by Pyrite Panel (Pyrite Panel, 2012, p.140)

Recommendation 9: Re-engagement by HomeBond in facilitating remediation
HomeBond should review its position on cover as articulated in its letter of 31 August 2011 and, as a matter of urgency, HomeBond should re-engage with homeowners in facilitating the remediation of pyrite-damaged dwellings. This should be addressed, in the first instance, by the members of HomeBond and, in turn, they should be supported in this process by the overall construction industry, which was involved in the establishment of the HomeBond structural guarantee scheme. This would not preclude HomeBond seeking to recover costs from other parties whom they consider may have a liability.
Recommendation 10: Engagement by the insurance industry
The Insurance Industry Federation (IIF), as the representative body of the insurance industry, together with its relevant members, should immediately engage with solving the problems caused by pyrite and for which some insurers have provided insurance cover. The Panel exhorts the IIF to encourage its relevant members to respond with greater sensitivity and urgency to the homeowners and to explore the options for a collective solution to the pyrite problem, as opposed to just awaiting the outcomes of lengthy legal processes.

Recommendation 11: Funding by mortgage providers
Subject to whatever legal constraints exist on the members of the Irish Banking Federation (IBF), mortgage providers should consider providing funding for pyrite-related remediation work, including testing, to homeowners.
Recommendation 12: Role of Government
Government should take the necessary steps to ensure that: (a) those who have responsibility for the pyrite problem should bear the costs of remediation, (b) remediation is carried out in a timely manner, (c) that comprehensive measures are put in place to minimise the risk of this or similar problems occurring in future.
Recommendation 17: Enforcement of Building Control Legislation
The Panel recommends that: (a) Building control authorities should adopt a risk-based approach to the enforcement of Building Regulations and take appropriate enforcement action for serious breaches of Building Regulations following consideration of the particulars of each individual case, (b) in local authority areas where pyrite has been shown to be a problem, the building control authorities should consider using the enforcement provisions of the Building Control Acts 1990 – 2007 to require builders to remediate defects in pyrite damaged dwellings, (c) the Minister for the Environment, Community and Local Government should reconsider the 5 year time limit for prosecutions under the Building Control Act, with a view to extending it, (d) Building control authorities should require evidence of periodic testing and certification, of hardcore used on sites, to demonstrate compliance with the Building Regulations, (e) the County and City Managers' Association should review its guidance (as articulated in its submission to the Panel) in relation to building control enforcement.
Recommendation 24: Dissemination of important information
The Panel recommends that: (a) a more effective and efficient method of dissemination of information should be established to ensure that information reaches relevant people in a timely manner and that the Department of the Environment, Community and Local Government should take the lead in setting up this system. Consideration should be given to the use of a centralised web-based alert system with a suitable feedback loop with information readily and publicly available via the internet, (b the National Standards Authority of Ireland (NSAI) should provide a single, publicly accessible information point with up-to-date information on standards immediately and readily available to all involved in the construction industry, (c) professional bodies should take responsibility for ensuing that their members receive information in a timely manner.

However, as aforementioned, just over a year later in 2013, similar problems with defective building materials started to emerge in Donegal and Mayo. The presence of another deleterious material - muscovite mica in abundant quantities in the aggregate constituent of the concrete blocks used in the construction of these homes was deemed to be one of the main factors contributing to their deterioration (DHLGH, 2017).

In 2016, an expert panel was established by the then Minister for Housing and Urban Renewal - Paudie Coffey, TD, to investigate this issue. In June 2017, the panel concluded in the Report of the Expert Panel on Concrete Blocks that the disintegration of the concrete blocks used in the construction of the affected dwellings in Donegal and Mayo was primarily due to excessive amounts of deleterious materials (Muscovite Mica in Donegal and Pyrite in Mayo) found in the aggregate used to manufacture the concrete blocks (DHLGH, 2017). This same government report found that at least 4800 homeowners were impacted by defective blocks used in the construction of their homes in Donegal and a minimum of 345 in County Mayo (DHLGH, 2017). This report further found that the blocks used to construct these homes were not 'fit for purpose', hence defective, causing the homes to crumble and collapse (DHLGH, 2017). DHLGH in their 2017 report on the issue confirmed that there were "many incidences of building failures or severe non-compliance concerns which followed the 2008 collapse in economic and construction activity" (p.56), and they recommended more meaningful on-site inspections and enforcement by building control personnel in future.

Following on from the publication of this Expert Panel Report, the National Standards Authority of Ireland (NSAI) set up a Technical Committee to develop a standardised protocol to guide the course of action in relation to remedial works for all affected house holders (NSAI, 2018). The standardised protocol - 'I.S. 465:2018' was published by the NSAI on 13 November 2018. This standard is used to assess and categorise the damage in properties where the concrete blocks used in their construction exhibit the characteristics of defective blocks and are believed to contain the minerals mica or pyrite. Before the publication of this protocol there was no commonly agreed mechanism for engineers to assess the damage caused by defective concrete blocks, in order to determine what, if any, remedial work should be carried out (Donegal County Council, 2022). Finally, after 5 years of lobbying by MAG, in 2018, the Irish Government finally announced that a MICA redress scheme would be put in place to enable affected homeowners to remediate their homes (Maguire, 2018). The scheme was finally opened for applications in June 2020 (Magee, 2020).

More recently, the number of homes affected by this issue of defective blocks is believed to be closer to 6000 (DHLGH, 2021) with at least 12 counties in Ireland now believed to be affected by this issue (Cox, 2022). Additionally, following significant testing of the homes over the last 18months or so, another deleterious mineral – Pyrrhotite – a naturally occurring iron sulfide has also been found in the blocks and is strongly believed to be another key factor contributing to them disintegrating. In many cases, all three of these deleterious minerals (i.e. mica, pyrite and pyrrhotite) are found in the blocks used to construct these homes. Alarmingly, there is no reference to Pyrrhotite in the IS465 protocol published in 2018 which is meant to act as a guide to the remediation of these properties, undermining the credibility of this protocol with homeowners calling for a complete review of it (Bray, 2022).

As a result of this crisis, many of these homes will need to be razed to the ground and replaced at a huge emotional and financial cost to families (Beattie, 2020) as well as a vast financial cost to the Irish state estimated as between €3.2 billion (Hogan, 2021) and €5 billion euro (Cox, 2022).

Opposition politicians, campaigners and homeowners have indicated that this issue of defective blocks has been caused due to a lack of appropriate oversight and 'light touch regulations' in the construction sector, particularly during the period from 2000 onwards when there was a 'boom' in house building in Ireland (Cunningham, 2021).

3. Methodology

This paper adopts a Critical case study approach to research with respect to the aforementioned research aims. In general terms, case study research is concerned with the detailed and intensive analysis of a single case (Bell et al, 2019). Case study research is focused on the complexity and particular nature of the case in question (Stake, 1995). Further, when the parameters of a case study approach as outlined by Bell et al (2019) below is considered:

> *"What distinguishes a case study approach from other research designs is the focus on a bounded situation or system, an entity with a purpose and functioning parts"* (Bell et al, 2019, p.63).

It is clear that the 'mica' or defective blocks case is a suitable approach due to its very complex and bounded nature, both in terms of time and also in terms of its geographic/regional focus. In their study of quality management in a UK retail bank, Knights and McCabe (1997) utilised secondary sources of documentary data such as company reports, total quality management (TQM) guides and newsletters to identify insights into why so many TQM programmes had failed. Similarly, this study will utilise multiple secondary sources such as Government reports, media coverage, documentary evidence, Irish buildings Standards concerning concrete/aggregate and media reports to identify insights into how this issue arose and why governance on behalf of the Irish State failed. After an extensive review of this secondary material in respect of this case, the recommendations put forward after 'pyrite' were deemed a suitable model to ascertain the efficacy of the approach to Governance of this issue by the Irish State.

Case study research can be either based on a single case or a multiple case. A single case study is one in which a single research object/research event is used (Stewart, 2001). A single case study design is appropriate when one has a critical case and is able to test a well-formulated theory; or when the case represents an extreme unique case; or when the case is revelatory (Yin, 2003).

Yin goes on to explicate that the critical case is an appropriate approach when a clearly specified hypothesis exists and a case is selected on the basis that it will enable a better understanding of the circumstances in which the hypothesis will and will not hold (Yin, 2003). In the case of this research, this study will render a better understanding of whether the Irish State failed in its approach to governance of the construction sector in terms of the products that were allowed on to the market. This understanding will be enhanced by a review of the 'pyrite' recommendations (Pyrite Panel, 2012) and whether effective governance followed publication of these recommendations. Hence, the type of case study that will be adopted in the case of this study is a 'Critical case' (Yin, 2003).

Further, this critical case study approach will also include a longitudinal element by analysing archival information (Government reports, surveys, annual reports etc.) pertaining to the emergence of the 'mica' defective blocks issue, over a lengthy period (Bell et al, 2019).

4. Findings and Discussion

This section will review a number of key recommendations made by the Pyrite Panel (2012) that were deemed pertinent to the 'mica' case as outlined above in Table 1. Each of these recommendations will be considered in the context of the 'mica'/defective blocks crisis and whether they were acted upon following publication of this Pyrite report.

4.1 Recommendation 9: Re-engagement by HomeBond in facilitating remediation

The panel recommended that HomeBond - the main insurer of these homes for structural defect guarantees, should re-engage with homeowners in facilitating the remediation of pyrite-damaged dwellings. HomeBond refused to reimburse property owners who had found to have pyrite in their homes from 2007 onwards (Pyrite Panel, 2012). Similarly, in the case of mica/defective blocks homeowners, HomeBond once again walked away and refused to honour insurance policies on the affected properties (Lucey, 2021). Why, did the Irish Government learn nothing from 'pyrite'? Why, at such a huge cost to the State and given the huge stress to families, that this caused in 2012, was this allowed to happen again?

4.2 Recommendation 10: Engagement by the insurance industry

The insurance Industry Federation was recommended_to encourage its relevant members to respond with greater sensitivity and urgency to the homeowners and to explore the options for a collective solution to the pyrite problem (Pyrite Panel, 2012). However, in the case of the mica/defective blocks issue, insurance companies, once again withdrew support from families affected by this issue as soon as they became aware of this issue affecting their homes (Hone, 2021). This has caused untold stress to families and again, why has the Irish Government learnt nothing from 'pyrite' years earlier?

4.3 Recommendation 11: Funding by mortgage providers

The panel recommended that_mortgage providers should consider providing funding for pyrite-related remediation work, including testing, to homeowners (Pyrite Panel, 2012). However, once again, banks did not step in and provide this support to families affected by the mica/defective blocks issue. Even though, in many cases banks were also stakeholders on the property (as many had mortgages and the deeds of these properties resided with the bank), banks refused to support families affected resulting in MAG in February 2020 instigating a campaign to try to bring the banks to the table to help families pay for the testing and to support them in fixing their homes (Donegal Live, 2020). Mortgage providers did not act in any proactive manner to try to support these families affected (Donegal News, 2021). Again, and given that the Irish Government are shareholders in most of these banks following the banking bailout which cost the state an estimated 64billion euro in 2010 (Hancock, 2019), have they not put pressure on these banks to support families? The alternative puts a huge financial burden on the State. Surely coming to some agreement with the banks makes sense from both a financial and a moral perspective.

4.4 Recommendation 12: Role of Government

The panel recommended that Government should take the necessary steps to ensure that:

1. those who have responsibility for the pyrite problem should bear the costs of remediation,
2. remediation is carried out in a timely manner,
3. that comprehensive measures are put in place to minimise the risk of this or similar problems occurring in future (Pyrite Panel, 2012).

In respect of the homeowners affected by the defective blocks issue, those quarries who had manufactured the defective blocks, refused to provide redress to homeowners. They indicated that they had at all times complied with existing legislation and instead of offering redress to those affected reiterated their support for remediation from Government (Beattie, 2018). A further recommendation by the panel was for this remediation process to be carried out in a timely manner (Pyrite Panel, 2012). Indeed, this has not been the experience of families affected by the defective blocks issue, MAG first presented this issue of defective blocks to their local authority – Donegal County Council in April 2014. In December of the same year due to a lack of any response from Donegal County Council, results of a MAG survey of affected homeowners in the county were presented to Government in Dublin. At the time there were a few hundred affected homes registered with MAG (MAG, 2014). It took many years of lobbying for the Irish Government finally to agree to provide a redress scheme for affected homeowners (Maguire, 2018). Further, as of figures published by Donegal County Council in 2021, only 7 homes (from a possible 5000 affected) in Donegal were remediated in the previous year since the scheme opened (McGinty, 2022).

The final element of this recommendation by the panel indicated that comprehensive measures be put in place to minimise the risk of this or similar problems occurring in future (Pyrite Panel, 2012). Given, the huge task undertaken by MAG to lobby Government and to have their voice heard and the subsequent (5) years it took to implement a scheme for affected homeowners (Maguire, 2018), it is clear that Government did not act with any urgency or put in place such measures to stop this happening again. In fact, it begs the question as to how many additional homes may have been built during this period of inaction which may also now be affected by this issue?

An extract taken from the Pyrite Panel report in 2012 is pertinent to the role of Government in the mica/defective blocks case:

> *"The Panel recognises the significant hardship imposed on homeowners affected by pyrite heave and by having reactive pyrite in the hardcore of their houses. This should not have happened in the first place but, after it had happened, the various stakeholders were far too slow in addressing the legitimate concerns of the homeowners. They often appeared to be more concerned about defending possible claims against them rather than in remediating the affected dwellings. Nobody wished to take overall responsibility for solving the problem."* (Pyrite Panel, 2012, p.126)

It would appear that the same lethargy and chronically slow pace at which government acted played out once again.

4.5 Recommendation 17: Enforcement of Building Control Legislation

The panel recommended a strengthening of Building control practices in respect to areas suspected to be impacted by pyrite (Pyrite Panel, 2012). In the case of the Defective blocks issue the expert panel on Defective Blocks (5 years later), in fact found that the introduction of the opt out for new single dwellings, on a single development, as provided for in the Building Control (Amendment) (No. 2) Regulations 2015 (S.I. No. 365 of 2015) as a retrograde step that may contribute to further building failures such as those experienced in Counties Donegal and Mayo (DHLGH, 2017). They further found that more independent meaningful on-site risk-based inspections and enforcement by building control personnel was required to ensure that greater compliance with the Building Regulations was secured as a necessary check and balance of the self-certification system. In this regard, building control authorities needed to be adequately resourced to facilitate increased inspection activity on the ground (DHLGH, 2017). Why had the recommendations of increasing building control from 2012 still not been acted upon 5 years later? Would this strengthening of building control, as was recommended by the Pyrite Panel have stopped or at least curtailed the extent of this mica/defective blocks issue.

4.6 Recommendation 24: Dissemination of important information

The panel recommended that a more effective and efficient method of dissemination of information should be established and that the Government should take the lead in setting up this system supported by the National Standard Authority of Ireland (NSAI) and professional bodies to ensure that information reaches relevant people in a timely manner (The Expert Panel, 2012). In respect to the Defective Blocks issue, information on the issue was not centrally controlled but instead was the remit of MAG who acted as both a lobby group and a support group for families and all key stakeholders until 2020 when the scheme was set up (Mica Action Group, 2016). This led to many challenges of misinformation and a lack of clarity about the issue. Professional bodies such as Engineers Ireland and other bodies such as the Property Services Regulatory Authority (PSRA) - the statutory body with responsibility for licensing and regulating the property services sector (Auctioneers, Estate Agents, Letting Agents and Property Management Agents) in Ireland continued to have members who were ill informed on the issue causing further challenges with regards to effectively assessing the issue as well as selling properties to unsuspecting buyers who were affected (Mica Action Group, 2014).

5. Conclusion and Recommendations

This study had a number of key aims: Each of these aims will be presented and conclusions drawn below:

5.1 Review and examine the recommendations made by the Pyrite Panel in 2012 and whether or not these recommendations were acted upon in a timely manner.

Following a review of the recommendations made by the Pyrite Panel in 2012, it can be concluded that with respect to a number of key recommendations in relation to issues that re-occurred in the mica/defective blocks case, that Government failed in their governance of this issue:

- *HomeBond* (insurer against structural defects)
- The insurer was allowed to walk away once again abdicating all responsibility. This had happened previously in the case of Pyrite. Why was it allowed to happen again in the 'mica' case?
- *The Insurance industry*
- The insurance industry, failed to offer insurance cover to homeowners who were affected. There was no government intervention to ensure insurance cover for those affected.
- *Mortgage providers*
- Banks and mortgage providers did not support families in terms of helping finance the testing and remediation of these homes. There was no government intervention to ensure banks were supporting those affected even though many homes were mortgaged and banks remained key stakeholders and would benefit from their remediation where the home would be returned to market value following remediation.
- *The Role of Government*
- The companies/stakeholders responsible for the mica/defective blocks issue have not been investigated and were not forced to contribute towards the cost of remediation of affected homes.
- Implementation of this scheme by Government took years and remediation of these homes has not happened in a timely manner, instead it has taken years to open the application process and the process of remediation is arduous and painfully slow.
- Comprehensive measures have not been put in place by Government to minimise the risk of this or similar problems occurring in future.
- *Enforcement of Building Control legislation*
- Findings from the investigation into the defective blocks issue in 2017, 5 years after the report on Pyrite found that as opposed to further enforcement of building control legislation as was recommended, an 'opt out' clause was implemented in 2015 which in their own words acted 'as a retrograde step that may contribute to further building failures such as those experienced in Counties Donegal and Mayo' (DHLDC, 2017). More recently, this issue of defective blocks is believed to have spread to 12 counties with all counties in the Republic of Ireland being advised to assess their housing stock for any signs of this defective blocks issue. The scale of this issue and the subsequent cost to the Irish State is continuing to rise. The lack of effective governance controls in place as aforementioned played a central role in this crisis.
- *Dissemination of important information*
- *A* government led centralised system to disseminate information on this issue was not set up leading to a lack of understanding and confusion among key stakeholders affected by the mica/defective blocks issue.

5.2 Examine whether the government's action/inaction in relation to these recommendations could have contributed to the scale of this mica crisis and whether it may have exacerbated this crisis further

It is clear that whilst a comprehensive list of recommendations from pyrite were made to address the inadequacies and lack of oversight that led to this issue emerging and to stop anything like this from happening again, many of these recommendations were not acted upon. It can be speculated, that if they had been acted upon and if effective governance had been implemented following pyrite, the scale and impact of the mica/defective blocks crisis could have been significantly curtailed and in the case of more recent properties that were built – in fact prevented from happening.

It begs the question as to whether there was a genuine will at Government level to implement these recommendations. Given the cost to the Irish state for both pyrite (currently estimated at 140million euro) and mica/defective blocks (estimated between 3.2-5 billion euro) why lip service was paid to this serious issue. The impact of this governance failure will be felt for years to come in terms of the financial cost. What is more concerning is the cost of these crises to the families affected, not just in financial terms but the stress, trauma, adverse physical and mental health impacts this is having. This is much more difficult to quantify and to accept given that lessons should have been learnt years earlier. Therefore, it is recommended that in the future, if anything like this is to happen again, government need to demonstrate a genuine will to act upon its on recommendations in a timely and sensitive manner. Further, a public inquiry needs to be held into this issue. Why did it happen? What key factors and which stakeholders contributed to this crisis? How can we be sure that nothing like this ever happens again?

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The Islands of Sanity in the Killing Fields of Inequalities: A Juxtaposed case in Management, Leadership and Governance Practices

"When the gazelle wakes up, it knows that it must run faster than the fastest lion or it will be killed. Every morning, when the lion wakes up it knows that it must outrun the slowest gazelle or it will starve to death. It does not matter whether you are a lion or a gazelle, when the sun comes up, you better start running!"

(The African folklore)

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Abstract: This article was motivated by the conversations which ensued at ECMLG 2021 after a presentation on a similar topic. The question from the audience was whether the researcher and analyst still had tenure in the insider research project he had just shared. The response was in the affirmative, although serious concerns were expressed about the quality of the tenure, symbolized by the brutality and dehumanising tendencies of the then University Regime. Therefore, this project-based article at ECMLG 2022 continues from that debate. Mirrored on the national events as a result of the Justice Zondo Commission about State Capture in South Africa, the article focuses on one case of a university institution, which was arguable under a capture during a particular regime of a Vice Chancellor and Principal. The case of "The Killing Fields of Inequalities" is very typical of the national contexts, which is still steeped in settler colonialism and in a structured racist system, strangely almost thirty years into constitutional democracy. Such a case is juxtaposed with what can be referred to as "Islands of Sanity"! The two African folklore illustrate the case as reported in the article. Firstly, that the system can be changed but it will first try to eat you up! Secondly, that when the hyena wants to eat its own children, it first accuses them of smelling like rats. Therefore, the main argument, which serves as the anchor for the article, is to problematise the taken for granted claims about management, leadership and governance practices in university education spaces. This can be done by means of realist oriented scholarship projects, which ought to dig deeper than what appears on surface as leadership for the idea of university education as the public good. In this regard, the article suggests a realist social program, which is anchored on the critical realist philosophy, in accounting for the cited practices and in ways that can shed more light for the transformative outcomes than those reported in the article. It is envisaged that the article will have as the result, promotion of systemic conversations about the default position and fault consciousness in the idea of university education in general and how such an idea should be better managed, led and governed in the national development plans (in the case of South Africa, for example).

Keywords; State Capture; Justice Zondo Commission; Historically Disadvantaged Universities; Walter Sisulu University; Public Good

1. Introduction

The enduring challenges of historically disadvantaged universities (HDUs), and the transformation project of public university education in South Africa, are well documented in literature (MoHET, 2019, 2021; CHE, 2015, 2017, 2019, 2021). The research, on which this article is based, had its setting a particular case about the Vice Chancellor and Principal (henceforth, The VC-P) at University of the North Eastern Cape[1] (henceforth to be referred to as, UNEC). The research focussed on a series of events which would later be captured in the form of an Institutional Forum Report about the National Education Health and Allied Workers Union (NEHAWU)-MR X Unresolved Dispute (to be referred to as the IF Report). The events leading to the report dated back to May 2018, and the Report served at the University Council of 8th April 2022. The case had its roots at the very first year of the VC assuming duties at UNEC, which would reflect serious contradictory positions and inherent consistencies, at least from the critical realist perspective about the nature of complexity in open social systems. Several times since NEHAWU had declared the labour dispute about the case, the Council would remain obfuscating about the case until the new Council came into existence in November 2020, which was then followed by the VC-P ostensibly going on sabbatical leave in January of 2021, and finally vacating the Office in March 2021. The article thus makes the observation about how the IF Report could be juxtaposed with the VC's Regime, at least in a particular case of how the university policies were breached in service of the power relations and the materialist interests of the day. This could be described as yet another case about the "Pretenders to the Throne" (Dwayi 2021). How the case played out promises to be an interesting area of research to the scholars

[1] Not the real name.

of humanities and social science in general and of the leadership, management and governance, in particular. Therefore, in illustration of the title, I refer to this particular case, where the report itself promised what could be the case for "Sanity", when the university space, purposefully or inadvertently, directly or unwittingly" can also be managed, led and governed in service of the systems of domination and control. Unfortunately, such cases can arguable reflect the case of the "killing fields of inequalities" (Therborn, 2013), when their extremity entails the perpetuation of historical and structural disadvantage about the Other. Therefore, juxtaposition in the context of this article refers to leadership and leader as dialectically related in two ways,

- Firstly, as the question of structure (roles, duties and functions) and agency (choices or none choices, projects or none projects, about the matter of concern). This can be the case of how systems of domination and control can play out at the expense of the Other.
- Secondly, it can be the same question of the domination, but this time with an additional element of the cultural system (the beliefs, norms and standards), as the dominant explanations about MLGs in mutually inclusive ways.

2. The Complexity of Power Relations in the South African Transformation Project

The South African constitutional democracy is still bedevilled by the legacy of settler colonialism and the structured racist system (Bundy, 2019). It is against such a background that the Council on Higher Education, a national regulatory body for quality management, has commenced the second phase of Institutional Audits in 2022. The first, after Constitutional Democracy, took place from 2004 to 2011. Such a phase is sufficiently deconstructed by social science scholars who draw from the critical realist perspective (Luckett, 2007; McKenna & Quinn, 2012; Boughey & McKenna, 2015). Such a body of knowledge was in line with what were the global trends about systemic reviews (for example, Clegg, 2005). For me, this is what I would regard as the developments that do not only find expression in the South African context, but also in the unique case of its transformation project as characterised by the HDU phenomenon.

2.1 2.1. The Killing fields and the particular case of the University of North Eastern Cape (UNEC)

The case of "The Killing Fields of Inequalities" (Therborn, 2013) is very typical of the complexity of the South African contexts, as already alluded to above. When Therborn *ibid* invokes the imagery of "The Killing Fields of Inequalities" he argues that,

> *"Inequality is not just about the size of our wallets. It is a socio-cultural order which, for most of us, reduces our capabilities to function as human beings, our health, our dignity, our sense of self, as well as our resources to act and participate in the world….inequality is literally a killing field, with millions of people dying premature deaths because of it. These lethal effects of inequality operate not only in the poor world, but also, and increasingly, in rich countries"*

On his parting note to the university community, the UNEC VC-P had this statement to make (WSU, 2021),

> *"For me, this chapter of my life and a career spanning just over four decades is about to close and I am pleased to hand over the baton to the new VC. I bid you farewell with much appreciation for the support I received and for the good times we had together".*

However, upon his assumption of the Office five years before, he had made a powerful promise that he would take this particular University out of the intensive care unit and to the high care. It was quite coincidental, or was it, that when this case would unfold, South Africa was also grappling with the serious challenge of managing the unintended consequences about her democracy, as emanating from dangers of kleptocracy. During the year that the VC retired from UNEC, the nation was gripped by the "state capture phenomenon", which would be later reported in the Justice Zondo Commission findings, per Reports One to Four (The Presidency, 2022). In summary, the Reports outline the endemic corruption which has permeated all the Organs of State through the deliberate undermining of policies, namely Public Management Act, with regard to the procurement systems, etc. In a nutshell, these Reports outline the State Capture cases as having been systemic, historical and quite perpetual of the dominant of systems and control. While such discussions seemed to be about the public service, not much was well documented about how the Hallowed Walls of University Education might have been the subject of the same phenomenon.

The strange phenomenon is that similar cases had long been reported about how the university education sector seemed to undermine the management, leadership and governance systems and processes to the point of subjecting these University into Administration Regimes (Dwayi, 2021, Dwayi, 2022). During the time of finalising this article, the HETSA sector was still bedevilled by yet another sad news about maladministration and corruption which can threaten the very idea of University Education and its academic project. This related to the case of Fort Hare University (UFH) when The President of South Africa had to make a proclamation about the UFH state of affairs. In the subsequent media statement that sought to welcome the proclamation, University management made the following statement,

> *"the proclamation is very important to the University's new Council and Management Executive Committee (MEC). Both these bodies have been pursuing the complete destruction of corrupt ties, criminal networks and individuals and/or entities that at times attempted to make the institution ungovernable in order to stifle investigations, sanctions and the rule of law, including threatening the leadership through shootings"* Dispatch-Live 6th August 2022).

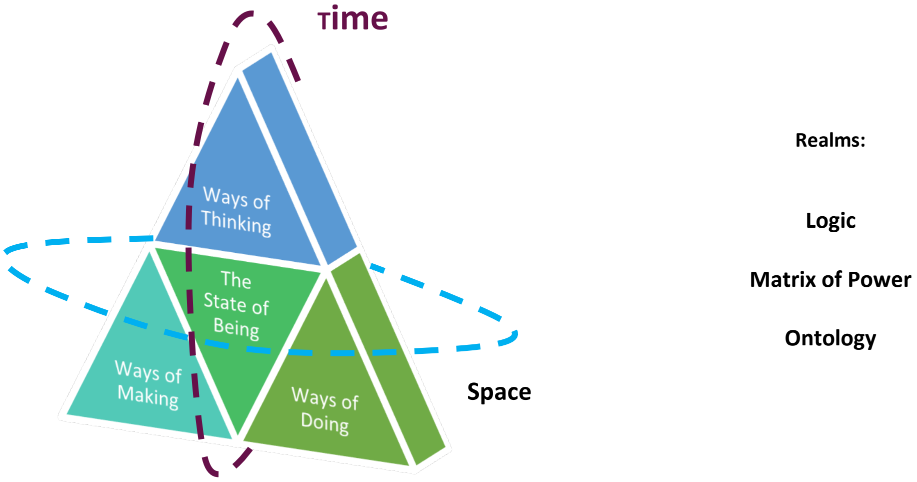
The Institutional Forum (IF), according to the regulatory framework for HETSA, is a statutory committee which advises Council on policy matters. The IF finally reported its findings and recommendations about the case of NEHAWU-Mr X unresolved dispute. The contents of the report can be seen in the analogy of the Killing Fields of Inequalities. In a nutshell, the report portrayed this particular and strange picture about the systemic way in which forms of domination and controlled played against the Other, as briefly summarised below,

1. According to the policy in hand, the incumbent gets to occupy the upgraded position. The former Vice Chancellor flouted this policy. The exclusion of Mr X from the SD: LTD position happened via increasing academic requirements: a generic PhD qualification was required, not Masters which Mr X possessed at the time. Here the VC used a subordinate principle (academic requirements) to justify flouting the imperative of the job grading policy. This was, it can be concluded, a tactical mischief!
2. Another breach happened against the Statute and policy on Recruitment and Selection. The person who presided over the shortlisting of the SD: CLTD was not an external person as required by the policy. The VC usurped the powers of Council when he presided over the shortlisting.
3. When NEHAWU simultaneously approached CCMA and university Council to intervene on the matter, the then university Council invoked the principle of sub judice to avoid taking responsibility. However, CCMA said that, until an appointment to the SD: CLTD position is actually made, the matter remained internal. While CCMA and Council were not acting, HRCC was processing the interviews of shortlisted candidates and the employment of the successful candidate.
4. It is recommended that the mishandling of the matter of Mr X be acknowledged, and that some form of retrospective recourse be done in his favour. Additionally, prospective recourse could be done. Strict compliance and abandonment of arbitrary practices is recommended. Finally, HR policies – for example, Job Grading Policy, Grievance Procedure – must be reviewed. Importantly a dispute resolution policy requires construction and clarification, especially how matters that are sub judice are handled and whether and the extent to which management and university could proceed to process matters about which a dispute has been declared and challenged. This needs to be done to enable proper oversight and justice for disputants.

For research purposes, the main point of analysis was how the events surfaced the contradictory positions and the inherent consistencies about the matter of a qualification which the VC-P used as an excuse for excluding Mr X , and in the process, usurped the University Council powers, while the Council, on the other hand, abrogated its fiduciary duties. This is one case in which MLG systems and practices can fit the analogy of the Killing Fields.

3. Surfacing the Ontological Assumptions about what ought to be good performance and sustainable value creation

The value of calling on the realist social program, which is anchored on the critical realist philosophy, is for its power of providing an explanatory account about the social world (the research and practice terrain of corporate governance and leadership). In such cases, the nature of complexity in open and social systems need to be simplified by means of scholarship towards what should be sense and meaning making about a social phenomenon as a matter of concern. In such projects, the particular challenge about Agency needs to be problematised. Agency will always inherit the conditions of culture and of structure, which are not of own making. These are events and processes that, at the time of Agency being active, the systems were already in action and in ways that both the elements of structure and culture will always predate Agency at macro level, while Agency always responds at micro level.



Agency as the Criticality-Reflexivity-Praxis Chain/Logic

(**Diagram 1**: Dimensions & realms about the Idea of Being where University Education as the Public Good has to be enacted as Agency, adapted from Dwayi, 2021)

Therefore, Diagram 1 reflects how the idea of being, when it applies in the social world, can assist towards representing the dimensions and realms as already is the case to many scholars of humanities and social science. In the light of what the context indicates, and drawing from Diagram 1, an inference can be made that the matrix of power in the context of HDUs need to be a subject of critique in time and in space (contextual profiling). The idea about university education, as the ways of thinking (cultural system) need to be made analytically distinct from those of making (structural system) and of doing (human systems) . There needs to be scholarship projects that can be more critical about the present in the idea of university education in South Africa in general and the question of HDUs, in particular, if praxis artistry in such contexts has to earn and maintain its value.

Therefore, in order to carry out this project, I had to think of the following research questions,

1. Firstly, How do MLG role, duties and responsibilities engage the apparent systemic challenges in the ideal about the university education as the public good?
2. Secondly, as emergent from the first: Could the University Council role of strategy, performance and reporting, per Principles 4 and 5 of the Code of Corporate Governance and Leadership, be said to translate into good performance to sustainable value creation?

Thinking about the two questions, for a study that employs critical realist philosophy and the realist social program, could shed more light about the challenges that the HDUs in general, and the particular case of UNEC, continue to grapple with. The light would have to be shone on the potential disjuncture about the pursuit for human flourishing, as the idea of university education as the public good, juxtaposed with the reality for systems of domination and control, as the antitheses to the latter. The insights as developed from such analysis would therefore emerge from a realist critical understanding of the interplays of structure, culture and agency about the matter of concern in three ways,

1. The interplays from the position of structure (Council and management roles, functions and duties);
2. The interplays from the aspects of Culture (beliefs, norms and standards);
3. The interplays from the dimensions about Agency (choices or none choices, practices or silences)

The ability to understand and explain these interplays would therefore be significant for theorisation of management, leadership and governance practices in the typical South African context.

Therefore, thinking of this particular case of the IF Report at UNEC would be the bigger goal of trying to elaborate on the current projects that draw on realist social program as an explanatory theory (Dwayi *ibid*). The additional value would be the matter of theory advancement, the demonstration of how to ensure the internal coherence in a scholarship project as the Theory-Methodology-Practical Program chain!

4. From the Socio-cultural Conditions to the Social and Socio-Cultural Interactions

Informed by the implicit assumptions of structure, culture and agency, as briefly introduced above, and also as extensively illustrated elsewhere (Dwayi *ibid*), I had to explore the constructs of leadership, management and governance according to Principles 4 and 5, where the ideal outcome ought to be good performance for sustainable value creation. Content analysis therefore took the critical discourses analytical approach, which entailed deduction and abductive reasoning about the reported case. Validity would be tested against how the systems of domination and control can work by having the events juxtaposed along the analogies of "the islands of sanity" and "the killing fields of inequalities". Such an approach therefore took two forms,

1. Firstly, working with the hard data in the form of texts about how the UNEC case, per the findings of the IF Report, was managed, led and governed, which would therefore surface the institutional culture of corporate governance and leadership.
2. Secondly, interpretation of such texts in ways that can take the abductive logic, where the alternative explanations about the subject focussed only on one aspect about the code of corporate governance and leadership, that is, Principles 4 and 5 about good performance for sustainable value creation, therefore surfacing what could be argued as either silences or superficialities of MLG systems and practices as indicated by the texts.

4.1 The Islands of Sanity: Surfacing the fault lines about MLG systems of domination and control

Elsewhere, I make the following argument about the challenges of class, race, power and privilege in the idea of university education and the public good, especially in the context of the South Africa.

> *"While institutional autonomy means the protection of academic freedoms and rights in how the academic enterprise, in particular, can be led managed and governed, public accountability and disclosure thereof means such rights and freedom cannot be dispensed unmediated, especially in contexts of social inequalities and injustice "*(Dwayi, 2021, p.2)

In the context of the picture as portrayed above about the MLG practices, the systems which can invoke the analogy of "the killing fields of inequalities", the counter point thereof, as a juxtaposition, is when the analogy of the islands of sanity can actually help to ameliorate such forms of brutality and dehumanising tendencies as evidenced by the IF Report. Citing Margaret Wheatly (2017) comes in handy, then, for such a comparative analysis,

> *"An island of sanity can be a literally bounded group, such as a team, function, or community. It can also be an interior space bounded by our integrity: we know who we are, what we value, and what we stand for. Sanity is in treating people……..as human beings."*

Further, how the cases reflect the workings of systems of domination and control, can be inferred from the following reference about the notion of the Dominant and its Constitutive Other (Gunnarsson, 2016, p.1).

> *"This refers to the contradictory relation whereby the powerful and "independent" existence of the one is premised on that which is other than it, as well as on the denial and obscuring of this constitutive dependence"*

It was quite instructive to read the findings of the IF Report when it moaned about the absence of the dispute management policies, the grievance procedures, and worse still, the Office of the Ombudsman. The same way that the state capture involved the deliberate undermining of polices, namely Public Management Act with regard to the procurement systems, etc, UNEC demonstrated strong cases about the systemic, historical and quite perpetual of the dominant of systems and control. The contradictions of position and practice, coupled with their inherent inconsistencies, refer to this particular case about the institutional leader and his leadership practices, which would have to be treated as analytically distinct, hence the case as the subject of inquiry. Drawing the parallels between the State Capture, as reported in the Justice Raymond Zondo Commission in South Africa and a particular University Education Regime as in the UNEC case, would sound unfamiliar. But it is this very unfamiliarity, the natural necessity but the inadequacies thereof, that always interests the researchers of humanities and social sciences!

4.2 The Islands of Sanity in pursuit for Human Flourishing

"The Heads Must Roll!"; "The Consequences Management Policy must apply!", such were the calls by the Members of National Parliament, Portfolio Committee for Higher Education and Training, during the presentation by the UNEC Management, about the crisis which had led to the postponement of the graduation ceremonies in May 2022. Whether, indeed, the heads had to roll would have to be understood and explained within the simple logic that each action invites a reaction! In the case about "The Killing Fields", the next logical question would be, "To what extent and for how long?" In any event, should the UNEC spaces be about "The Killing Fields" when UNEC ought to be about the idea for university education as the common and the public good? Well, the IF Report indicated the case which could be argued as being antithetical to the ideals of the public good. Such goods ought to promote the social world for "Human Flourishing!" (Bhaskar, 1989, Archer, 1995). Therefore, thinking about the latter proponents for social justice and equity in pursuit for human flourishing, if the UNEC case were to continue unabated, what would be the value about Humanity? Thus these would have to be understood as the ideological questions where the UNEC Governance/Board of Directors would have to be reimagined as the discursive spaces. Thus, the juxtaposition about the case would entail the MLG systems and practices, which are represented in the IF Report as the killing fields, in ways that should allow for absenting such dysfunctional systems or malpractices, in pursuit for the potential sanity. Such absenting would have to think about the "presence" beyond what could be described as a natural necessity, that is, when the apparent MLG systems and practices (University Council decision or none decision), can masquerade as normalised practices, while in fact they reflect the systems of domination (the antitheses to Principles 4 and 5).

Therefore, in the next three points about the role of structure, culture and agency, I highlight what turned out to be the developed insights about the UNEC case, which therefore highlight the possibilities for The Islands of Sanity, as represented by the Report, against The Killing Fields of Inequalities, as reflected in how the policies were breached in service of the Dominant and its Constitutive Other (Gunnarsson, 2016). In the literal sense, the rolling heads would be feeding into this particular narrative about the "Killing Fields of Inequalities". However, the alternative literatures to the systems of domination and control would have to be called upon if the "Islands of Sanity", and the pursuit for human flourishing, are to be mutually constitutive.

4.3 Making Loud the voice for social justice and equity

One particular call by the IF Report was this issue about the interface of management and leadership functions with those of the University council, that is, the Separation of Powers and the Delegation of Powers between the two. The Report was quite instructive about how the VC-P seemed to have the expectations that the position accorded him the unmediated right to dispense power in misrecognition of Institutional Rules and Policies. Therefore, engaging in this project allowed me to develop particular insights about the UNEC case in terms of three elements of social systems, which I describe quite extensively elsewhere (Dwayi *ibid*).

1. At the point of structural systems, the case seemed to indicate the enduring systems of domination and control which were quite the characteristics of settler colonialism, a structured racist apartheid system, power and privilege in the South Africa.
2. At the point of cultural system, the case seemed to reflect the dominant explanations about quality when the VC-P seemed to show extreme and dangerous passion about meritocracy.
3. Implied by both points (a) and (b), would be the question of Agency, which I address later. Suffice to ask some critical questions about the exercise of agency, especially by those who are always on the receiving ends of the disabling power of domination. In the case where the claims per point (a) and point (b) are granted, "Can the Subaltern Speak?" (Spivak, 2015). If so, in "whose rules of use?" (Pennycook, 1994)?

Therefore, being reminded by the latter two social scientists, I would then elaborate on the questions by raining on the point as whether "Such rules could be made explicit, and also accessible to all in the UNEC case, in particular, and in the general case of the HDUs in South Africa? The VC's claims seemed to be drawing on the literatures, which revolve around the deficit model about student learning abilities, staff teaching competences, as a result of the neoclassical approaches about the social world. Such claims do not exist in the absence of the alternative literatures, unfortunately. Contemporary literatures about integrated academic development (Dwayi, 2014) are making loud the voice about the dangers of the deficit model in the university education practices, especially of the autonomous and decontextualised models about learning (McKenna and Boughey, 2016). About the case as the subject of analysis, though, the apparent dangers of the deficit model is when it applies to the MLGs systems and processes. That is, if the body of knowledge could be problematic about the three main elements of the academic project (teaching and learning for epistemological access through students, staff and curriculum delivery), such approaches also have the direct implications to the level above those constituent parts, and in emergent ways. The nett result about the three elements of the academic project would therefore at the point of emergence, the MLG capacity as the enabling system for university education as the social world. Therefore, the engagement of the antecedent literatures about quality enhancement has to have a focus on MLG systems and practices as Agency. Such would be the need for having expanded islands of sanity in the sea of the killing fields of inequalities.

5. The Potential for The Islands of Sanity

With the power of agency as acting both on structure and on culture, respectively, the "system can be changed, although "it will always first attempt to eat one up!" For such possibilities about agency in mitigating the plethora of systems of domination, and also in the dominant explanations about the social world, there needs to be concerted efforts for the advancement of scholarship of engagement in dealing with the understudy of MLG systems at the two positions.

1. Firstly, MLG systems as the default position of being and becoming. Such possibilities require a reflexive-dialectical process which problematises the current ways of thinking in ways that can allow for transformative agency to emerge.
2. Secondly, as the faulty consciousness about MLG systems. This is typically the case when "the hyenas can first accuse its children of smelling like rats", only to justify themselves why such children "need to be eaten". The UNEC VCs-P seemingly undermined the very idea of university education as the public good, at least per the case as discussed in this article.

The case of a VC-P at UNEC has been the subject of analysis in this article in ways that the systems of domination and control could be identified as the structural mechanisms. Such mechanisms are always in interplays with the cultural mechanisms (the dominant explanations about quality). The unfortunate result about domineering systems here is that disabling powers can be meted out to the "Subaltern" and in ways that promote "The Killing Fields". Therefore, the possibility for "The Islands of Sanity would have to take the following considerations, at least as evidenced from the IF Report,

1. Firstly, identifying the *modus vivendi* about the MLG systems at UNEC. That requires systemic engagements about the IF Report beyond what works and doesn't, but about the social and socio-cultural conditions of the current choices and practices.
2. Secondly, and at practical levels, there needs to be answers to the questions about these MLG Actors in the UNEC Case. The Members of National Parliament called for the "Heads Must Roll", for the "Consequences Management Policy and Strategies" to be rolled out.

The Report was quite explicit that the VC-P didn't only undermine the Council powers, the Council itself abrogated its responsibility to the management level. It was quite unfortunate that the VC-P and his management team, especially the Directorate of Human Resources, were reported as having failed the integrity test. At UNEC, Integrity, Wisdom and Excellence remain the institutional values which are captured in the Academic Crest (the graduate academic gowns and certificates). However, what seems to be increasing complexity levels is for the Council to be reported to have failed in its fiduciary duties, especially on Principle 4 and 5 about good performance for sustainable value creation.

What would be of great concern about this case, and at practical level, is whether the case was indicative of the already dysfunctional institutional culture which feeds into the systems of domination and control in other HDUs in South Africa? Such a culture would definitely continue unabated even after the "Good Bye Message" of the VC-Ps, as briefly alluded to earlier. Such actors would have to be capacitated so that they could be able to engage the conditions of structure and of culture in ways that can allow more for the transformative outcomes, than the currently transactional and transformational outcomes. Such a situation cab thus call for what I argue elsewhere (Dwayi, 2003) as the need for impact tracking for sustainable value creation by means of the Ability-Capacity-Capabilities Logic, and for the purposes of this article, the Criticality-Reflexivity-Praxis Logic (Diagram 1). In November 2019, UNEC established a Directorate for Short Learning Programs whose main agenda is to develop policies and strategies for Centres, Bureaus and Institutes as the structural mechanisms for capabilities development in a university that is in pursuit for excellence. Against such developments as the transformative mechanisms for a potentially socially responsive university at corporate level (Dwayi, 2022, a, forthcoming), the IF Report is quite instructive about what seems to be the missing links in the required capabilities in systemic ways,

1. Firstly, at the point of structural arrangements (the systemic gaps in the policies and strategies (point 2.1).
2. Secondly, at the point of logical connections (the value systems where both quality enhancement and human resource development ought to be the defenders of the current popularised UNEC Vision 2030).

6. The Practical Alternative: Reflections and Conclusion

The idea of university education in the particular case of HDUs, as exemplified in this article, continues to reflect the unfortunate acts of intimidating and bullying into submission. It can be an ugly and naked misuse of power. The IF Report indicated serious gaps in the UNEC MLG systems, namely the grievance procedure and the dispute management policies, and better still, the Office of the Ombudsman, as is the normal practice in other institutions. Strangely, as reported in this article, both the Appointment and Selection Policies and the Job Upgrading Policies, while official and active, were deliberately undermined, which therefore raises serious cases about "corporate social responsibility" and "great leadership practices and good leaders" (Dwayi, 2022, a, Dwayi, 2022, b, both forthcoming). In this particular case, all the parties who were implicated in this case dismally failed the integrity test and therefore cannot begin to claim to being men of honour and women of virtue. They dare not claim to belong to the islands of sanity as clearly so described by Wheatley (*ibid).*

The significance of the discussion in this article reveals the character of the HETSA transformation project and why some HDUs continue to experience unrealized potential as the current university education profiles seem to be instructive. This is a particular case about MLG systems and practices as the conflation of position and practice. As it has been the main argument in this article, and from previous research, Agency, as the truth about, and the emancipatory choices and projects for, the Other, is what ought to matter in the MLG systems and practices, in particular, and the general case of university education as the public and common good. Therefore, while new MLG regimes would always be significant at the change of guard, what shall remain as a matter of serious concern in the South African National Democratic Revolution, especially for the academic project for the progressive and socially reconstructive agenda, will always be this particular issue about the unity of theory and practice in practice. Unfortunately, such forms of scholarship, by means of praxis artistry, remain as serious inadequacies for the HDUs in the HETSA transformation project, albeit with the project as a natural necessity post the constitutional democracy. As the way of ameliorating the current killing fields of inequalities, and at best, of having them abolished, we still need more iterative cycles of research if the MLG systems and practices are to finally serve as praxis artistry in the pursuit for human flourishing.

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Bridging the gap Between Cultural Subordinate and Organisational Success: Emirati Women's Liminal Economic Agency

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Abstract: This paper explores responses to the latent, but still robust, cultural resistance to Emirati women's liminal economic agency in the United Arab Emirates. While a great deal of state policy has sought to encourage women into the workforce and to provide them with a level platform on which to participate economically, some religio-cultural values still prioritise women's family-related roles. One result of this is that there is substantial disparity between women's educational skills and the extent of their participation in the economy. This study uses narrative methodology to explore how Emirati women respond to the surviving prejudices that maintain that they are not fully entitled to engage in the workforce. A highly dominant theme that emerges in this study is that women have identified, and begun to celebrate, the role that women have played in the economic history of their country. They highlight that economically active women are not a new phenomenon in their society. The contribution this study makes is its analysis of how culture and gender are mutually reconstituted and how aspects of modernity are incorporated into a framework of traditional values. This analysis demonstrates a means by which women in a highly patriarchal society seek to defend and legitimate their unrestricted economic participation. It also illustrates how tradition and modernity become blended rather than existing as a dualism.

Keywords: economic agency; heritage; liminality; modernity; narrative; United Arab Emirates

1. Introduction

Challenges to traditional values associated with women in the Muslim world are frequently attributed to opprobrious Western influences (Sibgatullina and Kemper, 2021, p. 8). Elements of such rejection of women in non-traditional roles are discernible in the United Arab Emirates (UAE) where state policy to develop women's economic agency is materialising against a cultural background that disclaims such agency. The earlier prioritisation of women's family-related roles, their domestic seclusion, and their dogma-inspired financial dependence on men generate discomfort around the outcomes of contemporary state policy geared to enhancing women's professional development (Erogul et al, 2019*)*. Women in organisational leadership roles are particularly vulnerable within a cultural framework that underscores women's subordination (Kemp and Zhao, 2016).

This study explores some responses of Emirati women to the enduring assumption that their professional status is discordant with their country's cultural heritage (Jabeen and Faisal, 2018). I employ narrative interviews to elicit Emirati women's handling of culture-based opposition to their liminal economic agency. This methodology enables the researcher to explore gender related issues from the local perspective voiced by participants. These narrative interviews reveal a dominant practice of employing elements of Emirati history to legitimate women's economic agency. This demonstrates a strategic manoeuvring of a revered shared past to validate their changing roles. My paper overviews this repositioning of women's liminal economic agency within their country's historic traditions.

This study contributes to theoretical thinking about the mutual constitution of gender and culture in an Arab Islamic embedded context in two ways. First, it identifies ways in which women identify legitimate spaces for their economic agency. Second, its problematises the notion of tradition and modernity as a dualism (Kim-Puri, 2005).

2. Country and cultural context

Since its foundation in 1971, the UAE has engaged in a rapid modernisation process made possible by the affluence of the oil boom. Its prosperity strengthens the country against changes in the global economy (Issawi, 2013) and permits it full freedom in how it creates its own brand of modernity within its cultural framework (Eno et al, 2016). Women's educational level has increased dramatically and currently 95% of women high school graduates continue to further education and 70% of university graduates are women (OECD, 2020). Yet, despite these high levels of education and abundant state policies to facilitate women's entry into work, women's professional skills continue to be underutilised in common with other parts of the Middle East (Budhwar et al, 2018; Marmenout and Lirio, 2014). While UAE state policy has set a goal to enhance gender equity (OECD, 2017), the country ranks 135th in terms of women's economic participation and opportunity of the 156 countries surveyed in the most recent *Gender Gap Report* (WEF, 2021).

Societal judgements of women in the workforce are often negative due enduring sociocultural values which repudiate women's economic agency (Itani et a. 2011), although increasing numbers of Emirati women report benefiting from considerable family support for their careers (Jabeen and Faisal, 2018). Women's family related roles continue to be prioritised and women's financial independence is considered undesirable due to the Islamic precept that men are financially responsible for their womenfolk.[1] The fact that many Emirati women were economically active before the wealth of the oil boom has been excluded from local history (Al-Sayegh, 2001) and their contribution has not been recognised or recorded in school history books (AlMutawa, 2016). State policy encouraging women to engage in the economy side-tracks the issue of women's financial independence by focussing on the contribution that economically active women make to the development of the country (*Women in the UAE: A portrait of progress*). This perspective is reflected in the attitudes of Emiratis of all generations who are reported to consider the most important benefit of education to be that of making citizens better able to contribute to national development (Matherly et al, 2017).

3. Theoretical framework

This study is based on a social constructivist perspective on gender, that is, an understanding of gender as socially constructed rather than a collection of characteristics (Brickell, 2006; Butler, 1990). It views gender as a dynamic construct (Gherardi, 1994) that changes as other social structures change in the course of a country's development (Billing and Alvesson, 2000; Billing, 2011). Culture and gender are mutually constitutive and intricately intertwined (Kim-Puri, 2005). The complexity of these links is further increased by the contradictory dynamics of globalisation, localisation, and renationalisation that characterise modernisation processes (Wodak and Meyer, 2016, p. 13). This complexity can best be revealed through a nuanced scrutiny of culturally embedded subtleties of how gender is done and undone during a particular phase of modernisation (Butler, 1990, 2004). Such investigation must be conducted without privileging assumptions, binaries, and dualisms that originate from research in culturally diverse settings (Oyewumi, 2002).

This social constructivist lens is used to explore the "social doings" (West and Zimmerman 1987, p. 129) associated with women's liminal economic agency and the "multifaceted dynamics" (Bose, 2015, p. 769) of the changing gendered spaces of the UAE's modernisation process. As social events change, the interactive processes relating to gender configurations change (Deutsch, 2007), and the new patterns that are created are learned and replicated and eventually institutionalised in the particular cultural context (Martin, 2003). New identities are created by women in the interplay with their surrounding socio-cultural context (Kovalainen and Österberg-Högstedt, 2014). This study explores some instances of the culturally embedded reconstitutions of gender and permitted identities within Emirati women's liminal economic agency.

4. Methodology

I employ narrative in this study as this methodology enhances investigation of gender in specific contexts (Essers, 2009) and from a local perspective expressed by participants. This helps to reduce the Western-centric bias that has been argued to exist in much research on gender in the global South (Grewal, 1996; Oyewumi, 2002). The personalised narratives that emerge from this methodology are especially revealing in research within contexts which are bound by more conservative values and which do not easily permit individuals to call societal narratives into question (Ybema et al, 2009). This is so because personal narratives reveal how individuals attempt to makes sense of their societal systems and thus offer valuable additions to the grand narratives or meta-narratives that "ignore the heterogeneity and variety of human experience" (Eriksson and Kovalainen, 2016, p. 219). Despite valid concerns about its overuse (Jännäri and Kovalainen, 2015), this methodology is increasingly popular for investigating gender (Spiering, 2016) as personalised narratives express the "processes of 'practicing gender'" (Gherardi and Poggio, 2007, p. 25).

I conducted narrative interviews with 22 Emirati working women graduates, all working and aged between 25 and 45. The interviews were conducted in person or on zoom in the course of 2021 and each lasted approximately one to one and a half hours. All were recorded and later transcribed. To encourage participants to talk freely about the issues of their own choice and to recognise their role in producing this research (Sprague,

[1] "Men are the protectors and maintainers of women because of what Allah has preferred one with over the other and because of what they spend to support them from their wealth." (Koran [Sûrah an-Nisâ': 34])

2016), I did not guide the interview in anyway other than by opening it with the statement that being a working woman could be considered to be somewhat problematic in the UAE context.

5. Findings

Many participants made reference to the criticism that women in the workplace experience from more conservative sectors of the community, and this theme is aptly captured in the following narrative of one participant:

> *There is a certain level of fear amongst women to be out there because they're afraid of judgment, because they are afraid of what the others will say, and this is a society that is very much interlinked. People still very much care about what others think of them. It's a collectivist society, it's not an individualistic society. But in my opinion, that is a method of control as well. And I think a lot of times women aren't aware of that.*

Several participants highlight the lack of motivation to earn money experienced by many women and one argues that this is common among the younger generation of Emiratis, both men and women, who have, as she says, "been fed with a golden spoon since birth." However, many participants stress that a lack of motivation to be economically successful is more common for women because they feel entitled to be cared for financially and "believe that comfort is the status quo." Despite the acceptance of the substantial social changes that have come about through the UAE's exponential economic growth, issues relating to Muslim women are generally sensitive and less amenable to change (Kandiyoti, 1991). Various themes relating to the role that Emirati women have had in the socio-economic history of the region emerged in the narratives. Given the limitation of space, I only discuss participants' stress on Emirati women's historic economic agency. To counter censure of women leaving the ambit of the family to enter paid work, participants do not discuss women's economic activity as a change brought about by the country's modernisation. Rather they relate Emirati women's current economic activity to a tradition of women having economic agency. This is mentioned by many participants, and I cite the narrative of one who discusses it in some detail:

> *But in fact, this idea of women being these passive creatures in Emirati culture is something that is actually new in our society. Emirati women have always had to work alongside their families. Let's say her husband was a fisherman, she would be the person selling the fish. And that used to be the case in our society; it was never frowned upon or looked down on; it was life. Since the oil boom, things have changed dramatically, but we mustn't forget that. It's not an intrusive thought in our society at all, that women work, are breadwinners. In the past they helped their husbands, they were out there, you know, talking to people, being in the forefront of a business, whether that was a shop or whatever, a stand in the fish markets, or something like that. And we also have to remember in my grandmother's generation that used to be quite the norm. Women would amass a certain fortune, they would invest it, buy and sell, or own property. But because this is a patriarchal society, a lot of times these stories are never written, and they're often forgotten. And that is detrimental to the thinking of the younger generation, I think. And this is all part of a bigger issue, which is certainly not specific to the UAE, this idea of women's stories not being celebrated and history being men-centric.*

This narrative encapsulates the essence of the input of many participants who were keen to stress that women have not always enjoyed the luxury of being able to stay at home and be taken care of financially by their male relatives. Participants took time to emphasise the active role previous generations of Emirati women played before the financial comfort of the oil boom. The notion that women's economic activity is an integral part of Emirati tradition is taken further by one participant who insists that "more and more women are getting bored of the conversation of correct behaviour for women, and they don't even discuss it anymore and focus on issues such as career and business strategies."

6. Discussion

When women are doing economic participation, they are, of course, also required to do gender and how they do gender and work must be culturally appropriate (West and Zimmerman, 1987). Given the Islamic heritage of the country, arguments about gender equity could have little validity or broad acceptability (Metcalfe, 2008). These women adopt a different strategy which is to identify part of the country's cherished tradition and highlight how today's professionally engaged Emirati woman is continuing in this tradition; they stress that

Emirati working women are not a new phenomenon but rather part of the fabric of the country's economic and social history.

The availability of role models for women in positions considered pioneering is vital to the success of significant numbers of women (Erogul et al, 2019; Khan, 2019).The findings of this study demonstrate that Emirati women are finding role models within the history of their country to support the cultural legitimacy of their economic agency. This identification of an historic validation can attenuate the notion that, within the country's value framework, the ideal place for women is exclusively embedded within the family. Participants' situationalisation of the present within the past illustrates Kim-Puri's (2005, p. 142) argument that we should not assume that tradition and modernity are in a dualistic relationship. This combining of heritage with modernity also exemplifies how these contradictory forces contribute to the reconstitution of gender in context of women's liminal economic agency.

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When Power Hurts: An Explorative Study on the Relationship Between Toxic Leadership, Emotional Exhaustion, Turnover Intention and job Satisfaction

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Abstract: The present study is aimed to two related objectives: 1) to make a systematic review of the relationship between toxic leadership, burnout and turnover intentions in the workplace 2) to use this knowledge to investigate if and to what extent a toxic leadership style might negatively impact workers' burnout and turnover intentions. This second objective was pursuedconducting a survey focused on a convenience sample of 156 employees (48% males and 50% females), working in small and medium enterprises across Italy. The structured questionnaire adopted is composed of validated measures of emotional exhaustion (Sirigatti et al. 1988), toxic leadership (Schmidt, 2008), turnover intention (Mobley et al., 1978) and job satisfaction (Wanous et al., 1997). Results showed that all dimensions of burnout and turnover intentions were positively related to toxic leadership. Limitations of the study as well as practical implications for research and practice in HRM are discussed.

Keywords: toxic leadership; turnover intention; job satisfaction; emotional exhaustion; burnout

1. Introduction

Undoubtedly, leadership is one of the most authoritative streams of research within social sciences applied to management and organizations. A positive leadership style is a secure drive to organizational performance and effective human resource management (Ramdas and Patrick, 2018).

However, within the last decades, growing research interest has developed toward negative behaviours in organizations, highlighting the pivotal responsibility that a dysfunctional leadership might have (Wu and Hu, 2009). Studies on ineffective leadership have examined punitive or aggressive leadership behaviours, such as tyranny (Ashforth, 1994), toxic leaders (Lipman-Blumen, 2005a; 2005b), abusive supervision (Tepper, 2000, Tepper et al., 2009; Zellar, Tepper and Duffy, 2002),, despotic leadership (Bass and Stogdill, 1990), bad leadership (Kellerman, 2004), narcissistic leaders (Rosenthal and Pittinsky, 2006), unethical leaders (Treviño et al., 2003), destructive leadership (Einarsen et al., 2007) and corporate psychopaths (Boddy et al., 2015; Boddy, 2017).

In the present study, we focused specifically on the construct of toxic leadership, which is a major aspect of dark leadership “spreading insidiously and undetected like a poison”, it contaminates individuals, teams and ultimately the whole organization (Goldman, 2008; Vreja et al., 2016).

Lipman-Blumen (2005a) describes toxic leaders as “those who act without integrity by dissembling and engaging in various other dishonourable behaviours, including behaviours such as corruption, hypocrisy, sabotage and manipulation, as well as other assorted unethical, illegal, and criminal acts” (p. 18).

According to Pelletier (2010), the leader can be considered toxic if the follower is physically or psychologically harmed by the leader’s actions and it creates long-lasting impairment in the subordinates. On the other hand, Illies and Reiter-Palmon (2008) added that toxic leaders create conflicts and complicate the organizational environment by causing emotional damage to their subordinates. It is equally interesting to note that the toxic leader never considers his/her behaviour negative and they always believe their behaviour to be socially acceptable (Maxwell, 2015; Schyns 2015).

The most recent research developments on healthy and sustainable workplaces (Di Fabio & Peirò, 2018; Khalil et al., 2021) have shown that a toxic leadership style could heavily impact followers’ motivations and behaviours, negatively influencing their commitment and engagement with the organization. Psychological distress and turnover intentions could be among the most diffused reactions shown by followers experiencing this negative and dysfunctional leadership style (Barlow and Durand, 2005).

In view of the above, the present study aims to investigate if and to what extent a toxic leadership style might negatively impact workers' burnout and turnover intentions.

For this purpose, the paper is organised as follows. A brief introductory section sets the theoretical framework that justified the study, presenting definitions of toxic leadership and its correlation in terms of workers' organizational behaviours, specifically turnover intentions and emotional exhaustion. Therefore, a second section presents a description of the main steps adopted to conduct the systematic literature review. Finally, the empirical study is presented, summarizing the main findings and drawing conclusions.

2. Theoretical framework

Since the 1990s, the dark side of leadership has received a growing attention. Although using different labels several scholars have concurred to identify and to specify the set of behaviours that could be distinctive of this style of management, that certainly impact negatively on workplace climate and performance.

Einarsen and colleagues (2007) defined this negative leadership "destructive", as long as they focused on "the systematic and repeated behaviour by a leader, supervisor or manager that violates the legitimate interest of the organization by undermining and/or sabotaging the organization's goals, tasks, resources, and effectiveness and/or the motivation, well-being or job satisfaction of subordinates" (p. 209). Lipman-Blumen (2005) used for the first time the label "toxic" to stress the need that some leaders might feel to abuse of their power: the leader's effect on the followers harmed them, physically or psychologically. This is a very similar definition with the one proposed by Tepper (2000) who defined this kind of leadership "abusive". In the same vein, Pelletier (2010) maintained that the most frequent and harmful toxic actions are the influence over self-esteem and lack of integrity. Finally, Schmidt (2008; 2014) gave an important contribution to the operationalization of the construct of toxic leadership identifying its 5 main components: self-promotion, abusive supervision, unpredictability, narcissism, authoritarian leadership.

However, overcoming the richness of definitions proposed by the literature the common conclusion to which all studies come is the evidence that bad or toxic leadership is linked to several negative outcomes which can be classified broadly into psychological and performance-related outcomes.

Followers' stress and psychological well-being are the most researched psychological outcomes of toxic leadership (Burris et al., 2008; Chen and Kao, 2009; Chua and Murray, 2015; Walton, 2007). Bad leadership is also significantly associated with performance-related outcomes like decreased organizational commitment, injustice perceptions, role conflict, interpersonal deviance and poor work-related attitudes among subordinates (Duffy et al., 2002; Hoobler and Hu, 2013; Mawritz et al., 2012). Toxic leadership is also found to be negatively associated with job satisfaction, job dedication, work motivation and turnover intentions (Aryee et al., 2008; Elangovan and Xie, 2000; Reed, 2004; Reed and Bullis, 2009; Templer, 2018).

Emotional exhaustion is among the most important psychological outcomes of toxic leadership. It is characterised by an emotional condition that involves negative views of the self, of others and of the environment. It is characterized by unpleasant subjective states such feeling tense, worried, worthless, withdrawn and irritable. This state is a constitutive part of the burnout syndrome, namely the result of accumulated stress experienced in the workplace and draining individuals from all their personal and professional resources, certainly impacting of their coping behaviours and negatively influencing their working performance.

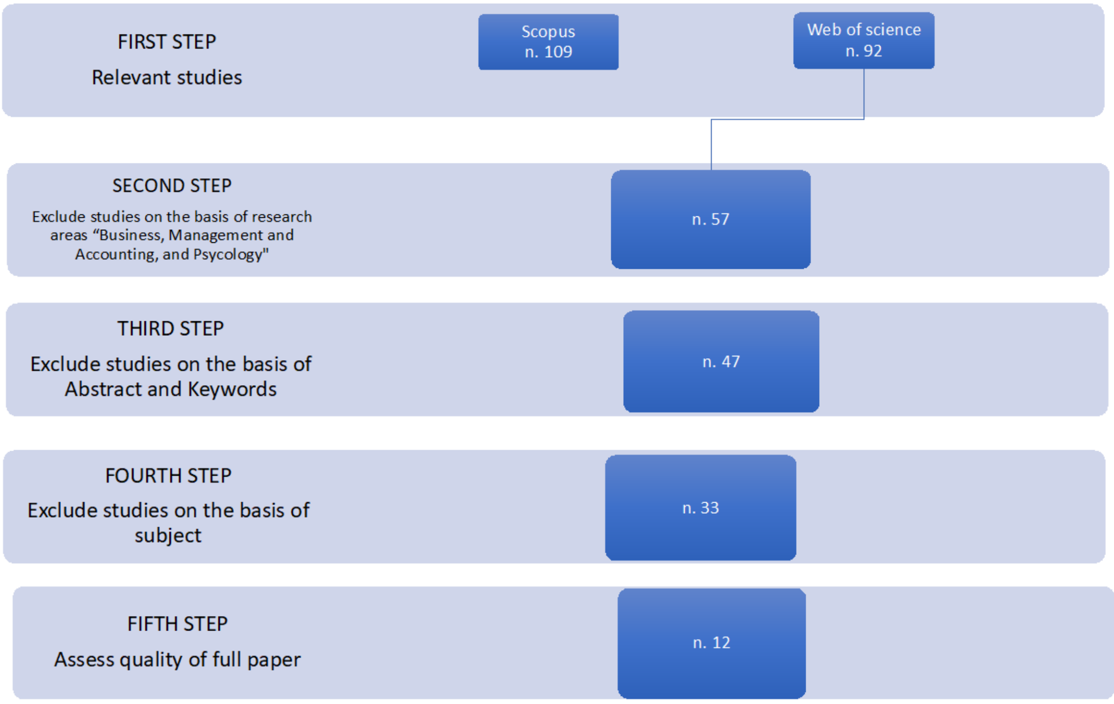
According to Hobman et al. (2009), long-term and regular contact with toxic leaders cause strain and reduced well-being. Similarly, Kusy and Holloway (2009) also reported low self-worth and reduced self-efficacy among followers working with toxic leaders for a longer period of time. Toxic leaders wear down subordinates by yelling, criticizing and ridiculing, which immediately reduce their self-confidence, self-worth and self-efficacy (Harvey et al., 2014). According to Richman et al. (1992), subordinates' perceptions of mistreatment results in negative psychological consequences such as hostility, anxiety and depression. Findings of the study conducted by Wu and Hu (2009) also suggested that there is an inverse relationship between abusive supervision and emotional exhaustion among subordinates. According to Carlson et al. (2012), toxic leadership is also positively related to the high level of withdrawal in subordinates. According to the findings of this study, subordinates reported high level of detachment within oneself, depression, hopelessness and detachment with work and role. In sum, three major outcomes in terms of psychological distress due to toxic leadership reported in the literature are loss of self-worth, agitated and withdrawal (Hobman et al., 2009).

3. Systematic literature review: toxic leadership, workplace, burnout, turnover intention

To analyse the impact of toxic leadership in workplace we developed a systematic literature review on Scopus and Web of Science, using "Toxic Leadership" as descriptor, used the methodology developed by Ngai and Wat in 2002. A revision protocol has followed: the inclusion and exclusion criteria were established to reveal significant researches for the analysed topic crossed with workplace, burnout and turnover intention. Followed by the critical evaluation, the extraction of the data and the synthesis of the results. The following figure describes in detail the process. Investigation showed that the scientific production includes a total of 109 papers on Scopus and 92 papers on Web of Science. We examined the papers and those that were repeated or out of the scope of our study were excluded. (Figure n. 1)

The first screening process was based on the crossing of two data base, thus 110 papers are embodied in the sample. The second step of analysis were focused on research areas, including "Business, Management and Accounting, and Psycology", the third on "Abstract and Keywords", while in the fourth phase of the process, assessed on the basis of subjects, has produced 12 suitable articles. The academic production, started in 2006 according Scopus and in 2008 for Web of Science, grows in the last three years and were written mainly by American and English authors.

Following this classification, all papers were examined and those that were out of the scope of our study were excluded. This second screening process was based on the analysis of research areas "Business, Management and Accounting, and Psycology" (57 papers).



After a selection focused on "Abstract and Keywords" (47 papers), the result gave 33 relevant articles using a combination of the following keywords: "Human Relation", "Stress", "Risk Management", "Toxicity", "Workplace", "toxic leadership", "Burnout", "Employee", "Organizational Culture", "Perception", "Job satisfaction", "Employment", "Destructive leadership", "Personnel Management"

We classified papers on the basis of analysed items in the researches. Our investigation revealed that the toxic leadership has negative impacts on individual and organizational well-being, performance and organizational commitment, burnout and job exhaustion, and physical health, as shown in Table n.1

AUTHORS	ANALYSED ITEMS	RESULTS OF RESEARCHES
Milosevic, I., Maric, S., & Lončar, D. (2020). Defeating the toxic boss: the nature of toxic leadership and the role of followers. Journal of Leadership & Organizational Studies, 27(2), 117-137. for observed destructive and toxic leadership practices	Emotive impacts	Followers may overcome negative outcomes and neutralize toxic leadership influence via workarounds and learning
Nowack, K., & Zak, P. (2020). Empathy enhancing antidotes for interpersonally toxic leaders. *Consulting Psychology Journal: Practice and Research*, *72*(2), 119.	Health/emotive negative impacts/Organizational resilience	Empathy in leaders favors on important organizational outcomes and overall employee health and well-being
Kaluza, A. J., Boer, D., Buengeler, C., & van Dick, R. (2020). Leadership behaviour and leader self-reported well-being: A review, integration and meta-analytic examination. *Work & Stress*, *34*(1), 34-56.	Impact on well being	There is a considerable linkage between leader well-being and leadership. The adoption of leadership development programmed and organisational health interventions for leaders influence positive impact on employees, teams and organisations.
Hattab, S., Wirawan, H., Salam, R., Daswati, D., & Niswaty, R. (2022). The effect of toxic leadership on turnover intention and counterproductive work behaviour in Indonesia public organisations. *International Journal of Public Sector Management*.	Impact on burnout	Under a toxic leader, employees might intend to leave the organisations as the employees perceived the psychological contract breach.
Uysal, H. T. (2019). The mediation role of toxic leadership in the effect of job stress on job satisfaction. *International Journal of Business*, *24*(1), 55-73.	Impact on burnout and physical heath	Toxic leadership has a negative impact on job stress and burnout
Klahn Acuña, B., & Male, T. (2022). Toxic leadership and academics' work engagement in higher education: A cross-sectional study from Chile. *Educational Management Administration & Leadership*, 17411432221084474.	Impact on engagement	No evidence of decreased levels of work engagement in the presence of toxic leadership
Wodociag, S., Dolce, V., & Molino, M. (2021). Cross-border and sedentary workers' job satisfaction. *Personnel Review*.	Impact on Job satisfaction	Sedentary workers, toxic leadership and job insecurity were significantly negatively related to job satisfaction.
Brouwers, M., & Paltu, A. (2020). Toxic leadership: Effects on job satisfaction, commitment, turnover intention and organisational culture within the South African manufacturing industry. *SA Journal of Human Resource Management*, *18*(1), 1-11	Impact on Job satisfaction	Toxic leadership has negative consequences on employees and the organisations' culture
Bakkal, E., Serener, B., & Myrvang, N. A. (2019). Toxic leadership and turnover intention: Mediating role of job satisfaction. *Revista de cercetare si interventie sociala*, *66*, 88.	Impact on Job satisfaction	Toxic leadership has negatively effects on job satisfaction and turnover intention.
Zaabi, H. H. A., Elanain, H. M. A., & Ajmal, M. M. (2018). Impact of toxic leadership on work outcomes: An empirical study of public banks in the UAE. *International Journal of Public Sector Performance Management*, *4*(3), 373-392.	Impact on Job satisfaction	Toxic leadership in the banking sector has a significant relationship with organisational trust, organisational citizenship behaviour, and group productivity.

Schyns, B., & Schilling, J. (2013). How bad are the effects of bad leaders? A meta-analysis of destructive leadership and its outcomes. *The Leadership Quarterly*, *24*(1), 138-158.	Impact on well being	Leadership is negatively related to positive leader-related concepts and positively related to negative leader-related concepts
Bhandarker, A., & Rai, S. (2019). Toxic leadership: emotional distress and coping strategy. *International Journal of Organization Theory & Behaviour*.	Physical Health/emotive negative impacts	The loss of self-worth was negatively related with assertive coping.

4. The study: Procedure, Hypotheses, Participants, Scales

In view of the theoretical framework drawn above, the study concentrated on the negative correlates of toxic leadership especially considering its impact on followers' emotional exhaustion, turnover intentions and job satisfaction.

Therefore, the following hypotheses were formulated:
H1: Toxic Leadership is related to followers' emotional exhaustion;
H2: Emotional exhaustion is related to turnover intentions;
H2: Emotional exhaustion is negatively related to job satisfaction.

Participants were 156 workers selected through a convenience sampling procedure. 40% of them worked in the South of Italy, 37% in the center of Italy and 19% in the North of Italy, only 4% of them worked abroad.

They were invited to fill in an online survey made up by a section useful to gather descriptive information about the participants and then by some self-report scales useful to investigate the hypotheses described. All workers gave their informed consent to data collection according to the European Law 2016/679 and to the Italian Law 196/2003. We asked participants to think about their leader, meant as their direct manager.

The first section of the survey allowed us to describe the socio-professional features of participants that could be summed up as follows.

48% of participants were men and 50% women, 2% non-binary. The age range oscillated between 19 and 63 years old, average age being 31 years old (s.d.=9,46).

As for education, 6% had middle school diploma, 6% a professional qualification, 55% high school diploma, 24% bachelor degree and 8% had a post-graduate degree. The majority of participants had a full time undetermined contract (53%), while the others had a fix term contract (26%), were entrepreneurs (11%), seasonal workers (7%), stagists (3%) and job on call workers (1%).

Finally, 51% of them were dependent workers, 37% were craftmen, 8% professionals, 6% managers and 4% executives.

The second section of the survey encompassed some self-report scales related to the psycho-social constructs investigated.

- **Emotional Exhaustion.** This variable was measured through the Italian version of the subscale of the Maslach Burnout Inventory (Sirigatti, Menoni, & Stefanile, 1988). The subscale is composed by 9 items describing perceptions about the difficulties experienced by participants in managing the emotional side of one's own work (e.g. I feel emotionally dried by my work). Participants were invited to read each statement and to mark their agreement/disagreement with each using a 6 point scale. Internal consistency measured with the Cronbach alpha was very good (α = .89).
- **Toxic Leadership.** This variable was measured by the scale developed by Schmidt (2008) composed by 30 items assessing leaders' negative behaviours such as self-promotion, abusive supervision, authoritarian leadership, unpredictability narcissism. Participants were invited to think about their supervisior and to mark their agreement/disagreement with each item using a 6-point scale (e.g. My supervisor accepts credit for successes that do not belong to him/her). Cronbach alpha for this scale was (α=.97).

- **Turnover intentions.** This variable was measured with three items developed by Mobley et al. (1978). Participants were asked to express their agreement/disagreement with each using a 7-point scale (e.g. “I have serious intentions to give up this job”). Internal consistency was very good (α = .97).
- **Job satisfaction** was measured through a single item developed by Wanous et al. (1997). Participants were invited to answer to the question “How much do you feel satisfied in your job currently?” using a 7-point scale.

5. Results

Before investigating the hypotheses, descriptives were run. Table 1 shows means and standard deviations for all constructs.

Table 1: Means and Standard deviations for all variables (N=156)

	Means	Standard Deviations	N
Emotional exhaustion	2,8348	1,33037	156
Toxic leadership	2,9368	1,37148	156
Turnover intentions	3,3226	2,27230	156
Job satisfaction	4,6282	1,66256	156

Table 2 shows the correlation matrix for all variables that was useful to investigate reciprocal relationships among them. Results showed a negative correlation between toxic leadership and job satisfaction (r=-,611**; p=.000) a positive correlation between toxic leadership and turnover intention (r=,615**; p=.000) and between toxic leadership and emotional exhaustion (r=,450**; p=.000).

Table 2: Intercorrelation Matrix (N=156)

**Correlation is significant to 0.01 p value (2-tails).

		Emotional exhaustion	Toxic Leadership	Turnover intentions	Job satisfaction
Emotional exhaustion	Pearson correlations	1	,450**	,615**	-,611**
	Sig. (2-tails)		,000	,000	,000
	N	156	156	156	156
Toxic leadership	Pearson Correlations	,450**	1	,576**	-,394**
	Sig. (2-tails)	,000		,000	,000
	N	156	156	156	156
Turnover intentions	Pearson Correlations	,615**	,576**	1	-,611**
	Sig. (2-tails)	,000	,000		,000
	N	156	156	156	156
Job satisfaction	Pearson Correlations	-,611**	-,394**	-,611**	1
	Sig. (2-tails)	,000	,000	,000	
	N	156	156	156	156

After having checked intercorrelation matrix hypotheses were investigated running linear regression.

H1 supposed that Toxic Leadership was related to followers’ emotional exhaution. Therefore, a first model was assessed considering toxic leadership as an independent variable and emotional exhaustion as a dependent one. Results confirmed the hypotheses: the model is statistically significant (F=39,142; p=.000) and the beta value was .450 (p=.000).

H2 supposed that emotional exhaustion is related to turnover intentions. This hypothesis was also confirmed. Turnover intentions were significantly related by emotional exhaustion (F=93,448; p=.000) and the beta values was .615 (p=.000).

Finally, the H3 investigated if emotional exhaustion was negatively related to job satisfaction. This model too was proved to be significant (F=91,743; p=.000) and the beta value was -.611 (p=.000).

6. Discussion and conclusions

The paper analysed on a twofold perspective the relationship between toxic leadership and organizational impacts, both on theoretical and empirical dimensions.

From a theoretical dimension, it was revealed that the research on this topic is still fragmentized, only 13 papers focused on the impacts on individual and organizational well-being, performance and organizational commitment, burnout and job exhaustion, and physical health. This means that this paper could stimulate new and future researches.

On the empirical perspective, we observed the leader, more than anyone else, can potentially create the conditions that directly influence the ability to work better in individuals, being turnoiver intentions and emotional exhaustion two negative consequences of the person/organization relationship.

We saw, through a regression model, how relevant is the role of the leadership.

The leaders who have an abusive and authoritarian style (toxic) have a negative impact on their subordinates who become, unfortunately, frustrated by work, developing burnout syndrome and the desire to leave work. The regression analysis of the data collected confirmed all the hypotheses, as explained in more detail in the "Results" section.

The emotional state of a leader and his actions affect the mood of the co-workers, thus influencing their individual performance. Consequently, the leader's ability to manage his collaborators is not a private matter, but becomes an essential factor in a firm's success, for organizational performance.

Toxic leaders, according to this study and the analyzed literature, scare off talented people who, one after another, resign, setting out on the search of another job. The turnover, therefore, become as a sort of "safety valve" for those who live an unsatisfactory and deteriorating organizational experience.

In a society characterized by "talent war", in which companies are required to select best talent to survey to the new challenges, attracting and retaining human resources represent the competitive advantage par excellence, the uniqueness that leads the company to success. In order for workers to perform at their best, they need of individual and organizational well-being, working in a quite work place in which they need to feel useful, competent, considered and respected.

Leaders need always to keep in mind that supporting employees allows to improve individual and organizational performance.

7. Limitations and future developments

Although the contribution given by the present study to the investigation of the complex relationships between toxic leadership and some followers' negative behaviours, there are some limitations that could pave the way to future research in the field.

A first limitation was linked to the self-report nature of the measures used that could give a biased view of negative leadership and could only express intentions and perceptions of followers that surely need to be confirmed by some more objective indicators.

A second limitation could be related to the limited and convenience sample that does not allow any generalization of results. Moreover, the present study had a cross-sectional design that restricted the possibility to have a wider view about the evolution of some perceptions and behaviours in the workplace. Therefore, a longitudinal design could be more informative about the development of such negative patterns of behaviours of both leaders and followers in the long run.

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Leadership in Business Schools: Contributions from Traditional Leadership Approaches

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Abstract: For many years, leadership in universities and business schools has been investigated and explored (see Thomas 2011). Many changes and new requirements from a variety of stakeholders have arisen. For instance, there has been an increased focus on impact from the state, companies, and organizations and a greater need to obtain external funding for research projects. Additionally, current debates regarding sustainability and digitalization and the prevalence of mission-based research have made it necessary to revisit the challenges inherent in leading universities and business schools. It is relevant to revisit traditional approaches to leadership to explore how these concepts and factors can inspire the development of business school leadership. This article is not a comprehensive literature review of the leadership differences that business schools face. Rather, we present recent literature on leadership in business schools that, in combination with our own experiences as part of a management team in a newly established business school in Denmark, showcases the contemporary challenges faced in business school leadership. We use traditional leadership approaches to discuss how business school leadership can benefit from these approaches to confront new challenges and requirements.

Keywords: Leadership; Academic leadership; Business School;

1. What makes business schools different?

In the last 40–50 years, many new business schools have been established, and their relevance and importance have increased. At the same time, there has been increased attention to the contributions that business schools can provide. Business schools are facing new demands on how they are run, which has placed new challenges and requirements on business school leadership. In order to run a business school, a management team must acknowledge the unique ways a business school functions while also considering a variety of stakeholders. As indicated below, there are many areas in which a business school functions differently from traditional organizations:

1.1 Ambidexterity of output

Business schools produce a multiplicity of intangible "products" across both short, middle–long, and long terms, including

- education at the bachelor's and master's level (short term),
- research and dissemination of current challenges and problems in organizations, and in society in general (middle–long term), and
- research and foresight regarding future challenges and problems in organizations and in society in general (long term).

A peculiar fact is that most employees in a business school must focus on short-, middle–long-, and long-term activities while at the same time confronting the challenge of ambidexterity. The challenge of ambidexterity also concerns the process of leading to incentivize and manage these interdependent activities.

1.2 Need for interdisciplinarity

Every researcher or research group has a research focus and agenda within a specific field of expertise. However, it is increasingly evident that solving today's wicked problems calls for interdisciplinarity. An inherent challenge is that researchers are encouraged to become specialized in their research area and develop a so-called "T-profile," as the most prestigious journals only accept papers with specialist content. Conversely, external foundations and state governments put pressure on business schools to help solve societal problems through interdisciplinary research. In addition, researchers often find that mission-based research, the scope of external funding, and an increased focus on impact limit their freedom to research. Leadership must balance these conflicting agendas and the diversity of the involved stakeholders while maintaining faculty motivation and enthusiasm to work.

1.3 Differences in work conditions between the supporting staff and faculty

The challenge of coping with substantial differences between the administrative support staff and the faculty is not new. Work conditions can vary, as faculty can, to a great extent, work from home, go to conferences, and participate in research projects. Therefore, faculty members often have highly flexible work conditions. The work conditions for administrative support staff are more traditional, with many fixed assignments that often require being physically present at the office. Consequently, different leadership styles are required at the same time to manage two different working groups.

1.4 Conflicting demands from different stakeholders

The faculty must teach on a basic level to undergraduates and on an applied level to executives. They must also conduct both in-depth research in their research area and broader interdisciplinary research, apply for external funding, and disseminate their findings both to peers and to society in general. This can be confusing and difficult to prioritize and can result in a feeling of insufficiency, especially for those on fixed contracts and those without tenure.

1.5 Administrative demands from the university, the state, and external funds

Both state governments and the surrounding community expect business schools to demonstrate high quality across all activities. One way to ensure quality is through accreditation, both from the state and from well-known accreditation institutions. The need for accreditation gives rise to a significant increase in the administrative burden. Regular quality control and a large number of evaluation criteria render the administrative role in a business school cumbersome and difficult to streamline together with the faculty (Kundu 2020).

1.6 Development rather than disruption: the pace of change

Business schools, and especially universities, are large, conservative institutions. They change very slowly and try to maintain an exalted aura often associated with the concept of the "ivory tower." Universities and business schools have, nevertheless, undergone major changes, both in the number of degree programs offered, the activities available to researchers, and the way the institution as a whole is managed.

1.7 Lack of experience with professional leaders

25 years ago faculty in most universities and business schools elected their leaders democratically. In many departments, the top position previously passed to those that were "next in line" rather than to the most skilled leaders among the faculty. The Head of Department position was passed to the next person in line. There was not much respect for the top position, and the department was managed by the strongest professors among the faculty. The implementation of professional leadership, therefore, represents a major shift in the way business schools operate.

1.8 Implementation of performance management

The last key point concerns the significant burden of measurements and control mechanisms that have been implemented to ensure the quality of education and research output and to establish more precise promotion criteria for the faculty. These control mechanisms put significant pressure on the individual faculty member and can create a feeling of constant monitoring. Leadership must cope with this challenge and help the faculty remain motivated despite the consequences of New Public Management entering the business school.

Business schools are facing many issues of which leadership must be aware, and leaders must find solutions to cope with these challenges alongside the faculty and the supporting staff (Ong 2012). To identify how leaders of business schools can mitigate these challenges and work proactively on the issues, we revisit the traditional leadership literature and propose areas for further exploration.

2. Short definition of leadership

Leadership has been defined in many ways over the years. In 1957, Hemphill and Coons wrote: "Leadership is *'the behavior of an individual … directing the activities of a group toward a shared goal'*" (Hemphill and Coons 1957, p. 7). Later, this definition was developed and expanded:

> *"Leadership is about articulating visions, embodying values, and creatinge the environment within which things can be accomplished" (Richards and Engle 1986, p. 206) or*

Leadership is "*the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organization …"* (House et al. 1999, p. 184).

A distinction has also been made between management and leadership. Traditionally, management has been associated with planning, budgeting, organizing, and controlling, while leadership has been concerned with setting a direction, managing change, and motivating people (Kotter 1990). When we discuss leadership in business schools, it includes both concepts. In our view, leadership includes both influencing the organization and ensuring that the organization is prepared to meet challenges in the future. Leadership is a specialized role and a social influence process that, in most cases, is performed by a group of leaders.

Inspired by the leadership of private companies, New Public Management (NPM) has been introduced as a way to achieve the goals and desired outcomes of business schools. As a result, leadership in business schools is deviating from the well-known academic leadership approach that has been described as distributed leadership, in which leaders must create and protect environments encouraging academic work, support and develop academic values and identity, and promote collaboration between individuals and research groups. The introduction of NPM has changed the focus to a more fragmented leadership style that involves increasingly formalized management structures, performance measurements, and management based on marked principles of competition between universities and business schools for attracting students, researchers, and funding.

The challenge of leading business schools is to conduct research at a high academic level, offer programs that enable students to make a difference in society and collaborate with companies, organizations, and society in general to maximize impact. This must be undertaken while combining the need for leading researchers and teachers to strive for the highest level of research, teaching, and making an impact while meeting the requirements of the state and other stakeholders to ensure high quality in all areas of the business school. Leadership in business schools must, therefore, contain elements from both traditional management tasks and traditional leadership perspectives. Our aim is to investigate how these two approaches can be combined and to suggest possible ways for leaders to integrate them so they can handle leadership regarding the special circumstances business schools are facing.

3. The contribution of traditional leadership approaches in a business school context

In general, three types of variables characterize the traditional leadership approach: characteristics of the leader, characteristics of the follower, and characteristics of the situation. These variables are described in the research on leadership as leader traits and skills, leader behavior and roles, power in leadership, situational leadership, strategic leadership, and some newer approaches to leadership, which include transformational, charismatic, and ethical leadership. In the following section, we will briefly describe the different approaches and relate them to leadership in business schools.

3.1 Leader traits and skills

The leader trait and skills approach is one of the oldest ways to describe leadership. The Big Five traits (conscientiousness, openness, extraversion, agreeableness, and neuroticism; see Digman 1990) are still relevant and important today as aspects of business school leadership. Conscientiousness indicates high levels of thoughtfulness and goal-directed behaviors. Conscientious people are organized and mindful of details, and they consider how their behavior affects others. This trait is highly relevant for leadership in business schools, as the focus is increasingly on achieving specific goals based on the needs of students and society. There must be a strategy and a plan for fulfilling it.

Another important trait is openness. Leaders with this trait are curious about the world and eager to learn new things and enjoy new experiences. As many new requirements and demands challenge business schools, there is a need for imagination and experimentation to determine new ways to live up to the often-conflicting terms and conditions.

Extraversion, agreeableness, and neuroticism remain important aspects of leadership. In business schools, however, it can be more difficult to find people with these characteristics or traits. Experts like professors can be quite introverted, and they are often narrowly focused on their own research area and on being the expert (Stiles 2004), thus challenging the notion of agreeableness.

Leadership skills are traditionally divided into three categories known as the three-factor taxonomy of broadly defined skills: technical, interpersonal, and conceptual (Hirst et al. 2004).

Technical knowledge of methods, processes, the organization, and the organization's product and service are acquired through formal education, experience, and job training. As many leaders of business schools primarily acquire research and teaching experiences before they get a job as a manager, they tend to lack technical skills as leaders.

The need for collaboration between diverse research areas and interests indicates that interpersonal and conceptual skills are very important. Establishing effective relationships through tact, diplomacy, and listening skills can be a challenge; the manager must set aside their own research interests and examine the whole picture of the business school. Leaders must also generate creative solutions to conflicting interests.

Leader traits and skills are highly relevant for the leaders of a business school. The lack of professional leadership in business schools makes it vital that incoming and appointed leaders acquire leadership competencies and skills. It is paradoxical that business school leaders are often professors who have acquired their position because they are skilled at digging deep into a very narrow subject using specific research methods to acquire useful information and results. These are not the skills necessary to be a successful business school leader.

3.2 Leadership behavior and roles

It has posed a major challenge in leadership research to determine which behavior categories are meaningful and relevant for classifying managerial activities. As Mintzberg (1973) argues, the roles of managers can be examined across a taxonomy of 10 managerial roles that are divided into three overall categories: information processing roles, decision-making roles, and interpersonal roles.

Information processes roles: Due to the increasing demands of impact and dissemination that have been placed upon business schools, leaders must focus on the roles of disseminator and spokesperson. The practice of monitoring information from a variety of sources must be transformed into relevant activities and initiatives in the business school and in collaboration with external partners.

Decision-making roles: The disturbance handler role has become increasingly vital, not only because of the increasing demands on business schools but also due to COVID-19 and other unforeseen events. Business school leaders have been forced to make many changes and even act in accordance with the entrepreneurial role in some cases in the form of crisis management. The resource allocator role and the negotiator role are currently in use and will remain necessary in the future. Business schools' dependence on external funding and the states' focus on how resources are used require that leaders enter fully into the negotiator role and attempt to reach the optimal outcome during negotiations.

Interpersonal roles: In order to fulfill and promote the purpose of the business school, its leadership must ensure that employees are motivated. This includes hiring the "right" people and training, directing, and promoting them. All of these managerial activities ensure that the business school meets its obligations. By establishing and maintaining relationships with individuals and groups outside the business school, such as through alumni activities and by participating in different networks, leaders can keep the business school on track. Therefore, the liaison role plays a significant part in leadership.

The challenge for the business school leader is that self-leadership is prevalent among researchers, and they are often expected to create their own academic environments centered around their research and teaching. Therefore, the central role of the business school leader is to create a framework around the researchers that can support their publishing, funding, and teaching efforts. For this reason, the business school leader must also accept that they are not necessarily the expert in getting papers published or applying for external funding. This reality requires the business school leader to manage a variety of roles, including both outward- and inward-looking decision-making roles and outward- and inward-looking interpersonal roles.

3.3 Power in leadership

The balance of power in business schools has changed dramatically. With the introduction of professional leadership and an increase in control systems, power has shifted from personal power to position power. Previously, the most prominent professors, who built a group of researchers around them, had the power to allocate resources and decide the agenda of a research group. By virtue of their expertise and ability to establish a community, they acquired referent power, as people wanted to participate in the community, and followers expressed admiration and loyalty to the professor.

Now that leadership has been institutionalized and professionalized, charismatic leaders can still strengthen their power, but position power plays a much more important role. Legitimate, reward, coercive, and information powers are prevalent (French and Raven 1968). The view of leadership as a profession has increased the significance of leadership, and the appointed leaders exercise an increased level of power, which is allocated from the top level of universities or from the board of directors. In many cases, coercive power is still limited, as it remains difficult to lay off faculty who do not perform or behave properly. The university systems or educational environments that business schools are part of have not kept abreast of the implementation of professional management.

Another issue is that position power can be difficult to apply to highly charismatic professors who exercise great personal power outside the leadership team. In such situations, it is necessary to find other ways to handle the risk of conflicting demands from different internal and external stakeholders.

3.4 Situational leadership (Team leadership)

Situational leadership, or contingency theory, has been the basis of much of the leadership literature for many years. The idea that the leader's most important task is to smooth the path to help employees reach their goals, taking into account their motivation toward a task or relationship (House 1996), is still relevant in business schools. Faculty members often complain that they lack time to conduct research. With all of the new and conflicting tasks the faculty must take into account, this lack of consistent research time represents a deficiency. Leadership should, therefore, focus on planning for teaching and administration in a way that promotes sufficient research time.

Hersey and Blanchard (1977) specified appropriate leadership behavior based on an employee's ability and confidence to perform a task. Again, this concept can be transferred to leadership in business schools, where young and inexperienced researchers and teachers must learn the profession and receive differentiated treatment according to their approach and attitude toward their tasks.

Many business schools are organized into different forms (e.g., research groups, research centers, or departments). It is, therefore, necessary for leaders to manage teams and identify the key determinants of team performance. The focus on following a mission-based strategy implies that every team must find a way to participate in the missions. Leadership must communicate regarding the missions and support the teams' efforts to contribute. The framework must be broad, but there may be some goals on the business school level that every research group must share.

A business school employs a diverse pool of employees. The researchers can have flexible working days and times in which they do not have to be present at the business school. This is quite different for the supporting administrative staff. It is often necessary for them to be present on campus, and they do not have the same flexibility. This can be a challenge for the business school leader, who may have employees working under a variety of different conditions.

Another situational leadership challenge is managing employees as individuals while at the same time promoting collaboration and attachment to a large and broad research group. This situation can give rise to rivalry and sub-optimization, and it can be difficult to navigate in terms of leadership. This team focus could also be relevant to the leadership team in a business school. Depending on the management structure, some business schools are managed by a group of leaders. This arrangement can challenge the leaders' ability to participate in and lead a management group of faculty and support administrative staff with diverging foci and a wide range of expertise.

3.5 Strategic leadership

Interest in strategic leadership has increased for all organizations, especially among top executives (Cannella and Monroe 1997). Strategic leadership is also highly relevant for business schools (Howard et al. 2012). Understanding how executives can transform an organization to deal with globalization, competition, technological changes, and requirements from society is very important. The challenges are extensive, and the need for control is high for some aspects (e.g., regarding the quality of the outcome). However, for other aspects, the need for control is low or medium (e.g., regarding the research and teaching processes and the way research groups conduct their work). Leadership must determine the balance between high and low control within the organization.

Formulating and implementing strategy is, therefore, one of the most important ways leaders can make a difference (Nahavandi 1993). Direct decisions, the allocation of resources, reward systems, the selection of other leaders end employees, promotions, and role modeling are all processes that can affect the most important determinants for the organization: the environment, the strategy, the structure, the culture, the technology, and the leadership. Leadership in business schools must attend to these factors in order to establish the agenda and meet all necessary requirements.

Business schools, in particular, differ from other types of organizations when it comes to the ambidexterity of output and the need for interdisciplinarity. With so many diverse stakeholders, business school leaders must maintain a broad overview and a holistic mindset to capture the needs and desires of all stakeholders. This aim must be reflected in the strategy and how the strategy is implemented.

3.6 Charismatic, transformational, and authentic leadership

The newest models for leadership are charismatic, transformational, and authentic (or ethical) leadership (Akrivou and Bradbury-Huang 2015). Charisma is not a new phenomenon, but combined with followers' emotional reactions to leadership, the concept can bring some new insights to the field. The same applies to authentic leadership. There are many forms of charismatic leadership, but some focus more heavily on the manager's own strengths and how to develop them. It is not a new concept that a way to be an effective leader is to be authentic and aware of why one is a leader (the purpose) and to pursue solid values, connect with the followers, and demonstrate self-discipline. If one is also charismatic, one has a good chance of being an excellent leader.

Transformational behaviors seem to align well with the leadership needs of business schools. Transformational leadership is characterized by finding the optimal way to influence an organization (without dictating), making individualized considerations, motivating followers in an inspirational way, and stimulating followers intellectually. Within a mission-driven organization, it is possible to articulate a clear and appealing vision. The vision must be communicated to the individual groups and employees in the organization. In order to achieve this aim, leaders must express confidence in their followers to establish the framework for the implementation of the vision and the strategy.

When implementing changes such as performance management in traditional and conservative organizations such as business schools, a leader must balance strategic considerations with researchers' needs for self-leadership. In such cases, a transformational and authentic leadership style is required, along with patience and a realistic view of the pace of change.

4. Need for further research

Traditional leadership approaches are, in many ways, relevant for leadership in business schools today. However, with the changes in the expectations of business schools, the changing composition of internal and external stakeholders, and the growing demand for the professionalization of leadership, it is clear that many aspects of a business school differ from those of traditional organizations. The circumstances faced by business schools have changed dramatically over the last 20 years. The focus has shifted from a traditionally research-based view toward increasingly output-oriented demands. Business schools are facing new business models and increasingly mission-based thinking regarding the expected outcomes and inherent impact of the business school.

Overall, business schools are facing new and potentially contradicting demands, and the interactions between individuals, organizations, and bureaucratic politics are therefore vital. Consequently, business school leaders must strengthen their focus on the development of personal and communication skills and the practice of strategic leadership. These changes will be challenging for the individual leader and for team-based leadership. In addition, the pace of change will be a point of focus for many business school leadership teams.

These considerations underline the need for further research to identify how business schools differ from other organizations as a precondition for exploring how to best respond to the new requirements that business school leaders face. While the ambidexterity of output and the need for interdisciplinarity, together with differences in work conditions between the faculty and administrative staff, are obvious points of difference, there is also a need to contextualize the challenges and explore the potential options for utilizing these differences to create stronger organizations. Second, it is relevant to uncover different ways to handle the challenges and the variety of circumstances business schools are facing, both through traditional leadership approaches (as presented above) and through other complementary perspectives. Lastly, it is relevant to examine traditional leadership approaches to add relevant perspectives and expand the number of available approaches. These measures can offer inspiration on how to lead business schools in the new era of prerequisites, demands, and expectations.

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Holistic Digital Leadership and 20 Factors Relevant for its Understanding and Implementation

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Abstract: Organizations today face challenges like changing organizational structures and value chains, participation in digital eco-systems or fast changing customer expectations. Digital Leadership aims to guide the necessary transformation to overcome these challenges. Thereby a holistic viewpoint is needed since the challenges and conditions concern organizations as a whole. They are not limited to single managers, departments or even the organization's system boundaries. Digital Leadership is a relatively new and well discussed research topic but yet only vaguely defined and understood. This exploratory research contributes to the exploration, understanding and development of Digital Leadership with the elaboration, based on the review of existing literature, of a holistic definition of Digital Leadership, and the proposal, based on semi-structured qualitative expert interviews, of 20 interdependent and mutually influencing Digital Leadership factors within four main areas of Digital Leadership. These 20 factors are relevant for successful and sustainable holistic Digital Leadership and offer a deeper understanding of Digital Leadership. Furthermore, they provide guidance for the implementation and improvement of Digital Leadership for organizations facing the challenges and conditions of the digital age.

Keywords: Digital Leadership, Strategic-position Leadership, Organizational Leadership, Employee Leadership, Self-Leadership, Digital Transformation

1. Introduction

Due to the measures taken by governments all over the world to limit the spread of the Coronavirus disease (COVID-19) most people have experienced in the last two years a push towards a more digital daily living and working environment. The digital age has become more present and tangible for individuals and organizations than ever before. The need for digital transformation and new and innovative business models puts pressure on executives and employees alike. Thereby, challenges and challenging conditions arise that can hardly be predicted (Corsaro and D'Amico, 2022; Stalmachova, Chinoracky, and Strenitzerova, 2022; Li, Voorneveld, and de Koster, 2022). As the review of the literature shows, organizations face for example challenges like changing organizational structures and value chains, participation (and leadership) in digital eco-systems, and changing expectations of employees and customers. In this context, Digital Leadership as the ability to adequately lead in the digital age becomes relevant for all kinds of organizations and their stakeholders to remain competitive.
Since Digital Leadership is a relatively new topic and well discussed in many different research streams but yet only vaguely defined and understood, this exploratory research paper contributes to the exploration, understanding and development of Digital Leadership.

Based on the existing literature the authors have identified challenges and conditions posed by the digital age. Following the identified challenges and conditions of the digital age, four relevant main areas within an organization have been derived for which solutions need to be established to deal with the identified challenges and conditions. In extension to existing definitions of Digital Leadership, these four main areas form the basis for the proposed own and holistic definition. In contrast to existing definitions, the authors suggest a holistic viewpoint since the identified challenges and conditions concern organizations as a whole. They are not limited to single employees, managers, departments or even the organization's system boundaries.

To further detail the four main areas and the proposed definition, the main contribution of this research is the elaboration of 20 Digital Leadership factors by conducting further literature research and semi-structured qualitative expert interviews with experienced managers from different SMEs in the strategic business consulting as well as financial industry. These 20 factors are relevant for successful Digital Leadership and enable an organization to implement Digital Leadership by offering concrete guidance.

This paper is organized as follows: Chapter 2 introduces the reader to the identified challenges and conditions of the digital age. Chapter 3 develops the definition of Digital Leadership and draws the big picture. Chapter 4 elaborates the 20 Digital Leadership factors. Chapter 5 concludes the paper and offers thoughts for future research activities.

2. Identified challenges and conditions of the digital age

Based on the review of the existing literature cited below, the following challenges and conditions of the digital age that organizations face currently, and in the future have been identified.

1. *The VUCA-World:* The business environment in the digital age can be characterized as being increasingly volatile, uncertain, complex, and ambiguous (VUCA) (Bennett and Lemoine, 2014; Mack et al, 2016; Kauffeld, 2019). The digitalization and the globalization lead to an increasing VUCA-World (Kauffeld, 2019; Petry, 2019; Wagner, 2018). The development of the business (model) becomes increasingly less predictable and plannable. Management which relies on detailed and long-term planning needs to be rethought since plannability, in consequence also the implementation of what has been planned, becomes increasingly difficult (Petry, 2019; Schreyögg and Koch, 2020).
2. *Complexity Reduction:* To deal with complexity, organizations define their system's boundaries and select their own specific environment. This reduction of complexity in turn leads to blind spots from which positive or negative surprises and uncertainty can emerge (Luhmann, 1984; Schreyögg and Koch, 2020).
3. *Chang of Company Structures:* Digitalization and globalization, and reduced transaction costs, enable new company structures and reduced company sizes (Schwaferts, 2020). Reduced company sizes positively influence the ability to react agile on changes in the environment, changing customer needs, or on effects of the VUCA-World (Schwaferts and Baldi, 2018). A former in-house value chain of a large company can be distributed on many smaller independent companies, all of which contributing to the final overall value creation and forming a digital age networked arena of collaboration (Schwaferts, 2020).
4. *Digital Arenas and Digital Eco-Systems:* Digital arenas, or if a participating organization can establish a leading position of power and determine system boundaries, collaboration, and conditions, also referred to as digital eco-systems, are a combination of individual participants which contribute unique value to an overall value creation (Schwaferts, 2020). Digital arenas and eco-systems are dynamic and change over time as participants join or exit, and technology and possibilities advance (Um, 2015; Schaffnit, 2020). This demands for agility to adapt fast to changes (Schaffnit, 2020). To participate in a digital arena or eco-system, an organization needs to establish customer centricity, focus on its uniqueness, and contribute its own unique value contribution to the over-all value creation (Schwaferts, 2020).
5. *Change of Competencies:* According to the World Economic Forum (WEF, 2020) the top 10 most asked for employee skills by 2025 are analytical thinking and innovation, complex problem-solving, critical thinking and analysis, creativity, originality and initiative, reasoning, problem solving and ideation, active learning and learning strategies, resilience, stress tolerance and flexibility, leadership and social influence, technology use, monitoring and control, and technology design and programming. 50 percent of all employees will need to re-skill by 2025 as technology adoption increases and due to the economic impact of the COVID-19 pandemic. According to Schwaferts and Baldi (2018) traditional management might struggle to develop the working environment required for employees to support such skills, since it has been laid out originally to push employees in repetitive, standardizable, and measurable tasks, but not to support creative, innovative, and entrepreneurial tasks for employees.
6. *Chang of Employee Expectations and Values:* The virtual man describes a human being which is flexible, can adapt to new technologies, is communicative and cooperative, and participates actively in networks (Kauffeld, 2019). The working environment today is characterized by change, the need for agility, the ability to learn and to adapt quickly to new developments, and the mental capability to process multiple available options. It is impacted by innovations which have the power to disrupt and transform all aspects of life (Kauffeld, 2019). This also impacts expectations and values of employees. Employers need to address these characteristics, too. These efforts should address and enhance expected employee values such as freedom, self-determination, competency, meaningfulness, as well as participation and influence, to support employees to unleash their potential in favour of the organizational development, and to increase satisfaction and motivation (Schermuly, 2016; Hasenbein, 2020; Hofmann, Piele and Piele, 2019; Kollmann, 2020).
7. *Change of Customer Expectations and Values:* The ongoing change of expectations and values also applies for customers. According to Mangelmann (2016) digitalization influences customer behaviour in the following ways: Customers are (1) prequalified, (2) self-determined, (3) individual and with individual

needs, (4) multi-optional, and (5) hybrid. It becomes more difficult to assign customers to categories and segments, and plan product and service developments and marketing activities. Furthermore, shortened product life cycles and the increasing pace of change of customer expectations should be considered (Schwaferts and Baldi, 2018). Customers also become active participants in the development process of products or services, and do, with reviewing or filming products or services, actively contribute to the perception of the product or service among other customers, and ultimately its success.

8. *Technology Developments:* Technology enables new business opportunities, new forms of communication and interaction, and new or further developed business models (Petry, 2019). The exponential growth, economies of digitization, and compatibility have been identified by Brynjolfsson and McAfee (2014; Petry, 2019) as the central factors for the increasingly fast and less predictable technology advancements (and its impacts). These technologies also have an impact on society, and the customers behaviour, expectations, and position in the market change, too. For organizations that cannot keep up with the change and capture value from technology developments for themselves, this can have a disruptive impact when a market participant introduces something new, which leads to the questioning of the existing, changes the market logic, or replaces something existing (Thönnessen, 2020).
9. *Cyber Security and Resilience:* To defend themselves from cybercrime and entailed consequences, organizations need to have cyber security and resilience measures in place. Issues related to cyber security can lead to financial and reputational consequences for organizations, and to fines or prison sentences for individual employees. Cyber security and resilience measures as well as training to reduce vulnerabilities should therefore be of concern for all members of an organization (van der Kleij and Leukfeldt, 2020).

There is discussion in the literature, for example according to Kaehler and Grundei (2019) who carried out a literature survey to identify existing definitions of what management is and does, that management approaches which are a mere variation of theories and thoughts originally stemming from the times of the industrial age, might struggle to deal with the challenges and conditions of the digital age. It is not the goal of this paper to contribute to this discussion. This paper recognizes the above identified challenges and conditions of the digital age for organizations and their stakeholders and tries to contribute to the treatment of the such with offering a solution approach.

3. Development of the definition of digital leadership and its big picture

Considering the above identified challenges and conditions of the digital age, it becomes clear that the identified challenges and conditions affect an organization and its stakeholders as a whole and on different levels. Also, with regards to how an organization can establish the required organizational structures and the necessary working environment for its employees to be able to deal in the best possible way with the identified challenges and conditions. Digital Leadership is therefore not only to be understood as a capability or role of an individual person becoming a Digital Leader, but the organization as a whole is challenged.

The following illustration shows the above identified challenges and conditions of the digital age. The authors have grouped them into four main areas in an organization, for which the respective challenges and conditions can be of concern.

Following figure 1, the four areas (1) organization, (2) employees, (3), personal, and (4) strategy were extracted out of the identified challenges and conditions of the digital age. In a second step, the authors had a closer look into the Digital Leadership literature with a focus on the extracted four main areas. It has become clear that similar areas, but in some cases with a different naming, are mentioned also by other contributors. For example, also in in Petry (2019) it is explained that Digital Leadership is in use for “[…] First, an adequate company leadership in the age of the digital economy, second, for an adequate employee leadership in the digital age, and third, for digitally leading companies.” Considering further for example also the explanations in in Wagner (2018) also leading oneself, or the adequate self-leadership, is a relevant topic in the literature.

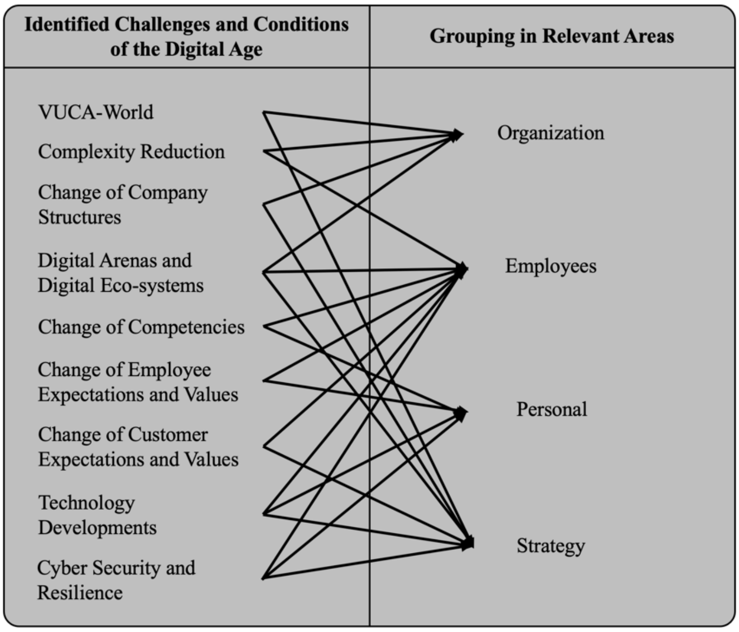

Figure 1: Identified challenges and conditions of the digital age and possible grouping in relevant areas

Considering therefore the above discussed challenges and conditions of the digital age, which should be mastered by the help of Digital Leadership, and considering the existing definitions in the literature with their respective areas of concern, the authors go one step beyond the known definitions and suggest the extension of the existing definitions to obtain a holistic viewpoint and a holistic definition of Digital Leadership. This proposed own holistic definition covers the strategic position, the organizational structures, and the employees, once as members of the organisation, and once as individual persons:

"Digital Leadership is to adequately lead an organization, its employees, and oneself (self-leadership), and to lead the sustainably successful strategic position of the organization in the digital age, under consideration of the challenges and conditions of the digital age."

The following big picture of Digital Leadership (figure 2) shows the derived four main areas of Digital Leadership, (1) Strategic Position Leadership, (2) Organizational Leadership, (3) Employee Leadership, and (4) Self-leadership and represents an organization embedded in the digital economy in the digital age.

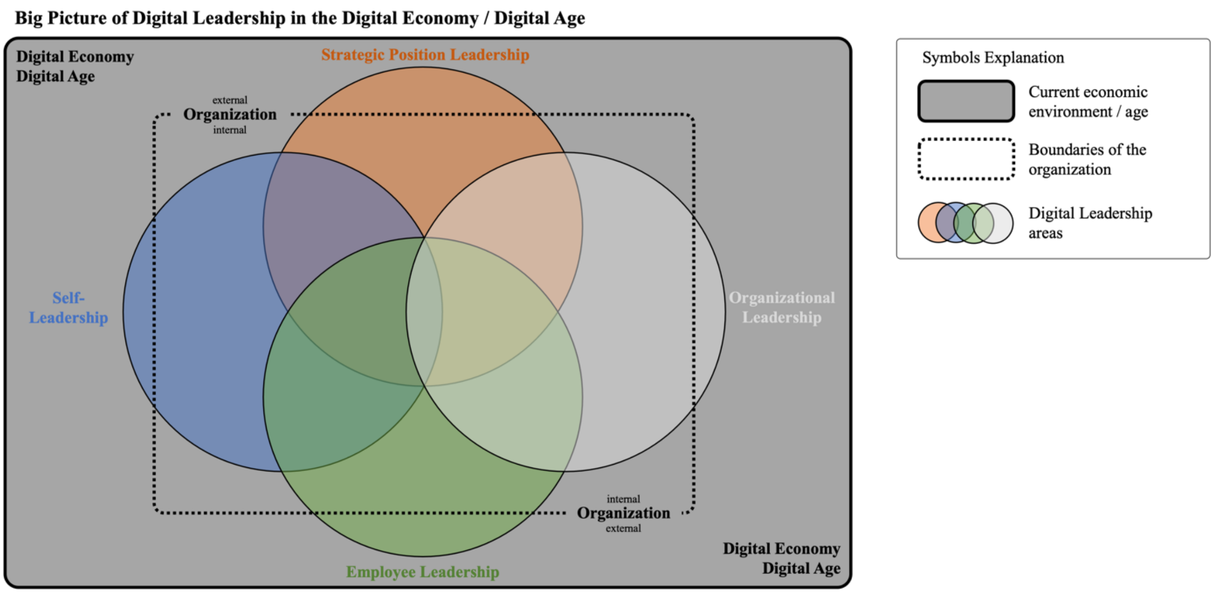

Figure 2: The big picture of Digital Leadership with four main Digital Leadership areas in an organization

Figure 2 shows schematically the four main areas of Digital Leadership within an organization. The four main areas of Digital Leadership are represented as round circles of the same size. They overlap, since they influence each other, are interrelated, and furthermore, because they are equally relevant. The organization's boundaries to its environment, the digital economy in the digital age, are represented with a dotted line. This indicates that the organization's boundaries do not seal off the four main areas of Digital Leadership from external influence. To highlight this exposedness is also why the four circles are drawn to extend beyond the organization's boundaries. While an external influence on the four main areas of Digital Leadership can be for example the customer expectations or the competition, it is also possible that an internal influence on the external environment takes place. This can for example be the case when employee satisfaction contributes to a positive work-life-balance or when a new product or service offered by the organization changes the customers habits and preferences.

The question arises, how the four main areas of Digital Leadership can be further defined and explained, and ultimately be implemented, to be of use for an organization that faces the challenges and conditions of the digital economy in the digital age. As mentioned earlier, the organization as a whole is challenged. This means that the members of an organization need to become Digital Leaders, or at least, need to start developing a Digital Leadership mindset, to be able to transform the organization with their capabilities, to ultimately for the organization as a whole to become a Digital Leader. The following chapter 4 introduces 20 Digital Leadership factors with which the authors aim to offer guidance for how this can be achieved and for how the four main areas of Digital Leadership can be treated.

4. Development of the 20 Digital Leadership Factors

To elaborate a possible solution for this question, further existing literature has been reviewed and semi-structured qualitative expert interviews have been conducted. The experts who have participated are seasoned managers with several years of professional experience in leading positions as all are either representatives of the middle management or managing directors of their respective institutions. All institutions operate in the service industry with a focus on either business and strategic management consulting or financial services. The institution sizes range from small to medium-sized and to large enterprises which are located in Central Europe. The results of the expert interviews have provided the main relevant topics to focus on within the four areas of Digital Leadership, the so called 20 Digital Leadership factors as introduced below. These factors are considered relevant for successful Digital Leadership and ultimately enable concrete options for its implementation by the respective theories and models. With further literature review, the descriptions and characteristics of the identified factors have been further extended and deepened, in addition to the explanations of the experts. The descriptions are provided later in this chapter in table 1.

The 20 equally weighted Digital Leadership factors are: (1) Digital Openness, (2) Customer Centricity, (3) Focus on Uniqueness, (4) Collective Intelligence, (5) Leadership Approach (participative), (6) Agility, (7) Intrapreneurship, (8) Innovation Culture, (9) Cyber Security, (10) Organizational Structures (flat), (11) Mistakes-making Culture (positive), (12) Culture of Trust, (13) Culture of Esteem, (14) Meaningfulness of Work, (15) Empathy, (16) Flexible Working, (17) Remote Work, (18) Digital Responsibility, (19) Self-determination, and (20) Self-engagement. The numbers shall only offer a better orientation, they are not meant as a ranking.

To gain a better overview, the 20 Digital Leadership factors can be located in the big picture of Digital Leadership as follows in figure 3.

Since the four main areas of Digital Leadership overlap and are equally relevant, the 20 factors are to be seen in a holistic manner and as equally relevant for successful Digital Leadership, each being part of the greater context, respectively of the four main areas of Digital Leadership. The location of the factors in the big picture is therefore not to be seen as fixed in just one of the four areas. For this reason, also the part in the middle remains free, to not indicate one factor as a central one. For explanatory reasons and recognizability, it makes sense to provide an illustration in which all 20 factors are visibly located in the big picture.

The following table 1 lists the 20 Digital Leadership factors and summarizes what is understood by each factor, based on the discussion with the experts and extended with additional information from the literature where appropriate.

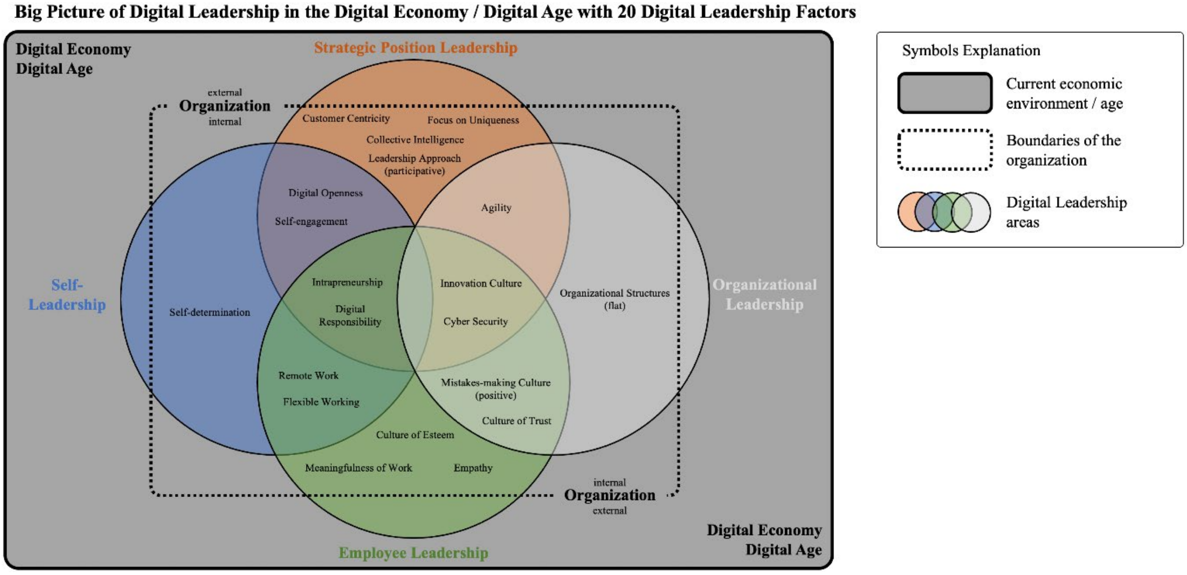

Figure 3: The big picture of Digital Leadership in an organization with 20 relevant Digital Leadership factors

Table 1: Overview of the 20 Digital Leadership factors with summarizing explanations

Overview of the 20 Digital Leadership Factors and Explanations	
Digital Leadership Factor	Explanation
(1) Digital Openness	General open-mindedness, interest, and curiosity, but as well will and courage to explore new technologies and possibilities they enable. Adherence to the "old times", rigid organizational structures or fear of making mistakes and risk-taking can counteract this factor (Kollmann, 2020).
(2) Customer Centricity	To identify and create a unique value contribution and to be able to participate in digital arenas or digital eco-systems, a customer centric approach is needed which "[…] thoroughly focuses on identifying customer needs and managing positive customer experience […] " (Schwaferts and Baldi, 2018).
(3) Focus on Uniqueness	To stay competitive and to participate in digital arenas or digital eco-systems, an organization needs to contribute uniqueness (a unique value contribution/competitive advantage) to the overall value creation of the arena's or eco-system's participants, and serve a need better or cheaper than its competitors. Globalization and digitalization, and reduced transaction costs, enable an organization to focus more on its uniqueness (Schwaferts, 2020).
(4) Collective Intelligence	It is natural that individual human beings do not know everything and are limited in their ability to capture and assess the entirety of relevant influencing factors when taking decisions. The collective brainpower available for the organization should therefore be taken advantage of (Petry, 2016; Wagner, 2018; Kappe, 2016). This also applies in terms of the identification of new customer needs. Teams who make use of collective intelligence are able to produce more innovative solutions (Ehmann, 2019), as well as increase diversity which can lead to the discovery of new ideas no one has thought of before (Stadler et al, 2021a).
(5) Leadership Approach (participative)	Considering the above identified challenges and conditions of the digital age and the complex questions that arise in a business context, the competencies, experiences, and opinions of many are needed to assess the situation and take the most promising decision. This can be achieved with a participative leadership approach at eye level (Geschwill and Nieswandt, 2020). Stadler et al (2021b) mention as well that valuable strategic insights are not limited to the leadership team or consultants. Furthermore, participation in the decision-making process does as well positively influence the acceptance of decisions made and the identification of the employees with their organization.
(6) Agility	Agility describes the ability "to constantly move in line with the changes in the system's environment" (Olbert and Prodoehl, 2019; Kollmann, 2020), to react on the dynamic, digital environment (Kollmann, 2020), and "to learn from own experiences and to act future oriented" (Redmann, 2017; Kollmann, 2020). A volatile, uncertain, complex, and ambiguous (VUCA) environment requires an agile handling.
(7) Intrapreneurship	Employees should be motivated to think and act like entrepreneurs themselves and acquire visionary and innovative entrepreneurial thinking (Petry, 2019; Antoncic and Hisrich, 2001; Kollmann, 2020). This should support the discovery of new customer needs and push innovation of products, services, processes, and business models (Kollmann, 2019; Kollmann, 2020). In turn,

Overview of the 20 Digital Leadership Factors and Explanations	
Digital Leadership Factor	Explanation
	this should also positively influence employee-satisfaction and loyalty, since employees get involved and can contribute to the development of their organization (Petry, 2019).
(8) Innovation Culture	A culture which is open and supportive for creative and innovative thinking from inside and outside the organization is crucial. Because of shortened product life spans and an increasing pace of change in customer expectations (Schwaferts, 2020) but as well because of increased transparency, globalization, and the reduction of market entry barriers which lead to more competition, being innovative is an important asset (Petry, 2019).
(9) Cyber Security	Cyber security and resilience are not only a topic for an organization's IT department. Every member of an organization is affected and responsible in daily work life and even in private life. Cyber security issues can lead to severe financial, reputational, and personal consequences. Having therefore not only the appropriate IT measures in place but also offer the necessary training for users is crucial.
(10) Organizational Structures (flat)	Flatter hierarchies with less management levels and a stronger focus on participation enable shorter decision paths and more agile decision making. This allows an organization to react faster on changes in the market and of customer needs. An example are cross-functional teams (Hofert, 2016; Hofert and Thonet, 2019; Hasenbein, 2020).
(11) Mistakes-making Culture (positive)	Making mistakes should be seen as a learning and improving process which should be in favour of creative and innovative power, and not as incompetency and failing. Considering un-predictability and fast changing customer expectations in an organization's environment, one does not know in advance which solution might work. To trying things out, experiment and test, and learn from mistakes is a productive attitude (Geschwill and Nieswandt, 2020; Petry, 2019).
(12) Culture of Trust	Trust is a prerequisite for many of the discussed Digital Leadership factors and according to the VOPA+ Model (Networking, Openness, Agility, Participation, and the plus sign for Trust) the basis for successful leadership (Buhse, 2014; Hasenbein, 2020). It is furthermore the basis for successful negotiations and sustainable business relationships, and for being trusted with high value assets such as data.
(13) Culture of Esteem	Esteem means the wish for appreciation, recognition, and respect, but also the human ability to fulfil this wish (Maslow, 1954; Schreyögg and Koch, 2020). With regards to changing expectations and values of customers and employees, esteem is an important asset, and to value co-workers or business partners and their contributions does positively influence the recipient's motivation, performance, and loyalty.
(14) Meaningfulness of Work	Perceiving a meaning in work tasks or one's work in general does positively influence employee-satisfaction, motivation, and performance. Work should be a meaningful part of life. The division of labour for example can negatively influence the perception of fulfilling meaningful work (Schreyögg and Koch, 2020; Kollmann, 2020; Petry, 2019; Hasenbein, 2020).
(15) Empathy	Empathy is an important ability, not only in the context of social situations and interactions but also with regards to the understanding of customers and the identification of new customer needs (Körner, 1998; Hellert, Müller and Mander, 2019). Furthermore, with regards to the increasing automatization of work tasks, empathy is as a unique human ability which cannot yet be copied by machines.
(16) Flexible Working	Similarly to remote work, also having the possibility to choose start and end time, and the duration of a workday in a self-determined manner should on the one hand side positively influence the performance, and on the other hand side also an advantageous work-life-balance (Creusen, Gall and Hackl, 2017; Covey et al, 1994).
(17) Remote Work	Remote work means work performed outside of the employer's buildings, either mobile or stationary, permanently, or temporarily, or both. Having the possibility to choose the work location in a self-determined manner should on the one hand side positively influence the performance, and on the other hand side also an advantageous work-life-balance (Creusen, Gall and Hackl, 2017; Covey et al, 1994).
(18) Digital Responsibility	Considering the increasing use of digital technologies in work and everyday life situations, it is important to maintain a responsible usage. For example, locking the screen, respecting other people's privacy, a respectful communication and interaction also online, or a professional background and sufficient lighting in online meetings. This is not only to promote one's own reputation also online but also to ensure a positive environment for online interactions with others.
(19) Self-determination	Having the possibility to self-determine and organize work tasks and workdays is considered to have a positive impact on employee-satisfaction, motivation, and performance (Petry, 2019; Hasenbein, 2020). This stands in contrast to external-determination where an external source

Overview of the 20 Digital Leadership Factors and Explanations	
Digital Leadership Factor	Explanation
	does command work tasks and workdays, and which is considered to negatively influence employee-satisfaction, motivation, and performance (Schreyögg and Koch, 2020).
(20) Self-engagement	Intrinsic engagement and motivation for constant learning (and learning from mistakes) and interest in new technologies. But also, with regards to thinking about customer needs, business opportunities, and the initiative to drive change and innovation. Keeping in mind the ongoing automatization of work tasks, staying engaged for new tasks and tasks that require human abilities is crucial.

As indicated above, the 20 factors offer now the guidance for the reader to go into greater detail with factor-specific literature, and its respective leadership theories and models, depending on the individual needs and requirements, but by supporting the view for the greater context.

5. Conclusion

Based on identified challenges and conditions of the digital age faced by organizations, and based on the existing Digital Leadership literature, the authors have proposed a holistic definition of Digital Leadership. Based on this definition the big picture of Digital Leadership has been drawn with the four main Digital Leadership areas (1) Strategic Position Leadership, (2) Organizational Leadership, (3) Employee Leadership, and (4) Self-Leadership. The main unique contribution of this paper is the elaboration, based on qualitative expert interviews, of 20 factors relevant for the deeper understanding of (the four main areas and the big picture of) Digital Leadership and its implementation in organizations that need to deal with the challenges and conditions of the digital age.

Further research is suggested in terms of the further and more detailed elaboration of the introduced 20 Digital Leadership factors and possible indicators which enable the measurement of the respective factors to support their implementation and monitoring. In the authors opinion, it should be the goal to develop even industry or department specific indicators for organizations to address individual needs and be able to offer tailor made guidance. With this, the basis can be created for comprehensive Digital Leadership assessments and improvement suggestions at various organizational levels and in organizations of all kinds and branches to support organizations as individually as possible in staying competitive.

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Leadership for Sustainability Learning: The role of Active Learning Methodologies

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Abstract: Learning to lead for sustainability in your enterprises has emerged as a new concern for top leaders in many industries, educational institutions, and regions. The higher education institutions may have a generic role in affecting leadership for sustainability learning in both theory and practice. From an action-based leadership for sustainability perspective, we propose that more attention be devoted to leveraging the developmental work in the everyday learning settings, and especially in local organizing for leadership learning. This explorative paper specifically seeks to understand the role of active learning methodologies in affecting sustainable leadership in an adult learner and student group setting. It is of broad interest to help diverse students' learning groups to both enact and engage recurrently as co-creating learners for their own leadership development.

Keywords: leadership learning, sustainability, action learning, learning methodologies, executive education

1. Introduction

The purpose of this paper is to understand the role of active learning methodologies to better educate for sustainable leadership in an adult learner and student group setting. Leadership learning in general (McCall, 2010) as well as in business schools (Murcia et al., 2018) have been criticized (e.g., Gosling and Mintzberg, 2006) for not developing actionable capabilities closer to everyday leadership and organizing practices (Hansen, 2018). There remains a lack of understanding and orchestrating higher education course strategies for learning leadership and organization development 'as practice' (Nicolini, 2012). In the following, we address especially the role of active learning methodologies with ingredients such as creativity, action-reflection-learning, linking to real organization experiences, and critical thinking (McCall, 2010), which can all contribute to a debate on improving business education based on understanding their mission (Murcia et al., 2018). In other words, we focus on active learning methodologies that may also foster executive students' own learning to learn, which seems essential for sustainability-oriented leadership because it can open new horizons for what is possible or not (Jevnaker and Olaisen, 2022).

For this paper's explorative aim, we specifically combine processual philosophy and sustainability-oriented action learning to help us understand the role of action learning methodologies in leadership learning settings. We draw on more than 20 years of experimentation involving leadership learning as ongoing practice. A relevant, revelatory case in a Scandinavian higher business education context allowed us to start exploring the following research question: In what ways can active learning methodologies enact leadership learning activities?

The higher education institutions have tended to be slow to embrace action learning and emergent human conditions and business needs in their teaching and learning practices (Coghlan, 2019; Murcia et al., 2018; Rocha et al., 2021). On this background, we address our research question drawing on a real course case in bachelor management executive education that offers several active learning approaches including action-based learning in its part-time learning over two semesters. In the remainder of the paper, we explain our approach and contribute by identifying and discussing active learning methodologies in use that involved both direct and indirect roles of organising and stimulating learning activities. Both ways seemed necessary for fostering adult students' learning, as well as for future leadership for sustainability.

2. Perspectives

In this paper, we adopted two perspectives – experiential action-reflection learning and process philosophy, a combination that allowed us to shed light on what ways active learning methodologies can enact on-going use of learning activities. Each is briefly presented below.

2.1 Experiential action-reflection learning

Experiential learning has been around for some decades (Coghlan, 2019) but is recently being re-discovered (e.g., Hansen, 2018). This may be regarded as part of the current practice turn in management and organization studies (see Nicolini, 2012), where 'practice' is understood in a broad sense of enacting recurrent practices of doings and sayings. Practices involve both dynamics and some social ordering and need to be understood beyond repetition/sameness (Schatzki et al., 2001).

Yet, how leadership learning activities can unfold and constitute a nexus of what we call ‘leadership-in-action’ to embrace whoever or whatever contributes to leading in practice (beyond formal leadership levels), are still not sufficiently understood (Jevnaker and Olaisen, 2022).

By the word ‘sustainable’, we point to the capacity to be upheld and endure, while not harming the surroundings, in an inclusive philosophy sense (Naess, 2005). Despite increasing attention on countries and companies’ sustainability goals, we know less about leadership for sustainability as continuous practices in micro, at the layers of more concrete developmental activities (Jevnaker and Olaisen, 2022). On this background, we propose that more attention could beneficially be devoted to experiential ways of leadership learning. According to McCall (2010):

Experience—not genetics, not training programs, not business school—is the primary source of learning to lead, and although our understanding of this kind of experience is far from complete, it is absolutely the place to start.

In management and organization change literature, several authors point to the importance of attending more to real-life phenomena in management (Schwarz and Stensaker, 2014). In a business school education context, both resources (e.g., courses, literatures, students, group-rooms) and possible actions (e.g., class visits to other sites) exist, although perhaps somewhat underused.

2.2 Process philosophy

In our concept of leadership in an ‘organization’ context, we include extra-organizational efforts beyond the formal organization (Tsoukas, 2005), and ‘leadership’ with and beyond formal leaders. Accordingly, we adopt process thinking (Langley and Tsoukas, 2017) that involves emergent wayfinding (Chia and Holt, 2009). As we shall see, action-based executive learning often entails finding other ways than what students (and sometimes also instructors) may have thought in the beginning. Thus, we propose to reimagine how we understand leadership learning for sustainability allowing us to capture some more inclusive learning dynamics (for example from a student class day off campus, which can enact other collaborative learning processes).

The idea of inclusion is adopted from the philosophical idea of inclusion, proposed by the American pragmatist philosopher *John Dewey* (1928/1998). In this paper, we seek to include multi-faceted resources and processes when relevant. We contend active learning methodologies can include and/or affect the social, the physical, the economic, as well as the envisioning or imaginative capacities of interest for human development.

To illustrate our process-based leadership reasoning, we draw on exemplary learning endeavours from Scandinavian business school settings, where leadership ideas on sustainability have spread like a virus, yet little is known of ways to enact more concrete, renewed learning practices (Jevnaker and Olaisen, 2022) in a higher education setting.

3. Research methodology

The paper is positioned as an explorative discussion paper drawing on inductive qualitative research within leadership and management learning. As introduced, the theoretical foundation for the paper is a processual practice-based view within leadership and organizational studies (Nicolini, 2012; Langley and Tsoukas, 2017). This means that we are zooming in on actual and recurrent learning practices treating higher education executive learning as a real-world organizing context.

In qualitative research, both the context and the researchers are essential (Yin, 2018). For this paper’s explorative aim, we build on observations and reflections from exemplary learning practices in a Scandinavian business school education setting to help us understand the role of active learning methodologies in a higher education leadership course case. Especially, we revisit one final comprehensive, final Bachelor of Management course in executive education, which means that it offers students both breadth and some depth in learning. In this course, we draw on more than 20 years of exemplary leadership course participations involving relevant elements of action-based leadership development and forms of collaborative learning. The co-teachers including the author have participated in and across several classes in this leadership course, the author from the start of this course (1999-2022), some co-teachers for around 10 years, and three more recently, yet all highly experienced teachers running and co-leading multiple other executive courses, some with strengths in leadership, HR, and teams, or alternatively, in processual organization change, innovation, and design. These faculty differences helped ongoing preparations, observations, and debriefings to engage with fresh, yet trained eyes, sustained curiosity, naïve asks, and some cumulative familiarity on what was unfolding in the various classes and student groups.

The teacher teams' ongoing developmental work in the course, and debates in the relevant literature, triggered thoughts on how sustainability-oriented leadership learning can become fostered in higher education student learning settings. Specifically, we explore and identify some active learning methodologies and their related learning activities, which may impact on executive students' learning. Exemplary real learning practices are explored through a set of active *learning methodologies, tasks* & *activities* recurrently enacted.

The material we draw on includes collective actions and events shared by participant teachers and students. Participant observations and reflections were often shared orally in individual, group, and plenary dialogues in or immediately after a course element, as well as in individual reflective writing and student feedbacks at the end of a task or course module. Teacher/instructors were also sharing own observations and reflections using their field notes from learning activities in group tasks, sharing examples of online communication with students and/or with course team members. Many pre-briefs, consultations, and debriefs were organized among teachers and facilitator teams. Following students/groups in action over a 10 months' course period and visiting several sources of experiential and other data (exam results, Assess of Learning (AoL) data, showed some recurrent patterns (e.g., student learning results exceeding expectations), and helped ensure trustworthiness and internal validity. In our interpretive analysis, we focus mainly on organizing and otherwise enacting stimulating learning practices. Based in Gioia et al. (2013), the author coded exemplary quotes from student feedback narrative inquiries, and by that could identify interesting relevant themes. Thus, we attempt in the following to synthetize learning activities in use that are constituting recurrent use of active leadership methodologies.

We propose this approach has the necessary grounding, as we explore learning activities unfolding in a real-life continuing business education context (Yin, 2018). The executive course case we draw on here can furthermore serve as a revelatory case (Eisenhardt and Graebner, 2007), because this course was, and still is, considered to involve several novel combinative features such as stressing 'active learning' embracing collaborative learning and leadership 'in action' rather than just teaching with questions and answers afterwards (see next section). The course offered and developed through more than two decades, allowed us to observe and gain process experiences from student performances and narrative inquiries from several classes and campuses. In sum, learning activities with, for, and among executive students in this course provides a highly appropriate setting for this research.

4. Executive case with multiple active learning components

Learning leadership in a business school higher education context can entail a set of learning goals including learning theories on leadership and organization development, some relevant skills, and general competencies such as attitudes of mutual respect for other people and raised awareness of their competencies. But how to enact learning to match or exceed the broad scope of learning goals?

In one bachelor executive program in Scandinavia that attracted students with diverse and interdisciplinary industry backgrounds, leadership learning (in a broad sense) was offered with action-learning components involved in every module. As teachers we could follow the students in the executive classes that we co-taught over a two semesters (ten months) course.

To be relevant for leadership and future work careers, tasks or processes in this course were deliberately challenging. 'Active learning' methodologies encompassed designing exercises as a challenge to link to key aspects in the course curriculum as well as prepare students for the needed 21st century skills, such as creative opportunity recognition, reflexive judgments, and co-creative action learning. Student teams were also working with identifying and formulating strategies for emergent challenges in organization change cases or entrepreneurial team-based start-ups.

Preparing for their exams, in this course the students were stimulated and had to find own relevant theories to an independently formulated problem statement in own theory-driven 'synopsis' paper. The completed short theory-reflective paper as first exam component then became a shared ground for conducting a reflective dialogue in their next, an oral and dialogue-based exam. Students were further conducting a project based on primary experience-based research in own or other relevant organization, a key part (60 pct) of their total exams.

Last, but not least, students in groups were practicing action learning and constructive-critical reflection in and beyond the classroom in every course module. Quotes and related coding from one leadership executive class the author followed over a full non-pandemic year is offered below – grounded in class module-related feedback narratives from individual students (see Table 1).

Table 1: Identified learning activities grounded in students' narrative feedback from one executive class in the exemplary leadership course case

Learning activities – student narratives **Quotes in first-order categorisation**	Second order themes	Aggregate themes
'Making team and working as team was unfamiliar in the beginning, but I think I learned very much about myself and my interaction in collaboration with the others. Felt safer and got myself challenged more.' (1st module, student 2017). *'I've learned to know the people in the group better.' (3rd module student, 2017).* *'Learning much from people I am in the group with and don't want groups to be changed.' (3rd module student, 2017).*	Getting to know each other in class through 'learning groups.' Continue with same groups over several modules.	Recurrent, increasingly familiar groupwise connecting
'I've learned that I function better in collaboration than I thought.' *'Very interesting to be filmed' (in group performances).' (3rd module student, 2017).* *'Found out more how I am in the leadership situation' (1st module student, 2017).*	Experiencing performative insights on oneself and others in collaboration – while doing groupwork.	Interactive performing
'The section with dreams and related barriers/possibilities was also useful and something I will actively use further.' (3rd module student, 2017). *'I personally feel that I have developed myself and learned more about myself these 3 days, thanks to this course.' (1st module student, 2017, this module incl. Action-day outside of the campus).*	Variety of learning tasks trigger self-learning and self-development. Much learning can happen intensely, which potentially come in further use.	Self-directing
'Various forms of observation made me reflect and think somewhat differently.' (3rd module student, 2017). *'I learned very much about myself on day 2, that was super!' (Day 2 was "Action-day". (3rd module student, 2017).* *'I learned a lot by challenging myself, stretch the comfort zone.' (3rd module student, 2017).*	Learning with enriched observation tools. Students become engaged by challenging activities (in a relatively safe group environment), which trigger self-learning.	Deep experiencing

The learning exercises used in this exemplary executive course involved regular action-reflection-learning activities (see below), individually and in groupwork. Groups (5-7 students) were established on the first day of this course and they were continuing throughout several modules but not necessarily for all tasks. Learning exercises were actively related to lecturing and further recall of relevant theories, a recurrent conceptualization to provide an improved visible 'red thread' in this final, integrative bachelor level executive course.

This combined theory- and action-reflection learning is not always easy to capture in the beginning but makes the course different. In the first module, this course already includes one action-day often off campus, such as to a guesthouse in the forest, to make a common, relatively safe ground for the student learning groups. As pointed out by one student in his first feedback at the end of the first module,

'The class encounters were very good. More dialogue than theory, and unexpected in relation to other subjects (courses). But very rich learning.'

5. Discussion: The role of active learning methodologies in leadership learning settings

The call for 'recasting' leadership in an experience-oriented, learning to learn direction (McCall, 2010) seem accentuated by many expected and surprising changes to be faced in societies and organizations in the wake of ongoing technology transformations, international conflicts, re-locations, pandemics, and other challenges (e.g., Rocha et al., 2021; Jevnaker and Olaisen, 2022). However, this recasting appears more problematic than it first may appear (McCall, 2010), which deserves further discussion.

In this paper, we thus ask, in what ways can active learning methodologies be enacted for leadership learning as practice? Drawing on one comprehensive, somewhat different executive course, we identified both direct organizing roles and emergent co-creative roles in-between students and their teachers (see Table 2).

Table 2: Identified learning practices and roles embedded in some active learning methodologies

Learning practices	*Directly organizing roles* - *with/for both task and process action*	*Indirectly inspiring co-creative roles* - *with/for collective and individual learning*
Enacting fresh and ongoing active learning relations *- through connecting, acknowledging-cum-encouraging learning*	Organizing relationship building through icebreaking, new learning group formation, and room for reflection in diverse student2student ('peer') relations - with inclusive competence and mastering orientations, and - a few meta principles for class sharing of reflections.	Dynamically using learning events and tasks to co-generate action, experiences, and reflections in and on own learning with others, e.g., via - individual notetaking (logbook), - dialogues in groups, and - emergent theory-/practice-informed reflective plenary conversations.
Enacting interactive learning work as action learning based *- through inclusive collaboration and reciprocal performative action*	Staging and inviting in all participants to well-prepared action tasks - staging joint aim, tasks, time, and place for group autonomous action and reflexive peer interaction.	Using emergent learning incidents to co-create and expand learning - in and with unfolding of process work, - with use of materials and tools, - allowing for broader spontaneous interacting, and reciprocal self-reflective learning conversations.
Evoking deeper learning loops *- through facilitating action reflection learning (ARL) circles*	Facilitating deeper action-reflection-learning loops - through getting to know students and their learning, - 'being there' following ARL circles, - orchestrating learning roles, - being prepared for facilitating suitable interventions and - fostering focused dialogs and stimulating open conversations.	Exploiting emergent situations to explore and reflect deeper in and on interaction - through follow-up learning roles, - facilitators and students' time-outs and sharing moments for exploring 'what happened here?', and - orchestrating giving-cum-taking constructive feedback, as well as - linking to theories, and - leveraging creative and critical thinking in experiential dialogue.
Evoking individual and group self-direction progressing own integrative learning tasks and reflections	Supervising autonomous formulation of own possibilities and challenges, finding, presenting, discussing, and reflecting critically on own chosen perspectives, own work, and cumulative insights - e.g., in own research literature and compulsory literature, work examples and findings (synopsis, and project work).	Stimulating creative independent navigation in student learning work through focusing broader integrative process work, e.g., via - iterative cycles of individual and/or group creation in workshops with reflective feedback & discussions, and - preparing and performing own exams-related work, with - moments of interactive supervision, - and some sharing 'synopsis' presentations.
Enabling potential student transformative experiencing of meaningful learning journey	Enacting and orchestrating sharing of creative perspectives on own learning journey, e.g., from holistic sustainability stance.	Inspiring potential self-development through affording multifaceted learning encounters, challenging learning efforts with independent flexible choices and recurrent collaborative support in the students' personal learning journeys.

5.1 Contributions

Grounded in the identified pattern of actual and potential learning practices, we may draw three propositions. Firstly, learning for leadership as practice calls for *creatively combining* directly and indirectly enacted relevant and interesting learning activities. Across the development and implementation of these leadership programs (several classes each year, from 1999 – 2022), we saw a blend of both purposive (intended) direct facilitations and more spontaneous evolving approaches that in combination contributed to enacting multifaceted learning activities. Notably, both ways were purposive processual, and action oriented as this is part of the course intentions. In other words, this makes learning practices co-generative and co-creative. Secondly, as Table 1 shows in the vertical heading and columns, enacting an increasingly rich *cumulative* learning process mastery was essential – from getting to know fellow executive students (fostering active learning relations) to engaging in self-directing learning work to enabling potential self-transformative learning. Thirdly, learning leadership as practice is thus not an event, it is a challenging, potentially *transformative journey*.

It seemed important for students to experience learning efforts both intensely (such as in a collaborative group task) *and* recurrently, over the course period. For many students it took some time before they fully 'got it' and appreciated self-navigating or co-creative learning tasks. Humour and linking well to students' interests/ backgrounds could help reducing some emergent tensions. Cumulative experiencing was essential as students often orally referred to the first module's action-day with awareness-raising 'blind-folded' outdoor exercises as well as a special feedback session in each learning group at the end of the day as an eye-opener. For example, in one 2021/22 class, we heard one group member who was absent in the first module, reflected to another member of her group that 'you were very lucky to experience that!".

For facilitators, stimulating executive students to meet-up and engage in constructive and critical reflexivity is not easy, as often new teachers and facilitators have reflected upon in the many internal 'debriefing' events and annual course development seminars. Yet, teachers as well as students have found it recurrently possible and enriching to learn to reflect, both proactively and reactively in the action learning class tasks we have experienced. "What I take with me (after this course), is overall this capacity to reflect," one student wrote in his/her learning letter at the end of the last module.

For each teacher and the whole course team (with administrative staff) who contributed as action learning facilitators, this statement is not surprising. Reflection work unfolded in many recurrent ways, such as in the sense of becoming able to share spontaneously here-and-now in the class situation or to expand reflection elaborating in more precise language – what you observed, how you personally reacted or felt, how you judged it, and so forth, or to reflect on more fundamental business and human needs in or after the class individually and in between students. This resonates with past literature and respond to a call for more reflective and purposive leadership learning (e.g., Murcia et al., 2018).

The learning practices were typically embracing collaborative learning among the students meeting up in the respective course module as well as seeking to stimulate and actively reflect 'on' and 'with' the participants' personal learning in potentially deeper and 'transformative' ways (see Petriglieri et al., 2011).

Each student actively attending course modules in this course, experiences both a personal learning journey and a co-creative one with other students in his/her groups/classes, because all modules provide both plenary, individual, and group action tasks and iterative processes, such as between action, reflection, and take-aways.

Taken together, we propose the learning activities identified can, in principle, help opening for a more experiential and action-based leadership orientation where theories and practices meet in ways that can potentially benefit engaging students.

5.2 *Strengths, limitations, and implications*

There is currently a gap of understanding actionable ways that may enable renewed leadership learning as practice in educational, business, and individual daily work settings. A theoretical implication of this paper is to pay further attention to the *combination* of direct and indirect ways of enacting learning activities that can together constitute a challenging, yet potentially highly beneficial learning journey for the executive student.

A strength in this case, is the proximity and triangulation of materials and insights from preparing the course, conducting the course, and following the students over the full course period, in teacher/project coordinator teams with multiple contact points with students, getting to know their individual results, and receiving personal feedbacks. Notably, almost all the students learn to do the three challenging exam components successfully, few drop out. In fact, after some common initial frustration most perform surprising well and embrace their theory-driven reflective 'synopsis'-paper and the oral individual exam, although the students are highly diverse in educational, professional, and intellectual backgrounds.

As suggested in the case we have drawn on, enacting a variety of leadership-related learning approaches are possible to *realise recurrently*, with some site and class variations over time. Enacting a stimulating variety of action-based learning practices combined with 'learning to learn' theory work relevant for own research questions linked to a real organisation, became an essential part if hundreds of students' learning journeys, as reflected upon in student feedback, sometimes in letters/mails long afterwards, as well as different teachers' observations in several classes. Still, a few students do probably not fully embrace the action tasks, which is not surprising, given the diverse adult students (average age around the mid 30ies) and their career/family lifecycle squeeze, and accustomed to mainstream teaching. Also, the ways this leadership course constitute an experiential nexus of learning activities housed in group work and/or embodied in each student, is evidently dependent on the students' own engagements and co-presence such as in the modules and the class activities between modules, or in learning groups in between students on or off campus.

Practical implications are many. One essential one is to better explain the possibilities of action learning efforts as part of executive learning practices. For the adult executive students, solid introductory and follow up information in combination with compelling self-experiences of relevance in the first modules, seemed crucial. This is key because most students seem to move through some frustrations and the course includes final bachelor "thesis" exam, yet felt challenges are also regarded as a sign of (expanded) learning by experienced teachers. Nevertheless, everything that can help create a triggering, yet 'safe' situation to cope with the respective learning challenges are essential.

For course designers and teacher teams, an important implication is also learning to include and facilitate well-prepared 'practicing activities' in each course encounter (modules, webinars, supervisions, etc.). Furthermore, exam design can channel executive student learning towards expected collection of primary, experience-based research data, to allow for more experiential insight into own or others' organization. Consider pluralistic, self-chosen approaches in theory and method foundations to offer flexibility and adaptability, given that executive students work in teams from diverse organizational settings and 'action research' (seeking to involve a wider learning in own organization) is just one way of doing research while working with improving some focused situations (Coghlan, 2019).

6. Conclusion

This paper unpacks the critical role of active learning methodologies in leadership learning settings. Drawing on one revelatory higher education executive course case, we identified the importance of stretching and sustaining active learning work through a variety of knowledge- and action-focused relational, broad, deep, and potentially transformative learning practices. The specific course methodologies unfolded in both directly organised and more spontaneous co-creative learning situations, which could affect students' experiential learning.

All in all, in the context of a comprehensive executive course at bachelor management level, a cumulative variety of supportive iterative and integrative learning approaches are essential. Given that executive students at this level commonly have a practical grounding in rather diverse backgrounds, capabilities, varying self-efficacies, and somewhat implicit learning preferences, we contend that the action-reflection learning methodologies need to make room for richer, experiential learning where theories and practices can meet. Learners including teachers can thus expand own competencies towards new leadership for challenging times. Last, but not least, students narrated the value of their own 'learning journey' – appreciating mastery of the most challenging exam-components and pointing to unexpectedly personal learning experiences that link to their everyday organization work and/or future careers.

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Implementing Organizational Ethics in an Academic Environment: The Case of a Croatian University

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Abstract: Despite its great importance as a crucial aspect of organizational culture, organizational ethics and the implementation of ethics initiatives at all levels of the organization are still largely misunderstood or even neglected, not only in the business world but also in academia. Given the role of universities in educating young people for the labour market and future jobs, the translation of defined and proclaimed ethical policies, norms, and formal documents into desirable ethical behaviours by individuals, departments, and faculties is a sine qua non requirement for any university. This is especially true in less developed countries and emerging economies where the challenge of creating an ethical environment in organizations, corporate or otherwise is even greater. The main goal of the paper is to explore the interrelationship between formalized ethical policies and initiatives and demonstrated ethical behaviours at the organizational level, as well as to further investigate their role in shaping ethical behaviours of academic staff and, subsequently, ethical behaviours of students in an academic setting in a transitional economy. To achieve this goal, empirical research was conducted in 2021 using a specially designed questionnaire on a sample of 115 employees from one of the leading universities in Croatia. A moderated mediation model was designed and the analysis was conducted using PROCESS macro v4.0 for SPSS. The obtained results suggest that the effectiveness of standalone formalized ethical policies and initiatives is questionable in shaping ethical behaviours of academic staff, whereas these policies and initiatives in conjunction with actually demonstrated high ethical behaviours at the organizational level positively influence the ethical behaviours of academic staff. Moreover, the demonstrated ethical behaviours of academic staff plays an important mediating role in the positive impact of formalized ethical policies and initiatives on student ethical behaviours. In fact, demonstrated high ethical behaviour at the organizational level contribute positively to the indirect effects in this model. These and other findings of the research contribute to the relevant literature by providing additional confirmation of the importance of moving beyond formal ethics-related documents to actually demonstrated ethical behaviours in shaping ethical behaviours of individuals, in this case, university employees and students.

Keywords: organizational ethics, ethical policies, ethical initiatives, ethical behaviours, transitional economy, academic environment

1. Research background

Organizational ethics and the implementation of ethics initiatives that lead to values such as fairness and impartiality, once considered universal features of university systems, have recently been supplanted or even replaced in a number of cases by unethical behaviours and interests of individuals (Heyneman, 2011). Due to their role in society and their potential to train exceptionally innovative specialists and the leaders of tomorrow in all areas of industry, research and politics, higher education institutions must develop and maintain a culture of integrity and ethical values to socialize and develop their own employees to adhere to proclaimed ethical values and produce honest, reliable, and trustworthy graduates (Momete, 2019). In this sense, Priscariu & Shah (2016, p. 161) emphasize that "ethics and moral values are a virtue to a high quality university, where corporate and academic governance framework articulates ethical standards in teaching, research and all other activities". As a result, headlines about ethical violations at institutions of higher education require academic leaders to formulate and implement comprehensive strategies and initiatives to promote ethical conduct (Elliot, Marquis & Neal, 2013). Based on the assumption that students who are dishonest during their studies will transfer this behaviour to their future workplace (Rakovski & Levy, 2007), corporate scandals and unethical behaviours in the workplace have led to considerable attention to the role of higher education in training young professionals (Deshpande, Joseph & Berry, 2012) in ethics and ethical values. For example, Leonard, Riemenschneider & Manly (2017) point out that students should be prepared to face ethical issues in the workplace during their studies and as part of the educational system. Considering that ethical transgression is an ongoing problem in higher education (Rothman, 2017), previously largely ignored research on organizational ethics and ethical issues and behaviours in higher education has become a weighty topic and is therefore receiving increasing attention from researchers (Elliot, Marquis & Neal, 2013; Jamil, Mohammad & Ramu, 2018).

Organizational ethics can be viewed as factors or aspects that enable exceptional, strong ethical conditions in organizational life (Bright *et al.*, 2014 in McLeod, Payne, Evert, 2016). Culture and climate, codes of ethics, programs, rewards, and sanctions are commonly referred to as ethical infrastructure in organizations (Treviño *et al.*, 2014). For an organization to be perceived as ethical, this infrastructure must move from 'words' to 'actions' at the individual and organizational levels (Credo, Ianuzzi & Armenakis, 2010). In this sense, ethical climate and culture in organizations are most effective when there is congruence between individual member ethics and organizational ethics – the greater the degree of ethical value congruence within the organization, the more influential the organization's ethical values are in shaping responses of individuals to ethical dilemmas (Liedtka, 1989 in Elango *et al.*, 2010). In the context of a higher education institution, the ethical infrastructure can be perceived as shown in Table 1, where the principle of "from words to actions" aims to avoid the unethical behaviours listed in the table.

Table 1: Elements of ethical infrastructure and unethical behaviours at faculties/universities

Desirable elements of an ethical culture	**The most common unethical behaviours of employees**	**The most common unethical behaviours of students**
○ Mission statement; ○ Honour code for students; ○ Codes of conduct for students, faculty and administrators; ○ Adjudication procedures for violations; ○ Reported ethical violations; ○ Outcomes of ethical violations; ○ Faculty handbook; ○ A statement of non-bias in hiring; ○ A statement of criteria used in faculty promotion; ○ A statement of fairness in admissions; ○ Transparency in budgets and accounting; ○ Ethics in research; ○ Diversity and equity; ○ Academic integrity.	○ Illegal procurement of goods and services; ○ Fraud in admissions, grading, graduation, housing and academic products; ○ Professional misconduct such as favouritism toward family members, sexual exploitation, bias in grading, research plagiarism and abuse of authority; ○ Fraud in the payment of taxes and in the use of university property.	○ Cheating in examinations; ○ Plagiarism; ○ Fraud; ○ Unacceptable assistance.

Source: adapted from Heyneman, 2013; Ishak, Haron & Ismail, 2019.

In light of the above, it is imperative for higher education institutions to create a culture of integrity and ethical values (Priscariu & Shah (2016; Momete, 2019). To achieve this, higher education institutions must ensure the effectiveness of their ethical infrastructure, i.e. congruence between the 'words' (formal policies, programs, initiatives, etc.) and the demonstrated behaviours exhibited at the organizational level and individual member levels ('actions'). The perception of ethics in higher education institutions depends primarily on the behaviours of leaders, academic staff, and students, as opposed to those of administrative staff. The ethics and moral values of higher education institutions are judged based on the behaviours of managers and employees of those institutions, but also based on the behaviours of students as a result of those institutions (Mirshekary & Lawrence, 2009). In this sense, students' unethical behaviour related to their studies, which primarily takes the form of academic cheating – the deliberate attempt to use prohibited data and/or resources in exams (e.g. copying other students' answers) or written work (e.g. plagiarism) submitted for academic credit (Chapman *et al.,* 2004, Hayes & Introna 2005)- has become as a major concern worldwide (Mirshekary & Lawrence, 2009).

Based on the assumption of value congruence, the main goal of this paper is to investigate the interrelationship between formalized ethical policies and initiatives and evidenced ethical behaviours at the organizational level, as well as to further investigate their role in shaping ethical behaviours of academic staff and, subsequently, ethical behaviours of students. To achieve this goal, the research conducted in this paper seeks to provide answers to the following research questions:

- What role does organizational ethics, in the form of formalized policies and initiatives, play in shaping the ethical behaviour of academic staff?
- Does demonstrated ethical behaviour by academic staff mediate the impact of organizational ethics in terms of formalized policies and initiatives on student ethical behaviour?
- Does demonstrated ethical behaviour at the organizational level (leaders, sanctions, etc.) influence the impact of organizational ethics in the form of formalized policies and initiatives on the ethical behaviour of academic staff and students?

The listed research questions are presented in the form of a research model – a moderated mediation model with three testing paths (Figure 1).

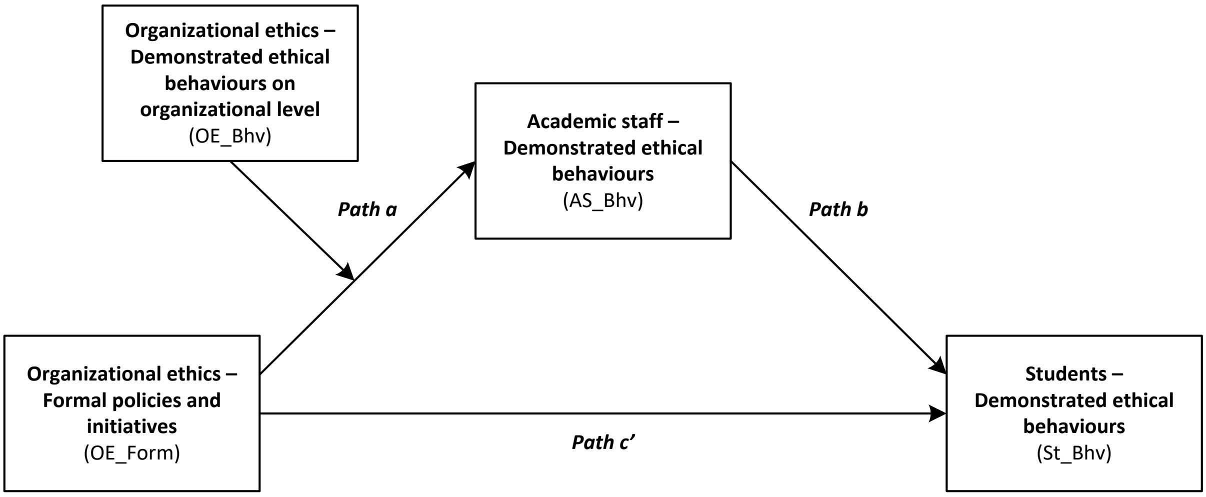

Figure 1: Research model

2. Methodology

In order to answer the above stated main research questions, empirical research was conducted in 2021 at one of the leading universities in Croatia, which consists of 16 faculties and university departments, employs about 2500 academic and non-academic staff and has around 20000 students. Research and contributions of Hunt *et al.* (1989), Treviño *et al.* (1998), Valentine & Fleischman (2004), Weber (2006) and Lau *et al.* (2012) served as a starting point and basis for the development of a specially designed questionnaire. The questionnaire contained six questions about the respondents' background and 28 closed-ended questions on a 5-point Likert scale about the research constructs. Ten items in the questionnaire addressed the construct of formalized organizational ethics, nine items addressed the construct of organizational-level ethical behaviours, six items addressed the construct of academic staff ethical behaviours, and three items addressed student ethical behaviours. The questionnaire was distributed via email to all university employees using Google Forms. After two rounds of email reminders, 115 correctly completed questionnaires were submitted by respondents into the Google Forms database, forming the final research sample (response rate of 4.6%). The collected data was extracted from the Google Forms database and entered into SPSS Statistics 23.0 software, which was used to perform all statistical analyses. In this sense, PROCESS macro v4.0 for SPSS was used to test the moderated mediation model. The main characteristics of the research sample are shown in Table 2.

Female respondents (70.4%) and middle-aged employees (36-55 years; 57.4%) dominate the research sample. More than half of the research sample were academic staff (55.7%), the vast majority of whom are both academic and lecturing (89.0%) on the faculties (86.7%). The lower and middle ranks of academic staff were equally represented in the sample and dominated over the high ranks (80.4% vs. 19.6%). One-third of the research sample were respondents on managerial positions (33.0%).

3. Results

3.1 Ethical policies, initiatives, and behaviours at the university

Organizational ethics at the university under study were investigated from four different perspectives: formalized policies and initiatives, evidenced ethical behaviours at the organizational level (managers, leaders, sanctions, ethical climate, etc.), evidenced ethical behaviours of academic staff, and evidenced ethical behaviours of the university's students (Table 3).

Table 2: Research sample characteristics

Gender		male	29.6%
		female	70.4%
Age (years)		21-25	0.9%
		26-30	12.2%
		31-35	13.9%
		36-45	37.4%
		46-55	20.0%
		56-65	13.0%
		> 65	2.6%
Tenure (years)		< 5	32.2%
		6-10	13.9%
		11-15	24.3%
		16-25	20.9%
		26-35	6.1%
		> 35	2.6%
Job type	*Academic staff* 55.7%	Performing scientific work only	3.5%
		Performing lecturing work only	2.6%
		Performing both scientific and lecturing work	49.6%
	Non-academic staff 44.3%	Administrative work with direct contact with students	18.3%
		Administrative work without direct contact with students	21.7%
		Work on auxiliary and technical jobs	4.3%
Academic staff rank	*At the Faculty* 86.7%	Teaching assistant or junior researcher	23.3%
		Assistant professor	23.3%
		Associate professor	23.3%
		Full professor	3.3%
		Full professor tenure	13.3%
	At the University department 13.3%	Lecturer	1.7%
		Senior lecturer	8.3%
		University (professional) department professor tenure	3.3%
Managerial/ non-managerial position	*Managerial position* 33.0%	Executive board member (University or Faculty)	8.7%
		Director of Institute or Academic department	11.3%
		Director of department, centre or other managerial positions	13.0%
	Non-managerial position		67.0%

Formalized organizational ethics at the university, in the form of adopted documents, policies, and initiatives, is moderate to high (M = 3.45; SD = 0.79). The Code of Ethics is the most common formal document related to ethics (M = 4.34, SD = 1.02), while less formal and less written institutional efforts at the faculty or university departments level to promote ethical norms, values, and behaviours are the least common (M = 2.30, SD = 1.14; M = 2.87, SD = 1.27). The actual ethical behaviours exhibited at the level of the institution or by its leaders are almost at the same level as formalized organizational ethics (M=3.46, SD=0.84). At the university, the sense of an ethical atmosphere is at a high level ($M \geq 3.70$), while, on the other hand, the frequency of reporting and appropriately sanctioning unethical behaviours by employees, especially when these employees are institutional leaders, is at a much lower level ($M < 3.40$), which calls into question the ubiquity of ethical values and culture. As for academic staff, the results suggest that these staff members have high levels of respect and adherence to ethical standards. This is especially true for their interactions with students in teaching and mentoring (M = 3.92, SD = 0.97) and in the conduct of scientific work (M = 4.03, SD = 0.99). On the other hand, academic staff are somewhat reluctant in their efforts to prevent unethical student behaviour (M = 2.47, SD = 1.26). Finally, students lag behind in their ethical behaviours when compared to formalized organizational ethics, demonstrated ethical behaviours at the institutional level, and when compared to the ethical behaviours of academic staff (M = 3.23, SD = 0.71).

Table 3: Ethical policies, initiatives and resulting behaviours at university (N=115; N*=59-65)

	M	Mdn	Mode	SD
Embeddedness of ethical values into vision, mission and strategy	3.76	4.00	5.00	1.12
Existence of a Code of Ethics	4.34	5.00	5.00	1.02
Existence of centres, offices, committees, commissioners, etc. to implement ethics	3.62	4.00	4.00	1.14
Institutional engagement to introduce employees with ethical norms, values and culture of the institution (presentations, announcements,…)	3.30	3.00	4.00	1.18
Opportunities to participate in content related to ethics and ethical behaviours (lectures, seminars, …) within the institutional setting	2.30	2.00	1.00	1.14
Commitment of the management level to introduce and maintain ethical norms, values and culture	3.42	3.00	3.00	1.23
Management's attitude of zero-tolerance for unethical behaviour	3.55	4.00	5.00	1.33
Rewarding employees who demonstrate integrity and honour in their behaviour and in the performance of their daily duties	2.87	3.00	3.00	1.27
No favouritism shown to individuals by the Executive board	3.09	3.00	3.00	1.33
Standalone courses in study programmes that address ethics	3.27	3.00	3.00	1.41
Organizational ethics – formalized policies and initiatives	**3.45**	**3.50**	**4.20**	**0.79**
Familiarity of employees with ethical norms, values, and culture	3.57	4.00	4	1.04
To be successful in an institution, one does not have to abandon one's personal ethical values and principles	3.82	4.00	5.00	1.24
Not witnessing ethically questionable behaviours by colleagues	3.70	4.00	5	1.29
Frequency of reporting and appropriate sanctioning of unethical behaviours by employees	2.42	2.00	1	1.40
Leaders avoid engaging in unethical behaviours	3.85	4.00	5.00	1.19
Sanctioning managers who have engaged in unethical behaviours for personal gain	3.33	3.00	3.00	1.28
Sanctioning managers who have engaged in unethical behaviours for the benefit of the organization	3.25	3.00	3.00	1.26
Severity of sanctioning employees for unethical behaviours	3.32	3.00	3.00	1.17
Perception of employees who adhere to formalized organizational ethics	3.89	4.00	4.00	1.02
Organizational ethics – demonstrated behaviours at the organizational level	**3.46**	**3.44**	**3.89**	**0.84**
Lectures on ethics and topics related to ethical behaviours in courses offered	3.34	4.00	5.00	1.55
The commitment of academic staff in emphasizing and developing ethical values among students	3.70	4.00	4.00	1.02
The level of adherence to ethical standards by academic staff in their interactions with students	3.92	4.00	4.00	0.97
The degree to which academic staff adhere to ethical standards in conducting scientific researches and publishing scientific output	4.03	4.00	5.00	0.99
The commitment of academic staff to preventing students from cheating on examinations and student papers	2.47	2.00	1.00	1.26
The conduct of the academic staff when they 'catch' students cheating	3.17	3.00	3.00	1.30
Academic staff – demonstrated ethical behaviours*	**3.43**	**3.50**	**3.50**	**0.61**
Not witnessing ethically questionable student behaviours	3.33	3.00	3.00	1.12
Frequency of reporting and appropriate sanctioning of unethical student conduct	2.70	3.00	3.00	1.30
Student behaviour is consistent with formalized organizational ethics (codes, procedures, acts, guidelines, …)	3.65	4.00	4.00	0.80
Students – demonstrated ethical behaviours	**3.23**	**3.33**	**3.00**	**0.71**
Organizational ethics at university*	**3.43**	**3.46**	**1.89**	**0.69**

3.2 Research model testing

The proposed research model was tested as a single moderated mediation model containing three paths *a*, *b* and *c'* – (Hayes, 2013). The full moderated mediation model consists of two sub-models. Model 1 implies the regression of demonstrated ethical behaviours of academic staff on formalized organizational ethics, demonstrated ethical behaviour at the organizational level, and the interaction term (path *a*). Model 2 means that student ethical behaviour is simultaneously regressed on the formalized organizational ethics and the demonstrated ethical behaviour of the academic staff (path c' and b). The PROCESS Procedure conducted for SPSS version 4.0 (Model 7) produced results for both sub-models and the full moderated mediation model

(Figure 2, Appendix 1). The basic assumption before testing the moderated mediation model is that all predictors included in the model are correlated with each other. The results from Table 4 support this assumption.

Table 4: Correlation results among research constructs

Pearson correlation, N=56-115	1	2	3	4
Organizational ethics – formalized policies and initiatives	-			
Organizational ethics – demonstrated behaviours at org. level	0.819**	-		
Academic staff – demonstrated ethical behaviours	0.575**	0.635**	-	
Students – demonstrated ethical behaviours	4.443**	0.443**	0.591**	-

* $p < 0.05$; ** $p < 0.01$

Model 1 showed a good fit and accounted for a significant proportion of the variance in the demonstrated ethical behaviour of academic staff, $R^2 = .49$, $F(3, 52) = 16.70$, $p < 0.001$, while Model 2 exhibited a good fit and accounted for a significant proportion of the variance in the demonstrated ethical behaviour of students, $R^2 = .50$, $F(2, 53) = 26.32$, $p < .001$. Demonstrated ethical behaviour at the organizational level was found to moderate the impact of formalized organizational ethics on the ethical behaviour of academic staff ($\beta = 0.25$, $p = 0.003$). Simple slope tests indicate that higher levels of demonstrated ethical behaviour among academic staff (+1 *SD*) are expected when higher level of formalized organizational ethics and higher levels of demonstrated organizational-level ethical behaviour are present in the institution (Figure 3). In this sense, the moderating effects of demonstrated ethical behaviours at the organizational level are much stronger when the institution moves toward a higher level of formalized organizational ethics– *'the fan effect'* ($\beta = 0.45$, $p = 0.009$). These effects are not present when the level of formalized organizational ethics and demonstrated ethical behaviours at the organizational level is low ($\beta = 0.16$, $p = 0.91$). Higher levels of demonstrated ethical behaviour among academic staff are associated with higher levels of demonstrated ethical behaviour among students ($\beta = 0.63$, $p = 0.001$). The index of moderated mediation supports the full moderated mediation model (*IMM* = 0.16, 95% CI = 0.05, 0.31), with non-zero values within CIs indicating a significant moderating effect of demonstrated ethical behaviours at the organizational level on formalized organizational ethics on the indirect effects via demonstrated ethical behaviours of academic staff (Hayes, 2015). The conditional indirect effects of formalized organizational ethics on student ethical behaviours are present when demonstrated organizational-level ethical behaviours are high (95% CI = 0.08, 0.56).

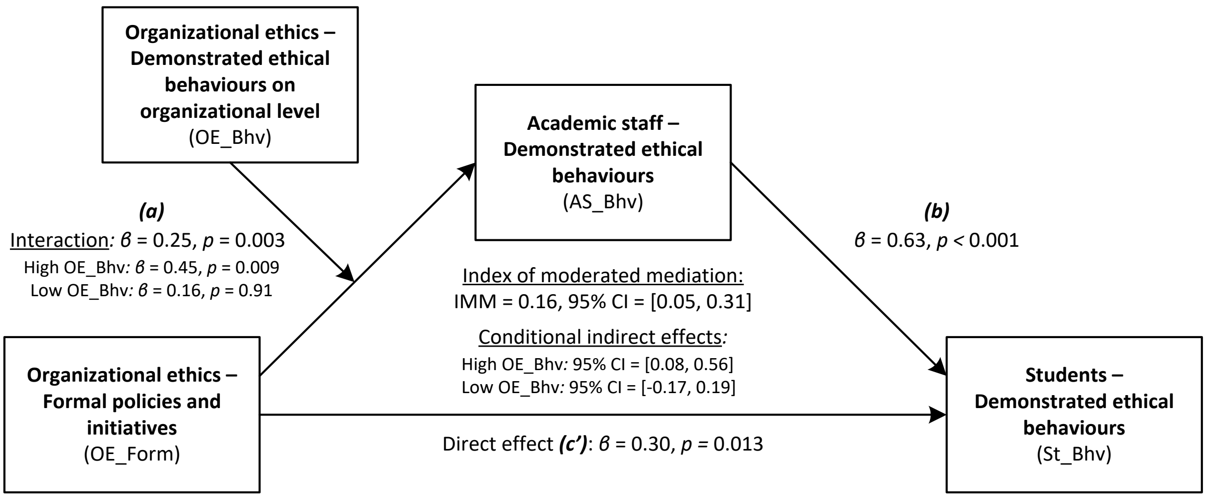

Figure 2: Testing results for the moderated mediation model (research model)

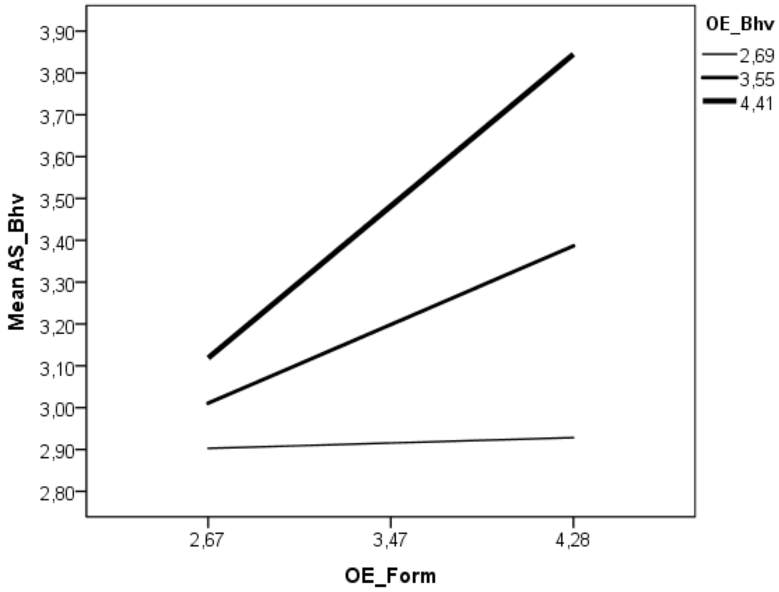

Figure 3: Simple slopes computations and verification for moderation effect in the research model

4. Conclusion

The research conducted in this paper provided answers to the research questions posed. The obtained results suggest that the effectiveness of standalone formalized ethical policies and initiatives in higher education institutions is questionable in shaping the ethical behaviours of academic staff. However, when these policies and initiatives are combined with actual demonstrated moderate and especially high levels of ethical behaviour at the organizational level, i.e. high integrity, honesty, and general ethical behaviour by academic leaders, supported by sanctions and reward policies and programs, they have a positive impact on the demonstrated ethical behaviour of academic staff. Both formalized organizational ethics and demonstrated ethical behaviour of academic staff have positive effects on demonstrated ethical behaviour of students, and the effects of demonstrated ethical behaviour of academic staff on demonstrated ethical behaviour of students are much stronger than the same effects of formalized organizational ethics. Moreover, the demonstrated ethical behaviour of academic staff plays an important mediating role in the effects of formalized ethical policies and initiatives on student ethical behaviours. As with the effects of formalized organizational ethics on the demonstrated ethical behaviour of academic staff, demonstrated high ethical behaviour at the organizational level contributes positively to the indirect effects of formalized organizational ethics on the demonstrated ethical behaviour of students.

The main findings and conclusions just presented support the viewpoint of the relevant literature on the critical importance of leadership as the 'tone at the top' that shapes the direction and ethical culture of an organization (Elliot, Marquis & Neal, 2013; Rothman, 2017; Ishak, Haron & Ismail, 2019). In this sense, demonstrated ethical behaviour at the organizational level in the form of academic leaders' behaviours, ethical (mis)conduct, and decisions about sanctioning unethical or rewarding integrity and ethical behaviour of individuals informs the overall research model. Given the assumption that the ethical climate in a higher education institution refers to the perception of its members (university leaders, faculty, administrative staff and students) about the rights and wrongs within a particular university, unethical behaviour that is not sanctioned by strong measures creates poor role models for university members and determines bad behaviour that becomes a part of the organizational culture (Hanson, 2009; Rothman, 2017 in Momete, 2019). Furthermore, the findings of this research emphasize that academic staff often act as 'silent heroes' for ethical behaviour, fairness, and impartiality in their interactions with all students at the university, even in circumstances sometimes unfavourable to ethics (Heyneman, 2011). As Lau *et al.* (2012) show, the ethical behaviour of the faculty is critical in shaping the ethical behaviour of today's university students and tomorrow's experts, professionals, industry leaders, politicians, and so on. The research findings presented, which emphasize the importance of the actual ethical behaviour exhibited at the higher education institution ('actions') in fostering an ethical climate and shaping the resulting ethical behaviour of students as compared to formalized organizational ethics ('words'), provide additional support for the similar claims made in the relevant literature. The perception of an organization's ethical actions may have a greater impact than an organization's words regarding ethics, which increases the importance of researching organizations' ethical actions and perceptions of those actions (Credo, Ianuzzi, & Armenakis, 2010). In this sense, research on the perceptions of the ethical actions of higher education institutions (organizations) is another contribution of the paper. Finally, the research presented in this paper contributes to the relevant literature by advancing the understanding of ethics through the simultaneous study of individual and organizational ethics and their combined impact on students' ethical behaviours, all in the context of a higher education institution in a transnational economy (Elango *et al*., 2010; McLeod, Payne & Evert, 2016).

The limitations of the research conducted are primarily reflected in a small research sample and only one university as a research polygon, although it consists of 16 legally autonomous higher education institutions (faculties, university departments). Another limitation of the research is the research methodology used in the study of ethics in higher education institutions, which is quantitative in nature – a questionnaire compared to an in-depth interview (Rothman, 2017). A possible limitation of the research presented could also be the common method variance, as the data on both the independent and dependent variables in the research model were collected from the same respondents at a specific point in time. The respondents, employees of a university, assessed their institutional ethical environment, the ethical behaviour of their colleagues and peers, and the ethical behaviour of students. Expanding the research sample to include students as respondents and their contributions to the constructs in the research model would add validity to the research presented and could minimize the potential issue of common method variance.

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Appendix 1: Results for the moderated mediation model (PROCESS Procedure for SPSS Version 4.0)

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 7
    Y  : St_Bhv
    X  : OE_Form
    M  : AS_Bhv
    W  : OE_Bhv

Sample
Size:  56

**************************************************************************
OUTCOME VARIABLE:
 AS_Bhv

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,7004      ,4906      ,1940    16,6950     3,0000    52,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,1986      ,0747    42,8175      ,0000     3,0487     3,3485
OE_Form       ,2335      ,1373     1,7006      ,0950     -,0420      ,5090
OE_Bhv        ,3287      ,1254     2,6211      ,0115      ,0771      ,5804
Int_1         ,2527      ,0809     3,1228      ,0029      ,0903      ,4151

Product terms key:
 Int_1    :        OE_Form  x        OE_Bhv

Test(s) of the highest order of unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0955     9,7522     1,0000    52,0000      ,0029
----------
    Focal predict: OE_Form  (X)
          Mod var: OE_Bhv   (W)

Conditional effects of the focal predictor ~~at~~ on values of the moderator(s):

     OE_Bhv     Effect         se          t          p       LLCI       ULCI
     -,8612      ,0159      ,1401      ,1132      ,9103     -,2653      ,2970
      ,0000      ,2335      ,1373     1,7006      ,0950     -,0420      ,5090
      ,8612      ,4511      ,1667     2,7063      ,0092      ,1166      ,7856

**************************************************************************
OUTCOME VARIABLE:
 St_Bhv

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,7059      ,4983      ,3185    26,3172     2,0000    53,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant      ,9634      ,5237     1,8396      ,0714     -,0870     2,0139
OE_Form       ,2990      ,1156     2,5870      ,0125      ,0672      ,5309
AS_Bhv        ,6289      ,1551     4,0560      ,0002      ,3179      ,9399

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
```

```
     Effect         se          t          p       LLCI       ULCI
      ,2990      ,1156     2,5870      ,0125      ,0672      ,5309

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 OE_Form     ->    AS_Bhv      ->    St_Bhv

     OE_Bhv     Effect     BootSE   BootLLCI   BootULCI
     -,8612      ,0100      ,0859     -,1653      ,1898
      ,0000      ,1468      ,0910     -,0049      ,3514
      ,8612      ,2837      ,1265      ,0773      ,5635

      Index of moderated mediation:
            Index     BootSE   BootLLCI   BootULCI
OE_Bhv      ,1589      ,0677      ,0483      ,3108

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output: 95,0000
Number of bootstrap samples for percentile bootstrap confidence intervals: 5000
W values in conditional tables are the mean and +/- SD from the mean.
NOTE: The following variables were mean centered prior to analysis: OE_Bhv   OE_Form

------ END MATRIX -----
```

Technology Transfer Model to Enhance Sustainable Competitiveness of SMEs

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Abstract: Thailand is implementing the Thailand 4.0 policy that aims to bring technology and innovation to build sustainable competitiveness for the private sector. However, in the context of SMEs, the ability to transfer technology from universities is still a limitation. The objective of this research is to identify the technology assistance needs of SMEs, as well as, to study the key factors that make the technology transfer successful in the context of collaboration between universities, government agencies and SMEs. The sample group of this research is 226 SME entrepreneurs participating in the Boost up New Entrepreneurs with Technology and Innovation Program carried out by The Office of SMEs Promotion and Thammasat University between 2019-2020. The research results indicated that to create sustainable competitiveness, SMEs need technology assistance in 4 areas: (1) enhancing digital marketing capabilities, (2) developing product innovations, (3) raising product standards, and (4) improving production efficiency. In addition, this research also indicated that the technology transfer success factors for SMEs has 3 key elements: (1) a technology transferor who stands out for collaboration between researchers and business consultants, (2)atechnology transferee who has key characteristics of entrepreneur orientation and absorptive capacity of SMEs, and (3)the technology characteristics which can be connected to the original business processes of the organization which is a technology that gives SMEs' products uniqueness that is difficult for competitors in the market to copy.

Keyword: Technology assistance needs, Technology transfer, SMEs, Sustainable competitiveness

1. Introduction

Developing innovations in a developing country has a much lower success rate than in a developed country. Therefore, policymakers emphasize the role of universities in transferring technology to the private sector to drive innovation in businesses (Secundo, De Beer and Passiante, 2016). Universities are not only expected to be a source of educated professionals, but also are expected to be the main engine in the transition of scientific and business administration knowledge to the country's economic and social development (Secundo, Del Vecchio and Passiante, 2015; Chais, Ganzer and Olea, 2018). Technology transfer is an important tool for innovation development (Ismail, Hamzah and Bebenroth, 2018) linked to performance improvement and sustainable competitiveness of business (Shahzad, Xiu and Shahbaz, 2017; Omar, et al., 2017). The concept of university – industry technology transfer arises from the fact that the production sector needs new technology, as well as the fact that universities develop scientific knowledge or advanced technology and require commercialization (Chais, Ganzer and Olea, 2018). Technology transfer needs integration among a number of stakeholders, namely the academic researcher, the technology transfer office, and the entrepreneur. The success rate of technology transfer has not been very high, even in the USA, which is a developed country and a leading country of advanced technology, only 50% of technology transfer offices can make a profit (Oliveira, Teixeira and Martins, 2010). Several factors have created gaps in collaboration among universities as technology transferors and the private sector as technology transferees. This research has identified several weaknesses of universities, such as the lack of entrepreneurial attitude (Chais, Ganzer and Olea, 2018; Ismail, Hamzah and Bebenroth, 2018) and the lack of skills in the understanding of the firms' needs (Anderson, Daim and Lavoie, 2007), etc.

Innovation has become essential in the business world. It helps increase the competitiveness of the business organization. In particular, Small and Medium Enterprises (SMEs) are under high pressure from the rapid changes in technology and marketing (Chung and Tan, 2017). However, most SMEs are limited in technology and resources. Therefore, SMEs need to take advantage of the open innovation ecosystem to develop innovation. In other words, SME - university collaboration helps SMEs to plan to invest in only the necessary core competencies and receive technology transfers from universities instead of large-budget in-house R&D (Radziwon and Bogers, 2019). Building sustainable competitiveness for SMEs is not only in applying technology to develop product innovation, but also in other areas of business process development, like marketing capability (Madhoushi and Mehdivand, 2011) and an organization database (Buenechea-Elberdin, Saenz and Kianto, 2018).

For Thailand, the Office of SMEs Promotion (OSMEP) is a government agency that sets out policies to promote SMEs and is the centre for connecting public and private networks to drive the development of SMEs towards strength and sustainability. The OSMEP Annual report 2020 states that the GDP value of Thailand was 15.7 trillion baht, of this, SMEs account for 5.38 trillion baht or 34.27% (OSMEP, 2020). It can be seen that SMEs play a very important role in Thailand's economic expansion. Therefore, the Thai government has a policy to support the creation of technology transfer from universities to enhance the competitiveness of SMEs, which have many limitations with both the basic technology of the organization and the limited resources. However, SMEs in Thailand have a variety of development levels. Therefore, the need for technological assistance to create sustainability for the organization also varies. The readiness for technology transfer is also different.

Research question 1: SMEs in the context of developing countries like Thailand, for what purposes do SMEs need technology assistance?

Research question 2: What are the key factors that make the technology transfer successful?

2. Literature Review

Technology transfer is the process of transferring technology from one source to another group of people or agencies (Distanont, Khongmalai and Kritpipat, 2018). It may be in the form of scientific knowledge, processes, or newly developed tools, with the aim of enabling technology to be delivered to a broader audience (Davenport, 2013). Technology recipient organizations have access to technical information from their own organizations and can learn and absorb to develop new manufacturing processes or new products (Ismail, Hamzah and Bebenroth, 2018). In the past, technology transfer was the process of transferring cutting-edge technologies from developed countries to local economic development to achieve product innovation and process innovation. This improved the quality of life of people in society (Shane, 2004). Nowadays, technology transfer can take place in many contexts, both the technology transfer from the parent company to the subsidiary and changes in corporate work processes caused by mergers and acquisitions or in joint venture firms (Ismail, Hamzah and Bebenroth, 2018). Technology transfers among universities and technology transfer from university to business is also known as University - Industry Technology Transfer (Osabutey and Jin, 2016). The goal of university - industry technology transfer is not only an aim to maximize profits from commercialization, but also the contribution of universities to developing communities and societies by transferring applied research (Velasquez, 2010) or medium-low-technology. There are many factors affecting the efficiency of university – industry technology transfer such as qualified faculty and researcher involvement (Chais, Ganzer and Olea, 2018).

Based on technology transfer theory, a technology transfer model consists of three main components: technology characteristics, technology transferor, and technology transferee (Distanont, Khongmalai and Kritpipat, 2018). Technology characteristics affect the success of technology transfer. Technology characteristics include: transferability is the degree of complexity or simplicity of the technology that affects the difficulty of the transfer; aggregate capacity is the difficulty with which the technology transferee can implement the existing technology; and appropriability is the suitability of technology for its application and benefit (Ismail, Hamzah and Bebenroth, 2018) such as the development of new products and new process development.

A technology transferor is a technology owner or a person representing an organization (Young and Lan, 1997). A technology transferor is an individual or group with knowledge and skills covering the value chain of technology commercialization, including technology specialist and scientist, patent agent, and patent analyst consultant (Ismail, Hamzah and Bebenroth, 2018). Transferor characteristics affect technology transfer efficiency, management skills, technical skills, and communication skills (Wang, et al., 2003). The technology transferor's ability to develop relationships affects technology transfer efficiency. If the technology transferor can build a good relationship with the technology transferee, the more successful the transfer will be (Distanont, Khongmalai and Kritpipat, 2018; Choi and Johanson, 2012). The technology transferor's intention is a factor in supporting efforts to collect and transform knowledge to be more easily communicated (Minbaeva, et. al., 2018). The technology transferor transfers knowledge and technology through both formal and informal processes such as training, workshops, on the job training, or on-the-job interactions (Ismail, Hamzah and Bebenroth, 2018).

Technology transfer is mainly related to scientific knowledge, method, and physical tools. A place for technology transfer must be a particular facility with equipment such as university laboratories or public or private research agencies (Ismail, Hamzah and Bebenroth, 2018).

The technology transferee plays a role in supporting successful technology transfer (Ismail, Hamzah and Bebenroth, 2018). It can be measured by the technology transferee's ability to learn and understand technology until it can be distributed to the people involved, as well as being able to create commercial benefits. The technology transferee has several important elements. The first one is the absorptive capacity which is a company's ability to identify, assimilate, and exploit knowledge from the external sources (Cohen and Levinthal, 1990). The absorptive capacity enables technology transferees to recognize the value of external data, able to screen suitable knowledge and technology to apply, and create commercial benefits for the organization. Organizations will be able to apply knowledge from outside to benefit business greatly if they have a strong knowledge base and a mechanism to implement and continually expand. Absorptive capacity is a strategic resource necessary to build the ability to create added value and enhance the competitiveness of the organization (Xiea, Zoub and Qic, 2018), especially in the age of rapid technological change. An organization's ability to keep up with these changes depends on its ability to absorb and use knowledge effectively (Alexiou, Khanagha and Schippers, 2018). The technology transferee's intention is also a factor to make technology transfer more efficient (Distanont, Khongmalai and Kritpipat, 2018). Intention is based on motivational factors, for example, the motivation to advance in the job will drive the employees in the technology transfer organization to be willing and open to new technologies, as well as to seek additional knowledge to be able to use technology for maximum benefits for the organization. Even though the organization is full of highly skilled employees if there is no motivation to use the skills of employees, it will be limited (Minbaeva, et al., 2003; Xu and Ma, 2008). In the context of SMEs participating in technology transfer projects from the government, intention is equally important - both the intention to receive new technologies that are difficult to imitate and the intention of bringing the technology to commercialization. The qualifications of the technology transferee are generally based on existing knowledge from past experience (Winkelbach and Walter, 2015), as well as technology-related skills to be transferred (Minbaeva, et al., 2003). In the context of SMEs, key qualifications include existing production resources and investments for new technologies. The university – industry technology transfer process requires commitment from each party by providing priorities and investment plans (Chais, Ganzer and Olea, 2018).

3. Research Methodology

The research process had three phases:
Phase I: In this phase, the literature review was executed in order to understand the overall technology transfer and technology assistance to create sustainable competitiveness in the context of SMEs.

Phase II: This phase was the empirical study. The data were collected through in-depth interview to understand the context studied in depth, by observation and company visit to analyze the pain point of the business in depth, and by focus group discussion to capture lessons learned and to study the success factors of technology transfer. The sample group for this research consisted of 226 SMEs participating in the Boost up New Entrepreneurs project with technology and innovation operated by the Office of SMEs Promotion and Thammasat University from 2019-2020. The SMEs were in the food, health, and beauty business sectors. The largest number of SMEs in the project came from food and beverages with 94 enterprises or 41.59%, followed by cosmetic products with 84 enterprises accounting for 37.17%, and dietary supplement products with 48 enterprises accounting for 21.24%, respectively. The sample group was selected carefully on three criteria: 1) the early-stage enterprises (business age not more than 3 years), 2) adopting technology and innovation to enhance the business, and 3) doing business in the food, health and beauty industry sector.

Phase III: The final phase was to combine the intensive theoretical reviews and findings from the empirical analyses to illustrate the innovative methods in the study and to provide insight into how it enhanced the effectiveness of the case study. Data collected in this research was systematically coded and analyzed using the NVivo program. NVivo is a qualitative data analysis computer software package which helps with classifying, sorting, and arranging data. In this research, this analysis was useful to extract meanings and insights based on the data collected from the interviews and focus groups.

In order to ensure the reliability and validity of the research, the data were collected by using: 1) in-depth interview, a method that can really explain the context of the study, 2) observation and company visit, and 3) focus group discussions. In order to increase reliability, this research used the same set of interviews throughout the research, as well as the same method to record the interview, transcribe the words from sound, and store data in a systematic way. In addition, the informants were also asked to review and comment on research papers while the data were being analyzed. Moreover, the researcher checked the validity of the findings by using appropriate methods. In this research, triangulation was used to find information from a variety of sources (Khongmalai and Distanont, 2018). The informants were chosen from various positions in order to be able to obtain information and opinions from various perspectives. Moreover, the research report was sent to the informants for further review and comments.

4. Results and Discussion

4.1 Pain Point Analysis

Amid the rapid changes in technology, whether bio-technology and digital technology, Thai SMEs still face challenges in adopting modern technology to enhance their business competitiveness. OSMEP Annual Report 2020 points out that Thai SMEs still have limitations in many areas such as lack of product differentiation, lack of modern knowledge, lack of accessibility to innovative technologies, lack of partners and networks, etc. (OSMEP, 2020). OSMEP therefore operates the SME Boost up project, which integrates cooperation with Thammasat University from 2019-2020, in the development of SME entrepreneurs registered for juristic persons of not more than 5 years to be able to connect research, technology, and innovation from both government and private agencies to enhance their potential by focusing on adding value from agricultural and herbal products to become food, health, and beauty products (OSMEP, 2020).

SMEs participating in the project were consulted by the researcher and business consultant team in order to analyze the pain point of the business and receive appropriate technology transfer to solve problems and enhance their competitiveness in various fields of food, health, and beauty products. The researcher and business consultant team interviewed and visited the business of 226 SMEs. It was found that most of the SMEs in the business process had 4 processes: designing the business model, new product development, production, and sales and marketing. According to the results of the analysis, it was found that SMEs have a pain point in 2 main dimensions, namely product and production. In the product dimension, there are 3 problems: (1) SMEs with existing products with good quality and standards but with insufficient sales due to their inability to adapt to e-commerce and lack of digital marketing skills. (2) SMEs with herbal raw materials or local wisdom but who do not know how to use technology to add value to raw materials or how to create innovative products; and (3) SMEs who already have products but do not know the nutritional value and various properties or do not have product standards making it impossible to set a high selling price or expand the market. For production dimension, it was found that the problem (4) is that SMEs want to increase production capacity and expand factories but are still lacking the knowledge of factory standards as shown in detail in Figure 1.

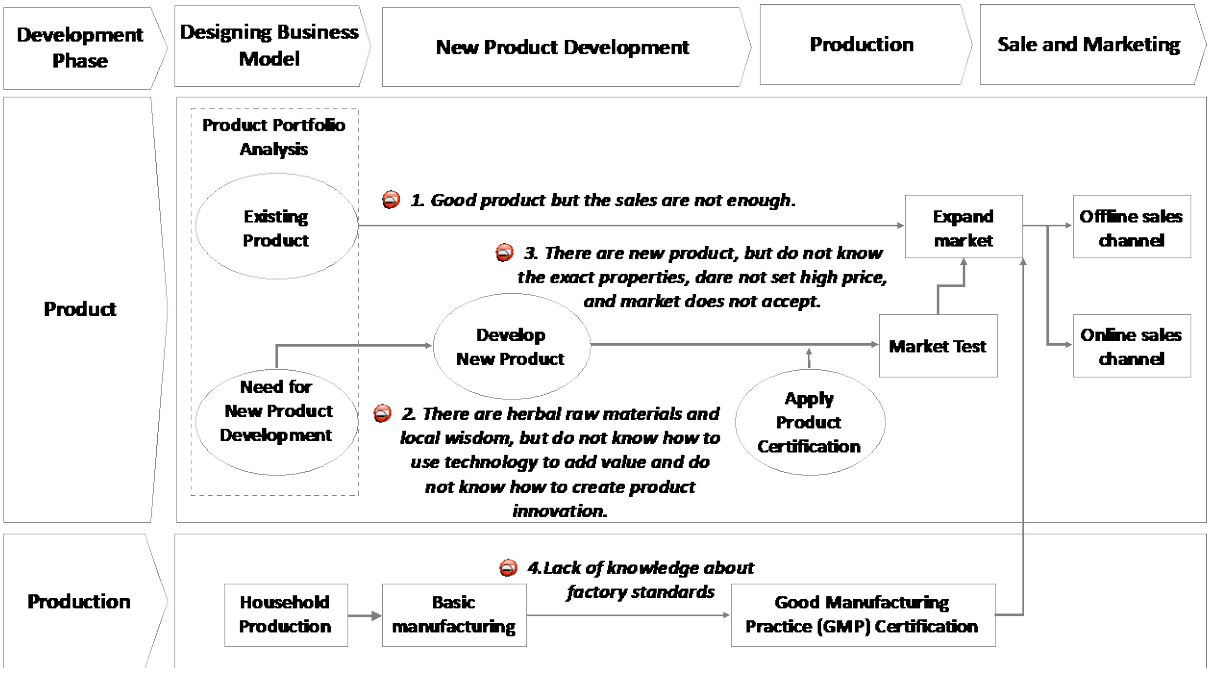

Figure 1: Business Process and Pain Point of SMEs

According to the pain point of SMEs above, the researcher and business consultant team from Thammasat University analyzed and selected suitable technology to solve problems for SMEs. The use of technology can be classified into 4 aspects: the first one was New Product Development with 82 entrepreneurs (36.28%), followed by Standards for Food and Health Product Applications with 80 entrepreneurs (35.40%), Digital Marketing with 47 entrepreneurs (20.80%), and Improving Production Efficiency with 17 entrepreneurs (7.52%).

Table 1: Objectives in applying technology to solve problems and upgrade SMEs

Aspect	No. of entrepreneurs	%
- New Product Development	82	36.28%
- Standards for Food and Health Product Applications	80	35.40%
- Digital Marketing	47	20.80%
- Improving Production Efficiency	17	7.52%
Total	226	100.00%

4.2 Technology Transfer Success Factors

The technology transferor team transferred technology to entrepreneurs which took approximately 6-8 months per case. Business owners and key personnel were involved in the technology transfer process throughout the project period. After the project ended, it was found that the entrepreneurs who received the technology transfer were able to adapt to the competition that led to various economic activities including investment in improving the factory to meet the standards, capacity increase, and an increase in sales totaling 376.58 million baht, which is 12 times the project target value. It is considered one of the most successful technology transfer projects in the government sector.

In this research, the lessons learned from the focus group, exchange of stakeholders' views, and content validation through the triangulation approach from 50 stakeholders were classified into 2 groups: 1) 27 technology transferees consisting of 9 entrepreneurs from the group of food and beverages, 9 entrepreneurs from the group of cosmetic, and 9 entrepreneurs from the group of food supplement product; and 2) 9 technology transferors consisting of 9 researchers, 9 business consultants, and 5 OSMEP personnel as policy units and funders. The results of the research can be concluded that there are 3 factors for success of University – SME technology transfer:

1. **Technology transferor:** This technology transfer project employed a diverse skilled technology transferor team, both researchers who own or specialize in the technology, and business consultants from both universities and the private sector with perspectives on product planning and marketing. In the business model and pain point analysis of entrepreneurs, the business consultants played a significant role in providing advice to select technologies that are in line with the organization's product

strategy, can increase marketing potential, and optimize production processes. The researchers have the skills to listen to the technical requirements of the entrepreneurs in detail, explain complex technologies in a way that is easy to understand, and follow up on technology implementations continuously.

2. **Technology transferee:** There were 226 entrepreneurs who were selected to join the project out of 450 applicants. They are entrepreneurs in the system of the Office of SMEs Promotion (OSMEP), registered for not more than 3 years and want to use technology to enhance competitiveness. Therefore, entrepreneurs have entrepreneur orientation and are ready to expand their investments based on their existing production resources and accept the risks that may arise from investing in new products or processes. They also have a good absorptive capacity with an attitude of accepting new technologies and are able to apply new technology to business.
3. **Technology characteristics:** Most of the entrepreneurs consider the transferred technology was appropriate, can be connected to the original business processes of the organization (transferability), is a technology that allows SMEs' products to have a uniqueness that is difficult for competitors in the market to copy and helps new products from entrepreneurs to compete in the market.

5. Conclusion and Recommendation

In this research, most of the SMEs were micro-enterprise entrepreneurs (with earnings not more than 1.8 million baht per year) and small enterprises (with earnings not more than 100 million baht in the manufacturing sector and income not more than 50 million baht in the service and trading sector), which has limitations in terms of resources and technology. Therefore, technology transfer requires a technology transferor team consisting of researchers and business consultants with close and step-by-step coaching skills. This is consistent with the study of Ismail, Hamzah and Bebenroth (2018) which stated that the efficiency of technology transfer depends not only on a technology specialist and scientist, a patent agent, a patent analyst consultant, but on business perspectives such as business case development, business plan development and marketing plan development

In the Thai context, there are many SMEs promotion projects. However, for projects that aim to use technology to enhance competitiveness, it is essential to select entrepreneurs who are really ready to accept technology transfers, both with absorptive capacity and readiness to invest in new product developments to the market and to raise production standards.

This study is qualitative research that highlights the need for technology assistance in various dimensions of SMEs and the key elements of university – SME technology transfer. In the future, there should be quantitative research to study empirical research on the impact of factors affecting the efficiency of university – SME technology transfer.

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Why does Talent Leave Organizations? Talent Retention of Trainee Program Graduates

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Abstract: Organizations fight for talent, and talent management has become an integral part of human resource management. Trainee programs are a part of talent management, which allows organizations to attract primarily university graduates with high potential. Trainee programs are highly selective and require high investment. However, much of the talent successfully finishing trainee programs (i.e. trainee program graduates) leave the organization before they can return the investment to the organization. The literature on talent management is centered around the process of attraction and development of talent but stays silent about talent retention. Thus, this research identifies and explores the reasons why trainee program graduates leave organizations. The study draws on a qualitative case study of the largest car producer in the Czech Republic with an established and highly developed trainee program. Data comprises of four sources: First, the interviews with the trainee program graduates, both who remained or left the organization after finishing the trainee program. Second, extensive internal talent management documentation related to the trainee program. Third, the consultations with human resource management specialists. Fourth, field notes from employee's non-participant observation. Grounded theory analysis was used to analyze the data. The findings reveal three overarching factors that determine the turnover of trainee program graduates: the sense of uniqueness, instantaneity, and privilege. These factors represent expectations that are set by the organization but are not achieved by the trainee program graduates. These factors uncover the underlying paradoxical nature of trainee programs, which is highlighted by two trainee program paradoxes: focus paradox and prestige paradox. The research has several theoretical contributions. In the first place, the findings expand talent management literature by identifying critical issues that may lead to talent drainage instead of talent retention. This research also contributes to generational cohort theory. Practical implications provide suggestions on how to integrate trainee programs into human resource management practices to achieve expected and desired benefits of talent management for organizations.

Keywords: trainee program, talent management, expectation management, talent retention, trainee program paradox

1. Introduction

One of the recent important organizational challenges is attracting and retaining young talent with a potential for high development (Cesário and Chambel, 2017; Gallardo-Gallardo, Thunnissen and Scullion, 2020). The competition for talent is so intensive that the situation has been labelled as a "war for talent" (Beechler and Woodward, 2009; Kwon and Jang, 2022). The predictions even suggest that artificial intelligence recruiting tools and other modern developments will intensify the competition for human capital, and the war for talent will become a permanent state (Black and van Esch, 2021). Organizations use various practices through which they manage talent from predictions of their need through their attraction and selection to the development and career management of the talent (Cappelli, 2008; Cappelli and Keller, 2014). Effective talent management improves organizational financial performance, increases employee engagement, and results in better organizational overall performance (Bethke-Langenegger, Mahler and Staffelbach, 2011). As a result, talent management has become an integral part of human resource management.

However, the organizations are often unable to retain their talent, and thus they lose both their financial investments and valuable human capital. The literature on talent management is centred around the process of attraction and development of talent, but much less is known about talent retention. The factors of talent retention do not go beyond general constructs, such as employee engagement or job satisfaction (Fletcher, Alfes and Robinson, 2018; Presbitero, Roxas and Chadee, 2016). In addition, with Generation Y and Z, the problems of retaining talent have become more apparent, as younger generations are more likely to leave their employers even if they are satisfied (Deloitte, 2020). Thus, the retention of younger talent will be a crucial challenge for organizations.

Therefore, this study explores the factors of young talent retention. Particularly, this research poses the question of *why trainee program graduates leave organizations*. The trainee programs were chosen for three reasons.

First, trainee programs are particularly focused on young talent. Second, trainee programs are distinctive organizational practices that can be distinguished from other organizational practices, while other talent management practices may overlap with other strategic HR practices. And third, trainee programs are a global phenomenon (Cesário and Chambel, 2017; Tákacs, Gjorevska and Meretei, 2018; Vaiginiene, et al., 2018). The study draws on a qualitative case study of the largest car producer in the Czech Republic. The organization has a long-established, prestigious, and highly developed trainee program, which, however, also suffers from low retention rates. A unique set of data comprise interviews with the trainee program graduates and HR specialists, internal documentation and non-participant observation.

2. Literature review and the research framework

Trainee programs emerged as an innovative talent management practice in the 1980s (Windolf, 1986), and currently, trainee programs have become a prominent organizational practice. Trainee programs are intensive learning and developmental programs, which are aimed primarily at university graduates with high developmental potential (Breaugh, 2013; Cesário and Chambel, 2017). Trainee programs are prevalent not only in multi-national corporations and large companies but have become a new norm for mid-size and even smaller organizations in most parts of the world (Tákacs, Gjorevska and Meretei, 2018; Vaiginiene, et al., 2018). Despite the prevalence of trainee programs in organizational practices, they are surprisingly neglected in academic management literature.

So far, we found only a handful of management studies dealing with trainee programs. Cesário and Chambel (2017) tested whether graduates recruited through a trainee programme have higher affective commitment and lower intention to leave than graduates not recruited through a trainee programme. To their surprise, they did not find significant differences between the two groups, but they indicate that there is a possible effect of perceived HRM practices, which are often distinctive in trainee programs. Jonsson and Thorgren (2017) showed that well-designed trainee programs may lead to the psychological contract reciprocity during and after the program, but the factors accounting for the reciprocity vary. Latukha (2011) studied the differences in reasons for intentions to leave of graduate program trainees in Western European and Russian companies. She found a great difference between Russian and European trainees regarding their expectations from the trainee programs, which indicates that there is no universal solution for designing a trainee program. This brief analysis demonstrates that our knowledge of trainee programs is limited and further investigation in trainee programs is needed.

A useful framework for the trainee programs may be developed by an adjustment of the general talent management process. The process has three stages. The first stage is the attraction and identification stage. The literature concurs that having a developed trainee program increases organizational attractiveness, which, in turn, brings more potential job candidates. The presence of a trainee program improves the employer brand (Chapman, et al., 2005; Ehrhart and Ziegert, 2005) and is also a signalto potential candidates of a higher opportunity for their development, which is an important criterion for university graduates' decision-making (Breaugh, 2013; Held and Bader, 2018). This stage is usually at the center of managerial attention, and employers allocate the most resources to this stage (Holland, Sheehan and De Cieri, 2007).

The second stage is the learning and development stage. Although learning and development are pertinent throughout an entire career, this stage is distinctive in trainee programs for two reasons. First, during trainee programs, the intensity of learning and development is higher than in standard talent management programs or in regular job positions (Cesário and Chambel, 2017; Tákacs, Gjorevska and Meretei, 2018). Second, trainee programs are framed within a fixed period, while standard talent management is rather continuous (Latukha, 2011). Talent management literature provides good evidence that learning and development have significant positive effects on many individual outcomes, such as employee commitment (Weng, et al., 2010), engagement (Bethke-Langenegger, Mahler and Staffelbach, 2011; Fletcher, Alfes and Robinson, 2018), or productivity (Claus, 2019). However, we are not sure what the effect is of such a limited period on the given outcomes.

The third stage is the retention of trainee program graduates. Trainee programs require high investments, and organizations expect that the talent will be able to return the investments (Latukha, 2011). However, low trainee program retention is a key issue connected with trainee programs. Narrative reviews of empirical evidence from human resource managers and specialists shows that more than half of trainee program graduates leave organizations. Considering wages, education and other costs for the typical length of trainee programs between

12 and 18 months, such an investment vanishes if a graduate leaves the organization. Empirical findings suggest that employers give issues related to talent retention, such as follow-up training, future job design, career management, or team building much less attention and allocate them significantly fewer resources (Holland, Sheehan and De Cieri, 2007; Meyers, et al., 2020). Retention is often regarded as taken-for-granted or a black box outside the control of managers (Thunnissen, 2016). Thus, we have only a limited knowledge of factors that decide whether a trainee program graduate leaves or stays in the organization.

From the talent's perspective, the first stage occurs before they enter the trainee program and attracts them to the organization. The second stage proceeds during the trainee program and is directly associated with their learning and development activities. The third stage follows the trainee program as trainees move to their regular job position after finishing the trainee program. Transitions among the stages can be a factor with possible effects, and thus are a part of the framework.

3. Methods

We undertook a qualitative single case study to explore heretofore the poorly understood phenomena of *why trainee program graduates leave organizations* in a real life context. The case study design allows us to explore such nascent phenomena and provide a deep understanding of the causes that lead to such phenomena (Eisenhardt and Graebner, 2007). A case study enables in-depth analysis of such a complex setting where boundaries between phenomenon and context are not evident (Yin, 1994). The process followed suggestions about theory building from case studies (Cornelissen, 2017; Eisenhardt, 1989; Gioia, Corley and Hamilton, 2013).

Theoretical sampling was employed by selecting Skoda Auto, which is the largest car producer in the Czech Republic and in which the focal phenomenon occurred (Yin, 2003). Skoda Auto has a well-established and highly developed trainee program for university graduates. The Skoda Trainee Program is designed for the adaptation and development of talented university graduates with the potential for quick progression to lower and middle managerial positions. The Skoda Trainee Program represents the unit of analysis in our case study. Despite the Skoda Trainee Program's attractiveness and high selectiveness, the retention rate of its graduates is not satisfactory for the organization. Internal data show that more than 37% of graduates leave during the first year after the trainee program graduation and within three years after the trainee program graduation, 70% of graduates leave the organization.

Case studies rely on the combination of data collection methods (Eisenhardt, 1989), and thus we draw on four types of data to triangulate different perspectives and to provide more accurate information and results (Yin, 2003). First, we conducted semi-structured interviews with 26 Skoda Trainee program graduates out of 50 participants in the course of the Skoda Trainee Program. Data were collected from trainee program graduates, both from those who remained in the organization in regular positions and from those who left the organization after finishing the trainee program. Second, we collected organizational documentation related to the formalized processes of the trainee program and the human resources documentation related to the acquiring and maintenance of talent in the organizations. Such data allows us to get insight into the core intention for such trainee program design as well as to capture the contingencies of the trainee program within the entire organization. Moreover, one of the researchers was allowed to be a part of the coordinating team of the Skoda Trainee Program with access to trainee personal documentation. Third, field notes from non-participant observation during the trainee program were collected during one term of the trainee program. The observations enabled us to see and hear non-formal discussions, and trainee interactions with co-workers, or the trainee program coordinator. Fourth, the semi-structured interviews with human resource management specialists and the trainee program coordinator provided internal information about the trainee program and the process of adaptation in the organization, which provided the link between the formalized documentation and the interview-based information provided by the graduates.

The data analysis utilized grounded theory as a tool to analyze the data obtained from all sources. Data analysis involved four main phases. First, the preparation phase is related to organizing and identifying evidence within a common database accessible to the three researchers (Yin, 2003). All three researchers repeatedly read all the collected documentation, field notes and transcribed interviews to get familiarized with the case. Second, the first-order coding process relied on discovering themes and emerging patterns based on the initial open coding (Cornelissen, 2017). From this stage, the memos were written down by each researcher to grasp insights, ideas, and potential links among emerging constructs (Corbin and Strauss, 1990; Saldaña, 2015). After the first order coding process, the emerging patterns as concepts together with memos were jointly discussed and the potential variances were verified. Third, the second-order coding moved to a more abstract level of analysis by iteration back and forth between the data and the emerging patterns. The first major theme – *Sense of Uniqueness* – emerged early in the process of the second-order coding. Further analysis allowed us to reveal *Instantaneity* and *Sound voice* as two further major themes. Fourth, the theoretical level of analysis further questioned the discovered themes for the possibility of deeper theoretical meaning as the aggregate dimensions. We searched for potential theoretical dimensions by asking how these themes can help us explain the researched phenomenon of the high turnover rate of trainee graduates in the first years of working in regular positions (Gioia, Corley and Hamilton, 2013). As we compared the themes with the literature and the data, we identified two theoretical dimensions that capture two paradoxes that influence the trainee transition from the trainee program to regular position. *The Focus Paradox* and *The Prestige Paradox* provide explanation to the research question of why trainee program graduates leave organizations. Figure 1 introduces the results of data analysis leading to the aggregate dimensions as two trainee program paradoxes, 2nd order themes as retention factors shaped by the 1st order concepts.

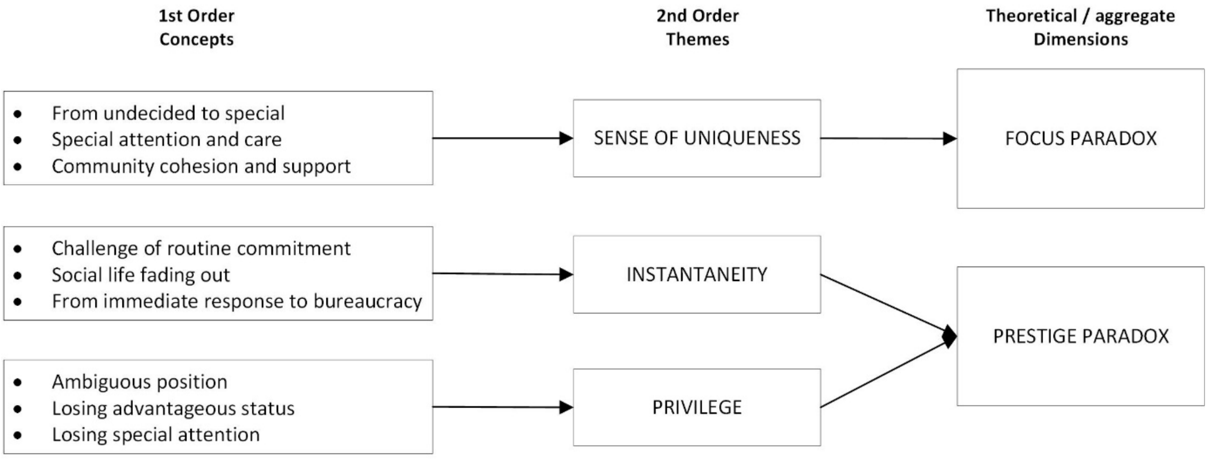

Figure 1: Result of the data analysis

4. Findings

The analysis revealed three overarching factors that determine the turnover of trainee program graduates: the *sense of uniqueness*, *instantaneity*, and *privilege*. However, contrary to expectations, the factors are not negative attributes of the trainee program. These factors rather represent high expectations set by the organization before and during the trainee program, but these expectations are not met by the trainee program graduates in their subsequent careers in regular positions. As a respondent gave a picture of the change in expectations by pointing out:

> *'When a person finishes the program they often have exaggerated expectations… We were often told that we were a sort of elite, and all of a sudden we found that it is not like that and eventually you have the same, but often worse position than people that did not go through the program.'*

These factors uncover the underlying paradoxical nature of trainee programs because seemingly positive features of trainee programs may lead to future disillusion and leaving the organization. The occurrence of such paradoxes determines that trainee program graduates leave organizations even though the trainee program is well designed and trainees express positive opinions about the trainee program. *Sense of uniqueness* results in *focus paradox*, while *instantaneity* and *sound voice* jointly cause *prestige paradox*. Figure 2 presents the model of trainee program paradoxes.

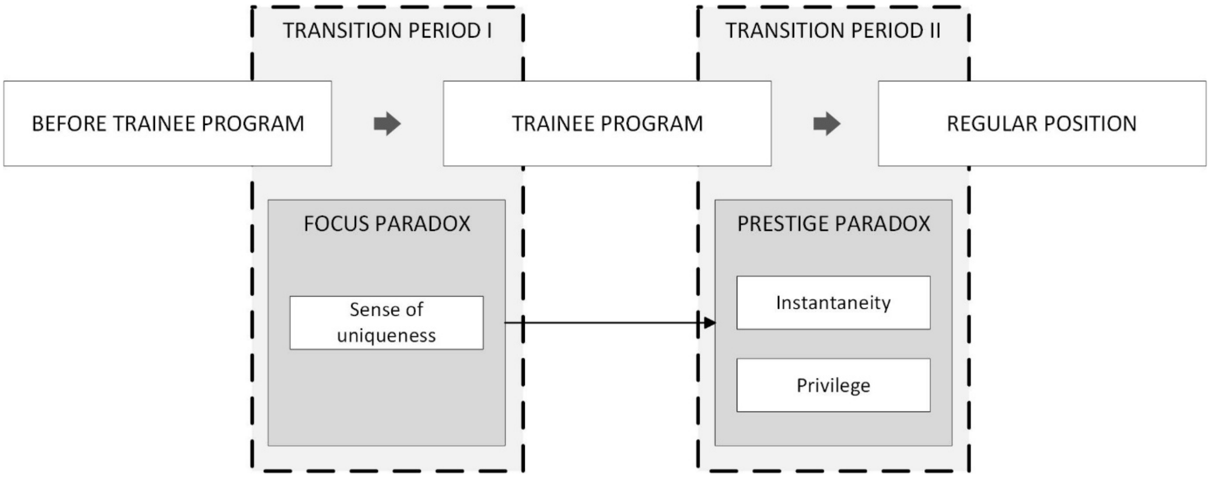

Figure 2: Model of trainee program paradoxes

4.1 Focus paradox

The focus paradox explains how excessive attention to talented individuals may backfire. *The sense of uniqueness* is the primary factor of *the focus paradox*. *The sense of uniqueness* emerges early in the trainee program in the phase we term the Transition Period I. This period occurs during the transition from university to the trainee program. Most university graduates enter the program right after university graduation or after a short period of their previous working experience with doubts or with a vague vision of their future career. Instead, they perceive the trainee program as an opportunity to try different positions and as a chance to decide later. They also reflected that they were aware of the low chance of obtaining a managerial or expert position with their limited experience. Thus, their self-esteem is relatively low in the beginning.

Trainee program selectivity, as the trainees pass several rounds of selection procedures, starts to build *the sense of uniqueness*. Their talent, specialty, and unique opportunity is often emphasized by their mentors, trainee program coordinator, and educators. Trainees enthusiastically told, for example:

> *'I am treated as a special employee and they count on me' or 'Trainee program is presented as exclusive thing, and it is exclusive'.*

The trainees receive special attention, they complete an extensive number of courses designed especially for them, and they are aware of some advantages they have in comparison with regular positions in the organization. The uniqueness is enhanced by the strong community cohesion of the trainees. The trainees support themselves in their views and meet regularly even during non-working opportunities. As a result, the trainees perceive themselves as the centre of attention and they work in an environment, in which the organizational processes are centered around them. This perception is reflected in their evaluation of their activities in the organization. They evaluate activities from the perspective of "how did this activity contribute to my development?" instead of "how did this activity contribute to the organization?" In subsequent organizational careers, previous trainees are suddenly not the center of attention and they have to fight for their place again.

4.2 Prestige paradox

The prestige paradox explains how perfect care and personal development may backfire. Two factors b this paradox: *instantaneity* and *privilege*. These factors are a consequence of the special care during the trainee program, but in contrast to the sense of uniqueness, both of these factors emerge during the transition from the trainee program to regular working positions, which we term the Transition Period II. The factors refer to the loss of the features that trainees subconsciously exploited during the trainee program, but were not aware of them until they were lost.

The first factor is *instantaneity*. During the trainee program, trainees experience high variability of activities, job rotation, and different challenges. After entering a regular position, this variability often vanishes. Most of the regular job positions are highly specialized, less complex and provide more routine activities. Program graduates in regular positions said:

'I must feel I am developing myself. I want to learn new things, and when I do the same thing repeatedly, I don't feel satisfied' or 'What I miss the most is the freedom to attend any event that develops me…now they [such events] are often restricted only for certain departments or positions'

Social life also changes. Meeting with peers from trainee programs shrinks to occasional planned events. Since the social life during the trainee program is exceptionally rich, the lack of social life is not substituted by the social life at the regular workplace, which summarizes the ex-trainee saying:

'Our community of ex-trainees does not hold together too much.'

Finally, participants of the trainee program hit the "wall of bureaucracy". The agile approach to problem-solving during the trainee program is replaced by formal procedures that are part of the regular organizational processes, and every decision or solution takes noticeably more time. As a trainee program graduate noted:

'The bureaucracy is dreadful and it slows down the entire organization' or 'Even changing a single thing is unreal'.

The loss of interestingness, instantaneousness, and variability lowers their engagement.

The second factor is termed *privilege*. Many of the trainees experience disillusion, as they are not recognized as talent anymore. Rather, they experience the ambiguity of their reception by their new managers and colleagues. They describe their position as 'neither juniors nor experts'. They also suddenly lose some of their advantages. A trainee graduate noted:

'Just overnight, I became a regular employee. I do not have any advantage any more.'

Some of them referred to "unfair pay", as they were paid less than their peers who entered the organization after a similar experience in different organizations. Education opportunities also shrink. Finally, the trainees lost regular access to their mentors and trainee program coordinator.

Overall, the higher are set the expectations, the deeper might be the fall after the period of a trainee program.

5. Discussion

The research has several theoretical contributions. In the first place, the findings expand talent management literature by identifying critical issues that may lead to talent drainage instead of talent retention. So far, talent management was perceived as a necessary – or at least a highly desirable – organizational practice. Well-designed talent management programs should result in competitive advantage (Cesário and Chambel, 2017; Gallardo-Gallardo, Thunnissen and Scullion, 2020). In contrast, our findings show that even well-established and highly developed trainee programs may have paradoxical outcomes since they attract talent who leave the organization soon after completion of the trainee program. The paradox emerges from a period of excessive attention to talent, which sets the talent's expectations higher than organizational practices may be able to meet. This study contributes to talent management literature by introducing two paradoxes: the focus paradox and the prestige paradox. These paradoxes also offer a mechanism for how employee and organizational perceptions, evaluations, and values may clash (Khoreva, Vaiman and Van Zalk, 2017; Thunnissen, 2016). The paradoxes also provide a further explanation of a complicated nature of the factors that influence trainee graduates psychological contract reciprocity or intention to leave, as revealed in previous studies (Cesário and Chambel, 2017; Jonsson and Thorgren, 2017; Latukha, 2011).

This research also contributes to research on generations at the workplace and generational cohort theory. Previous studies showed higher levels of self-esteem and narcissism among generations Y and Z compared to generation X and Baby boomers (Twenge, et al., 2010; Weber, 2017; Wood, Borja and Hoke, 2021). This study indirectly supports high levels of narcissism among these generations. But more importantly, the findings corroborate the negative consequences of narcissism, such as impatience to succeed and high expectations for pay and promotions (Luna-Arocas, Danvila-Del Valle and Lara, 2020; Ng, Schweitzer and Lyons, 2010). The paradoxes revealed in this study may be an indirect consequence of higher narcissism.

5.1 Practical implications

The findings offer some practical implications for organizations. First of all, we suggest implementing expectation management into trainee programs. Our findings show that exaggerated trainee expectations lead to the sense of uniqueness, which cannot be preserved in subsequent regular job positions after the trainee program is complete. Exaggerated expectations often start with marketing and promoting the program and are constantly built during the program by emphasizing uniqueness, instantaneity, and privilege. These factors from the trainee programs are lost with the transition to a regular position. As biased communication is the cause, the remedy lies in communication, which should be more realistic and modest. Also mentors who are aware of the paradoxes may shape the expectation according to future positions. Incorporating mentoring, strategic leadership, and knowledge sharing into their talent management strategy is a recommended strategy for Generation Y and Z employees in general (Naim and Lenka, 2018). In the case of trainees, mentors are crucially important during the period of transition to the regular job position. On the other hand, leaders' sense of uniqueness is a factor that helps leaders to be perceived as authentic by their followers (Zheng, et al., 2020). Thus, a sense of uniqueness is a double-edged sword, which needs to be balanced.

Second, paradoxes occur because trainee programs are not fully integrated into human resource management practices. Trainee programs in large companies are sometimes too isolated from regular human resource and organizational processes. Trainees in these programs form a unique subculture with weak links to regular organizational life. Integrating the aspects of talent management into general human resource management practices but also integrating the trainees among regular workers could facilitate the excessive sense of uniqueness. Another effective, but not easy-to-implement, solution is inclusive leadership (Randel, et al., 2018). Inclusive leaders are able to develop team belongingness together with maintaining the perception of individual uniqueness within the group through a set of behaviors, such as promoting individuals' diverse contribution or helping individuals fully provide their perspective.

5.2 Limitations and future research

Of course, as is the case with any single case study, our contributions must be considered within the given boundaries. While our study provides a deep insight into the trainee programs and uncovers new phenomena in the paradoxes, further empirical scrutiny should follow to enable empirical generalizability (Yin, 1994). We also need to acknowledge that we explored a well-designed trainee program, and thus we do not cover factors that occur during poorly designed trainee programs. Thus, our research can be perceived as the first probe into this important but neglected area and offers several suggestions for future inquiry. First, future work can empirically verify the occurrence of the paradoxes using a representative sample. A future quantitative study could employ, for example, a personal sense of uniqueness scale (Şimşek and Yalinçetin, 2010), which was adapted for organizational research purposes (Zheng, et al., 2020). Second, ethnographic research design could elaborate more on the emergence of the paradoxes, or action research design could explore how to mitigate the paradoxes and seamlessly integrate the trainee programs into general human resource practices. Finally, future work could empirically examine the effect of a trainee program's individual features on selected organizational characteristics, such as employer brand or organizational attractiveness.

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Transformational Leadership and Acceptance of Mistakes as a Source of Learning: Poland-USA Cross-Country Study.

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Abstract: This study aims to explore the influence of transformational leadership on internal innovativeness mediated by mistakes acceptance, including country and industry as factors to be considered and gender and risk-taking attitude as moderators. General findings, primarily based on the US samples (healthcare, construction, and IT industry), confirmed that transformational leadership and internal innovativeness are mediated by mistakes acceptance and strengthened by employees' risk-taking attitude. It is reflected in Polish healthcare sample. On the other hand, IT and construction industry samples revealed that a low mistakes acceptance level among risk-taking managers under transformational leadership might be their hidden form of change resistance. Regarding gender issue, this study showed that male employees driven by transformational leaders accept mistakes as a source of learning better than women, but the exceptions are healthcare and IT industries in Poland. The developed empirical model is based on a sample composed of 2,160 Polish and American knowledge workers applying OLS regression, using SPSS PROCESS macro software.

Keywords: transformational leadership, risk, acceptance of mistakes, learning culture, gender, internal innovativeness

1. Introduction

"Leadership is a multi-level circumstance between an individual leader and individual followers, followers' groups, and groups of followers' groups (Su, Wang, and Chen, 2020)." Style of leadership is one of the key factors for organizational changes. A person who encourages individuals to accept the change, to adapt and accept the new ideas by setting specific aims, is called a leader (Harb and Sidani, 2019). As the companies are working in a very predictable setup, the management of an organization has become an overly complex and challenging task. Nowadays, perfect and successful leadership has become a very important component of running a successful business in which a leader has explicit knowledge about the complexities of the setup. The leader also needs to identify and meet the needs of organizational investors so that they can achieve the goals effectively and efficiently (Alsayyed *et al.*, 2020).

Transformational leadership is the style of leadership that creates awareness among individuals to achieve the specific goals set by an organization (Harb and Sidani, 2019). "Transformational leaders are those who promote teamwork, respect among public and cooperation among employees to achieve the specific organizational goals." It has been reported that transformational leadership has a positive impact on the efficiency of the employees. It is a type of partnership that is formed on the basis of confidence, appreciation and respect among leaders and followers (Khan *et al.*, 2020). Recently, transformational leadership has attracted the huge interest of researchers. It has been reported that leaders have the capability to steer individuals in a specific direction to attain specific goals of an organization (Begum *et al.*, 2020).

Organizational transformation is a vital component in the world of industry. So, to expand competitiveness and secure their status in the market, companies should make changes in their policies and go through the process of transformation. "Organizational transformation is the shift of the organization from their present status to desired future status (Harb and Sidani, 2019)."

In the state of innovation, transformational leadership is thought to be a perfect style to take steps aimed at transformation in organizations. Transformational leadership has the capability to promote a good and healthy environment for its employees to innovate (García-Morales, Jiménez-Barrionuevo and Gutiérrez-Gutiérrez, 2012). It has been reported in various studies that women possess diverse leadership qualities as compared to men (Kabacoff and Stoffey, 2001; Kim and Shim, 2003; Eagly, Johannesen-Schmidt and Van Engen, 2012).

It has been reported that transformational leadership has a significant effect on organizational learning. Various studies have been carried out to indicate the positive effect of transformational leaders to develop the learning habits in the employees of an organization (Wallace, Tomlinson and O'Reilly, 2011; Haiyan, Walker and Xiaowei, 2017). So, transformational leaders are the core of organizational learning culture development.

Transformative Learning Theory (Mezirow, 1995) claims that adult learning happens thanks to modified interpretations of the meanings of personal experiences and frames of reference through critical reflection. Critical reflection results from "intuitively becoming aware that something is wrong with the result of our thought, or challenging its validity through discourse with others of differing viewpoints and arriving at the best-informed judgment" (Mezirow, 1995, p. 46). So, considering this, learning from mistakes, thanks to critical thinking, seems vital for organizational competency to determine innovativeness. However, several studies proved that acceptance of mistakes fosters innovativeness (Kucharska, 2021a-c; Kucharska and Rebelo, 2022), and thus mistakes are significant for organizational development. In some industries and national cultures contexts they remain controversial as an official source of organizational learning, however, in others they are not. This makes mistakes an interesting subject of studies.

Mistakes acceptance component of learning culture is proved to be a vital influencer of change adaptability (Kucharska, Bedford, 2020), tacit knowledge awareness and sharing, intellectual capital development and innovation performance (Kucharska, 2021a-d; 2022). Also, Weinzimmer and Esken (2017), Horvath et al. (2021), Klamar et al. (2022) stressed that organizational system and culture supporting learning from mistakes might be an interesting source of organizational value, if responsibly managed. Therefore, this study is a simplified replication of Kucharska and Rebelo's (2022) study of transformational leadership influence on mistakes acceptance for innovativeness based on higher education in other sectors: healthcare, construction, and IT. Replication is vital for science development. The general value of replication is the opportunity to verify the replicated research findings. Precisely, the closer the replication research findings are to the replicated study findings, the more likely those results can be generalized to the larger population. Therefore, the studies being replication of the existing research are generally appreciated. But there is also the added value to this replication; this study aims also to verify whether the national cultural context is significant for mistakes acceptance and gender issues by comparing findings between two countries: Poland and the US.

2. Hypotheses

Transformational leaders are the agents of change (Bakari et al., 2017). They make brave organizational ideas and visions a reality, create strong bonds with employees, motivate employees, and provide support and inspiration (Busari et al., 2019; Domínguez-Escrig et al. 2022). Executives who can transform their organizations and adapt them to change, perform smoothly and deliver outstanding results (Kantor et al., 2008). Such leaders often lead changes through developing organizational culture (Brandt et al., 2019; Lee et al., 2018; Ibrahim et al., 2022) that is potent enough to promote knowledge, learning, and innovativeness (Kucharska, 2021a-d). This study refers directly to Kucharska and Rebelo's (2022) findings about learning culture which revealed that tacit knowledge sharing and change adaptability driven by learning culture are vital links connecting transformational leadership with innovativeness. Furthermore, what is the most interesting for this study - they exposed that the influence of the mistakes' acceptance component of learning culture on tacit knowledge sharing is moderated by gender. Following them, this study aims to verify how gender issue moderate the mistakes acceptance component of culture driven by transformational leaders in other sectors. Summing up, this study is a simplified replication of Kucharska and Rebelo's (2022) study based on higher education in other sectors: healthcare, construction, and the IT sectors. Therefore, based on Kucharska and Rebelo's (2022) study, the hypotheses included in the proposed research are formulated as below:

H1: Transformational leadership has positive influence on internal innovativeness.

Hm1: Transformational leadership and mistakes acceptance relation is moderated by gender.

Hm2: Transformational leadership and mistakes acceptance relation is moderated by gender that is moderated by country.

H2: Mistakes acceptance positively affects internal innovativeness.

H3: Transformational leadership's positive influence on internal innovativeness is mediated by mistakes acceptance component that is moderated by gender and country.

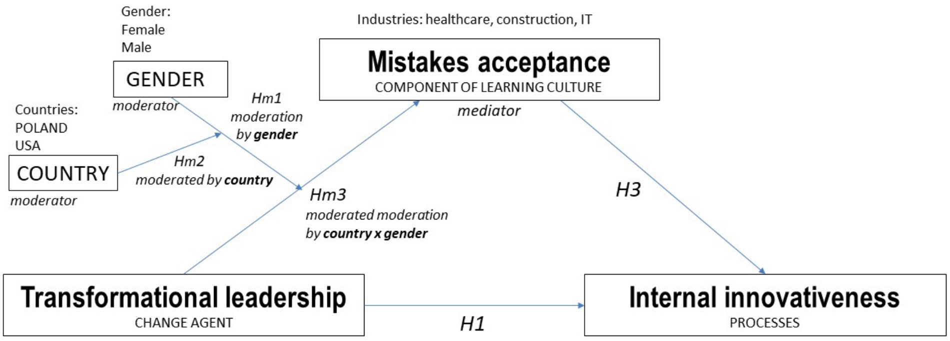

Figure 1: Hypothesized model

3. Method

The empirical model was tested on a sample composed of 2,160 Polish and American knowledge workers applying OLS regression using SPSS PROCESS macro software (Hayes, 2018). To do so, the samples were obtained from survey (January - February 2020) using mostly Likert scales to measure attitudes (Appendix 1). Composite variables were created to apply SPSS PROCESS and dummy variables were used to analyze moderators. The questionnaire included filter questions to establish minimum work experience and status as a "knowledge worker". Where comparable, the sample generally matched the underlying populations (jobs, gender) of both countries (Polish Yearbook, 2017; Bureau of Labor Statistics, 2020). While some differences were apparent in the underlying populations, they were not significant enough to justify varying the quota targets. The Polish quota structure was used as a pattern for samples for both countries.

4. Results

Results confirm that mistakes acceptance component of learning culture complementarily mediates between transformational leadership and internal innovativeness and that gender and country moderate this relation for the IT and construction industry. The exception is noticed for the healthcare industry, where the country is a significant moderator, but gender is not observed to be one (details in Table 1; Figures a-c).

Table 1:

Hypothesis	β	t	p	verification
H1	.29/.18/.21	9.2/6.96/8.41	.000/.000/.000	supported/supported/supported
Hm1	.36/.61/-.63	1.42/3.05/-3.58	.15/.002/.004	rejected/supported/ supported
Hm2	.32/-.35/.39	2.94/-2.66/3.12	.05/.008/.0018	supported/supported/supported
H2	.11/.25/.30	4.19/8.35/9.28	.000/.000/.000	supported/supported/supported
H3	-0.04/ -.09/ .12	HEALTHCARE -.024(LLCI), 0.09(ULCI)/ CONSTRUCTION -.17(LLCI), -0.16(ULCI)/ IT .045(LLCI), 0.21(ULCI		supported/supported/supported
Models' Summary	R R-sq MSE F df1 df2 p HEALTHCARE .3288 .1081 1.8760 12.2442 7.0000 707.0000 .0000 CONSTRUCTION .3924 .1539 1.0232 64.7762 2.0000 712.0000 .0000 IT .4763 .2268 1.0388 105.6060 2.0000 720.0000 .0000			

Note: sample size: **healthcare/construction/IT n=722/715/723**; standardized estimates, LLCI–low limit confidence interval; ULCI–upper limit confidence interval

Furthermore, Figures 2a-c illustrate that in terms of gender effects for the US, for both groups, female and male acceptance of mistakes is more robust if transformational leadership is stronger. Precisely, the stronger transformational leadership, the stronger acceptance for mistakes, and this dependence is noted for all industries included in the study for the US ((a) healthcare, (b) construction, (c) IT).

The results for Poland are similar for healthcare industry but gender-related differences are observed in the construction and IT industries. Precisely, in the construction industry (Fig. 2b), there is a decrease in women's mistakes acceptance level if transformational leadership is stronger, whereas in the case of men an increase is observed – similarly to the pattern noted for the healthcare industry in US and Poland. Regarding IT industry, the results for Poland are opposite to those of the construction industry – if transformational leadership is stronger, there is a decrease in men's mistakes acceptance level and an increase in women's acceptance level (Fig. 2c).

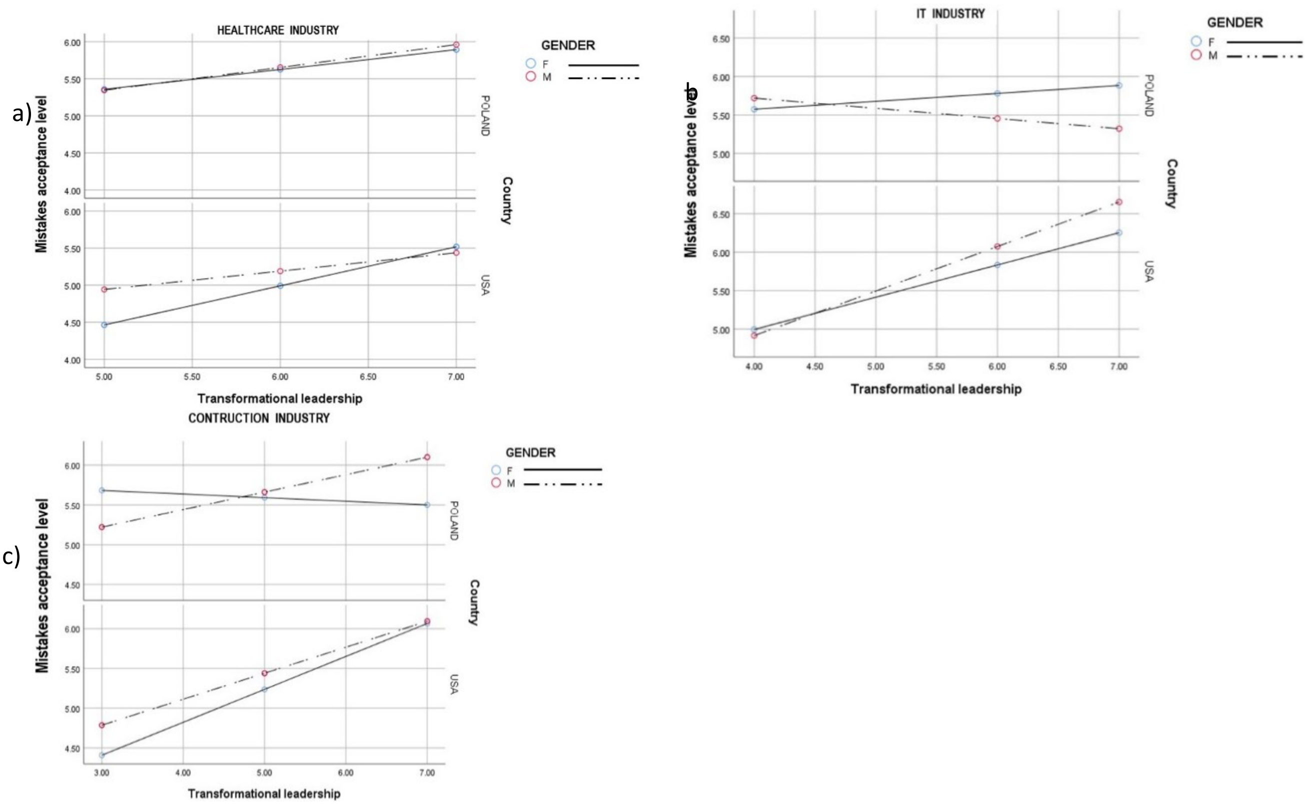

Figure 2: Transformational leadership influence on mistakes acceptance POLAND-US view by gender and industry, a) healthcare, b) construction, c) IT

Note: Level of confidence for all confidence intervals in output: 95.0000. Number of bootstrap samples for percentile bootstrap confidence intervals: 5000. W values in conditional tables are the 16th, 50th, and 84th percentiles. Sample size: healthcare/construction/IT n=722/715/723.

As it was observed that the influence of transformational leadership on mistakes acceptance level differs significantly among genders for the IT industry in Poland, the presented findings were next explored more in-depth. Specifically, the "risk" factor was incorporated into the study and it was considered a significant moderator for the gender reaction to mistakes (Fig. 3a-b). Risk-taking attitude implies uncertainty acceptance (Zinn, 2020). Thus, if a mistake is conceptualized as the lack of the desired results because "something went wrong", then the risk logically includes the acceptance of mistakes that occur when risk actions are taken and also of the negative outcomes of the particular risk (Cannon and Edmondson, 2001; Politis and Gabrielsson, 2009). Furthermore, to be mentally ready to be wrong, the person must feel comfortable and safe in facing uncertainty and risk in front of others (Andersson et al., 2020). Therefore, the "risk taking attitude" factor has been included in the study to verify if it differs among genders and somehow explain the observed differences.

Indeed, for the US, the risk is of significance for the mistake's acceptance – the higher risk acceptance level, the higher mistakes acceptance level driven by the transformational leadership observed for both gender groups. Based on this, the verification whether the risk acceptance attitude differs among men and women in the IT industry sample in Poland is justified. Precisely, based on dependencies between included variables observed for the US sample, it is expected that women's attitude towards risk in the IT industry in Poland is lower than men in the same industry so the influence of transformational leaders on women's attitude towards mistakes acceptance should be higher than in case of men. Figure 3 below presents the results obtained.

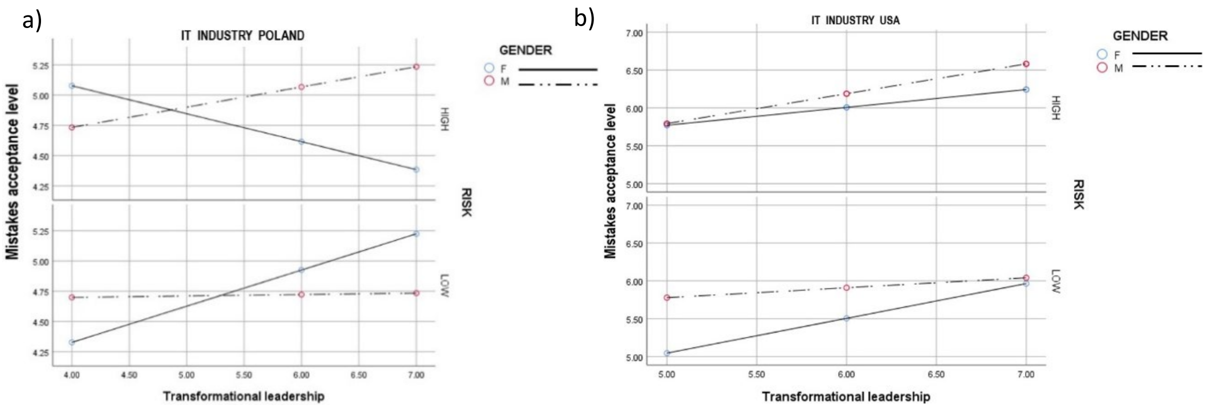

Figure 3: Transformational leadership influence on mistakes acceptance by gender and risk in the IT industry a) POLAND b) USA

Note: Level of confidence for all confidence intervals in output: 95.0000. Number of bootstrap samples for percentile bootstrap confidence intervals: 5000. W values in conditional tables are the 16th, 50th, and 84th percentiles. Sample size Poland/US n=350/378

Again, the results for Poland are contrary to what was expected. Specifically, the effect observed for the US, namely the higher risk, the higher the mistakes acceptance level, in Poland is observed only for men. The reaction of women with high-risk attitudes is opposite: their level of the mistake's acceptance level decreases when stimulated by transformational leaders. But in case of women with risk-acceptance attitude at lower level, transformational leaders stimulate their mistakes acceptance, while this effect is neutral for men. These findings again require the deeper consideration. Therefore, further deeper analyses were performed including the factor of "position" held by the respondents. Kucharska and Kowalczyk (2019) proved that the position factor matters for the perception of some phenomena within organization. Specifically, for this research, it is expected that women on higher positions in the IT are characterized by a higher level of risk-acceptance. Thus, "gender" and "position" factors might be tied with the "risk acceptance factor" and help understand the noted differences. This assumption has been verified by the analysis of the focal factor frequency in the Polish IT sample. The tables showing the frequency of the explored factors in a sample were created for the IT industry in Poland and presented below (Figures 4a-b).

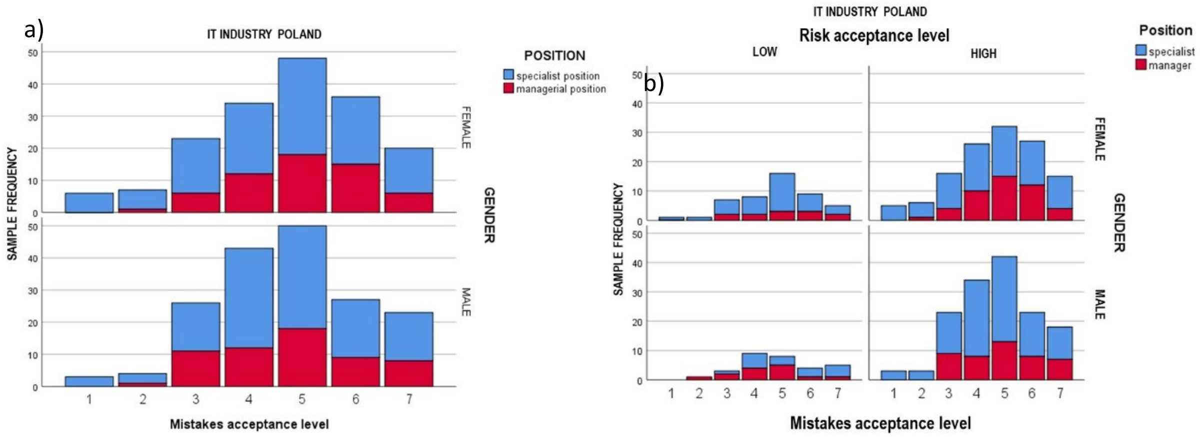

Figure 4: Mistakes acceptance level frequency by a) gender and position, b) gender, position, risk

The tables of frequency showed no significant differences between genders regarding the frequency of mistakes acceptance levels in specialists or managers. However, when risk-to-frequency analysis is included, it is seen that in the high-risk acceptance group of employees, women managers' risk attitude is higher than that of women specialists, and for men the situation is opposite: specialists show higher risk-taking perspective than managers, relatively to the position distribution in the sample. Therefore, at first glance, the explored revelation seems to be caused by a risk-taking attitude, but the frequency analysis shows that it is not. Since the risk-taking attitude dominates in the Polish IT sample, female managers are more willing than male managers to take a risk. They mistake acceptance level increase when transformational leadership is strong (precisely: the higher level of transformational leadership the higher level of mistakes acceptance is observed). In the IT industry, male managers' reaction to strong transformational leadership is opposite even if their attitude towards risk is positive. So, considering all findings presented, male managers in the IT seem to be change blockers as they intentionally or not (consciously or unconsciously) decrease acceptance of mistakes.

5. Discussion, limitations, and further research

The findings of Kucharska and Rebelo (2022) proving that transformational leadership increase the acceptance of mistakes as a source of learning is generally confirmed. However, some differences have been noted regarding the current samples. Specifically, Kucharska and Rebelo (2022) revealed that the effect is stronger for women than for men. The results presented are generally opposite to all samples from the US and one from Poland – the one for the construction industry. Similar results to those of Kucharska and Rebelo (2022) are noted for the healthcare industry, where gender effects are equal, and for the IT industry, where women accept mistakes more willingly than men. These findings are similar to those of Kucharska and Rebelo (2022), but quite different than majority of findings given in this research. Therefore, a more in-depth analysis was performed. Precisely, the decreasing acceptance of mistakes by men in the IT industry in Poland seemed to be caused by a risk-taking attitude (based on the US IT sample pattern, Fig. 3b). However, the sample frequency analysis showed that it is not. The risk-taking attitude dominates among men in the polish sample, so the attitude toward risk can't cause the observed low level of acceptance of IT men's mistakes. Therefore, there is a need for a different, better explanation.

So, to find the understanding, the given findings were discussed with three high-level polish IT professionals. And considering their opinions and all the conclusions presented, male managers in IT seem to be change blockers as their reaction to strong transformational leadership is decreasing acceptance of mistakes even if their risk acceptance is high. In other words, the potential risk of mistakes can be used here to discourage any transformation or change implementation. Mistakes acceptance decrease seems to be used here as a rationalized (consciously or not) form of change resistance. It is a hypothesis post-hoc and, the verification of this hypothesis requires further studies.

Other findings worth to be discussed, it is differences among industries concerning on transformational leadership influence on mistakes acceptance in the country context. This influence is most vital for the IT sector (H3 β=0,12 p=.0000) and more robust in the US than in Poland, and additionally oppositely directed. It suggests that there is a different mindset between IT knowledge workers in Poland than in the US who seem to be more open to changes. Besides, regarding the doubly moderated by gender and country factors of mediated effect of mistakes acceptance level between transformational leadership and internal innovativeness it is confirmed for all sectors (H3), but it is positive only for the IT. The double moderation is also confirmed for all samples (Hm2); it is positive for IT and healthcare, and it is negative only for the construction sector. So, it suggests that construction industry sector requires deeper further studies to understand transformational leadership, innovativeness, and mistakes acceptance issues. All the more so as Kucharska (2021c) noted that such organizational factors as hierarchy and maturity issues also matter for organizational learning from mistakes. Those factors were not included in this research.

The study also has other limitations. It is conducted only certain industries. In addition, the sample profile has recognizable patterns in terms of size distribution of companies (e.g. the US IT companies are big, whereas Polish ones are small; Polish healthcare companies are public, whereas in the US they are private). Finally, the study is conducted in two different types of nations, but still only two. So, scientific implications suggest that these studies should be expanded to other nations and industries.

6. Practical implications

In today's modern knowledge-based age, there is a need for innovative leaders who can address a knowledge-based environment and encourage growth to improve organizational sustainability. Based on this research, we learned that transformational leaders affect the underlying attitudes and assumptions of on organization's members, resulting in a shared mindset for achieving the company's objectives, which is in line with previous studies (Kucharska and Rebelo, 2022). According to our findings, such effective leadership always results in greater efficiency. Our study aimed to assess the transformational leadership and acceptance of mistakes as a source of learning. The presented results indicate that mistakes acceptance, a component of the learning culture, complementarily mediates between transformational leadership and internal innovativeness. So, from the practical point of view, the leaders' attitude towards mistakes as a source of learning shapes the organizational attitude in this regard.

So, to improve the efficiency of an organization, solid transformational leadership and a higher level of mistakes acceptance are required. The search for new possibilities, a shared vision as well as staff motivation and direction will be possible through transformational leadership and self-improvement in whatever people at work are engaged in. Employees are more proactive, and their intelligence is enriched if they are motivated to think and critically analyze their mistakes. It is seen that transformation leaders positively impact business outcomes by spotting mistakes and strengthening social relationships. Moreover, innovative leadership strengthens the strong connection or association between the leader and subordinates, allowing subordinates to go far beyond the average standards and thus achieve above-average effects. As seen in the study, the acceptance of mistakes in both female and male groups is more robust if transformational leadership is strong. It is, because transformational leadership inspires individuals to go above and beyond needed requirements to work toward a common goal and embrace mistakes along the way, it centers on individuals who are extrinsically motivated for the particular job duties. Leaders and businesses may achieve their maximum potential by learning to combine those traits. This is projected in the construction industry in the study where women's mistakes acceptance level decreases if transformational leadership is more robust. The same is observed in the IT for men. It is possible that these groups are more internal than externally motivated or, as we hypothesized before, a low mistakes acceptance level among risk-taking managers driven by transformative leaders in the IT and construction industry might be a hidden form of change resistance. It is one of the easiest ways to block the change by escalating potential risks of mistakes or failures resulting from the particular change implementation and their consequences in business practice. As we stressed - this idea requires further studies. But so far, it is an important warning for business practice: the fear of making mistakes might be a severe development blocker.

7. Conclusions

Generally, the findings primarily based on the US samples (healthcare, construction, and IT industry) confirmed that mistakes acceptance mediates transformational leadership and internal innovativeness and that it is strengthened by the employees' risk-taking attitude. It is reflected in the Polish healthcare sample. Nevertheless, the IT and construction industry samples revealed that a low level of mistakes acceptance among risk-taking managers driven by transformational leaders might be their hidden form of change resistance that requires further studies. Regarding gender issue, this study exposed that men employees driven by transformational leaders accept mistakes as a source of learning better than women, but the exceptions are healthcare and IT industries in Poland. To sum up, this study revealed that mistakes acceptance component of learning culture, country, industry, gender, and risk factors matters for transformational leadership's effective influence on internal innovativeness. Furthermore, mistakes acceptance component of learning culture is related to gender, industry and country (national culture).

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Appendix 1: Scales applied

Construct	**Items**
Transformational leadership Yi *et al*. (2019)	• The firm's management is always looking for new opportunities for the organization. • The firm's management has a clear view of its final aims. • The firm's management succeeds in motivating the rest of the company. • The firm's management always acts as the organization's leading force. • The organization has leaders who are capable of motivating and guiding their colleagues on the job.
II: Internal innovations Kucharska (2021a), Kucharska and Erickson (2022)	• we constantly improve the way we work • we are good at managing changes • we are highly disposed to introduce new methods and procedures we are highly disposed to accept new rules
LCM: mistakes acceptance Kucharska and Bedford (2020)	• People know that mistakes are a learning consequence and tolerate it up to a certain limit. • Most people freely declare mistakes. • We discuss problems openly without blaming. • Mistakes are tolerated and treated as learning opportunities.

Corporate Governance Disclosure: Empirical Evidence in the Portuguese Capital Market

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Abstract: The corporate governance theme has been a subject of great debate due to the financial scandals of recent years. However, it is currently seen as a key factor for the success of organizations. This is because of the strong evolution that it has undergone over the years and the increase in financial market demands. Corporate governance is also seen as a crucial component in strengthening investor confidence. According to the literature, good corporate governance allows for the achievement of a degree of trust necessary for the proper functioning of a market. Currently, good corporate governance practices contribute to attracting investors, increasing stakeholder confidence, raising a company's reputation, and increasing business transparency among other benefits. The present study aims to analyse corporate governance disclosure in companies listed on Euronext Lisbon in 2020. To achieve this aim, we perform a content analysis of the corporate governance and annual reports as well as the consolidated annual accounts of a sample comprising 32 companies listed on Euronext Lisbon as at 31st December 2020. To analyse the extent of disclosure, a disclosure index is created based on the recommendations of the Portuguese Securities Market Commission; this makes it possible to measure the degree of compliance with recommended disclosures. Only disclosures related to the board of directors, the audit committee, the external auditor, and the statutory auditor are considered. The average value of the disclosure index is 0.977, with the most disclosed information related to the statutory auditor and the least disclosed related to the audit committee. This study contributes to a good understanding of corporate governance in the Portuguese context.

Keywords: corporate governance, information disclosure, disclosure index

1. Introduction

The corporate governance theme has been the subject of great debate due to the financial scandals of recent years. Currently, corporate governance is seen as a key factor in the success of organizations. Furthermore, due to the strong evolution that it has undergone over the years and the increase in financial market demands, it is viewed as a crucial component in strengthening investor confidence.

According to the literature, good corporate governance makes it possible to achieve the degree of trust necessary for the proper functioning of the market. In addition, it helps attract investors and increase stakeholder confidence, company reputation, and business transparency.

According to Das (2017), corporate governance is broad control to mitigate costs of agency and improve a company's efficiency. Carioca et al. (2010) argue that good corporate governance practices increase the transparency of management, thus reducing information asymmetries. Moreover, good corporate governance provides security to users of the information disclosed.

In this sense, several entities with legislative powers have created mechanisms to protect the interests of shareholders.

According to Cunha and Rodrigues (2018), the Portuguese Securities Market Commission CMVM has adopted policies relating to corporate governance to Portugal through a set of recommendations aimed essentially at listed companies.

In Portugal, with its publication of Regulation No. 7/2001 in 2001, CMVM created guidelines about the degree of and method of adoption of governance recommendations by listed companies. These guidelines were to be carried out through an annual management report or through a report on corporate governance practices. Furthermore, 'some recommendations were elevated to information duties: information on business decision processes; positions held by managers in other companies; evolution of quotations; indication of dividend policy' (Moreira et al., 2004).

This research was done with the main objective of measuring the extent of disclosure about corporate governance.

The motivation of this study was essentially to understand the extent of the information disclosed on corporate governance and in companies' annual reports and accounts to their increasingly demanding users.

As far as we are aware, existing studies on this topic in the Portuguese context are scarce. Cunha and Rodrigues (2018) carried out a study with an objective of analysing the determinants of disclosure of information about the structure of corporate governance. To carry out the study, they analysed the content of corporate governance and annual reports of 40 non-financial companies listed on Euronext Lisbon. The reports analysed were for the period between 2005 and 2011. Our study contributes to the literature on corporate governance and information disclosure as we present updated data on corporate governance disclosure and updated analysis of the most and least disclosed items by companies.

For this purpose, the consolidated annual reports and accounts and the corporate governance report for the financial year 2020 were analysed in a sample composed of 32 companies listed on Euronext Lisbon as of 31st December 2020.

To analyse the extent of disclosure, a disclosure index was created based on the recommendations of CMVM. This index made it possible to measure the degree of compliance with the recommended disclosures. In building the index, only the disclosures regarding the board of directors, the audit committee, the external auditor, and the statutory auditor (ROC) were considered.

This work is divided into four sections. After this Introduction, section 2 below presents a brief literature review on corporate governance disclosure. Section 3 is dedicated to empirical study and shows the research methodology adopted in selecting the sample and the collection and processing of data as well as the results obtained. Finally, the main conclusions, limitations of the study, and suggestions for future investigation are presented.

2. Disclosure of Information on Corporate Governance

The accounting information literature investigates a wide range of issues, such as corporate disclosure practice, focusing on mandatory and voluntary items to understand the determinants of voluntary disclosure and regulatory compliance (Hassan & Marston, 2010).

Gibbins et al. (1990) define financial disclosure as any deliberate publication of information, whether numerical, qualitative, mandatory, or voluntary via formal or informal channels. According to Leung and Horwitz (2004), disclosure is a clear requirement for the stock market to function effectively. Healy and Palepu (2001) also argue that the disclosure of information by companies is a crucial factor for the proper functioning of the capital market.

According to Hassan and Marston (2010), disclosure of information can be divided into two categories, namely, voluntary and mandatory. Mandatory disclosure is composed of companies' information published in their financial reports (Kumar et al., 2008).

For Botosan (1997), voluntary disclosure means making public financial and non-financial information regarding a company's operations without any legal requirement. The opinion of Aripin et al. (2014) is in line with that of Botosan (1997), namely that voluntary disclosure is an optional dispensation of financial and non-financial information beyond mandatory requirements. Companies may voluntarily disclose certain types of information in their annual reports. Healy and Palepu (2001) argue that reports and accounts and the disclosure of information are excellent ways to reveal corporate governance structure and performance to external investors.

Enache and Hussainey (2020) say that managers usually transmit the private information they have to investors through voluntary disclosures. In this sense, investors benefit when a company offers transparent and adequate information that allows for the assessment of its future performance.

According to Enache and Hussainey (2020), voluntary disclosures can reveal information to competitors, potential participants, regulators, customers, and suppliers that a company would not otherwise disclose.

Botosan (1997) argues that accounting disclosure is essential for all stakeholders and provides them with the necessary information to reduce uncertainties and help them make appropriate economic and financial decisions. Furthermore, she considers annual financial reports as the most important source of information to people outside a company. The disclosure of financial information in company reports is common practice (Romão et al., 2018).

Eng and Mak (2003) state that information is the basis on which investors form their opinion about a company and subsequently make their investment decisions. In empirical terms, the information arrives through well-structured legal reports voluntarily delivered by companies. In this way, investors can obtain and understand the information in a valuable and reliable way to make the best investment decisions.

According to Hermaline and Weisbach (2012), dissemination of information has advantages and disadvantages. On one hand, increased disclosure allows directors to make good decisions; on the other hand, it generates additional agency conflicts and other costs to shareholders.

According to Barako et al. (2006), a significant problem with companies is the asymmetry of information between managers and shareholders. Healy and Palepu (2001) suggest that a potential solution to information asymmetry problems involves regulation requiring managers to disclose their private information fully.

According to Enache and Hussainey (2020), voluntary disclosures reduce information asymmetry and decrease the extraction of private benefits by senior management that occurs in opaque information environments. In addition, the authors argue that structured corporate governance reduces the opportunistic behaviour of managers, and forces them to disclose information.

Ho and Wong (2011) argue that managers will not withhold information for their benefit if there is an intensive monitoring environment, which improves disclosure and the quality of financial statements.

Barako et al. (2006) state that it is possible for an agent to provide information voluntarily to reduce connection costs (between the agent and shareholders) and encourage external investors to invest in their company. In this sense, the increase in the level of disclosure positively affects investors´ confidence (Archambault & Archambault, 2003).

According to Cunha and Ribeiro (2006), companies with positive financial prospects have a great incentive to disclose these prospects and other information in detail as they believe that the costs related to such information are outweighed by the benefits and that non-disclosure would lead the market to interpret these prospects as being bad.

According to Aripin et al. (2014), corporate governance mechanisms aim to strengthen the capital market, increase investors´ confidence, and improve the credibility and accountability of financial information presented by companies.

Gonzalez and Meca (2014) argue that when a country implements controls that are geared towards ethical behaviour, reducing corruption, strengthening the rule of law, or improving government effectiveness, the controls appear to increase the quality and transparency of financial information issued by companies, thus enhancing managers' ethical behaviour. In this vein, Aksu and Kosedag (2006) state that companies' level of transparency and disclosure practices are essential factors in the quality of corporate governance.

For Cohen et al. (2004), one of the essential functions of corporate governance is to ensure the quality of the financial disclosure process. In this sense, good corporate governance practices guarantee the publication of quality financial reports, namely financial information that approximates the actual financial situation of a company.

Today, corporate governance structures are mainly faced with issues of transparency, productivity, and ethically correct disclosure of information (Muller et al., 2017).

For Bushman and Smith (2003), the role of corporate governance structure in financial disclosure is to ensure conformity to the accounting system and credibility of financial statements. Silva et al. (2006) add that corporate governance includes structures that make decisions on behalf of a company and that supervise this exercise to ensure that companies function effectively to achieve their interests. Without these structures, companies would not function.

According to CMVM, the objective of corporate governance is to contribute to the improvement of companies' performance in the interest of parties, such as investors, creditors, and workers, who are concerned with a company's activities.

Lokman et al. (2014) argue that a disclosure of information on corporate governance practices is an excellent indicator of the quality of the corporate governance structure of companies. They also state that companies with a high quality of corporate governance have added incentives to inform internal and external investors about the quality of their governance structure.

According to the OECD (1999), good corporate governance helps maintain investor – both foreign and domestic – confidence.

One of the objectives of corporate governance is to ensure that the information disclosed is transparent and reveals the financial situation, performance, ownership, and governance of a company (OECD, 1999). Furthermore, according to Morais (2008), information is a fundamental tool in the decision-making process since it affects changes implemented by management.

3. Empirical Study

The present study aimed to identify the extent of corporate governance disclosure in Portuguese companies listed on Euronext Lisbon in 2020.

The decision to analyse the information for the year 2020 was justified by the fact that it was the most recent information available since, at the time of data collection, the companies analysed had not yet made available the reports for the year 2021.

3.1 Research Methodology

3.1.1 Selection and Characterization of the Sample

The population of this research was made up of all public limited companies issuing shares and admitted to trade on the regulated market on Euronext Lisbon in 2020, with the exclusion of sports limited companies as they have a different economic calendar from that of other listed companies, and their accounts are closed on 30 June.

For this purpose, all consolidated annual reports and accounts as well as the corporate governance reports of all companies listed on Euronext Lisbon in 2020 were collected. Companies that did not provide this information were excluded from the sample, which resulted in a total size of 32 companies.

Concerning the characterization of the sample, the set of companies analysed was divided according to various sectors by activity, as shown in Table 1.

Table 1 Distribution of Companies by Activity Sector

Activity sector	Number of companies	Percentage
Oil and gas	1	3.13%
Basic materials	3	9.38%
Industrial products	6	18.75%
Consumer goods	1	3.13%
Consumer services	10	31.25%
Telecommunications	1	3.13%
Public services	4	12.5%
Financial services	3	3.13%
Technology	3	3.13%
Total	32	100%

To classify the companies analysed by economic sector, the industry classification benchmark was used. This benchmark categorizes industrial activities based on a macroeconomic context.

The sample studied consisted mainly of the consumer services sector (31.25%) followed by the industrial products sector (18.75%). These 2 sectors represented 50% of the sample. The least represented sectors were oil and gas, consumer goods, and telecommunications, each of which had a share of 3.13%.

Regarding the geographical location of companies, their registered offices were distributed as shown in Table 2.

Table 2: Geographic Distribution

Geographic region	Number of companies	Percentage
North	14	43.75%
Centre	17	53.12%
South	0	0.00%
Azores	0	0.00%
Madeira	0	0.00%
Abroad	1	3.13%
Total	32	100%

More than half the companies were located in the centre (53.12%) and the rest in the north of the country (43.75%), and only one company was headquartered abroad (3.13%).

3.1.2 Collection and Processing of Data

To analyse the disclosure of information on corporate governance in Portugal, a disclosure index was created to assess the publication of data by companies listed on Euronext Lisbon. Consolidated reports and accounts for the year 2020 were collected from the institutional websites of listed companies and from the corporate governance report available on the CMVM website. These documents were chosen because they are the primary source of data for the companies' stakeholders and because this disclosure is mandatory for all companies listed on the stock exchange.

The disclosure index was created based on Regulation No. 4/2013, which covers items related to the board of directors, the supervisory board, the ROC and the external auditor of CMVM. In this sense, the list that makes up the disclosure index corresponds to that recommended or required by regulations issued by CMVM and is applicable to entities issuing shares admitted to trade on a regulated market.

CMVM Regulation No. 4/2013 consists of a set of rules of conduct to be observed in the exercise of the management and control of listed companies (Moreira et al., 2004). Through this set of rules, CMVM transposes international reflections on corporate governance into the Portuguese context.

The CMVM guidelines have changed over time both in their content and in their correspondence to the regulatory environment. Initially, they were accompanied by a recommendation to publicize compliance to them. Later, an obligation was added to annually disclose data on various aspects related to corporate governance, namely information about the board of directors. Later, the obligation to disclose was extended to the supervisory body; and, years later, the obligation was again extended to reporting on the independence of the company's auditor and on fees paid to the auditor.

Notwithstanding, among all the items recommended by corporate governance, such as shareholder structure, corporate bodies and committees, internal organization, compensation, and transactions with related parties, we chose to analyse only information referring to corporate bodies and committees, which include the board of directors, the audit committee, the ROC, and the external auditor.

Thus, the global index of disclosure of corporate governance in this study comprises a total of 51 items of information aggregated into 4 main categories, which are divided into sub-indices, namely: board of directors, which comprises 23 items; audit committee, whose total number of items is 16; ROC, with 3 disclosure items; and, finally, 9 items for the external auditor.

For each company in the sample, we analysed the corporate governance report to verify whether the information contained in the index was disclosed or whether it was not applicable to the company in question. Each disclosure item included in the disclosure index was classified using a dichotomous scale with the value of 1 being assigned whenever the item in question was disclosed and the value 0 otherwise. However, when the item under analysis did not apply to the company under study, it was classified as 'not applicable'.

Thus, the value of the disclosure index for each company was obtained through the quotient between the total of items disclosed by the company under analysis and the sum of the total of items that constitute the disclosure index deducted from the number of responses classified as 'not applicable', according to the formula

$$\text{CDI}=\sum_{i=0}^{n}\frac{Ii}{R}$$

where:
CDI = Company disclosure index
n = Total number of index items
I_i= Corporate governance disclosure element and 'i' is a dichotomous variable that takes the value 1 if disclosed and 0 if not disclosed
R= Total items that make up the index after deducting items classified as not applicable

The disclosure index is unweighted. Therefore, it is assumed that all the items considered have the same level of importance for the different users of the financial statements.

3.2 Presentation and Discussion of Results

To measure the extent of disclosure of corporate governance, we prepared a disclosure index which considered CMVM's recommendations regarding the board of directors, audit committee, ROC, and external auditor.

Table 3 presents the descriptive analysis of this disclosure index.

Table 3: Characterization of the Disclosure Index

CDI (51 items)	
N	
Valid	32
Omitted	0
Average	0.9778
Median	1.0000
Mode	1.00
Deviation error	0.03786
Minimum	0.84
Maximum	1.00

As shown in Table 3, CDI varies between 0.84 and 1, with an average of 0.97728 and a deviation error of 0.03786. Considering the results obtained, we can conclude that on average, the companies under study have extremely high disclosure rates (of approximately 0.97), which shows that they accepted most of CMVM's recommendations. However, they still do not fully comply with CMVM's recommendations since there are still companies that do not disclose all the recommended information. Most companies in the sample (20 companies) have a disclosure value equal to 1, and they disclose all the information provided in the index.

If we compare our results with those obtained by Cunha and Rodrigues (2018), we see that there has been an increase in the disclosure of information, allowing us to conclude that, over the years, companies have increasingly disclosed information about their corporate governance. These authors found an average disclosure level of 51.3% for the period under analysis (2005–2011) and discovered that the value of the disclosure index increased during the period analysed, reaching an average value of 77.7% in 2011. Nine years later, we can see that the level of disclosure of corporate governance has increased over time, which means that companies have been concerned with compliance to legal guidelines and recommendations from CMVM.

However, there is a need to understand which information items are most disseminated by companies. Therefore, we created disclosure sub-indices for the 4 main categories: the board of directors, the supervisory board (or audit committee), the ROC, and the external auditor. Moreover, we calculated the maximum, minimum, average, mode, and median values to understand which items are most publicized by companies. These values are shown in Table 4.

Table 4: Descriptive Analysis of the Information Disclosure Sub-indices

Sub-index	**Board of directors (23 items)**	**Board (audit committee) (16 items)**	**Statutory auditor (ROC) (3 items)**	**External auditor (9 items)**
Average	0.9835	0.1973	1.0000	0.9878
Median	1.0000	0.0000	1.0000	1.0000
Mode	1.00	0.00	1.00	1.00
Deviation error	0.04409	0.37938	0.0000	0.03926
Minimum	0.80	0.00	1.00	0.83
Maximum	1.00	1.00	1.00	1.00

Analysing the table above, we can conclude that the items related to ROC are most disclosed by companies. The entire sample discloses all the information recommended by CMVM regarding ROC.

The sub-indices referring to the board of directors and the external auditor also show a high average of 0.9835 and 0.9878, respectively. In this sense, we can say that companies accept most CMVM's recommendations regarding these two bodies.

The least disclosed items are related to the supervisory board, which has an average value of 0.1973. These results may be due to the fact that only 7 companies in the sample have an audit committee.

4. Conclusions, Study Limitations, and Suggestions for Future Research

The main objective of this study was to analyse the extent of disclosure of corporate governance, considering the fact that it has been the subject of study for a long time and that it plays a central role within companies. According to the agency theory, corporate governance allows for mitigating information asymmetries, which increases the disclosure of information. It is essential to study the variables that influence this disclosure since the information presented by companies will enable users of this information to form an opinion and make investment decisions. Some authors argue that disclosure is a crucial factor for the functioning of the capital market.

The most common way for companies to disclose information is through their annual and corporate governance reports. In addition, companies are required by various legislative bodies to reveal certain information items to their users. In our study, we considered CMVM's recommendations to study the extent of information disclosure.

To analyse the extent of disclosure by companies, we created a disclosure index comprising a total of 51 items for each company in the sample based on the recommendations of CMVM. This allowed us to obtain information about a company's board of directors, supervisor (audit committee), ROC, and external auditor.

An analysis of the disclosure index revealed that, on average, companies listed on Euronext Lisbon comply with most CMVM's recommendations. The average value of the disclosure index is 0.977, which is close to the maximum disclosure value of 1. When we analysed the information disclosed by each category considered in the disclosure index (using sub-indices), we concluded that the most disclosed information was related to ROC, which was disclosed by all the companies in the sample. The least disclosed information was related to the audit committee, which can be explained by the fact that only 7 companies in the sample have this body. Concerning the board of directors and the external auditor, the average disclosure was also relatively high, which explains the high average value of the global disclosure index.

One of the main limitations of this study was that some companies did not provide their consolidated and corporate governance reports and accounts, which made our sample size modest. Another limitation was the methodology adopted. This is because we performed a content analysis where we only confirmed whether or not there was disclosure and did not verify the extent and quality of the disclosure.

However, this study contributes to an understanding of corporate governance in the Portuguese context as we identified which information items were most disseminated by companies.

One suggestion for future studies is to increase the disclosure index, as our index only contained CMVM's recommendations regarding the board of directors, supervisory board, ROC, and external auditor. However, if we had applied all the recommendations to our index, our results might have been different.

Future studies that may be carried out on this topic may expand the sample to include listed and unlisted companies and compare results obtained between them to understand the differences found and identify possible justifications for these differences, considering that corporate governance information is a voluntary disclosure for unlisted companies. Another possibility to study the level of information disclosure would be to compare the level of information disclosure by Portuguese companies listed on Euronext Lisbon with that of other companies listed in other countries. Finally, given the time factor, it would be interesting to extend the time horizons to understand how the level of disclosure evolves.

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Early-Stage vs. Growth-Stage Startups: Examining the Differences in the Perception of Factors Instrumental to Success

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Abstract: A stream of research available in the literature focuses on startup success factors, although there is a lack of consensus in determining what these factors are. In general, there are two critical groups of success factors, organizational and entrepreneurial, both considered to be integral parts of internal startup environment. Since the perception of early-stage (incubation stage) and growth stage (post incubation stage) startup entrepreneurs differ significantly they tend to perceive important success factors distinctively. As a result, attributes of success differ considerably. This paper aims at capturing internal startup environment as it is considered to be crucial in shaping startup's success in contrast to external environment that is more remote and (usually) not manageable. Primary data were collected using an online survey questionnaire and quantitative approach was used; data were analysed using descriptive statistics and Mann-Whitney U test. The final research sample consisted of 70 startups and the findings indicate that the perception of internal environment and its contribution to overall success differs significantly from the perspective of early-stage and growth stage startup entrepreneurs. Out of analysed internal factors, statistically significant differences were identified for prior experience in starting the company and self-confidence (individual's/entrepreneur's category factors) and internal startup organization and team-level competencies (organizational category factors). The contribution of this research is evident in identifying important internal factors that determine startup's success (that aspiring startup founders can benefit from) and providing an insight into the startup community in Croatia, thus contributing to a scarce empirical literature on the topic available. Limitations of the research include sample size and subjective assessment of the success factors, so recommendations for future research include repeating the research on a larger sample, covering the international level and widening a set of key-performance indicators that can be assessed at a higher level of rigour with objective metrics.

Keywords: early-stage startup, growth stage startup, internal startup environment, startup, success

1. Introduction

Startups are raising much interest and discussions in both academic and business circles since they become creators of new business model of the 21st century (Szarek, and Piecuch, 2018). Globalization and advancements of internet-based technologies have increased the interest in starting own business and developing startup projects, as a modern form of entrepreneurship is gaining attention. In a new, globalized economy, startup companies are considered to be generators of economic development since they provide new jobs and contribute to employment and economic growth on regional, national and industrial level (Tripathi et al., 2019). A large proportion of new ventures cease to exist within five-year period (Eurostat, 2021) so the question arises on how to identify critical success factors, and how these factors differ from the startup life-cycle perspective.

2. Literature overview

Like in the entrepreneurship domain, there is no clear and universal startup definition. Startup is a term that proliferates across mainstream and popular culture, as well academic discourse and literature (Cockayne, 2019). The most popular startup definition was formulated by Blank and Dorf (2012) outlining startup as a temporary organization in search of a scalable, repeatable and profitable business model. Interestingly, the definition does not include the words “new”, “innovative”, or “technological”, but rather focuses on the dynamics of business development (Skala, 2019). Ries (2011) states that every organization aiming at delivering new goods and services under extreme uncertainty is a startup while Damodaran (2009) points to the specific feature of startups, a high potential for growth in the company's value in the future.

It is possible to identify different approaches in the literature regarding startup development stages. Wing-Ki, Hong-Man, and Venuvinod (2005) recognize six relevant phases: (1) preparation for startup, (2) incubation process, (3) performance measure of incubate, (4) exit policies, (5) parental care, and (6) disconnect incubator. Ng, Macbeth, and Southern (2014) identify three stages: (1) early stage, (2) growth and development stage, and (3) expansion stage. Bocken (2015) recognizes four relevant stages: (1) seed stage, (2) young stage, (3) growing stage, and (4) mature stage. Sebastian and Mauricio (2017) wrap up different approaches and identify four distinctive success stages: (1) seed, (2) early, (3) growth, and (4) expansion, whereas success have different meaning depending on the development stage of the start-up. Early stages of startup development are very delicate; startups are at a high risk of failure in comparison with existing firms because of the limited availability of resources and lack of established channels with suppliers and customers (Kim, Kim, and Jeon, 2018; Tomy, and Pardede, 2018). Many startups fail in very early stages of their life-cycle and failure occurs due to typical "startup problems" such as lack of finance, team management problems, lack of adequate business knowledge, technology lag, etc. (Salamzadeh, and Kawamorita Kesim, 2015). The two main reasons for startup failure are the absent or the wrong business model and the lack of business development (Cantamessa, et al., 2018). Behind these reasons, a simple truth is hidden; entrepreneurs are usually in love with their product/service and they usually lack in business development expertise. However, startups that survive delicate stages have potential to generate positive change, economic growth and new jobs (Berger, and Kuckertz, 2016) since surviving young frms tend to grow faster than the average (Haltiwanger, Jarmin, and Miranda, 2013). Consequently, the role of startups has never been more important in ever globalizing economy (Marmer et al., 2011).

Based on systematic review of the literature Sebastian and Muricio (2017) point out that educational level doesn't necessarily have a positive impact on performance (startup founders are, on general, highly educated in comparison to other entrepreneurial forms) unless education is supplemented by skills acquired through experience. Business/management experience as well as industry experience could have significant impact on success. They also suggest that initial capital does not have to play a critical role, but rather innovative idea, market and team work make a difference. They further propose three-level classification of the factors that influence success: (1) organizational factors, (2) individual factors, and (3) external factors, of which, for the purposes of this paper, the selection was made among the most commonly investigated ones (on the level of individual and the organization since their influence is much stronger and straightforward).

3. Research methodology and research results

The main goal of this research is to identify key factors that contribute startup success and to examine the differences in the perception of success factors between early-stage and growth-stage startup founders (entrepreneurs). Startup success factors were classified as entrepreneurial (individual level) and organizational (startup level) and were described by 11 items representing level of education, work experience, entrepreneurial experience, personal investment, team composition, innovativeness and important entrepreneurial personality traits. Startup success factors were formulated drawing from previous research (Radzi, Mohd Nor, and Ali, 2017) and were modified according to research scope. Startup success included eight items representing overall satisfaction with startup performance, overall satisfaction with startup management, growth rate, market share, growth potential, innovation potential, profit, impact on society.

The sample of this research was a result of convenience sampling method and consisted of 70 startups from Croatia. The questionnaire was organized into three parts. The first part focused on general information about startup founders and startups, the second part consisted of questions about success factors while the third part captured success attributes. A five-point Likert scale was applied. In total, 70 startup founders fulfilled the online questionnaire from June to August 2021. Statistical analysis of the obtained data was conducted by SPSS software package through descriptive analysis and Mann-Whitney U test due to non-normal distribution (Gravetter and Wallnau, 2004).

Table 1: General characteristics of startup founders

	N	%
Gender		
Male	49	70,0
Female	21	30,0
TOTAL	70	100,0
Age		
18-24	4	5,7
25-30	18	25,7
31-40	32	45,7
41-50	13	18,6
51 and more	3	4,3
TOTAL	70	100,0
	N	%

	N	%
Education		
Secondary	13	18,6
Tertiary	47	67,1
Postgraduate	10	14,3
TOTAL	70	100,0
Previous managerial experience		
Not at all	8	11,4
To little extent	15	21,4
To some extent	9	12,9
To a large extent	28	40,0
To a very large extent	10	14,3
TOTAL	70	100,0
Previous industry experience		
Not at all	11	15,7
To little extent	11	15,7
To some extent	14	20,0
To a large extent	21	30,0
To a very large extent	13	18,6
TOTAL	70	100,0

Source: Research results

As it can be seen from Table 1, the majority of respondents are male (70,0%) which is in line with similar investigations (women are still generally underrepresented in entrepreneurship). There is a significant proportion of young entrepreneurs (less than 30 years) in the sample (31,4%) while the largest proportion of the sample with respect to the respondents' age, accounts for startup owners 31-40 years old. The majority of the respondents hold tertiary degree (67,1%), mostly from STEM and social sciences. Regarding previous managerial experience (e.g. team leader, project manager, head of the department, board member), the majority of the respondents have substantial experience (54,3% reported having significant managerial experience), while just under one third of the respondents (32,8%) reported having none or little previous managerial experience. With respect to previous industry related experience, 48,6% of the respondents reported having substantial industry related experience and 31,4% of the respondents have none or insignificant industry related experience.

As for the sample structure regarding life-cycle, 61 startups are in the growth stage, while nine startups are in the early-stage (albeit in different phases: preseed, seed, and early phase). Results regarding the age of growth-stage startups and developmental phases of early-stage startups are given in Tables 2 and 3.

Table 2: Growth-stage startups – company's age

When have you started a company to deliver your startup idea?	Frequency	Percent	Valid Percent	Cumulative Percent
1 year ago	12	19,7	19,7	19,7
2 years ago	11	18,0	18,0	37,7
3 years ago	10	16,4	16,4	54,1
4 years ago	8	13,1	13,1	67,2
5 years ago	20	32,8	32,8	100,0
TOTAL	61	100,0	100,0	

Source: Research results

As it can be seen from Table 2, almost half of the respondents (45,9%) have started a company four and/or five years ago. However, there is 19,7% of the startup companies in the growth-stage subsample that are still very young. As for the early-stage subsample, there is 55,6% of the startups in the seed stage while there is an equal proportion of pre-seed and early-stage (22,2%) startups (Table 3).

Table 3: Startup phase for early-stage startups

	Frequency	Percent	Valid Percent	Cumulative Percent
Pre-seed	2	2,9	22,2	22,2
Seed	5	7,1	55,6	77,8
Early-stage	2	2,9	22,2	100,0
TOTAL	9	12,9	100,0	

Source: Research results

With respect to business orientation, results are given in Table 4. As for the startup operations' orientation, majority of startups are service development and sales oriented (40%), just under one third are product development and sales oriented, and 28,6% of the startups in the sample support both product and service orientation.

Table 4: Business orientation

	Frequency	Percent	Valid Percent	Cumulative Percent
Product	22	31,4	31,4	31,4
Service	28	40,0	40,0	71,4
Both	20	28,6	28,6	100,0
TOTAL	70	100,0	100,0	

Source: Research results

Analysing composition of the sample regarding industry, the results have revealed that IoT, e-commerce, and cleantech are the most represented industries, but there is a fair proportion of startups fitting into other industries like fintech, tourism and hospitality, etc.

Table 5: Industry

	Frequency	Percent
Automotive	4	5,7
Cleantech	7	10,0
E-commerce	10	14,3
Energy	3	4,3
Fintech	5	7,1
IoT	12	17,1
Circular economy	2	2,9
Transportation and logistics	2	2,9
Agritech	2	2,9
Retail	4	5,7
Tourism and hospitality	6	8,6
Other	13	18,6
TOTAL	70	100,0

Source: Research results

As it can be seen from Table 6, mean value for internal environment is relatively high (mean=4,14), representing respondents' perception of internal environment contribution to overall startup success. As the most important factor, hard work is identified (mean=4,8), followed by personal responsibility – accountability (mean=4,6) and goals/objectives setting (mean=4,5). Factors like self-confidence (mean=4,4), innovativeness (mean=4,3), reasonable risk-taking (mean=4,2) and team composition and internal start-up organization (mean=4,2) are also considered to contribute startup success to a fair extent while factors like, level of education (mean=3,6) and previous entrepreneurial experience (mean=3,2) are considered to be less important. Since internal startup environment is composed of 11 items, a new variable was computed and Chronbach's Alpha coefficient was calculated (α=,705; N=11).

Table 6: Descriptive statistic – Internal start-up environment (factors instrumental to startup success)

	N	Mean	Std. Deviation
Level of education	70	3,6	1,231
Work experience	70	4,0	,807
Previous experience in starting a company	70	3,2	1,261
Personal investment	70	3,8	1,016
Team composition (adequate competences)	70	4,2	,849
Level of innovativeness	70	4,3	,778
Reasonable risk-taking	70	4,2	,679
Self-confidence	70	4,4	,604
Hard work	70	4,8	,447
Setting objectives	70	4,5	,717
Accountability	70	4,6	,512
Internal startup environment	*70*	*4,14*	*,457*

Source: Research results

Since variables are non-normally distributed, Mann-Whitney U test was performed. The results showed that there is a statistically significant difference in the perception of internal environment with respect to the fact whether respondents have actually started a company or still are in incubation stage (Mann-Whitney test; sig.=,000). Regarding respective elements of internal environment, three items were found to be significant - previous experience in starting a company (Mann-Whitney test; sig.=,023), team composition (Mann-Whitney test; sig.=,021), and self-confidence (Mann-Whitney test; sig.=,044).

Table 7: Startup success – growth-stage startups

	N	Mean	Std. Deviation
Overall satisfaction with managerial competencies	61	3,9	,826
Startup growth rates	61	4,2	,771
Market share	61	4,1	,899
Growth potential	61	4,4	,642
Overall startup success	61	4,1	,854
Profit	61	3,5	1,148
Innovation potential	61	4,3	,719
Impact on community/society	61	4,0	,983
Overall success	*61*	*4,1*	*,609*

Source: Research results

According to research results, respondents consider their startup to be successful (mean=4,1) as demonstrated in Table 7. Higher mean values (above average) are identified for items representing growth rates, growth potential and innovation potential while mean values for satisfaction with managerial competencies are below average (=3,9) as well as for startup's profit-generating capacity (=3,5).

Table 8: Startup success – early-stage startups

	Frequency	Percent	Valid Percent	Cumulative Percent
Growth of market share	5	7,1	55,6	55,6
Profit	2	2,9	22,2	77,8
Customer satisfaction	2	2,9	22,2	100,0
TOTAL	9	12,9	100,0	

Source: Research results

For startup success attributes 9 items were offered to early-stage startup founders: (1) profit, (2) market share growth, (3) growth in number of employees, (4) business expansion potential, (5) customer satisfaction, (6) innovation potential, (7) positive impact on society, (8) top quality of product/service, and (9) other. The respondents were asked to choose the most important aspect of success from their perspective. Majority of respondents have chosen growth of market share a single most important success attribute (55,6%) while there is an equal proportion of respondents stating profit (22,2%) and customer satisfaction (22,2%) as the most significant attributes of success as presented in Table 8.

4. Discussion and conclusion

The aim of this paper was to determine whether startup owners/founders have different perceptions of factors that shape startup's success depending on the life-cycle stage of their startup. Theoretical developments in the entrepreneurship domain suggest that early-stage and growth stage startups face different obstacles and challenges resulting in different perceptions of success and factors that determine success. Factors that shape startup's success are described in the literature as individual, organizational, and external factors. This research focuses on individual and organizational level factors (defined as internal startup environment) since their influence is direct and (to some extent) manageable.

On the sample of 70 Croatian startup companies an online survey questionnaire was carried out and data were analysed using descriptive statistics and Mann-Whitney U test (due to non-normal distribution of data). In the research sample, 61 startups (87,1%) were well beyond early-stage; almost 50% of startup founders have started their company four and/or five years ago. Nine startups (12,9%) were in the different phases of early stage (pre-sees, sees and early stage). Startup founders in the sample are predominately male (70%), well educated (67,1% hold tertiary degree) and relatively young (77,1% are younger than 40) and have significant prior managerial and industry experience. From the perspective of startup founders in the sample the most important contributors to startup's success are hard work, personal responsibility/accountability and self-confidence, which is in line with similar research in entrepreneurship domain where important entrepreneurial characteristic and personality traits are described. Further analysis showed that there is a statistically significant difference in the perception of important success contributors with respect to the fact whether respondents have actually started a company or still are in incubation stage. Regarding respective elements of internal startup environment, three items were found to be significant (mix of individual and organizational level factors) - previous experience in starting a company (Mann-Whitney test; sig.=,023), team composition (Mann-Whitney test; sig.=,021), and self-confidence (Mann-Whitney test; sig.=,044). As for the success attributes, growth-stage startups perceive success mainly through the growth prism where innovation potential is recognized as important growth leverage which is in line with theoretical propositions; startups do more than just seize opportunities, because they also create opportunities themselves (Stevenson, Roberts, and Grousbeck, 1994) using innovation as value-generating mechanism. Satisfaction with managerial competencies and startup's profit-generating capacity are inferior success attributes from the perspective of growth-stage startups. These findings are also in line with theoretical propositions; startup owners are usually deficient in managerial and other important business development related competencies, and high growth rates are critical in early stages of startup so profitability is often sacrificed in order to ensure survival. The very fact that 45,9% of the startup owners in the sample have started a company four and/or five years ago suggest that these companies are successful since survival rate of startups in the first five years is only about 45-55% in U.S. and Europe (Laitinen, 2017).

Early-stage startup founders also value growth above other important aspects of success suggesting that growth is seen as vital guarantor of survival in the most delicate stages of startup's life.

Due to limitations of presented research, primarily regarding sample size and measures applied (subjective perceptive measures), future research on the topic should include larger sample, covering the international level and widening the set of key-performance indicators that can be assessed at a higher level of rigour with objective metrics. Regardless the limitations, this research has empirical value in contributing empirical research on startup community – group of entrepreneurs that have potential to change the future.

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Exploring the links Between Ethical Leadership, Creativity and the work Environment in Hospital Wards

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Abstract: The literature indicates that a positive relationship between creativity and ethical leadership exists. It is critical to explore how this relationship can influence creative mindsets of nurse managers and nurses specifically within their work environment. The purpose of this study is to explore the influence of ethical leadership on creativity and the work environment in hospital wards. Data was collected by means of a qualitative approach. Staff from three wards in a general hospital was recruited for the study. Three nurse managers and nine nurses from three different wards in a hospital setting consented to hold semi-structured interviews. Thematic analysis was used to analyse the data from the interview transcripts. Nurses and nurse managers co-exist in a dynamic context provided through their work environment. Most respondents were able to identify creative activities in their daily work. Trust, inclusiveness and altruism facilitated learning and the development of new skills. This was manifested in environments where most respondents where receptive to alternative methods of addressing issues on the ward demonstrating a creative mindset. Nurses and nurse managers may mutually enhance their work environment by making it more engaging, by nurturing relationships, and facilitating creativity and creative mindsets by practicing ethical leadership. The study supports other research linking creativity and ethical leadership. Nurse managers and their teams have the opportunity to improve the quality of care delivery in hospital settings through their leadership style and openness to creative ideas.

Keywords: ethical leadership, creativity, creative mindset, work environment, interviews, thematic analysis

1. Introduction

Critical to any health care system nurses are the largest group of professionals in any hospital (Dall, 2009). Through their leadership styles and effective management, nurse managers are the authority figures in hospital wards typically associated with the creation of a positive work environment where staff enjoy working (Whiley, 2001). Toor and Ofori (2009, p.533) state that "leadership ought to be ethical in order to be effective and successful over the long term". Taking this statement as a baseline, this paper aims to explore the possible relationship between ethical leadership, creativity and creative mindsets, and the work environment. Considered as the foundations for values, beliefs and moral (Meriac et al., 2013) manifested through customs and conduct (Northouse, 2016), ethical issues are considered as highly relevant in relation to employee engagement (Meriac et al., 2013) and creativity (Asif et al., 2020).

2. Theoretical background

Defined as an influencing relationship between leaders and followers with the intention to create change (Rost, 1993), leadership has acquired prominence in influencing and transforming employees' needs and behaviours (Bass, 1985). This is also the case in hospital settings through a shift towards transformational and distributed styles of leadership (Turnbull James, 2011). Over time, leadership has acquired "a critical role in shaping the conditions for staff to deliver quality care" (Henderson, 2015, p. 793). Notwithstanding the definition, in the management of wards, the dual role of nurse and nurse manager exists and can potentially place the nurse manager in difficult situations on different levels (Divall, 2015). Ethical behaviour in nursing has long attracted the attention of researchers (de Casterlé et al., 2008; Goethals et al., 2010), with de Casterlé and colleagues raising concerns about ethical competence in hospital settings. Influenced by personal and contextual factors, the ethical behaviour of nurses has been identified as a complex process involving reasoning and decision making leading to the implementation of a selected decision (Goethals et al., 2010). Following a review of existing literature, the authors found that a balancing act was necessary. They must reconcile their own values with those of hospital, ward, patients and their relatives before making decisions. It was found that often conformity with previously dealt with issues is more feasible than applying their own ethically desirable approach. Rabie and Abdul Malek (2020), found that ethical behaviour in the work environment is associated with ethical leadership. Their findings indicate that this association is mediated by mechanisms of moral attentiveness.

Ethical leadership seeks to promote leadership skills through good conduct and character. Defined as ''the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making'' (Brown et al. 2005, p. 120), ethical leadership presents opportunities for exploration of its implications across different group and organisational settings. Toor and Ofori (2009) claim that not enough has been done to explore ethical leadership from an empirical point of view. Exploring the relationship between leadership employee outcomes and organisational culture, in their study the authors found that ethical leadership is positively linked to leader effectiveness and to the willingness of employees to put in extra effort in their work. It may be postulated that resting on good conduct and good character traits (Northouse, 2016), an ethical style of leadership may lead to an enhanced climate within the organisation (Aloustani et al. 2020). In exploring the impact of Moral Case Deliberation with first-line managers where moral reasoning took place to collectively explore moral issues, Silen and Svantesson (2019) reported that positive outcomes emerged through an enhanced ethical climate also implying group cohesion.

Nursing studies have also expanded to feature in the field of creativity. Amongst a myriad of definitions, some agreement seems to have been established in claiming that creativity involves novelty and usefulness (Mumford, 2003) or effectiveness (Runco & Jaeger, 2012). Creativity is something that we engage with regularly (Richards, 2018). As early as 1992, Ferguson referred to creativity in nursing as being a process that takes place both a conscious level and also unconsciously. Ma et al. (2018) conducted an integrative review to explore the concept of creativity in nursing literature. Through their review, they found that a variety of intrinsic and extrinsic factors may influence nurses' creativity. They also noted that creativity could be enhanced through self-directed learning and group work. Clark (2008) maintains that nurse managers need to practice problem solving skills on the job to address emerging situations by calling on their creative thinking. She goes on to elaborate that this is done by inventing new solutions by putting imagination and skill to use thus practicing 'creative nursing leadership'.

Collecting data from nurses and their supervisors, Malik et al. (2016) found that effective leadership is positively correlated with employee creativity. In another study, Nasser et al., (2021), explored the relationship between ethical leadership and creative process engagement with a mediating effect of leader-member exchange quality. They found a positive correlation and recommend more emphases in social activities that can enhance creative behaviour in a climate where there is ethical character and good conduct. Snow (2019), aimed to equip nurse leaders with methods that they could use to facilitate problem solving with the hope that a creative climate is established among the workforce. Using facilitative leadership styles like transformational leadership, she hoped that nurse leaders may inspire others to take the risk, be innovative to ultimately deliver better quality of care.

It must be noted that nurses and nurse managers work within an organisational context. The work environment has long been known to influence creativity in groups and individuals (Hamlin & Sawyer, 2007). Encouragement, autonomy, resources, pressures and organisational impediments are five conceptual constructs of creativity that influence while also impacting the work environment (Amabile & Mueller, 2008). Although the work environment could determine the extent of creative activity of individuals, the role of the creative person who may manifest attributes indicating a predisposition to creative activity is also critical. Mlodinow (2008) claimed that there may be a link between high motivation levels and creative activity. This activity may also be facilitated through the establishment of a creative mindset which is defined by Karwowski (2014:62) as "beliefs about the stable versus-malleable character and the nature of creativity". Makel (2008) and O'Connor et al., (2013) have studied aspects related to fixed or growth (incremental) mindsets. Their findings indicate that a growth mindset enhances the disposition for individuals to work on tasks that require creativity like searching for solutions when problems need to be addressed.

2.1 Research question

Following a review of the pertinent literature, the main constructs were set to be explored from an empirical point of view. The perspectives of nurses and nurse managers were sought to acquire a better understanding of the link between the key constructs. To this end we formulated the following research question to guide our study:

How may ethical leadership, creativity and creative mindsets be linked in hospital wards?

3. Methods

Data for this study was collected from nurses and nurse managers working in the main general hospital in Malta (European Union) using semi-structured face-to-face interviews. All ethical procedures were adhered to as per regulations of the University Research Ethics Committee at the University of Malta, and the Research Ethics Committee of the General hospital.

3.1 Data collection

To capture the work environment, three groups were created; A, B, and C representing each participating ward. Recruitment was difficult due to the heavy workload and fatigue experienced by staff members at all levels. Once consent was granted through the intermediary, a schedule to conduct the semi-structured interviews was set up. The interview questions were structured in three sections in a way to address the core constructs relating to ethical leadership, creativity and creative mindset, and the work environment.

3.2 Sampling and recruitment

Twelve respondents were recruited through voluntary participation with each respondent being approached through an intermediary to allow the participants to make opt in or out without feeling coerced. The establishment of the sampling criteria identified nurses who had worked in the same ward where the data was collected for at least one calendar year prior to data collection. This criterion was set to ensure that respondents were familiar with the modus operandi on the ward and for them to have acquired a good sense of the working dynamics. Moreover, their educational background had to include either a diploma or a degree in nursing. The criteria for nurse managers were minimal to facilitate the uptake of respondents since the aim was to have nurses and nurse managers from the same wards included in the study. Nurse managers had to be in the position for at least one year prior to data collection.

3.3 Data Analysis

Semi-structured interviews took place lasting approximately sixty minutes with each participant. The aim was to elicit as much information as possible in a natural, yet reflexive way from the participants. With the aim to address a gap in the existing literature about nursing and nursing management, a pragmatic approach (Weaver & Olson, 2006) was used. All interviews were audio-recorded with the permission of respondents and transcribed manually. Thematic analysis was used to analyse the data collected due to the specific characteristics of this method.

"Thematic analysis is a method for identifying, analysing, and reporting patterns within data" Braun and Clarke (2006, p. 6). The authors claim that thematic analysis can be a method used to report on the lived experience of participants by interpreting their reality and meaning. Moreover, they argue that themes can capture important elements in relation to the research question and need not depend on quantifiable measures. The six steps identified by Braun and Clarke (2006) were followed to give structure to how interpretation of the data collected could be allocated while undergoing a process of reflexivity throughout the process. Phase one involves the familiarisation with the transcript data. This involved reading the transcript a number of times including reading while playing the audio to check for any mistakes that may have occurred during the transcription process. In phase two of thematic analysis initial codes were generated. Codes were generated by first making a list of different elements that seem meaningful. After reading the transcript various times and going over this process, the codes are divided into meaning categories. This leads to the third phase of the project; searching for themes. Throughout the process it becomes evident that some topics become recurring, thus reinforcing the aspect which they address. In this case the themes were related to ethical leadership, creativity and creative mindset and the work environment. In the following phase these themes were subsequently reviewed by ensuring that there is enough data to support them. In organising the data this process leads to a 'map' of how the data can be organised to have a meaning leading to the next phase which involves the naming of the themes. This phase requires the researcher to have a definition for each theme that emerges. The sixth and final step in thematic analysis involves the writing out of the findings. The process evolves naturally, however being aware of the steps adds a mindful stance to the activity involving a higher level of reflexivity. This involved the questioning and reviewing of the process undertaken during the analysis to ensure the trustworthiness of our study. Trustworthiness in qualitative research is a way in which researchers make their work noticeable (Lincoln & Guba, 1985).

4. Findings

The study aimed to explore how ethical leadership creativity and creative mindsets in hospital wards may be linked. Several themes emerged from the collected data guiding us to get a picture of how respondents see the link between ethical leadership, creativity and creative mindsets, and the work environment. A description of the demographic data of the sample population can be found in Table 1.

Table 1: Demographic data representing the sample

Age and Gender	Educational Background	Duration of employment on the ward	Role	Ward (letter) and Code
52; Male	Master degree	2 years	Nurse manager	A1
23; Female	Batchelor degree	2 years	Nurse	A2
23; Female	Batchelor degree	2 years	Nurse	A3
27; Female	Batchelor degree	3 years	Nurse	A4
50; Female	Diploma	4 years	Nurse manager	B1
25; Female	Batchelor Degree	3 years	Nurse	B2
25; Female	Batchelor Degree	4 years	Nurse	B3
53; Female	Diploma	10 years	Nurse	B4
35; Male	Master degree	1 year	Nurse manager	C1
45; Male	Master degree	20 years	Nurse	C2
40; Male	Batchelor degree	15 years	Nurse	C3
27; male	Batchelor degree	3 years	Nurse	C4

Participants were asked to interpret the term 'creativity'. Their responses were grounded in positivity, improvisation and how to be effective and efficient. Effectiveness in particular is in line with the definition of creativity by Runco and Jaeger (2012). Responses that support this view of being efficient and effective include the following:

> *"I find that resources are very limited to work with and creativity is having to work with what you have.* (A3)

> *"To paint with the colours that are available"* (C1).

The element of improvisation appears to be in line with Clark (2008) when referring to the need to use skill and imagination when on the job in relation to creative nursing leadership. It is understood that improvisation in current context refers to decision making and finding solutions on the job. A respondent supports this view by stating that:

> *"you have to stay positive and improvise according to the situation you are facing"* (A1).

Further analysis by re-reading transcripts led to the outcomes presented in Table 2. The table presents the three main themes, sub-themes and the categories that emerged from the analysis. These labels were developed throughout the six-step process identified above. Following the grouping of codes, the categories emerged. They were then separated into the different themes related to ethical leadership, creativity and creative mindset and the work environment. The theme related to ethical leadership seemed too broad to describe the manifestation of these elements. This led to a further breakdown into three sub-themes, namely ethical behaviour, approach to leadership and leader characteristics.

Table 2: Emerging themes

Main Themes	**Ethical Leadership**			**Creativity and Creative Mindset**	**Work Environment**
Sub-themes	**Ethical Behaviour**	**Approach to leadership**	**Leaders characteristics**		
Categories	Openness	Collaboration	Way of doing things	Personal disposition	Stress and stressors
	Values	Influence of team work	Skills	Idea generation and alternative seeking	Workload
	Altruism	Empowerment	Affect	Sharing of ideas	Time

Main Themes	Ethical Leadership			Creativity and Creative Mindset	Work Environment
	Trust	Development of skills	Character	Problem solving	Motivation and Motivators
	Inclusion	Teaching/ Learning modes			

4.1 Creativity and Creative Mindset

Creativity and creative mindset came across as a strong theme in current study. The following sub-themes emerged in relation to a creative mindset: (a) personal disposition to be creative; (b) idea generation and alternative seeking; (c) sharing of ideas; and (d) problem-solving.

From Ward A, a respondent gave a practical example of how the openness to different alternatives could be manifested on the ward. The notion of everyday creativity (Richards, 2018), or on the job creativity features as an important element when the nurse needs to think about a situation at hand.

> *"I think one example would be when dealing with a confused patient and you need to lead them back to their bed."* (A2)

Other nurses acknowledged that they have new ideas on a daily basis implying that they are aware of creativity and practice it regularly thus showing a disposition to a creative mindset. The manifestation of their ideas did not feature only in how they performed patient care. Participant C4 mentioned a specific incident where he had to be creative to get management to approve a new staffroom.

Nurse Manager A1 claimed that when solving problems there is no option other than having a creative mindset since the best and most appropriate solution needs to be identified. The nurse manager went on to align traits that might promote a creative mindset.

> *"As I said, space and the gift of initiative, and a certain weight of responsibility towards the patient are all factors that influence a creative mindset"* (A1)

In terms of fostering a creative mindset and qualities about modes of thinking associated with it, such as convergent and divergent thinking, a response in particular captured the notion of the disposition to nurture this trait while also showing elements of a supportive leadership style.

> *"My vision is in empowering my staff to have ideas and implementing them."* (C1)

Overall, respondents from the two out of the three wards showed an appreciation of creativity and an inclination towards a creative mindset. Respondents from Ward B however, indicated more of a fixed mindset in seeking the establishment of routine and the need for stability without seeking continuous improvement. This attitude was linked to a heavy workload. The term creativity was unfamiliar to respondents from this ward in its potential relationship with nursing practice with the statement below indicating either a total misconception of the term creativity or the importance attributed to routine work. The respondent did not elaborate further therefore this aspect could not be clarified.

> *"I don't think there is any creativity in nursing."* (B3)

4.2 Ethical Leadership

This was the broadest theme identified during the analysis of the data collected. Leadership proved too be broad and was split into three; ethical behaviour, leadership style referring mainly to transformative leadership and leadership skills referring to soft skills. Within these two categories, sub-themes were identified. Within the sub-theme of ethical behaviour, the following themes sub-themes emerged: (a) openness; (b) values; (c) altruism; (d) trust; (e) inclusion. For leadership style we identified: (a) collaboration, (b) influence of teamwork; (c) empowerment; (d) development of skills; (e) teaching and learning modes. Within the sub-theme related to leadership skills, the emerging sub-themes were: (a) characteristics; (b) skills); (c) affect; (d) character. It was interesting to note that besides the leader-follower relationship, these other elements emerged. Respondents from Ward A were consistent in highlighting positive aspects that nurture human relationships and that foster an environment for creative effort.

"(The nurse manager) a person in charge with the ability to listen, socialise, and be assertive, show respect and do what is right. Communication skills are very important". (A2)

"(The nurse manager) someone who tries to bring everyone together and to move us in one direction. I like how the leader works in the ward." (A4)

In an empowering stance hinting at an element of mentorship, the nurse managers of Ward B and Ward C1 stated the following:

"You need to model the image that you want them to be. Other people see you as leader, you do not see yourself as leader." (B1)

"Like being the first horse pulling a carriage, the leader is the person that gives the first push towards a direction. Always be with a smile and don't bother your staff with your problems unless it affects them directly. They have to worry (care) for the patients". (C1)

Aspects of openness and inclusion may be observed in the excerpts below:

"The leadership in this ward helped me to mature in my profession and to keep motivated to continuously learn and work in a team. Ideas are always welcomed." (C2)

".. we work as well on days when the nurse manager is not present as much as when he is. We communicate and lead ourselves through the day". (A2)

This is further supported when in a separate interview the nurse manager of the same ward claimed that:

"I give them space and freedom to do their practices in their own way and style. If there is an environment where it is safe to be free to voice your opinions and knowledge without judgement it will greatly improve the conditions to be creative." (A1)

4.3 Work environment

This theme refers to elements in the occupational context that impinge on ethical leadership and the creative mindset as perceived by the respondents. They seemed aware that the work environment provides instances that facilitate processes and others that hinders them. For instance, in relation to creativity and the facilitation of a creative mindset, the nurse manager in Ward A stated that:

"The work environment helps and hinders at the same time. It pushes you to solve problems, so you have to be creative whether you like it or not because if the solution is not found I have to answer to it all and it affects everyone negatively." (A1)

Apart from the direct reference to creativity, this respondent acknowledges the role of a leader and the responsibility that it brings with it. Altruism can also be observed in this excerpt. Within this broad theme, respondents identified the following sub-themes that were consistently referred to in various instances during different interviews: (a) stress and stressors; (b) workload; (c) time; (d) motivation and motivators. Respondent B1 another nurse manager for instance, indicated that the workload and time pressures influence the generation of ideas negatively by stating that:

"The environment here is hectic and there is no time to think about new ideas unless it solves the immediate problem." (B1)

Different attitudes emerged possibly owing to the nature of the ward setting and personal dispositions.

Workload and stress appear to be another impediment in relation to the enhancement of a creative mindset as claimed by the following respondent:

"sometimes the workload becomes too overwhelming at certain points of the day, and during those times you just focus on your work and pray that it will calm down for a few moments to take a breather!" (A2)

This comment however is countered by a nurse working in a different ward.

> *"The work environment helps me a lot to facilitate my creative intent. Work is your second home and it is up to you to make it, even though higher management provides a lot of barriers. Within nursing care there are standards, but I use creativity when I need to improvise."* (C2)

The above excerpt makes explicit reference to the creative mindset of individuals in relation to how one deals with the work environment while still engaging with creative activity. Moreover, the reference to work being the "second home" could be an indication that affect and belongingness are relevant elements to foster a creative mindset in the work environment. In this case, the work environment appears to act as a motivator that can lead to a creative mindset.

While acknowledging that creativity is critical in nursing, the following response by nurse manager C1 addresses issues of open-mindedness. It is not clear how this nurse manager addresses issues related to "lack of open-mindedness", however, as a leader he demonstrates the practice of the skill of observation and acknowledgement of the different abilities of the team members.

> *"The nursing profession is nothing without creativity. It would not be nursing!"* (C1)
>
> *"The lack of open-mindedness from employees does not help."* (C1)

5. Discussion

The aim of this study was to explore how ethical leadership, creativity and creative mindsets may be linked in hospital wards. Adopting a qualitative approach presented an opportunity to obtain a better worldview of our respondents. Overall, it can be noted that there is a positive influence among the three constructs. Supporting Hamlin and Sawyer (2007), the work environment emerged as an important element that may catalyze creativity and creative mindsets through ethical leadership. In line with Asif et al., (2020), the findings indicate that a sense of belonging and the positive attitude through ethical leadership of both nurse managers and nurses induces affective commitment that facilitates creativity and promotes a creative mindset. While de Casterlé et al., (2008) referred to issues with competence in relation to ethical behaviour in hospital settings, in the three wards where the respondents came from, ethical behaviour under the guise of leadership came across positively and in relation to empowering actions. This appeared to have a positive influence on creativity through the creation of effective ideas on a regular basis (Richards, 2018), such as when nurses need to usher confused patients back to bed thus supporting the definition by Runco and Jaeger (2012). A further notion of the positive link between ethical leadership and the engagement with creative activity including a creative mindset support the claims by Nasser et al., (2021). Overall, ethical behaviour appeared to act as a facilitator of creative activity. Empowering social activities when in the ward in an environment of trust could be conducive to creative activity. This was exemplified when respondents singled out instances when it happens. Hospital environments are sensitive workplaces. Having trust in nurses to run the ward in the absence of the nurse manager illustrates this element in our findings. Autonomy and encouragement and workplace constraints as identified by (Amabile & Mueller, 2008) appear to be symbiotic in the manifestation ethical leadership, creativity and creative mindset and the work environment. The work environment itself offers opportunities for the execution of ethical leadership principles on a learning ground through group work (Ma et al. 2018).

5.1 Limitations

The main limitation of the study is the small sample size leading to the impossibility of generalisation. The experiences described are limited to the respondents' experience on the respective wards. It would be useful if more wards in different hospital settings both locally and abroad could express their views in relation to the three key constructs. From an academic perspective this would further enhance the extant literature bringing the constructs together. From a practical point of view, nurse managers could benefit from further education on 'how-to guides' that may support them in the facilitation of an environment that is conducive to creative mindsets through their leadership skills in an ethical manner.

6. Conclusion

Nurse managers and their teams have the opportunity to create engaging work environments where mutual work relationships can be nurtured while fostering a creative mindset that can lead individuals to more malleable attitudes when seeking solutions to improve the quality of care delivery in hospital settings. This can be achieved through ethical leadership. Nurse managers and their teams have the opportunity to improve the quality of care delivery in hospital settings through their leadership style and openness to creative ideas.

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A Legislative Amendment Within Dutch Mental Healthcare Increases the Administrative Burden: A Follow-Up Study

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Abstract: *Background:* To be accountable to laws and regulations, healthcare professionals spend more than 40% of their time on administrative tasks. The Compulsory Mental Healthcare Act (CMHA) was introduced in Dutch mental healthcare in 2020. It was hypothesized that this legislative amendment would raise the administrative burden for some care professionals. Pilot studies in 2020 and 2021 visualized the exponentially rise of the administrative burden for care professionals, especially psychiatrists due to the transition. However the total response was too small and not generalizable. *Aim:* gain more nationwide insight in the hypothesized raise of administrative burden of psychiatrists due to the implementation of the CMHA. *Method:* Under the leadership of an advisory board of three medical director psychiatrists, a Likert scale questionnaire was further developed to investigate the administrative burden of psychiatrists in the Netherlands before and after transition. Open-ended questions provided the opportunity for feedback from the psychiatrists. The study was supported by the Department of Medical Directors (DMD) of The Netherlands Psychiatric Association (NPA). *Results:* all mental health institutions members of the DMD of the NPA received an invitation to participate. 14 institutions (total N=158) responded. The data show a significant change in the time spent on administrative tasks, the usefulness of the administrative actions, the fit for use and ease of use of supporting systems. The forementioned all decreased significantly after the implementation. *Conclusion and discussion:* Psychiatrists spend more time on administration than before the legislative amendment instead of helping vulnerable patients. None of the institutions has been able to use the transition to its advantage given the time spent on administrative tasks and the usefulness of these tasks. This is an unacceptable development in the field of mental health in the Netherlands and should be addressed to those who are responsible for the decision making, especially policy makers. These results show that the introduction of the CMHA have made the field of Dutch mental health an impossible area to work for.

Keywords: Dutch Mental Healthcare, Administrative burden, Legislative amendment, Public governance, Information Management

1. Introduction

Healthcare professionals are experiencing increasing friction between complying with law regulations and providing the necessary care to their clients. These frictions are classified in the literature under concepts such as red tape, ordeal mechanisms and administrative burdens (Madsen, Mikkelsen and Moynihan, 2022). In the case of reducing administrative burdens, there is already quite a lot of research, however these studies mainly focus on reducing the measurable 'costs' incurred by an institution or company and less on the governance of administrative burden experienced by the individual (Nielsen et al., 2017; Larjow, 2018).

Before the COVID-19 pandemic, 40% of the working time was spent on administrative tasks and despite all the improvement initiatives, this burden have increased for decades (Veenendaal, Waardenaar and Trappenburg, 2008; Joldersma, Laarman-Wierenga and Brink, 2016; Ministry of VWS, 2018; Lint, 2019; Hanekamp, Heesbeen and Taks, 2020; Keuper, Batenburg and Verheij, 2022). Various studies indicate that this problem is an international issue (Cebul et al., 2008; Brown, Enticott and Russell, 2021; Chernew and Mintz, 2021). This issue has a severe impact on the functioning and satisfaction of healthcare staff (V&VN, 2019) and appears to be one of the reasons for resigning (Ahli, 2019).

The Dutch ministry of Healthcare indicates that the administrative burden is due to the interpretation of legislation and regulations by the healthcare institutions and its employees. The legislation and regulations themselves can provide additional registrations in the actual time spent, but the experienced burden cannot be attributed to the legislation (Ministry of VWS, 2020a). This perspective was not recognized in healthcare institutions.

Healthcare professionals within mental healthcare institutions experience the highest administrative burden (Bronkhorst, 2019; Hanekamp, Heesbeen and Taks, 2020). In order to better protect the needs and legal rights of patients and their relatives, the Special Admissions Act in Psychiatric Hospitals (SAAPH) was replaced by the Compulsory Mental Healthcare Act (CMHA) on January 1, 2020. The SAAPH was aimed at arranging compulsory admission, while the CMHA focuses more on the treatment of the patient (The Dutch mental healthcare, 2020). Before this legislative amendment, psychiatrists indicated that mandatory administration was the main cause of the extreme workload they experienced in their daily clinical practice (Joldersma, 2019). Maris et al. (2021) indicated that this legislative amendment has consequences for the perceived administrative burden in mental healthcare, especially in the case of psychiatrists. However, this result was insufficiently generalizable for the entire sector.

The aim of this study is to conduct a nationwide study in the field of psychiatry with the main research question: *To what extent does the perceived administrative burden of care professionals within Dutch mental healthcare, specifically that of psychiatrists, differ before and after the legislative amendment from the SPAAH to the CMHA?*

In the remainder of this paper, the core concepts of this research, 'administrative burden', 'change in law' and 'Dutch mental healthcare' are discussed, followed by a description of the research method. The results of this study are presented in the results section. Conclusions, recommendations for further research and limitations are described in the last sections.

2. Theoretical perspective

2.1 Administrative burden

Wilson (1887) wrote that administration is ‘the most obvious part of government; it is government in action; it is executive; the operative, the most visible side of government’. Nowadays, several terms are used when referring to the concept of the burden of these administrations. The Dutch Ministry of Health (2017) commissioned research into the relationship between these concepts (figure 1).

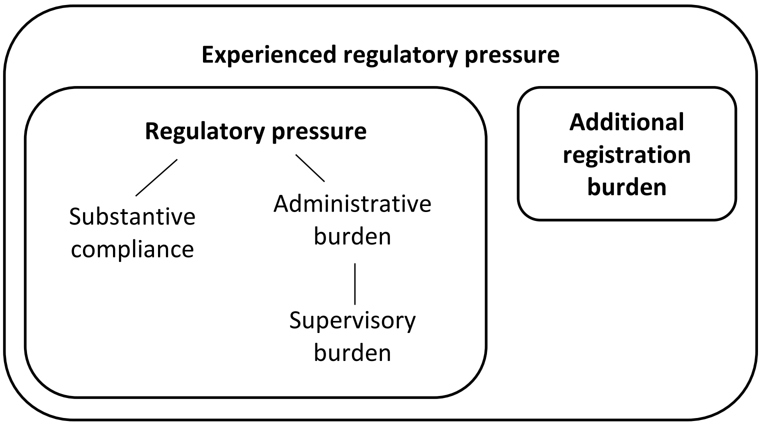

Figure 1: Relationship between concepts (Berghuis, Schimmel and Zuurbier, 2017)

Within the concept of regulatory pressure, the Dutch Ministry of Health distinguishes between administrative burden and substantive compliance burden. Administrative burden involves the collection, processing, registration, storage, and provision of information required by the central government. Supervisory burden concerns information obligations that are necessary in the context of supervision by the central government. This is about complying with governmental laws and regulations.

Substantive compliance burden on the other hand includes compliance with norms, standards and codes of conduct set by central government. Additional registration burden includes all (information) obligations to parties other than the central government, such as municipalities, insurers and care offices. All concepts are about experienced regulatory pressure and they do contribute to the ‘experienced regulatory pressure' by healthcare professionals.

Boog, Suyver and Tom (2004) understood 'regulatory pressure' as the experienced burden of an individual to comply with information obligations resulting from legislation and regulations. In this description is the emphasis placed on how the individual experiences complying with information obligations. The registration pressure experienced by healthcare professionals is mainly determined by the time required for registrations, the rate at which this individual performs the registration tasks and the frequency with which the registration tasks must be performed.

Michel (2017) shows in her thesis 'Into the black box of a nursing burden', that nurses especially have difficulty organizing administrative tasks in addition to care tasks. Moreover Vilans, one of the research offices commissioned by the Ministry of Public Health, recognizes that healthcare professionals as end-users of administrative rules have difficulty streamlining administrative work processes and care processes (Stekelenburg and Smit, 2022). Bronkhorst (2019) sees the perceived regulatory pressure of healthcare professionals as *'the perceived pressure that arises from the accumulation of administration, unnecessary bureaucracy and procedures that do not contribute to the goal of insight into care'*.

According to De Veer et al. (2017), this high administrative pressure can be felt in all sectors of healthcare. Two types of administration are distinguished: patient-related administration and non-patient-related administration. Patient-related administration is, for example, writing reports, writing a care plan, or completing checklists. Non-patient administration is, for example, recording hours worked or recording reports of incidents.

All definitions consider administrative burden as a single concept. Van Loon et al. (2016) were the first researchers to unravel this concept. They distinguish two dimensions: the perceived 'lack of functionality' and 'compliance burden'. Administrative burden is defined as the excessive or unnecessary amount of time, energy or other resources spent obeying a rule.

2.2 From admission act to treatment act

In the Dutch mental health sector, the CMHA regulates all the rights of persons who come into contact with compulsory care due to mental disorders since January 2020 (The Dutch mental healthcare, 2020). This law is for persons whose mental disorder leads to behavior that can cause serious danger to themselves or their surroundings. The CMHA is primarily a care act and not an admission act. Within the SAAPH, compulsory admission was mandatory. The patient has a better legal position within the CMHA. They will have a say in their process and have the right to provide a self-written care map and a plan of action.

Only when someone is forced to be admitted to, a psychiatric hospital, for example, can compulsory care be applied by a judge or mayor for a certain period of time. So, the provision of compulsory care is only applied in extreme cases. The basic principles with which compulsory care must comply are laid down in the CMHA. These include *proportionality* - the interest in proportion to the infringement, *subsidiarity* – the best and only way to achieve this and *effectiveness* - achieve what you want to achieve with the infringement (Ministry of VWS, 2020b).

2.3 Dutch Mental healthcare

As mentioned before, healthcare professionals spend about 40% of their time on administration (Hanekamp, Heesbeen and Taks, 2020; Van Ark, 2020). As visualized in figure 2, healthcare professionals within Dutch mental healthcare organizations experience the highest regulatory pressure (Bronkhorst, 2019).

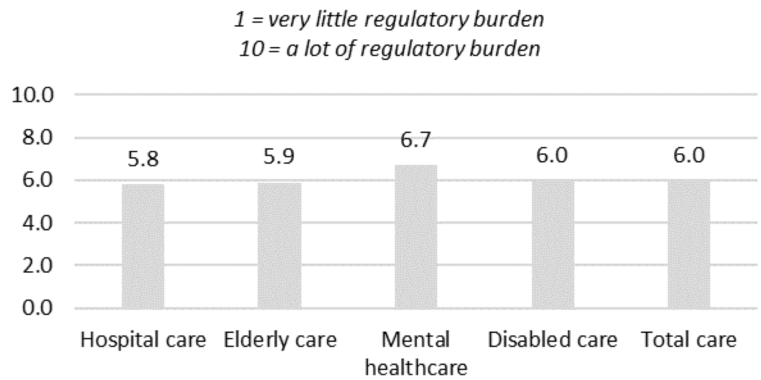

Figure 2: Measured perceived regulatory burden by Dutch healthcare professionals (Bronkhorst, 2019)

Seen separately, the lack of functionality and compliance burden are also appear to be greatest in mental healthcare (figure 3).

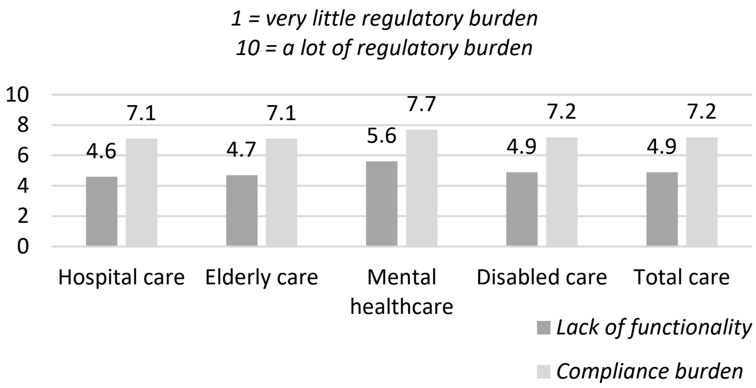

Figure 3: Measured lack of functionality and compliance burden (Bronkhorst, 2019)

Psychiatrists indicate that they see mandatory administration as the main cause of the extreme workload they experience in their daily clinical practice (Joldersma, 2019). Such a high perceived workload has a negative effect on the job satisfaction of psychiatrists (Van Ark, 2020).

3. Method

This research describes the possible change in the perceived administrative burden among Dutch psychiatrists in the context of a legislative amendment. A descriptive survey research method is chosen because the large amount of psychiatrists and nationally spread (Salaria, 2012).

In response to critical feedback from respondents to the original questionnaire, the survey from previous studies has been improved. To measure the administrative burden in an unbiased way, eight questions related to the general concept of 'administrative burden' are added. Based on the dimensions of van Loon et al. (2016) three questions are about usefulness and necessity and three questions about time pressure. The other two questions concern the degree of support of the ICT systems in which the registrations are entered. As in the original questionnaire, all individual registrations relating to the SAAPH as well as the CMHA were also requested in this survey. This time not only was attention paid on the ‘spent time’, but also the usefulness and necessity was taken into account. Subsequently, the questionnaire was linguistically updated in collaboration with an advisory committee consisting of three medical directors and a linguistical expert, also a psychiatrist. This improved the readability of the questionnaire and the unambiguity of the questions as well improved the quality related to the subject. The final questionnaire starts with five general questions to determine whether the respondent really belongs to the target group. Subsequently, eight questions were formulated to determine the overall perception of the administration burden at the time of the legislation. In addition to the overall perception, the change in usability and time pressure of 14 individual administrative actions was measured. Five of these actions relate to the objectives of the amendment to the law, such as more control for the client and better collaboration with the judiciary and municipalities. The other nine questions were related to the daily treatment process. All questions related to the administrative burden are measured for the SAAPH (before the transition) and to the CMHA (after the transition) on a 5-point Likert scale. Finally, an open question is formulated about how the transition was experienced. The questionnaire is available in Dutch upon request by the authors.

The online questionnaire was distributed using Qualtrics. For the distribution of the survey, the privacy of the professionals has been taken into account in accordance with Dutch (AVG) and European (GDPR) legislation. For this study, the names and e-mail addresses of the respondents were kept in the vaults of the healthcare organizations. An unique link was created for each respondent by the researchers. This link was linked by the secretariat of the healthcare organizations to the data of the organizations (name and e-mail address of the respondents). This allowed the secretariat to send a personalized bulk email to the psychiatrists inviting them to complete the survey with their personal unique links. The bulk email content was also the invitation as well the informed consent for participation. If someone did not want to participate, he could throw the e-mail away. If someone was willing to participate, he could click on the link and answer the questions from the online survey. Because this method was complicated for the secretariats, a manual was made with a step-by-step plan including a telephone number for support that could help the secretariat. With the help of department of the Medical Directors of The Netherland Psychiatric Association, the survey was successfully distributed through various secretariats nationwide. Successively, within two weeks, a reminder was also sent to the participants via the secretariats. In total, 158 responses were registered from 14 different institutions.

The results of the Likert scale questions were quantitatively analyzed using SPSS version 25. The data reliability was tested with a factor analysis and Cronbach's alpha score and the change in administrative burden was analyzed using a Paired sample T-test. The answers on the final open question were open coded (text labels are connected with text fragments) using Atlas.ti 9. The codes are visualized in a structured mind map using axial and selective coding.

4. Results

Ultimately, 158 respondents from 14 organizations, spread across the Netherlands, completed the survey. According to the Dutch Central Bureau of Statistics, there were 3,845 registered psychiatrists in 2020. 2,070 of these psychiatrists worked at a mental health institution (StatLine, 2022). These numbers have been fairly stable in recent years. Table 1 shows that 138 psychiatrists completed the survey. This means that almost 7% of the total number of registered psychiatrists participated.

Table 1: Sample details

Age	
Less than 29	0
30-39	35
40-49	41
50-59	49
older	33

Primary function	
Psychiatrist	122
Psychiatrist medical director	16
Psychiatrist in training	0
Other	20

Work experience within mental healthcare	
Less than 1 year	3
1-4 years	29
5-9 years	35
10-14 years	41
15-19 years	15
more than 19 years	35

A factor analysis and reliability test was conducted before the elements Usability, Time pressure and ICT support were merged. The factor analysis showed that both before and after the amendment of the law, the elements consist of the same items (Table 2).

Table 2: Factor analyses

Rotated Component Matrix SAAPH[a]			
	Use	Time	ICT
R3_1	0.853	-0.064	0.221
R3_2	0.924	-0.026	0.082
R3_3	0.788	-0.077	0.056
R3_4	-0.127	0.805	-0.018
R3_5	-0.011	0.875	-0.097
R3_6	-0.024	0.823	-0.165
R3_7	0.124	-0.060	0.928
R3_8	0.167	-0.186	0.896
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser normalization.			
a. Rotation converged in 4 iterations.			

Rotated Component Matrix CMHA[a]			
	Use	Time	ICT
R2_1	0.895	-0.076	0.162
R2_2	0.906	-0.209	0.096
R2_3	0.853	-0.136	0.035
R2_4	-0.191	0.871	-0.060
R2_5	-0.078	0.935	-0.001
R2_6	-0.147	0.844	-0.178
R2_7	0.074	-0.088	0.921
R2_8	0.146	-0.087	0.913
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser normalization.			
a. Rotation converged in 4 iterations.			

The reliability of the combined items is tested with the Cronbach's alpha score (table 3). These scores are all above 0.7, which is in this research context acceptable (Bland and Altman, 1997).

Table 3: Reliability analysis

	SAAPH			CMHA		
	Use	Time	ICT	Use	Time	ICT
Items	3	3	2	3	3	2
Cronbach's Alpha	0.828	0.795	0.853	0.885	0.876	0.841

Table 4 shows that the usability (1) has increased by 0.667 points (SD 0.998). This means that administrative tasks are seen as more of a necessity after the amendment of the law. The time pressure (2) has decreased by 0.848 points (SD 1.050) which means that administrative tasks take more time after the amendment of the law.

ICT support (3) has also deteriorated after the amendment of the law. This factor increased by 0.563 points (SD 1.178). All differences mentioned are significant ($p < 0.001$).

Table 4: Paired sample t-test overall perception

		Paired Differences		t	df	Sig. (2-tailed)
		Mean	Std. Dev.			
1	Use	0.667	0.998	8.395	157	0.000
2	Time	-0.848	1.050	-10.148	157	0.000
3	ICT	0.563	1.178	6.011	157	0.000

In more detail, the differences per individual administrative action have been mapped out (appendix 1). Pair 3, 9, 10, 11 and 12 are related to the objectives of the amendment to the law. The other pairs are related to the daily treatment. The pairs are combined in these two factors. All factors are reliable with a Cronbach's alpha score above 0.7 (table 5).

Table 5: Reliability analysis individual administrative actions

	SAAPH				CMHA			
	Use_1	Use_2	Time_1	Time_2	Use_1	Use_2	Time_1	Time_2
Items	9	5	9	5	9	5	9	5
Cronbach's Alpha	0.869	0.867	0.915	0.897	0.907	0.889	0.957	0.906

Table 6 shows that the usability of the administrative tasks related to the daily treatment has increased by 0.140 points (SD 0.590) and the tasks related to the amendment objectives increased by 0.665 points (SD 0.825). The time pressure of the daily treatment tasks has decreased by 0.204 points (SD 0.561) and the tasks related to the amendment objectives decreased by 0.615 points (SD 0.786). These differences are in line with the overall results (table 3) and also significant ($p < 0.05$).

Table 6: Paired sample t-test

	Paired Differences		t	df	Sig. (2-tailed)
	Mean	Std. Dev.			
Use - daily treatment	0.140	0.590	2.944	154	0.004
Use - amendment	0.665	0.825	9.935	151	0.000
Time - daily treatment	-0.204	0.561	-4.504	153	0.000
Time - amendment	-0.615	0.786	-9.561	148	0.000

The mindmap of the last open question (figure 4) shows that although some respondents were positive/neutral about the transition, most respondents experienced the transition as negative. Two respondents even thought about resigning because of the transition.

The reasons for being positive relate to the main goals of the new law, such as placing the patient in the center by giving him more control over his own treatment, intensifying cooperation between organizations around the patient and the possibilities to support the patient in their own environment.

The reasons for being negative are mainly related to negative experiences, such as

1. Unnecessary paperwork - patients who cannot fill in all the required paperwork because of their well-being and an increased registration pressure (also for the patient) that the psychiatrists perceive more like a control mechanism.
2. An increase in work pressure – complying with the rules within the CMHA is time-consuming and labor-intensive.
3. A lack of ICT-support – systems were/are not ready to comply with the CMHA and cause duplicate registrations.

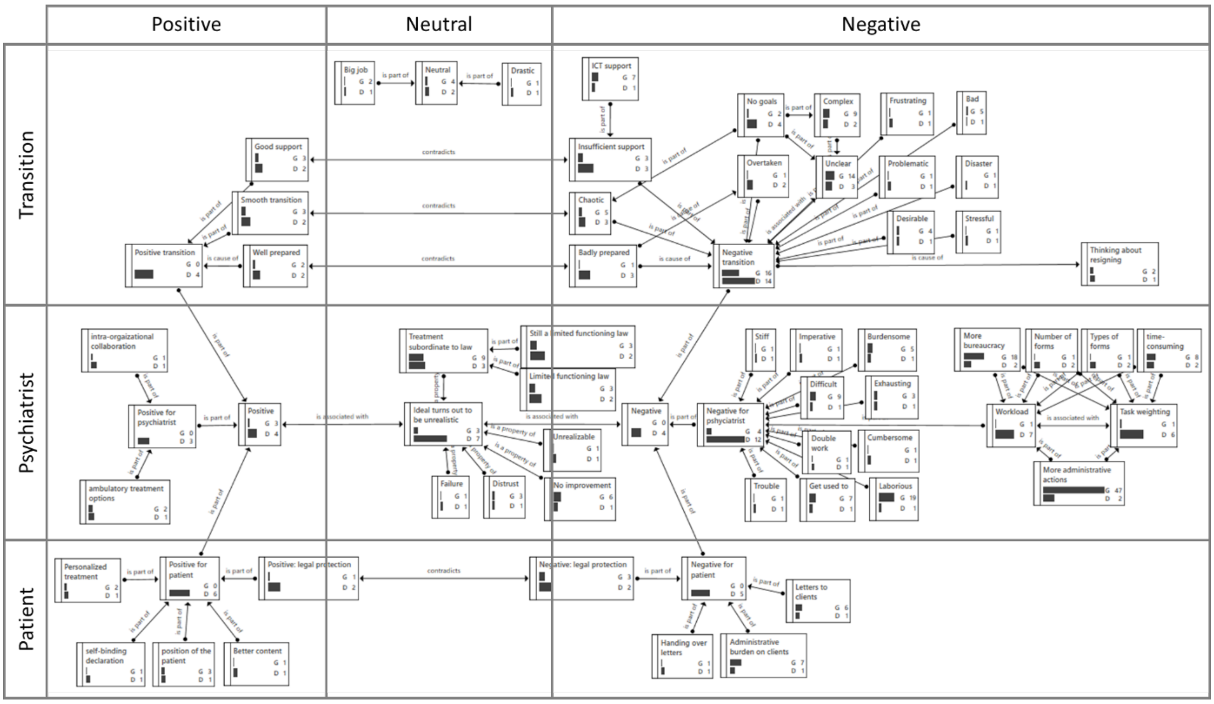

Figure 4: Experience with legislative amendment

5. Conclusion and discussion

Due to the amendment of the law from the SPAAH to the CMHA, the intake process of mental healthcare in the Netherlands had to be reorganized. Essential roles, conditions and deadlines are laid down by law. For example, the client has been given a prominent role in determining the 'desired' care. In order to comply with this, the healthcare authority must contact the client within a certain period of time to determine the treatment together (Maris et al., 2021). In many cases, however, the client is unreachable and unable to determine what care they need. In addition, they are unmotivated to be treated because they do not understand their problem. As a result, the start of treatment is expected to be delayed, the amount of paperwork will increase, as will the waiting lists, the workload and thus the (perceived) administrative burden.

The objective of this research was to investigate to what extent the perceived administrative burden of Dutch psychiatrists differs from the situation before and after the implementation of the CMHA. The psychiatrists were asked by means of a national survey what their experience was before the amendment of the law and what it is now after the amendment. The quantitative results show that the administrative burden has increased and in more detail it appears that the registrations concerning the CMHA in particular cause the greatest burden. The qualitative analysis shows that there are positive voices about the intentions of the law, but that these are undermined by negative experiences with the legislation, such as an increased workload in terms of time, reduced usability of the law and associated rules and poorer ICT support.

These results show that none of the participating institutions has succeeded in adopting the legislation and thereby reducing the administrative burden. We therefore conclude that a legislative amendment has direct consequences for the administrative burden within an organization.

As mentioned in the introduction, the subject of reducing administrative burdens has already been researched, but these studies were mainly aimed at reducing the costs of administrations, e.g. on time, and at the level of healthcare institutions (Nielsen et al., 2017; Larjow, 2018). This study focuses on the administrative burden experienced by individuals. The insights gained are relevant for the way in which (national) government and healthcare management at a strategic level should also pay attention to this 'softer side' of the burden.

This study indicates that the government can limit the burden by taking much more into account the possible consequences on the administrative burden, especially the perceived burden by the individual, when formulating new laws and regulations or reformulating them.

This study is the apotheosis in a series of four pilots in order to understand the complex Dutch psychiatric system. The psychiatric system has been studied in detail and its complexity made visible to the community in collaboration with students who generally had no experience in the sector. The study was conducted under the supervision of a medical director-psychiatrist and two senior researchers (authors) and funded by the various organizations they work for. The main results are based on a questionnaire that has been thoroughly developed from the literature, reviewed by a committee of three medical director psychiatrists and reviewed by a group of psychiatrists. A Likert scale gave the psychiatrists the opportunity to answer the questions nuanced. Also the pathway of the law from start to end was drawn up.

The final results and insights are described by the participants as breathtaking. For example, the mind map gave a clear picture of the different things that color the system. This visual insight made the complex world a lot clearer, such as the similarities between the administrative burden that each individual psychiatrist experiences and the reasons for this.

The system has been under heavy pressure for years and this pressure has only increased due to the transition. The psychiatrists and other healthcare professionals indicate that they are not being heard by politicians. It took more than a decade to conceive the CMHA and replace the SAAPH. The most important aim of the psychiatrists was to enhance the quality of life of the patients and to enhance the centeredness of their well-being. The politicians changed over time the aim of the law and wanted psychiatry to take care of the more aggressive human being. Several other laws further complicated the situation. Even a cry for help and a halt to the implementation of the CMHA was not heeded by the politicians. This has greatly diminished confidence in politicians.

That is why psychiatrists need to regain trust and not mistrust the current society and need to go away from paranoia. They are aware of the internet and social media framing in the wrong way and need to urn that in the opposite way. Politicians, on the other hand, should not make fundamental changes in a complex professional environment and burden the professionals in a way the mental health environment will be disrupted totally and ensures that the entire mental health system implodes with all its consequences for patients and professionals. When damage is done and professionals and patients are exhausted, the politicians must take responsibility for their actions.

6. Limitations and next steps

This study is the fourth exercise to understand the real impact of a legislative amendment on the administrative burden among healthcare professionals, especially psychiatrists. The collaboration among psychiatrists and researchers has been improved during this research period and is now within the system. The aim was to provide insight into the difficulties psychiatry faces nowadays and to convey their concerns to the responsible parties.

As mentioned before, the advantage of this law should be that the patient is at the center of the universe. The question remains, however, whether this goal has been achieved. This investigation and the questionnaires were addressed to the psychiatrists, the profession responsible for those most complex and vulnerable people in society. No other profession was asked and no patients were consulted about their views on the transition from SPAAH to CHMA and whether they thought it would improve their quality of personal life.

Approximately 3,500 psychiatrists work in the Netherlands and 1,500 psychiatrists in private practices. This research did not reach out to private practitioners. Also residents in psychiatry are not taken into account.

Of the approximately 2,000 institutional psychiatrists, 305 started filling out the questionnaire, 147 did not finalized the fill-out. There may be a bias by those that are confronted with the new law daily. Those who have not filled out the questionnaire or have had already too much administration.

Psychiatrists are scarce and it is unwise to burden them too much with a law harness. If this harness gets too tight, more psychiatrists will leave the job, harming mental healthcare in general and decreases the quality of care for patients. That cannot be the intent of the law and therefore a review of the law is a necessity.

For the future, we therefore recommend that a committee of politicians and psychiatrists work closely together to review current laws and to prepare new ones as much as possible so as not to chase away more psychiatrists, but to improve the quality of life of patients. This committee must ensure that systemic problems in psychiatry are solved, so that all psychiatry will work for the most vulnerable in society. Achieve less administrative burden and greater life satisfaction for the benefit of the patient.

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Appendix A

Paired Samples Test (Usability)								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1	0.105	0.776	0.065	-0.023	0.233	1.617	142	0.108
Pair 2	0.055	0.743	0.071	-0.086	0.196	0.773	108	0.441
Pair 3	0.692	0.986	0.097	0.501	0.884	7.160	103	0.000
Pair 4	0.174	0.780	0.075	0.026	0.322	2.334	108	0.021
Pair 5	0.328	0.962	0.126	0.075	0.581	2.593	57	0.012
Pair 6	0.134	0.818	0.069	-0.002	0.270	1.948	141	0.053
Pair 7	0.118	1.018	0.101	-0.082	0.318	1.168	101	0.246
Pair 8	0.200	0.973	0.109	-0.017	0.417	1.838	79	0.070
Pair 9	0.843	1.231	0.109	0.626	1.059	7.715	126	0.000
Pair 10	0.629	1.197	0.100	0.432	0.827	6.289	142	0.000
Pair 11	0.548	1.102	0.103	0.344	0.751	5.330	114	0.000
Pair 12	0.575	1.058	0.091	0.394	0.755	6.290	133	0.000
Pair 13	0.338	0.979	0.080	0.180	0.495	4.239	150	0.000
Pair 14	0.099	1.191	0.113	-0.125	0.323	0.877	110	0.382

Paired Samples Test (Time)								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1	-0.130	0.818	0.070	-0.268	0.007	-1.873	137	0.063
Pair 2	-0.071	0.803	0.081	-0.232	0.090	-0.881	97	0.381
Pair 3	-0.620	0.919	0.092	-0.802	-0.438	-6.749	99	0.000
Pair 4	-0.222	0.708	0.071	-0.363	-0.081	-3.123	98	0.002
Pair 5	-0.462	0.917	0.127	-0.717	-0.206	-3.628	51	0.001
Pair 6	-0.217	0.712	0.061	-0.337	-0.098	-3.586	137	0.000
Pair 7	-0.120	0.715	0.071	-0.262	0.022	-1.679	99	0.096
Pair 8	-0.239	0.746	0.089	-0.416	-0.063	-2.705	70	0.009
Pair 9	-0.689	0.954	0.086	-0.860	-0.517	-7.970	121	0.000
Pair 10	-0.691	1.145	0.098	-0.885	-0.497	-7.039	135	0.000
Pair 11	-0.543	1.047	0.102	-0.746	-0.340	-5.312	104	0.000
Pair 12	-0.680	1.049	0.093	-0.863	-0.496	-7.328	127	0.000
Pair 13	-0.250	0.724	0.060	-0.369	-0.131	-4.142	143	0.000
Pair 14	-0.373	1.052	0.097	-0.565	-0.181	-3.849	117	0.000

Management Leadership Visibility: A Marketing Asset for Engaging Millennials

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Abstract: This study explores whether media visibility of corporate leaders can be used for engaging with millennials. Millennials continue to form a lucrative customer segment. Corporate leaders are using media aggressively to be visible. This paper uses NLP-based webscrapping tools, and quantitative surveys to collect structured and unstructured data from 206 millennials studying in a postgraduate business program to determine their perception of media visible corporate leaders with their (millennials') engagement with brands of the company. Findings suggest, that millennials believe media visibility of a corporate leader can positively impact the business outcomes while they do not necessarily buy brands or products based on the leader's visibility. There is hardly any gender-based difference on this count. Theoretical and managerial implications are discussed.

Keywords: Management leadership, Media visibility, NLP, Millennials, web scrapping, transparency

1. Introduction

In the highly complex and competitive times firms operate in today, differentiation is a key pursuit of corporate leaders to engage with the target audience. Successful and differentiated financial outcomes are important for leaders to woo important stakeholders. Firms being socially responsible in terms of customer-positive actions, environmentally sensitive policies, transparent governance norms and fair employee/vendor interactions are important ways in which firms differentiate from other firms. However, most of these positive activities need to be communicated. Influential corporate leaders spend resources and hire specialized agencies to manage this marketing communication in a visible form.

Millennials are the large group of consumers born between 1980 and 2000 (Lee and Kotler, 2016). This generation is characterized by technological integration in their lives and a high level of inter-connection (Moreno, Lafuente, Carreón, and Moreno, 2017). Millennials also constitute about 50% of global consumption (Orozpe, 2014) and they want a sense of values to be reflected in leaders of all domains as they themselves are very conscious about value systems.

Millennials are deeply connected with media in its myriad forms. They are immersed in the various media platforms that permeate all aspects of their lives and they form a very lucrative segment for marketers. The actions of corporate leaders have a significant role to play in the creation of perceptions. Perceptions drive motivations. It is imperative that corporate leaders calibrate their media presence in ways that are honest, transparent and strategic. This paper attempts to decipher the ability of management leaders' media visibility in engaging Millennials and turn it into a marketing asset.

In this study we theorize that management leaders' media visibility activities as studied by previous researchers (e.g., Pollock and Rindova 2003; and Bednar 2012) in the management field and also in the finance field (Engelberg and Parsons 2011; Fang and Peress 2009)—affects millennial perceptions about and engagement with these leaders' companies and their products. There are many definitions of media visibility including the one by Pfarrer *et al*, 2010, "High news media visibility'' refers to ''a high level of public attention focused on a firm". News media impacts millennials in two important ways: the amount of attention it can garner and the depth of the attention (Jia and Zhang, 2015).

It has also been researched that higher the engagement that management leaders are able to elicit from millennials, the more likely they will be to achieve better marketing outcomes. These outcomes could be a shorter sales cycle, increased customer lifetime value, and increased positive product or company reviews (Deloitte, nd).

2. Hypotheses development

The calibrated efforts by management leaders and their communication teams and/or external agencies determine “what” and “how” millennials will perceive a company and its offerings. Communications theory suggests that the choice of media, the message content, the tone of communication and its comprehensibility play a key role in how perceptions are created, engagement is achieved and marketing outcomes are arrived at. Communication theory according to Carey (2009) states that its symbolic and social process aspects may be examined from two perspectives—the transmission perspective as exchange of information, and as the ritual perspective or work done to connect and facilitate that exchange. Both these aspects are critical for successfully leveraging management leaders’ media presence for millennials as they expect both, “exchange” and “transparent facilitation” of that exchange.

Millennials are actively engaged in both perspectives today. They expect management leaders to transmit information in a dialogue mode helping an exchange rather than a one-way “me to you” format and they expect it to happen on media platforms which enable dialogue, on a regular basis, in a transparent and non-condescending manner. Millennials favour open and frequent communication with leaders in the workplace (Myers and Sadhagiani, 2010), and with management leaders in general. Therefore, we hypothesize that:

H1: Management leaders’ media visibility when open and transparent have a positive impact on Millennials’ perception

Millennials are maturing in the workforce and will quickly become the future leaders of business organizations, the largest consumer population and, as they accumulate wealth, a significant pool of investors (Weber, 2015). They are constantly connected on various entertainment, news, politics and general interest news outlets. Thus, it is important for sellers, when approaching millennials, to send explicit and appropriately timed messages that regularly addresses their demands. However, if done irregularly there can be a misunderstanding of digital media and misuse of delivery mechanisms might deprive consumers of distinguishing the value they seek online. It is, therefore, important that brands understand the digital ecological system of their target market (Rahman, 2015). One of the aspects of this modern news ecosystem is a regularity in communications. Hence, we posit our second hypothesis as follows:

H2: Management leaders’ regular media visibility have a positive impact on millennials’ perception of those companies.

Industry research seems to indicate that with millennials the urge to co-create is strong. "A new brand, service or product is only started by the company; It's finished by the customers. Millennials are a generation that wants to co-create the product, the brand, with you. Companies that understand this and figure out ways to engage in this co-creation relationship with millennials will have an edge," according to Alex Castellamau, CEO at the file sharing service Dropbox (Howe & Strauss, 2003). This millennial urge to co-create with/for a brand can only flow when corporate leaders allow customers to “finish” the offering. Such a participation can only happen in an ecosystem of openness and transparency and business leaders have a significant role to play in this direction.

How different layers of an organization communicate and interact with the outside world in general and with customers specifically is based on the top leaders’ communication style. Frombrun (2004) identified key differentiators of high reputation quotient (RQ) companies from low RQ ones based on five expressiveness elements: visibility, distinctiveness, consistency, transparency, and authenticity. When millennials observe many of these qualities in management leadership’s media visibility they are inclined to have a positive attitude toward the company and its products. This is more so in times of crises which many companies face from time to time or when there is a crisis affecting the larger community, such as the Covid-19 pandemic.

It has also been studied that when a CEO (versus company spokesperson) is media-visible in an open and transparent manner during such crises through video (versus text), millennial attitude toward the company and its offerings is positively affected (Rosenstiel, L., 2019).

Thus, our third hypothesis is presented as follows:

H3: Positive perception among Millennials due to open and transparent media visibility by management leaders have a direct impact on their intention to buy.

3. Methodology

This research was conducted on B-school millennials adopting a non-probabilistic convenience sampling method. The target audience was chosen as they are well versed with current business affairs and keenly follow important business leaders' actions and media bytes as business school students. Further, these students are required to be fully abreast of communication bytes by well-known corporate leaders as part of class discussions and case analyses, have, on average, 3 years of corporate work experience before joining the B-school program, and are mature evaluators of business developments. The methodology involved two phases.

The first phase involved the use of machine-learning (ML) tools. To deal with textual data, various methods and models of natural language processing (NLP) were employed. NLP is a subset of ML which has received great attention from researchers (Kreimeyer et al., 2017). Due to the availability of new methods, and open source libraries, NLP models have become more robust and easy to use. Web scrapping, web crawling and using beautifulsoup (python library) are methods which have gained momentum lately (Schedlbauer et al., 2021). Sentiment analysis using textual data has also gained prominence due to the availability of various methods and models (Daudert, 2021).

In this work sentiment analysis has been performed using keywords such as "media savvy business leaders", "visible corporate leaders" etc., and the data has been extracted from newspaper websites and other media news websites using two methods:

1. Scrapping various news prominent websites manually using BeautifulSoup (refer Figure 1)
2. Scrapping using News API (https://newsapi.org/), which helps to locate news headlines and stories using JSON API key (refer Figure 1).

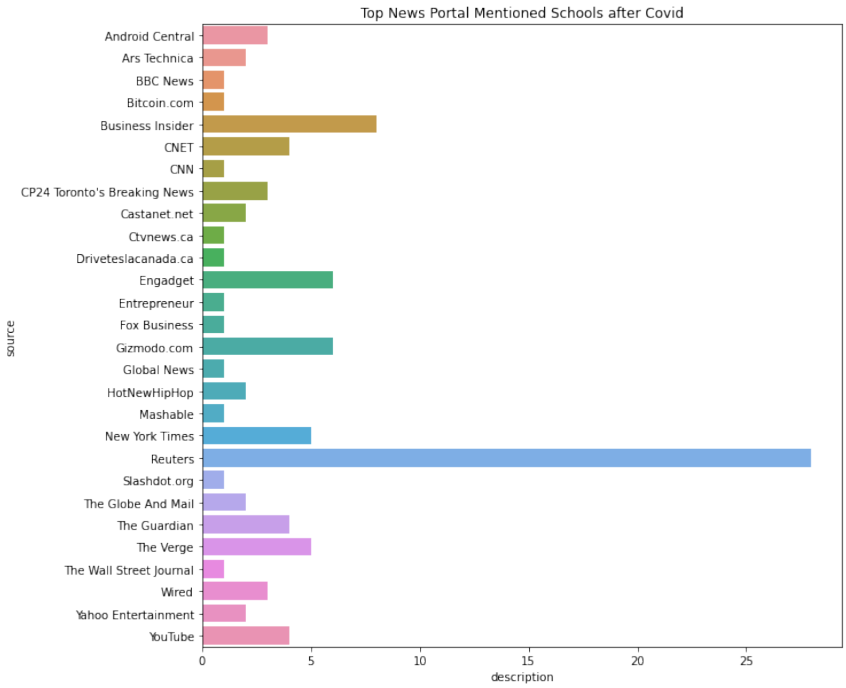

Figure 1: Top news Portals Mentioned in Schools after Covid

1. Extract tweets from Twitter using Twitter credentials such as keys and tokens.

4. NLP techniques used in this paper

The data obtained from the above-mentioned sources is unstructured. NLP models require that textual data be cleaned and converted to a structured form before any useful insights can be drawn. The following are the key NLP steps that have been used in this work.

1. Lexical analysis: This is the first step in NLP which splits a sentence into meaningful words, also known as ‘tokens’ and the method is known as tokenization.
2. Syntactic analysis: The process of finding a relationship between sentences and words so that a meaningful structure is formed.
3. Semantic analysis: Any given sentence contains some clauses, phrases, and paragraphs. This step processes and connects syntactic sentences to their meaning.
4. Output transformation: This is the final step that generates the output based on semantic analysis of the text. The output may be in the form of graphs, charts, polarity, or sentiment scores.

In this work, we have used python to extract the data and implement the sentiment analysis using the following open source libraries:

1. TextBlob
2. Tweepy (for accessing Twitter API)
3. NLTK (natural language toolkit)

Based on manual scrapping of news urls, the following outputs were generated:

Based on the above analysis of news API scrapping we were able to extract the sentiment analysis for five business leaders most visible to our target segment. Figure 2 shows a sample analysis output for business leader Elon Musk.

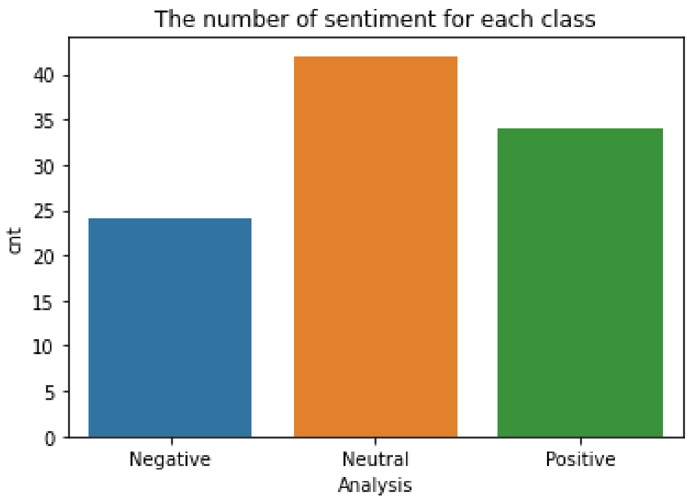

Figure 2: Sample sentiments for Elon Musk

Figures 3, 4 and 5 display word clouds –positive, negative and neutral – for Elon Musk

Figure 3: Positive Sentiment

Figure 4: Neutral sentiment

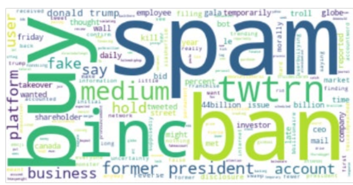

Figure 5: Negative sentiment

Similar exercises were done for all the five leaders who were perceived as having highest media visibility and/or possess high positive customer perception.

The second phase (with millennials) involved two parts:

1. The first phase of this stage involved a single question survey aimed at determining which corporate leader was media visible and contributed positively to his/her organization’s reputation according to millennials regularly consuming English news media. This single item open-ended questionnaire with an exploratory objective was administered using Google forms using a purposive sampling method. 78 students with a high general awareness score obtained from the Corporate Readiness Program (CRP) of

a top-notch B-school's placement department were sent the survey instrument. 65 students reverted with their responses. Names of five business leaders whom the millennials perceived had a high media presence were shortlisted based on simple frequency tabulation. These five names were compared with the news API (application programming interface) scraping data in the first stage and a 100% match was found. Thus, these five names formed the basis of the second phase of data collection.

2. The second phase of data collection involved a 25 item questionnaire adapted from Davies, Chun, Da Silva and Roper (2004)'s Corporate Character Scale. This instrument was administered using e-forms where millennial respondents answered for each of the five shortlisted leaders (on a 5 point Likert-type scale ranging from Strongly Disagree to Strongly Agree) on a range of leader traits. These traits included warmth, empathy, integrity, modern outlook, innovation, boldness, conscientiousness, ambition, technological savviness, elegance, prestige, elitism, arrogance, authoritarianism, easy-going nature, abrasiveness, visibility, and impact on company success. The respondents were also required to record their responses on seven general leader media visibility items for corporate leaders.

All questionnaires were administered electronically using Google forms. No incentives were offered for filling the survey forms. Questionnaires were floated to 320 Masters level business management students. 223 forms were received back. After removing incomplete questionnaires, a sample size of 206 formed the basis of this study. Data was made fit for statistical analysis using Statistical Package for Social Sciences (SPSS) 21.0.

5. Analysis

The data seem to indicate interesting outcomes.

Hypothesis 1 (H1) - Management leaders' media visibility when open and transparent have a positive impact on Millennials' perception about the company is supported

The 18 items used in the survey to ascertain the consumer perception of individual leader's corporate reputation are given in Table 1.

Table 1: Consumer Perception of Individual Leader Reputation Measuring Inventory

1.	I find this leader to be very warm in demeanor
2.	I find this leader to be very empathetic about others
3.	This leader is a person of great integrity
4.	This leader is modern in outlook
5.	This leader has innovative ways of doing business
6.	Many of this leader's business decisions can be termed bold
7.	This leader comes across as a conscientious person
8.	This leader appears to be highly ambitious
9.	This leader displays savviness with technological advances
10.	This leader appears to be elegant in public appearances
11.	People feel prestigious dealing with this leader
12.	I perceive this leader to be elitist in his/ her way of life
13.	I consider this leader to be arrogant
14.	I believe this leader is very authoritarian in actions
15.	My perception is that this leader has an easy-going nature
16.	I feel this leader deals in an abrasive manner
17.	I feel this leader is highly visible in relevant media
18.	I feel this leader's media visibility has impacted the company's success

Mean scores for the selected corporate leaders across the surveyed items are given in Table 2.

Table 2: Mean Scores for Most Visible Corporate Leaders in the Media

Leader	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Nayar	2.95	2.91	3.02	4.85	4.92	4.87	4.02	4.96	3.30	4.23	3.95	1.96	1.16	3.82	1.22	3.04	4.11	4.78
Mahindra	4.15	4.25	4.93	4.07	4.03	3.99	4.31	4.14	4.87	4.93	4.94	2.89	1.93	1.97	3.75	1.90	4.10	4.02
Pichai	3.84	3.78	3.85	4.91	4.94	4.11	3.92	4.79	4.94	4.01	4.06	1.92	1.92	1.99	3.07	1.16	3.97	4.82
Tata	4.96	4.97	5	4.03	4.02	3.10	5	3.05	2.05	4.96	4.91	1.08	1.06	1.76	4.02	1.72	2.23	2.98
Musk	2.44	2.44	3.09	4.94	4.92	4.97	3.87	5	5	2.34	4.38	2.30	3.40	4.28	1.54	4.45	4.89	4.99

The scores present a very interesting portrait of the corporate reputation of the selected leaders. Ratan Tata, the octogenarian Indian business leader with a global footprint scores highest when it comes to being a conscientious person with great integrity. But he does not seem to be highly visible in relevant media nor his media visibility impacts the company's success. In fact, he is the only one to score low on this last front. All other leaders' media visibility seems to be impacting their company's success, with Elon Musk leading the list. In fact, Musk emerges as the most admired business leader with high scores in almost every item including a full five points for being highly ambitious and technologically advanced. He is also seen to be abrasive in nature with no easy-going traits. A way to understand the survey results is the millennial preference for "meaning business without much ado". Being to the point, blunt if necessary, transparency and honesty are some qualities that millennials applaud, even when such actions are uncomfortable. They connect with business leaders who display such qualities.

Our analysis of the general questions asked of students about their perceptions relating to leader visibility in social and non-social media on matters of social and business issues, impact on market success, personal brand choices and loyalty behavior based, better business outcomes for the companies these leaders lead and govern, personal purchase behavior and the media visibility impact of business leaders on business outcomes have brought forth interesting insights from the data. Table 3 lists the 7 questions for collecting data for the above purpose.

Table 3: General perception about corporate leader's media visibility and business outcome

Item No.	Items	All	Men	Women
19	I like business leaders who publicly engage on social & business issues	4.77	4.77	4.76
20	I believe media visibility of a company's leader affects its market success	3.89	4.00	3.80
21	My brand choice decisions are often based on company leader's visibility	3.30	3.36	3.24
22	My loyalty to a brand often depends on the company leaders' visibility	3.29	3.24	3.34
23	I believe media savvy corporate leaders have better business outcomes	4.67	4.46	4.47
24	I often buy products/services from companies with visible leaders	2.42	2.48	2.36
25	Corporate leaders positively impact business outcomes with media visibility	4.12	4.10	4.13

Interestingly the millennials believe that the media visibility of a corporate leader positively impact the business outcomes as evident from their higher degree of agreement with items 19, 20, 23 and 25. But they do not necessarily buy brands or products based on the leader's visibility and thus scores for items 21, 22 and 24 are low. There is hardly much of a difference across genders on this count.

6. Discussion

When all is said and done, strong reputations are built when companies build emotional appeal (Fombrun and van Riel, 2004). Who else can build such better appeal than the top executive of a firm? Our data confirms that millennials expect business leaders to be open, transparent, regular and measured in their media appearances.

Genuine and well-crafted media visibility strategies positively affect millennial attitude and intention to buy. Therefore, it is essential for management leaders to strategically deploy well-calibrated visibility if they want to engage with and woo millennials. Well-designed media visibility can be a marketing asset in a hyper-competitive consumer world.

Our findings are in line with previous research that states millennials consider management leaders who are visible in the media at the appropriate times a good influence on the success of the organizations. A recent Deloitte University Report (Deloitte, nd) states that millennials and millennial leaders are pushing for cultural transformation through the creation and propagation of purpose driven companies and cultures within organizations. Millennials today want the existing cultural ethos to change within and outside organizations and one way of doing this is by encouraging transparent communications and collaborations. Much of this will come from media visibility in the appropriate public forums, calibrated with a purpose, executed regularly and with a large amount of transparency.

Lasswell's (1948) Uses and Gratifications theory of communications suggests that while leaders must be visible to the audience in a strategic manner, it is also important to ask, "what does the audience do with the media" rather than merely exploring "what media does to the audience". Some of our findings support Lasswell's idea that the audience has agency on what they do with the media. For example, though open, transparent, and regular visibility of corporate leaders can support organizational success, it does not automatically translate into personal purchase of brands of such corporate leaders. The audience can decide not to be personally influenced to seek gratification while consuming media while simultaneously believing that corporate leader visibility is essential for corporate success. This also goes to highlight that media must compete with other sources of information such as the internet, 24/7 news channels, televised news magazines, talk radio, and also comedic news programs (Pew Research Centre, 2004a) accessed by millennials. Other sources of information may have more influencing power than organized and formal media. The study suggests that this line of research may be explored in the future.

Millennials are however not to be dealt with lightly despite the fact that they appreciate regular, open, transparent and respectful media engagement with their company leaders. Simply because they appreciate leader visibility does not automatically translate into brand purchase or loyalty. But well designed and appropriate media visibility strategies by key leaders of organizations are definitely a positive way of staying relevant to millennials in their lives as students, employees and general consuming-class members.

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Organizational Resilience Factors of Startups: An Exploratory Case Study

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Abstract: In an increasingly competitive environment subject to uncontrollable risks, the continuity of organizations can be severely threatened, and the decision-making process takes place under circumstances of great uncertainty. Therefore, it is necessary to develop strategies and competencies that allow the business to thrive. Startups, particularly technology-based ones, are an essential source of innovation. However, several studies indicate that approximately 60% of Startups fail in the first five years of business. To succeed, startups need to develop skills that allow them to rapidly evaluate their decisions and options, and to identify what is vital for the survival of their business. Thus, organizational resilience becomes of paramount importance to those companies. The term resilience is used in different areas of knowledge, but all the definitions share common ground regarding the concept: it describes the ability of an element to return to its normal state after a period of stress and crisis. The main objective of this exploratory research developed in Portugal is to identify the resilience factors of technological Startups. It is also intended to contribute to the design and development of instruments which promote organizational resilience in technological ecosystems. The current research follows the case study methodology based on a sample of 10 technological startups collected from the Startup Leiria ecosystem (Portugal). The Startup Leiria is an incubator of startup ventures which makes it a prime source of data and knowledge. The main findings point out the necessity to develop agility skills in Startup ecosystems. It was concluded that resilient organizations are characterized by having the ability to anticipate, respond, adapt, and recover from a disruptive event. The uniqueness of this study concerns its contribution to stimulate data-driven discussions regarding the necessity to implement programs for the reskilling of Startups in the context of their ecosystems.

Keywords: Resilience, Technological Startups, Skills, Adaptation, Entrepreneurship

1. Introduction

Organizational resilience is a topic of growing interest in a global context marked by increasing uncertainty and adversity (Gibson & Tarrant, 2010; Bhamra et al., 2011; Carlson et al., 2012). In dynamic contexts, with high levels of competition between organizations and the growing importance of innovation for the survival of companies, resilience becomes important for learning and organizational flexibility. In this context, resilience refers to the organization's ability and capacity to tackle changes and adapt to environmental risks. A resilient organization should be able to effectively align its strategy, operations, management, and decision-making systems to adjust to the continuous environmental changes (Starr et al., 2003). Thus, the resilience dimension is associated with an increasing ability to react to crises and overcome current and future challenges.

Startups, particularly technological ones, face huge challenges in terms of survival and sustainability (Bøllingtoft, 2012; Giardino et al., 2014; Kee et al., 2019). According to Giardino et al. (2014), approximately 60% of startup companies fail in the first five years of business. Many startups fail to identify business process challenges and obstacles which makes them unable to achieve successful results (Yusuf, 2013). To achieve success, startups need to carefully evaluate their decisions and options to identify the critical factors for the survival of their business. Therefore, organizational resilience becomes even more relevant in startup companies.

The relevance of the "resilience" and "startups" topics, has never been more evident than it is today. In this context, this exploratory research identifies the organizational resilience factors of technological startups by answering the question: what are the organizational resilience factors of technological startups in Portugal? The clarification and operationalization of the research question presuppose the answer to the following sub-questions: (i) what are the characteristics of resilient organizations? (ii) how can organizational resilience be measured?

2. Literature review

The literature supporting this article was collected using several databases, namely, B-On-Online Knowledge Library, Scopus, and Web of Science. To refine the search, we have set limits on the publication dates of articles to include solely articles published from 2010 onwards. Furthermore, the search was limited to the following areas of study: engineering, computer science, business and management, economics, and finance. The main selection criterion was the existence of the words: “Startups”, "resilience" and "organizational resilience" in the title. As the title can be misleading, we have selected the most relevant articles by analyzing the abstract. The main results of the literature review are presented below.

2.1 Startups Concept

The idea of startup dates to the end of World War II as it first became popular in the context of the attempt to boost technology-focused companies, often in support of the production of weapons or aircrafts. Currently, a startup is synonymous of novelty but continues to be associated with technology and creativity. Sharifi & Hossein (2015) defined a startup company as a young company at the beginning of its activity with growth potential to become a large company. Pickernell et al. (2013) defined startups as young companies and companies that have been in existence for a maximum of four years. A connected idea is developed by Kee et al. (2019) who defined a company's initial success as its ability to survive or stay in business based on its financial and non-financial performance over the last five years (Lussier & Pfeifer, 2001; Yaacob et al., 2014; Durda & Krajčík, 2016). The European Commission defines startups as follows: "Startups, often technological in nature, generally combine rapid growth, high dependence on product, process and funding innovation, maximum attention to new technological developments and extensive use of business models, innovative businesses and often collaborative platforms" (Kopera et al., 2018, p.2). Furthermore, the role of human capital has been recently discussed for these firms and the team’s characteristics are seen as crucial for the ventures’ success (Campino et al., 2021).

In sum, a startup is a company, but also a differentiating vision, that seeks to explore a business opportunity in an innovative or underused area. Instead of being supported by a fixed model, it has a fluid concept, allowing adaptation to the opportunities that arise. Therefore, a startup can be characterized by having a new market concept, which is unstable in nature and adapts to opportunities. The risk of failure is high and not always easy to assess at the outset. Startups are usually technology intensive with an enormous growth potential.

Startups can promote economic growth as they are important vehicles for offering employment opportunities, and creating innovation (Bøllingtoft, 2012; Giardino et al., 2014; Kee et al., 2019). Despite their essential role in economic and social growth, startups face difficulties to sustain themselves and survive (Kee et al., 2019). According to Giardino et al. (2014), approximately 60% of startup companies fail in the first five years of business. Therefore, the first five years are the most vulnerable period for this type of companies. Identifying and measuring the success of startups is extremely difficult, as it is a relative measure. Initial success can be measured in several ways, such as financial, non-financial or hybrid methods (Lussier & Pfeifer, 2001; Yaacob et al., 2014; Durda & Krajčík, 2016; Kee et al., 2019).

2.2 Resilience Concept

With origins in Latin, the word *resilio* designates the return to a previous state (Barlach et al., 2008). The term resilience is applied in several areas of knowledge: ecology, sociology, economics, individual and organizational psychology, supply chain management, strategic management, risk management, physical security engineering management, engineering, and information systems (Erol et al., 2010; Bhamra et al., 2011). The literature in entrepreneurship has understood the concept of resilience as a response to a difficult or even extreme context (Danes et al., 2009). It has also been understood as a personality trait, quality, or capability of the entrepreneur (Hayward et al., 2009). Therefore, resilience is considered an asset to face difficulties and not a capacity strong enough to be considered the catalyst to start the entrepreneurial process itself (Bernard & Barbosa, 2016). Thus, business resilience can be defined as a company's ability to anticipate, prepare, respond, and adapt to incremental changes and sudden disruptions to survive and thrive (BSI, 2017).

Erol et al. (2010) compile several definitions of resilience from different authors, of which the main characteristics of resilience stand out: (i) the ability of the system to adaptively respond to a disruptive event to avoid losses; (ii) the ability to recover quickly within a period and at acceptable costs; (iii) allows the system to achieve its objectives, maintaining control over its functioning and structure, which translates into a capacity for self-organization, learning and adaptation.

2.3 Organizational Resilience

According to Hillmann & Guenther (2020), organizational resilience can be defined as a capability, competence, characteristic, result, process, behavior, strategy or type of performance or a combination of these. Furthermore, the authors state that organizations will only be able to increase their resilience if there is clarity in the concept and the variables that determine it to evaluate, develop and improve them continuously over time. According to The British Standards Institution (2018), organizational resilience is defined as "an organization's ability to anticipate, prepare, respond and adapt to incremental changes and sudden disruptions to survive and thrive". The idea of thriving introduced by this concept is of tremendous importance. Organizational resilience goes beyond survival towards a more holistic view of business health and success. A resilient organization is Darwinian in the sense that it adapts to a changing environment to remain fit for its purpose (Kerr, 2015). Another definition presents organizational resilience as an ongoing benchmarking, improvement, and reassessment process. It is an organization's ability to anticipate, prepare, respond, and adapt to incremental changes and sudden disruptions to survive and thrive (The British Standards Institution, 2018). Kahn et al. (2018a) base their definition on Sutcliffe & Vogus (2003) and state that organizational resilience can also be defined as the organization's ability to absorb tension and preserve or improve its functioning, despite the presence of adversity.

Ponomarov & Holcomb (2009) identified three areas of classification of the organizational resilience concept: (i) readiness and preparedness; (ii) response and adaptation; (iii) recovery and adjustment. Moreover, Erol et al. (2010) cite Hollnagel et al. (2006), to define resilience as "the ability of a system to predict, recognize, anticipate and defend against changing risk configurations before adverse consequences manifest". From this perspective, resilience is the ability to anticipate risks, before the consequences occur, even if their characteristics change. Starr et al. (2003) defines a resilient organization as one that aligns strategy, operations and management systems and structures with decision-making support to anticipate and adjust to continuous risk changes, withstand business disruptions, and gain an advantage over less adaptive competitors.

For this study, we understand organizational resilience as an organization's ability to anticipate, respond, adapt, and recover from a disruptive event. It is an organizational competence, manifested by a set of routines and processes, which depends on the quantity and availability of the organization's resources, allowing it to overcome vulnerabilities, learn, create new opportunities, and overcome the initial stage verified before the disruptive event, to create competitive advantage.

2.3.1 Dimensions of Organizational Resilience

A complete and more immediate qualitative view of organizational resilience needs the definition of a series of direct measures on the level of organizational resilience. Previous work in the literature has extensively discussed the issue of dimensions of resilience. For example, Bruneau & Reinhorn (2007) presented four resilience properties, on which four dimensions depend, namely, robustness, redundancy, resourcefulness, and speed. Furthermore, the authors identified four different dimensions that characterize resilience: technical, social, economic, and organizational. This model was expanded by Kahn et al. (2018b) who included vulnerability and susceptibility aspects to assess the degree of resilience of a system. Specifically, susceptibility refers to the frequency of adverse events combined with the exposure of systems to these events. Therefore, based on the analysis of previous contributions, seven different areas of resilience assessment can be identified:

1. Adaptability: refers to the adaptive ability of a system in response to changes in its environment.
2. Reliability: refers to the probability that a system will perform its function reasonably in a specific time interval and under certain operating conditions.
3. Agility: refers to the ability of a system to respond and react to changes in uncertain and ever-changing environments.
4. Effectiveness: refers to the quality of being successful in achieving what you want and the ability to produce the intended results.
5. Flexibility: refers to the extent and pace at which organizations adapt to sudden and radical changes and is based on the ability to quickly change elements to perform different tasks without having to reorganize all the processes of the organizational system.

6. Level of recovery: refers to the difference between the initial state of the system before the disturbance and the point of restoration, or even compared to a desired level of recovery to assess the performance of specific actions taken.
7. Recovery time: refers to the time required for the system and the organization to restore its normal state.

Table 1: Summary of the resilience Definitions

CONCEPT	AUTHORS/YEAR	DEFINITION
Dynamic organizational resilience	(Annarelli & Nonino, 2016)	Based on dynamic capabilities that allow organizations to manage unexpected threats and risks
Static organizational resilience	(Annarelli & Nonino, 2016; Jia, 2018)	It deals with strategic resilience initiatives based on the management of internal and external resources.
Reactive organizational resilience	(Somers, 2009)	The organization's ability to return to its normal state without incurring serious damage or loss.
Proactive organizational resilience	(Lovins & Lovins, 1982; Jia, 2018)	Deliberate efforts that increase the ability to deal with potential threats.
Individual organizational resilience	(Horne, 1997; Mallak, 1998; Coutu, 2002; Lengnick-Hall et al., 2011; Shin et al., 2012)	It is the combination of individual capabilities and actions that the organization can only be as resilient as its individuals are.
Collective organizational resilience	(Lengnick-Hall et al., 2011)	"It results from a set of capabilities, routines, practices, and specific organizational processes by which a company is conceptually oriented, acts to advance and creates an environment of diversity and adjustable integration."

2.4 The startup ecosystem in Portugal

Portugal has gained international notoriety with the holding of international events in technology and innovation, such as the Web Summit, which is associated with a growing awareness of the Portuguese population itself for the technological and scientific evolution worldwide and, consequently, its greater openness for the introduction of technologies and the greater demand for these solutions.

According to a study carried out within the scope of the Startup Europe Partnership (SEP) 50 initiative, Portugal has 67 scale-ups (companies that obtained funding of more than one million dollars), which raised a total of 310 million euros between 2014 and 2019, with Portugal being among the most favorable European ecosystems for scale-ups, growing twice the European average.

However, 88% are small scale-ups that obtained funding between 1 and 10 million dollars, representing 0.2% of Portuguese GDP (ANI- Agência Nacional de Inovação, 2019). According to the study "The State of European technology" carried out by Atomico, an international investment company, in 2018, the growth of investment in Portuguese technology caused the technological sector to grow five times more in Portugal than in other European economies (Atomico, 2022). According to the study's results, the technology sector in Portugal is driving job creation, with the workforce growing by 6.4% /year, which is clearly above the European average of 1.1%. In this indicator, Portugal is only behind France, which obtained 7.3% (Barbosa, 2018). The Portuguese ecosystem gained international visibility and managed to attract new investors to Portuguese startups, as well as large technological competence centers of multinationals such as Google, Zalando, CGI, Cisco, Altran, Natixis, Fujitsu, VW, Vestas or Mercedes (Ministério da Economia, 2018).

3. Methodology

The current research follows the case study methodology based on the application of a questionnaire to the leaders of a sample of 42 technological startups present in the Startup Leiria ecosystem. Only ten startups answered the questionnaire. Nine of the ten startups under analysis allowed the researcher to disclose their identity. The tenth company will be identified as Startup 10. Thus, the startups under analysis are: 1. Make it Special; 2. ByteRev; 3. REATIA; 4. Delft Digital Learning; 5. Datah artificial intelligence; 6. Medfolio, Lda.; 7. Digital Manager Guru; 8. Alcotester; 9. Sound Particles; 10. Startup 10. The case study is supported by the content analysis of the questionnaire. The questionnaire was drawn up from the literature and consists of questions graded on a Linkert scale and open-response questions. The questionnaire was applied from July 22, 2021, to September 17, 2021.

3.1 Startup Leiria Presentation

Startup Leiria is a non-profit association founded in July 2004 that currently has 42 associated startups. Its mission is to promote and support companies and entrepreneurs in creating value and growth in an agile and sustainable way (Startup Leiria, 2021). Startup Leiria presents four models to support companies or future companies: (i) acceleration of ideas: consulting programs to design and validate new products, services or business models; (ii) acceleration of startups: consulting programs to accelerate the entry of new products or services in the market and the first sales; (iii) business acceleration: programs to generate innovation within existing structures; (iv) accelerated scale-ups: top management programs to leverage the company's rapid growth and access to key partners. Additionally, it provides the "Creative Laboratory", which offers communication services: strategy and content creation, design of various communication materials, customer acquisition or brand awareness campaigns and design services for prototyping new products and services (Startup Leiria, 2021).

3.2 Description of Startups Participating in the Case Study

Table 2 presents the Startups of the case study.

Table 2: Startups Participating in the Case Study

	DESCRIPTION
STARTUP 1	Make It Special specializes in the field of digital transformation through application development services and proprietary software development for SMEs. The company specializes in machine learning, business intelligence, nearshore service, software development, digital transformation, outsourcing, digital commerce, and SaaS services (Make it Special Group, 2021).
STARTUP 2	ByteRev is a company that develops mobile applications on Android and iOS, implemented on Google Play (ByteRev, 2021).
STARTUP 3	Reatia is a metasearch platform which indexes thousands of listings and properties every day, creating a complete and updated database containing hundreds of thousands of properties available to the professional or real estate agency, evaluating any property with a high degree of market certainty and, finally, provide complete reports for each property and the market (Reatia, 2021).
STARTUP 4	Delft Digital Learning provides consultancy support through the development of digital learning strategies for companies and educational institutions, support in training to accelerate the development of digital learning skills and in the production and design of courses, development and implementation of short modules, complete courses, and programs (Delft Digital Learning, 2021).
STARTUP 6	Data H Artificial Intelligence operates in the information technology and services sector. The business model is based on partnerships between the company and customers, which ensure the success of AI through the synergy between the engine (deep learning algorithms) and data (Data H Artificial Intelligence, 2021).
STARTUP 6	Medfolio is dedicated to developing digital tools designed to facilitate and revolutionize the path of the Internal Doctor. Its mission is to make the Doctor's Specialty Internship more organized and practical to focus on the essentials and have time to be a doctor (Medfolio, Lda., 2021).
STARTUP 7	Digital Manager Guru is a complete online sales platform through which companies with subscription products, software platforms, physical product sales websites, online courses, training and consulting can operationalize their business and generate their digital strategy with complete freedom to choose which services and tools I want to use (Digital Manager Guru, 2021).
STARTUP 8	Alcotester is dedicated to the placement, maintenance, and calibration of machines for measuring the alcohol content through the creation of rigorous and highly important equipment in the prevention of road accidents, enabling the measurement of BAC (Blood Alcohol Rate) in grams of alcohol per litre of blood (Alcotester, 2021).
STARTUP 9	Sound Particles is a startup that developed a disruptive 3D audio software, which uses computer graphics concepts applied to sound, allowing, among other things, to simulate thousands of sounds simultaneously, being used in all major Hollywood studios and in films such as “Cars 3”, “Despicable Me”, “Wonder Woman”, “Guardians of the Galaxy 2”, among many others (Sound Particles, 2021).
STARTUP 10	The startup operates in the technology sector, focusing its activity on software development, automation, and quality control.

4. Results Analysis

The founders of the startups that took part in the research are all male, in the average age group of 30 years and mainly with a higher education degree (most of them with a master’s degree). More than half of our sample has a degree in Computer Science or Computer Engineering. Most of the startups under analysis were founded in 2019 or 2020, so they are in the seed stage (defined market offer, first sales) or in the growth stage (strong sales and/or customer growth), with B2B (business-to-business) customers. The turnover varies between 10,000 euros/year and 350,000 euros/year. Respondents admitted that the decision to create their own company was based on the aspiration to manage their own operations. Most startup founders remain linked to the business or as a formal worker. These startups have between 6 and 11 workers. The recruitment task is difficult due to the high salary demand and the perceived risk of working in a young company. The percentage invested in R&D (Research and Development) showed very different results. It can only be concluded that the surveyed startups invested more in 2021 than in 2020. The Cloud and Analytics areas were considered the most interesting for the near future.

Regarding the financial aspect, 80% of respondents revealed that they founded their company with their individual capital. The entrepreneurs reveled that they preferred to finance their ventures using individual capital and recurring to VC (Venture Capital) firms. All respondents considered that the Covid-19 pandemic was the biggest challenge in the startup's history. The main consequences pointed out were the decrease in sales and reduction of liquidity, forcing the readjustment of the business model and redefinition of the offer. The attraction of new customers and the constant rapid changes in the market were also indicated as challenges in the development of the business. Most respondents identified revenue growth as their main objective/priority until they reached a stable profitable company stage. The Portuguese startup ecosystem was considered an environment with potential, which needs continuous improvement. Supporting government policies were indicated as the most relevant area when creating and developing a startup. Measures such as strengthening state support, financial incentives to support the normalization of the company's activity and tax reductions were voted the most relevant and necessary. The Startup Portugal Program and the Europe Startup Nations Alliance initiative were highly valued, with Incubation/Incubator vouchers being the most interesting source of funding in the respondents' opinion. According to the results obtained, the most relevant indicators for developing organizational resilience are people, product or service, leadership, and culture.

In summary, the organizational resilience factors identified are:

- Strong and resilient leadership: motivated, dedicated, focused, and qualified leader.
- Qualified and motivated workers.
- Capital resilience: adequate cash flow, with a solid financial strategy in the development process, keeping its capital leverage within a reasonable range.
- Organizational agility and flexibility be flexible and adjust the business model and redefine the offer when necessary.
- Take advantage of support areas and government policies.
- Government support that favors entrepreneurship.
- Resilient organizational culture (Top-Down Direction): strengthens the dedication and cohesion of all members of the organization.

5. Conclusions

Resilience is a concept often associated with different areas such as engineering and psychology. This study intends to understand if this is a concept consciously promoted in the organizations or, despite not being a conscious decision making, there are practices that promote resilience. The resilience concept integrates vulnerability management, adaptability, and organizational agility. Risk management, knowledge management, human resources and information systems also contribute to the development of organizational resilience.

Previous studies have found that organizational resilience is a multidimensional construct, and the results obtained in the present research validated this idea. Resilience is about ensuring that an organization can achieve its fundamental goals in the face of adversity (Dalziell & McManus, 2006; Olu-Daniels & Nwibere, 2014). As mentioned in the literature review and observed in the results analysis, resilience is not an abstract capability. Resilience needs to be interpreted as the specific and complex interactions between different levels of adopted behavior, including individuals, groups, and organizational units (Cho et al., 2007). To create a resilient organization, it is necessary to implement a focused strategy to build strategic resilience.

It is important for companies to have an ambitious vision and mission. A company's vision and mission play an important role in its strategy and objectives, and a common vision facilitates the company's growth and paves the way for its future development. On the other hand, it is important that companies establish clear development objectives and form corresponding core competencies. An ambitious vision and objective business mission, help guide workers to focus on long-term development, while clear development goals help motivate the organization members and promote efficient synergies and mutual support within the organization. Workers are one of the company's most important resources and the main value-creating body. Therefore, cultivating the organizational loyalty of workers and retaining them helps the company increase the dedication and cohesion of the organization's members.

The main results indicate that the startups under analysis are organizations with resilient characteristics and behaviors in terms of organizational culture and strategic actions that are reflected in stable performance. These startups have learned from adversity as they seek to adapt to constant market changes and see change as an opportunity for improvement. Our results show convergence in the capacity of organizational resilience as a quality that can help organizations and groups survive and thrive in difficult or volatile environments.

Regarding the resilient characteristics, the results stand out concerning a focused, qualified, and motivated leadership as well as skilled workers, organizational agility, and flexibility. Furthermore, resilient characteristics concern the ability to remain focused on the company's everyday activities, including investment, even in times of crisis and a strategic vision that promotes the creation of opportunities in difficult times. The characteristics studied can be related to the work of Donnellan et al. (2006), where organizational resilience is considered an intelligent, reflective, flexible, and open to change organization.

Regarding resilient behaviors, the main behaviors and strategies pointed out by Whitehorn (2011) are present in the organizations studied, namely: (i) the organization's agility in anticipation, actions, changes, and responses; (ii) leadership that encourages and values the continuous development of individual and group skills; (iii) change is seen as an opportunity for growth, harmony between the external and internal environments; (iv) creation of market opportunities.

The startups surveyed trust the quality of their products, look for new technologies and innovation, retain qualified employees and identify opportunities for constant improvement. From the results obtained in the study, these organizations are aligned with the concept of organizational resilience. A culture of excellence needs to be implemented to build cultural resilience. A resilient organizational culture is conducive to the formation of a sense of community among the organization's members, which can help organizations survive crises.

Additionally, it is important to reinforce the relevance of government policies and support that favor entrepreneurship, facilitate, and promote the creation and development of young companies. To meet the research objectives, it can be concluded that in a time of financial, economic, and social crisis, the resilience of organizations can make the difference between the company's success and failure to adapt to new conditions.

The study's main limitations are the scarcity of studies focused on organizational resilience and the small sample size that does not allow extrapolation of results.

A practical implication of the present research is that building organizational resilience requires time and long-term strategic design, detailed planning, and effective measures. Thus, the resilient organization can sustain a competitive advantage over time, provide excellent performance and effectively innovate and adapt to rapid and turbulent changes in technologies and markets.

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Governance of Digital Transformation: As Observed in two Cases of Military Transformations

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Abstract: The transformation of a modern socio-technical system is challenging. Notably, the digital transformation of an enterprise's business or operational model is an arduous journey toward success. Recent studies illustrate that 70% of business enterprise digital transformations fall short of their objectives. Without revenue-based performance indicators, the digital transformations of military organisations are, if possible, even more challenging. However, governance methods should assist in the complex transformation of interrelated features like human behaviour, business processes, information, data, and technology. Are they applied, and how feasible the standard Information and Communications Technology (ICT) governance methods are in supporting digital transformation in the defence sector? The paper studies how feasible the contemporary ICT -governance methods are for military organisations while executing digital transformation. The research implements the action research method since the researcher has participated in two journeys of military transformation. First, a review of these two cases shows the military utilisation of the governance methods and models. Second, the standard methods are reflected against the most challenging transformation problems to see if they could provide support. Third, the methods are challenged by the range of variety in complex system transformations to test their flexibility. Based on the research on two digital transformations, military enterprises seem to fall short in applying central ICT governance standards and methods. Therefore, they are not getting the best available support. Secondly, the contemporary governance methods do not address all the pain points in military transformation. Hence, the utilisation degree and transformation benefits are not well correlated. Thirdly, modern governance tools are inflexible in addressing various situations, transformation goals, and organisational maturity. In summary, the research surfaces some new gaps within the contemporary ICT governance toolbox when applied to the complex socio-technical transformation in the defence sector.

Keywords: Digital transformation, ICT governance methods, IS management, Action research, Complex socio-technical system

1. Introduction

Digital transformations are not straightforward in any sector. Private enterprises face challenges, according to a Forbes study of enterprise failures in digital transformations (Council, 2021). The study indicates that 70% of transformation projects fall short of their goals and advises organisations to pay attention to their data, onboarding process, the coherency of existing technical foundation, resistance to change, communication and coordination. A Boston Consulting Group survey (Forth; Reichert; de Laubier & Chakraborty, 2020) confirms the failure rate stating that as 80% of companies plan to accelerate their digital transformations, the people dimension is the determining factor in success. The public sector is not doing any better. A study of the EU and national level challenges in digital transformation (Svarc, Laznjak, & Dabic, 2020) shows that social capital and working skills were predictors of success at the national level. The exact correlation emerges from a study of smart city transformations (Kar, Ilavarasan, Janssen, & Kothari, 2019). Since Gartner defines digital transformation as “the process of exploiting digital technologies and supporting capabilities to create a robust new business model” (Gartner, 2004), surely ICT governance methods will help exploit digital technologies and improve the success of transformations.

ICT governance (ISO/IEC, 2015) belongs under the organisation governance (ISO/IEC, 2021), and the ISO/IEC 38500 standard provides guiding principles for “effective, efficient, and acceptable use of IT within an organisation”. For the support of transformation, it defines principles for strategy, acquisition, and human performance, among other things. The 38500 also promotes existing good practices to address different approaches for management, in particular, change management, process management, and business model. The ICT governance methods should effectively support transformation programmes since digital transformation has been recognised for over ten years as crucial to performance improvements, business advantages, and even survival in the future (Digital Adoption, 2021).

Military organisations are also seeking operational performance and advantageous capabilities through digital transformations. It seems that they are facing similar challenges to other sectors. This paper uses action research while observing two military transformations to see how feasible the contemporary ICT governance methods are for military organisations while executing digital transformation. The sequenced research sub-questions are:

1. How greatly are armed forces utilising standard ICT governance methods?
2. How well do the methods mitigate the challenges of military DT?
3. How do the methods address the dynamics in different transformation approaches?

The paper is divided into the literature research section to understand how military works, whether they have special challenges in their transformations, how common ICT governance methods map to military line command, and the general difficulties in digital transformations. The research design section explains how the researcher used the action research and provides some essential information about the two use cases that remain otherwise anonymous. The results and discussion section provides causality and answers to the three detailed questions. Finally, the conclusion section summarises the paper.

2. Literature Research

The section seeks first to create a general model for military affairs and operational types. Secondly, it defines the nature of a military organisation and its reaction to change. Thirdly, the study tries to recognise the foundational frameworks and methods for ICT governance that makes the most sense for the military. As a result, the section composes a context and model for understanding the ICT branch within military organisations, maps ICT governance to this organisation, and reviews some common failures in military digital transformations.

2.1 How Military Works and Transforms

Military affairs typically comprise force utilisation, generation, and support (Smith, 2005). By tradition, the military is a line command functional organisation with some matrix processes commonly for supplies and long-range fire support. (Mattila & Parkinson, 2018) The history of symmetric battles, i.e., land, maritime, and air, has determined the basic operational model as semi-independent functional stovepipes called Services. (Bosquet, 2009) Nevertheless, many efforts have been made to compose a military organisation that could utilise Joint capabilities (components from different Services used together in operation) (Vego, 2007). Since 1983, the US DoD has operated with global combatant commands for force utilisation, but each force is a construct from components provided by the original Service. (U.S. CENTCOM, 2022) Some armed forces have established Joint logistics and educational functions to support all Services, but force generation typically remains distributed within each Service. (Mattila & Parkinson, 2018)

Military organisations and cultures are optimised to maintain their integrity when the environment is chaotic and lethal on the battlefield. (Dupuy, 1987, pp. 63-74) Hence, transferring fundamental structures or ways of military affairs may be perceived to question the established understanding and the existence of a military organisation. (Kegan & Lahey, 2009, ss. 56-60) Possibly, the hierarchical military organisation possesses immunity or resistance to change, which determines transformation as either adding a new organisation for a new function, consolidating similar functions, distributing parts, or erasing a part from the legacy organisation.

For example, the Defence Forces of Finland has erased units and consolidated functions in their 2008 (Finland, 2009) and 2015 (Prime Minister's Office Finland, 2012) foundational transformations. Conversely, there are several examples of military intentions to transfer their affairs or operational models but failing to reach the end state. (Mattila & Parkinson, 2018) The challenges appear in all layers of the organisational structure. One common nominator for challenges may be the functionally distributed hierarchical power structure, as defined by Otto Scharmer (Wilson, 2017), which resisted all changes except in Sweden, where the change of political agenda halted the digitalisation and integration of the Försvarsmakten (Hartman, 2020). Besides getting the buy-in from generals, each transformation has struggled with the lack of competencies or the speed of transfer for people to keep up.

2.2 ICT Governance Methods for Transformation

A successful transformation requires an organisation to focus its resources and efforts on gaining future value while mitigating risks on the journey. (Cameron & Green, 2012, ss. 117–118) There are several pathways (Eastwood, 2022) for digital transformations, but all of them require strategy, resources, and performance governance. Meanwhile, the enablers (ISACA, 2019), like competency, information, and technology, need to be acquired to support the efforts. The governance of this flux of movement and interrelated enablers is described in the ISO/IEC 38500 (ISO/IEC, 2015) concerning the organisational governance of information technology. The standard could be considered an umbrella framework for information and communications-related governance in an enterprise (Van Haren Publishing, 2013) since it recognises the primary IT business value stream of development and operations together with the core functions of governance, i.e., monitor, evaluate, and direct

(Almaawi, Alsaggaf, & Fasihuddin, 2020). Moreover, the framework connects business and IT strategy, risk management, operations, and change together with the architectural structure of the system (Calder & Moir, 2009), as illustrated in Table 1.

Table 1: A sample of governance and management methods recognised by ISO/IEC 38500

Area of governance	Model or Method	Application
Risk, conformance, and compliance	COBIT (ISACA, 2019)	Framework for governance and management of information and technology in an enterprise. It includes a value stream for managing risks, optimising resources, and creating new value.
Business strategy	Balanced Score Card (Kaplan & Norton, 2001)	Helps in aligning and focusing resources on strategy.
IT strategy	TOGAF (Open Group, 2018)	Enterprise architecture illustrates the structure of the organisation and helps to define the starting point and end state of transformation
Operations	ISO 27001 (ISO, 2018)	Defines an information security management system and how to establish, maintain and continually improve its ability to preserve confidentiality, integrity, and availability of data assets
	ITIL (Axelos, 2019)	Framework for information technology processes covering the life-cycle strategy-design-transition-operation-continual improvement.
Change	P3M3 (PMI, 2022)	Portfolio, Programme and Project management guides help organisational change management.
	CMMI (ISACA, 2022) (Forrester, Buteau, & Shrum, 2011)	Helps in understanding the current level of capability and performance and provides guidelines to optimise or mature them.
Information & Technology	Data Governance and Management (PMI, 2022)	Helps govern data life-cycle strategies and implement processes for collection, access, storage, availability, and security & privacy of enterprise data.

2.3 Mapping the Common Governance Methods to Military Affairs

In a typical enterprise, the business and operation models define governance implementation. Hence, there is a need to determine the essential business and operation model for the ICT-service production within a military enterprise and then arrange the IT-governance practices fitting the model. The Beers (Espejo, 1990) Viable Systems Model provides a structure for ICT business interfaces and levels of decision-making for the start. On top of the structure, the military prefers an in-house service provider and on-premises infrastructure because of autonomy and security reasons, as illustrated in Figure 1, left-hand side. Therefore, there is an in-house service relationship between the ICT provider and units using the software as a service.

Furthermore, the ICT provider may have many sub-providers and vendors to manage in the supply chain. In summary, the value stream (Toivonen & Siitonen, 2016) to support current operations with ICT-related services is composed of end-users, an in-house ICT service provider running service development, delivery, and support functions, and the supply chain connecting vendors and other service providers to support the in-house service provider. Next, there is enterprise information management which focuses on content and knowledge. Finally, at the strategic level, there is an enterprise information governance level focusing on knowledge capital preparedness for future scenarios. Together the ICT value stream and enterprise-level functions establish a generic ICT model for Armed Forces.

Matching the ISO 38500 preferred governance methods to the generic Armed Forces ICT model presented in Figure 1 (left-hand side), the essential tools map looks like Figure 1 (right-hand side). ISO 38500 establishes an umbrella for enterprise information governance at a strategic level, COBIT covers most of the management functions, and P3M3 and TOGAF provide essentials for change management. Furthermore, ICT service development and production are arranged compliant with ITIL and SCM processes within the eTOM business model, and enterprise-wide information and security management should follow the lines of data management and ISO 27001. The ICT model and mapping of governance tools will be used in the paper to establish the required context for the governance tool analysis.

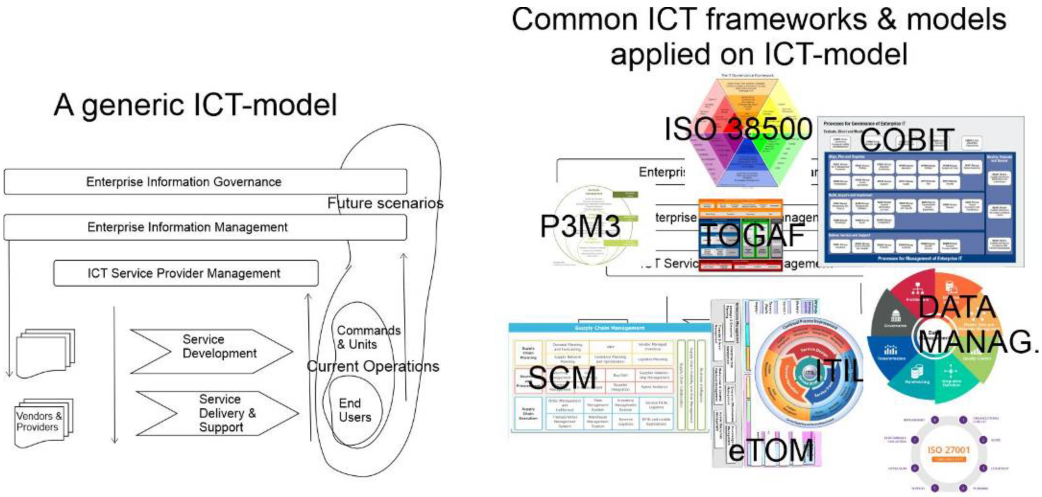

Figure 1: A generic governance, business, and operations model for military ICT and common frameworks of governance frameworks and models matching with ICT-model

2.4 Transformation challenges

For the past decade or so, digital transformation has been the foremost way to accelerate or revolutionise operational performance or business revenue. For example, over the last five years, the end-user experience has improved by more than 70% of cases. However, late surveys point out that 80% of enterprise transformation intentions fail, suffer delays, or be scaled back. (Couchbase, 2022) Nevertheless, with a 30 % annually increased investment, digital transformation continues to be significant pressure from outside or the way to make a difference inside an enterprise. (McKinsey, 2020) Both Couchbase and McKinsey surveys recognise causality between the failures and the following layers of organisation: culture, strategy, processes, human competency, information & data, technology and other resources. A third survey indicates that transformation may fail during the target setting (22%), planning (23%), implementation (35%) and post-transformation (20%) phases. (McKinsey, 2021) The recognised common challenges faced in digital transformations will set the reference to analyse ICT governance tools' abilities in mitigating obstacles along the transformation journey in section 4.2.

3. Research Design

The transformation of a military organisation remains complex because of social relationships, various obstacles on the journey, culture, language, and different perceptions of stakeholders. Hence, the interpretive approach seemed to be an applicable worldview for the research. (Saunders, Lewis, & Thornhill, 2015) Furthermore, Action Research appeared to be the most related method for study since the researcher participated (Reason & Bradbury, 2012) in planning and implementing transformations of two different armed forces (Case A and B). The self-reflective spiral of action research (Kemmis & McTaggart, 2000) followed in both cases the sequence of 1. identifying the competency gaps, 2. consulting the planning team towards applicable methods, 3. applying methods to planning, 4. transferring the organisational behaviour, 5. migrating the ICT infrastructure and data, 6. measuring the short-term outcome and performance, 7. improving the competency of the planning and control team, and 8. adjusting the plan and implementation accordingly.

The self-reflecting spiral ensured opportunities to observe, learn, and adjust the course whilst taking short steps on the transformation journey (Koshy, 2010). Hence, there were several opportunities to introduce ICT governance methods as they became understandable, and the opportunity emerged on the journey. As a result, the main principles of action research (Carr & Kemmis, 1989) were fulfilled as follows:

- The researcher participated in both cases between 2-7 years, providing longevity for the viewpoint.
- The researcher engaged the actors in the senior consultant role, so the relationship's peer nature was as close as possible to typical military culture.
- The action included several spirals of planning, observing, reflecting, and re-planning.

The two digital transformations (A and B), that the researcher participated in this study, were different in their nature. Therefore, the data collected during the action research provides various points along the transformation journeys. The research uses the EA Tool (Mattila J. K., 2020) to analyse the current position (AS-

IS) and intended end states (TO-BE) from the information and ICT technology viewpoint, as presented in Table 2.

Table 2: Nature of the two military enterprises and their transformation journeys of ICT branch as observed during the research

Feature	**A Case**	**B Case**
Cultural/Strategic posture during the transformation	The organisation adopts new abilities by minimising risks and optimising investments in a slow evolutionary manner in its strategy.	The organisation aims to acquire the best available platforms following an accelerated evolutionary posture in its strategy.
Affairs/Operations intention during the transformation	The organisation optimises the operational efficiency through coordination of the capabilities of each Service.	The organisation aims for operational efficiency through more independent Services with diversified capabilities.
Information AS-IS	Unstructured information is managed mainly through pages and collaborative workspaces	Unstructured information is managed as files in terminal devices and possessed by individual soldiers. E-mail and physical memories are used for file sharing.
Information TO-BE	Need to improve the use of information and data with business intelligence, real-time analysis, and enable machine learning support in automation and speed of awareness	Need to improve collaboration and sharing of information between units and soldiers in a confidential manner. Also, to digitise some main supporting processes end-to-end.
ICT AS-IS	On-premises cloud infrastructure runs enterprise platforms which support main processes. Accessed through multiple ways of communications, some mobile.	Hundreds of monolithic applications are operated in tens of separate domains and accessed through a fixed network.
ICT TO-BE	Need to become more agile in using edge, on-premises, and public cloud to capture data, process it on time and enable faster collaboration between men and machines.	Need to consolidate applications and services to enterprise platforms operated by a joint service provider.

Naturally, the researcher's language, knowledge, attitude, and perception in every engagement with others impact the observations. Also, long-time engagement evolves understanding and relationships, which naturally affects the observations.

4. Results and Discussion

The section provides first a view of how greatly the two cases recognise and utilise the essential ICT governance methods and tools. Secondly, it shows how the governance methods address the prevalent challenges of digital transformation in military culture. Thirdly, the section approaches governance tools from a dynamic viewpoint and assesses how well the tools manage the transformation from AS-IS to TO-BE. Finally, the section discusses the causality between the usage of governance tools and the ability to navigate the transformation journey and cope with dynamics.

4.1 Degree of Utilisation

While doing the action research, the researcher observed the organisation's policies, proposed improvements to increase the transformation success, and followed some adoption of these proposals. However, since both cases did not transfer their strategy or process postures, the researcher adopted a pragmatic approach of promoting whatever part or feature was feasible in the context of time, competency, and culture. As a result, both cases end up using some viable details of the selected ICT governance methods, as illustrated in Table 3.

Table 3: Utilisation of standard ICT governance methods in observed cases

Tool/Case	**A case**	**B case**
ISO 38500	Not applied to the letter, but parts without recognising the framework.	Some policy drafts but not implemented.
COBIT	Parts applied in policies and guidance but not necessarily recognised as COBIT	Parts applied in policies and doctrines.
BSC	Features applied in value measurement, but the method is not recognised	Not utilised, nor recognised.

Tool/Case	A case	B case
TOGAF	The EA method is applied throughout the organisation, but decision-makers do not recognise its value.	Tools and methods applied at a technical level but not utilised further.
ISO 27001	A national variation is applied widely in Armed Forces and Defence industry	Some features are applied mainly to each unit.
ITIL	Widely followed in ICT service provider organisation	Some features implemented with ISMS.
P3M3	Widely followed at a project level, but the programme and portfolio levels are merged in the engineering & acquisition process	Followed at project level depending on the project manager. Not recognised at other levels.
CMMI	Used in measuring the current status of process implementation	Used in measuring the quality of some process implementation
Data Governance and management	A long tradition of content management gradually extended to information and data levels.	Traditional document management alongside individual efforts in the areas of files and information.

Neither of the cases used the standard ICT governance methods entirely, purely, nor necessarily acknowledged. Nevertheless, the researcher and transformation programmes used parts of methods as either a seed for knowledge that hopefully will sprout in the future or a tailored tool to address a recognised challenge. Hence, the research does not measure the maturity of the governance tool utilisation but their feasibility in governing the transformation.

4.2 Feasibility in Mitigating Transformation Challenges

The feasibility of the governance methods depends on the challenges, utilisation of the tools and the journey of transformation. The research combines the challenges detected from military and private organisations into themes reflected in the standard governance tools in Table 4. The reflection of the challenge theme defines how much practical support the research observed from each tool or method.

Table 4: How well do standard governance methods address the typical ICT transformation challenges organisations observed using a three-step scale (green = match; yellow = something; red = no match)

Challenge Themes/ Tools	ISO 38500	COBIT	BSC	TOGAF	ISO 27001	ITIL & eTOM	P3M3 & CMMI
Culture – resistance to change							
Strategy – Non-disruptive							
Process - stovepipes							
Human Competency – slowly evolving							
Information & Data – security controlled							
Technology – complex integration							
Other resources – competition between cost units							

There is no one method to manage all typical challenges of military ICT transformations, but a need to combine them for a purpose. The need for combination supports the researcher's intent to apply whatever mitigates commonly recognised problems. For example, transferring and building up the social structure and human competencies receive weak support from the standard tools. This weakness requires help from other methods, like systems thinking, organisational behaviour, and business dynamics. The assistance in understanding organisational dynamics in the transformation does not appear in the above reflection. Since the transformation is about the migration of data and technology, the transition of individual competencies and habits, business transformation, and the organisational dynamics viewpoint (Burke & Litwin, 1992) ask for a separate assessment.

4.3 Governing the Dynamics of Transformation

Next, the research assesses the dynamics along the evolutionary path by applying the EA Tool (Mattila J. K., 2020) but simplifying the study by focusing on three layers within the main focus, i.e., ICT business, ICT operations, and technology. Table 5 samples the most critical gaps in the ICT governance methods found when managing the dynamics of migration, transition, and transformation. Nevertheless, the paper does not analyse more complex powers and forces between organisational components in motion.

Table 5: Transformation dynamics challenge the existing ICT governance methods

Transformation dynamics/ support from methods	A Case	B Case	Dynamic features challenging the existing ICT governance methods
ICT business transformation	From a Joint ICT service provider to a supply chain of multiple providers	From embedded ICT units to a Joint ICT service provider	Case A does not receive much support, but Case B could use the methods ideally. Unfortunately, they do not support the transition of culture and competencies.
ICT operations transition	From service management to value chain management	From element management to service management	Enterprise-oriented methods do not recognise the challenges of value chains for case A. However, the service management is well covered, but the ambitious transfer asks for more support.
IC technology migration	From cloud provided through roaming connections to software-defined everything	From domain computing on fixed connections to cloud computing with mobile access.	The latest ITIL recognises DevSecOps integration required in software-defined everything for case A. Cloud computing and mobility migration can be orchestrated in support of existing methods.

The dynamics of the ICT transformation challenge the existing governance methods in three areas:

1. Transformation goes beyond the range – methods follow progress with a delay. However, they do not define the behaviour on the edge of development.
2. Transformation fast forwards – methods presume a level of understanding and maturity between the slow steps of evolution.
3. Social and cognitive immunities to change – the focus is on managing things and transactions rather than the transition of interrelationships.

4.4 Discussion

Based on these two cases, the military does not systematically utilise the common ICT governance frameworks and methods. Whether this is because officers' training does not include these subjects or military command and control culture is too strong to tolerate frail matrix governance methods, remains outside of this research. Nevertheless, the ability of military personnel with various backgrounds to adopt applicable parts of these methods was remarkable once the challenge was recognised and ownership shared. Therefore, the complete application of ICT governance methods does not guarantee effortless transformation, but shared challenges and applied remedies make the success more predictable.

From a cultural perspective, the military organisation seems more prone to stability than agility (Kale, 2020). Thus, military digital transformations should be slow-paced or short steps and well within the scope of existing ICT governance methods for improved outcomes. Similarly, some ICT transformations in academic organisations have benefitted from applying good practices when consolidating university ICT. (Toleman, Cater-STeel, Kissel, Chown, & Thompson, 2009) Sometimes, the military transformations do not recognise their cultural heritage but launch ambitious programmes to gain an advantage or fast forward to meet the adversary's capabilities. Consequently, the culture of society and the competencies of individuals often hold down the realisation of transformation programmes and existing ICT governance methods do not support mitigating these problems. Hence, understanding enterprise sub-cultural structure is essential for the success of any transformation. (Pew & Mavour, 1998)

The ICT governance methods recognise all essential components (technology, information, competency) and aspects (performance, resources, strategy, value/risk) for transformation, but they remain enterprise-focused. Therefore, they require extensions from supply chain, value stream, and digital and knowledge economy management methods. (Kale V., 2020) Furthermore, good ICT governance practices seem to fit well for consolidated, hierarchically managed enterprise ICT services. In contrast, the fitting may be less feasible when ICT is distributed into autonomous business units or spread over the length of the value chain. (Loukis, Janssen, Dawes, & Zheng, 2016)

The strategy should focus on utilising organisational resources to achieve an advantage, but, except for balanced scorecard and portfolio management, centralised ICT governance methods do not support the acquisition and orchestration of resources within distributed, hierarchical, and functionally separated military organisations. (De Vries, 2010) Hence, the alignment of effort remains loose, and cooperation between military Services is challenging. At least, the importance of consolidating strategic alignment and ICT governance mechanisms has been proven productive in private sector organisations. (Wu, Straub, & Liang, 2015) The military has the challenge of valuating their ICT performance and investments since their ”business value” does not reflect on the financial figures as clearly as the private sector. (De Haes & Van Gremberg, 2015)

In conclusion, there is no one ICT governance tool to master digital transformation in military organisations. The feasibility of methods depends on the pace, length of the leap, and ambition of the transformation. Since the ICT governance methods often evolve behind the edge of evolution, they may not be the best practice to seek support for fast-forwarding or edge advantage-seeking transformations. In any case, it seems that successful orchestration of digital transformation requires a combination of governance methods tailored to the particular posture and target of the organisation.

5. Conclusions

The statistics show that 70% or more of digital transformations are falling short of their initial goals. Nevertheless, over 80% of organisations plan to gain performance or business advantages. Military organisations are also facing challenges in their transformations to gain advantages. The ICT governance and management methods should provide support in utilising digital technology and improve the success of the transformation. Is the military not using good practices? Are good practices not addressing the challenges of military transformation? Are good practices unable to manage the dynamics of a digital transformation?

The ISO 38500 promoted principles and management methods map well onto the Armed Forces' general ICT business model. However, none of the two cases fully recognised or utilised any governance or management methods. Nevertheless, both cases could use parts of the toolbox to improve their success in transforming the ICT branch once the challenge was recognised and the tool was identified and shared. On the other hand, there is no evidence that full compliance with the good practices would even enhance the transformation's success. The results indicate that sub-cultures of organisation, competency of people, and arrangements of military affairs significantly affect the application of good governance practices.

Based on the action participation, there is no one governance method to address the usual challenges of digital transformation. Moreover, even utilising the complete toolbox promoted in ISO 38500 does not provide full coverage as social structure, human competencies and acquisition of resources remain weakly supported. Hence, the governance toolbox requires an extension of, at least, systems thinking, organisational behaviour, business dynamics, and supply chain management. Transformation may need more leadership than good practices in management.

The transformation dynamics, interrelating forces between organisational components, affect the outcome of digital transformation. However, the toolbox of good governance did not support when transformation reached further towards the edge of development, when the intention was fast forward the organisation, or when social structure was exceptionally immune to change. Therefore, it requires a tailored approach to apply good governance practices in a wide variation of ICT transformations.

The lack of public data concerning military digital transformations makes this research relatively unique from an academic viewpoint. Action research may be one of the best ways to gather reliable data with the proper context from military transformations that extend over several years and have many rotating stakeholders. Transformation practitioners should be relieved as there are no signs that full implementation of the governance toolbox makes transformation successful. On the contrary, tailored application of tools to mitigate recognised challenges seems to create a better impact.

The focus of the research is limited only to ICT transformations and does not observe a broader transformation of military affairs. Moreover, the information concerning affairs and operational performance transformations would be further constrained for operational security reasons. Nevertheless, the in-house transformational experts, who have access to confidential information, may extend and build on this research. Furthermore, the constrained understanding of one researcher engaging in two transformations can be mitigated in the future by a multi-discipline research team that composes observations from several viewpoints, i.e., sociology, psychology, business, information, and engineering, and even create a better governance framework for digital transformations.

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A Systematic Literature Review on Change and Leadership in Higher Education

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Abstract: This paper presents a systematic literature review that focuses on the topics of change and leadership in Higher Education, in order to synthesis existing research in this key emerging area and provide some direction for future research. A review framework and method are outlined, in order to clarify the type and source of literature to be reviewed and the focus of this review process. Then, findings are analysed and presented, and thematic areas identified and analysed. Gaps in research are then explored followed by a conclusion and recommendations. Initially, 80 relevant articles were identified from Scopus and Academic Search Complete since 2010. Through abstract review, articles, which did not adequately relate to change and leadership were removed. The final number of papers reviewed and thematically analysed in detail were 23. This research confirms that there has been a steady output of peer-reviewed journal articles published that focused on both leadership and change in Higher Education. Through thematic analysis, several key themes emerged. These included an array of change drivers and the internal and external context associated with politics, culture and traditions and the developmental stage of the higher educational system. Staff utilisation, collaboration and development were additional themes identified that set the scene to determine effective leadership approaches and characteristics. The final theme identified was leadership recruitment and development. Many knowledge gaps from an instrumental, humanistic, critical, and philosophical perspective were identified. It is hoped that this literature review will aid further scholars in their research and develop new knowledge so that convergent views on this important topic will surface.

Keywords: Literature Review, Change, Leadership, Higher Education

1. Introduction

Change is unavoidable across all industries and is crucial for growth so leaders must be able to react to new trends, developments, and attitudes to enable them to be effective and allow their organisations to thrive (Fullan, 2020). In addition to dramatic disruptions because of Covid 19, significant issues currently face Higher Educational Institute's (HEIs) including increased workload, reduced staff development opportunities and concerns over investment in information technology, which lead to inefficiencies (QQI 2016). In the context of most Irish Institutes of technology (ITs) merging to become Technological Universities (TUs), the topics of change and leadership have never been as important in higher education.

This systematic literature review focuses on the topics of change and leadership in Higher Education to provide some direction for future research in this area. A suitable framework and method are initially outlined, to clarify the type and source of literature to be reviewed and the focus of this review process. Then, findings are analysed and presented, and thematic areas identified and critiqued. Gaps in research will then be explored followed by a conclusion and recommendations.

2. Review framework and method

An effective way of initiating a literature review is to determine its fit with the Taxonomy of Literature Reviews which incorporates five characteristics- focus, goal, perspective, coverage, organisation, and audience (Randolph 2019, cited in Cooper 1988). The focus of this literature was primarily on the research outcomes or findings. The goal was to integrate the knowledge gained and identify the main themes. After completing some preliminary literature searches, the search criteria were tailored so that the quality and relevance of literature were high, and the volume had a critical mass for reviewing. Targeting an academic audience, analysis was then undertaken to identify the most common sources, trends and type of knowledge domains used.

Search strategies typically use an index such as Scopus for keyword searches or search within relevant journals (Kovacevic and Hallinger, 2019). Initially, a general library search was conducted (Maynooth University) in addition to Google Scholar, to get an appreciation of the literature in this niche area. Given the large volume identified, it was decided to limit the literature review to peer- reviewed academic articles only and utilise Scopus and Academic Search Complete (EBSCO) to identify the best sources. To get an optimum number of articles to review within the time available, the search was limited to those in the English language, published between April 2010 to April 2020. The following search words were used and needed to be contained in the article title:

(Change or transform) and (Leadership or management) and (Higher Education or university or post-secondary school).

When these search criteria were used, Scopus and Academic Search Complete (EBSCO) identified 80 articles. Another filter was applied by performing an abstract review to remove non relevant articles. Articles specific to data management, hospitality management and diversity were removed. This reduced the article count to 43. In order to rationalise down further to the core research area, another filter was applied that required each article to include the word 'Leadership' as well as 'Change' in its title. This filter removed articles focused on general change management but did not have the reference to leadership. The resulting final article count was 23 peer reviewed articles that matched the core area of focus for this literature review. Figure 1 shows a summary of this filtering process.

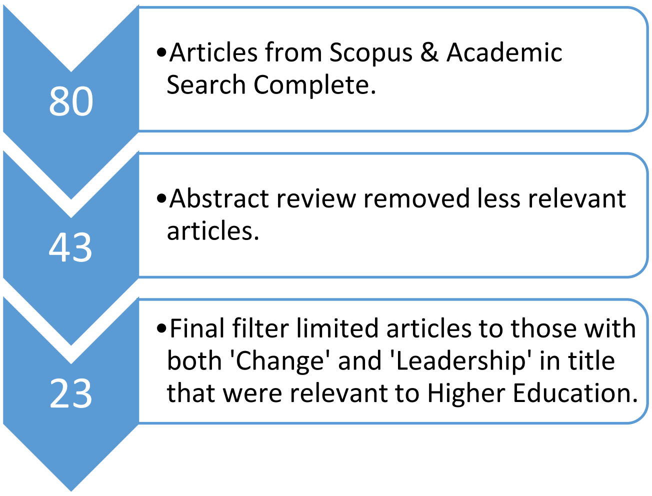

Figure 1: Main Literature Filtering Steps

The next step involved sourcing these full articles in various sites including Scopus, Academic Search Complete, Library Search, Google Scholar, and Google. The articles were then read to get an overall appreciation of the content as well as identify each article source, output or findings, research methodology and its knowledge domain.

3. Findings and analysis

Figure 2 demonstrates that within the 10-year period, there has been a steady output of peer reviewed journal articles published that focused on both leadership and change in Higher Education. The largest number of published articles occurred in 2018 with a total of three and the overall trend is positive in output. (Note 2020 has one article to date but was omitted from the diagram as it was not a complete year for this exercise.)

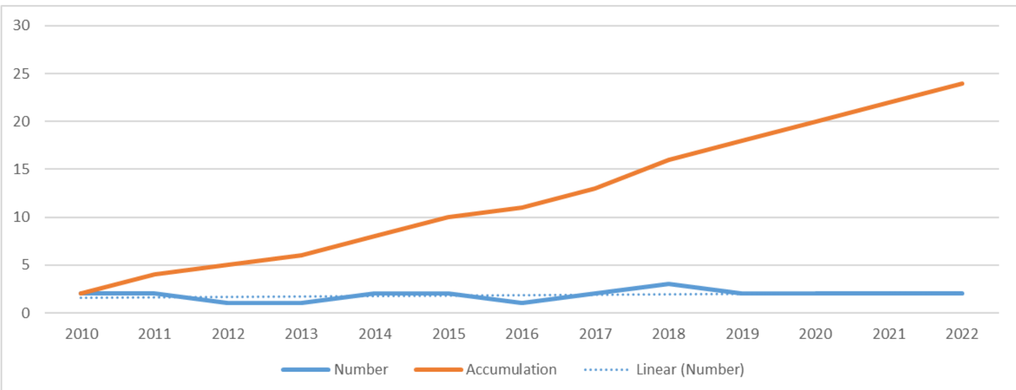

Figure 2: Distribution of literature from 2010-2020

Two main academic journals were identified as the most common sources of relevant literature: Journal of Higher Education Policy and Management as well as the International Journal of Knowledge, Culture and Change Management. 13 other sources were identified, each with one article indicating quite a diverse and fragmented range of sources overall.

With regards to leadership research in education, Gunter (2016) created four knowledge domains as field position outcomes to view how change is engaged with. Each piece of literature was reviewed and aligned to these domains and presented in Figure 3. Most of the research in this area has been carried out mainly from a humanistic knowledge domain perspective (eight papers). Five papers were from the critical Domain, 3 philosophical and finally three articles took an instrumental perspective.

Figure 4 shows that a qualitative approach was taken by most researchers in this area such as interviews of various leaders or stakeholders. A small number of researchers utilised quantitative approaches. These included Waisy (2020) who gathered survey data from 611 lecturing staff to show the relationship between transformational leadership and affective commitment to change of staff. Dobi's (2012) 89 survey respondents in academia provided evidence to support distributed leadership. However, there was no article identified which utilised a mixed methods of both quantitative and qualitative techniques to support their research findings.

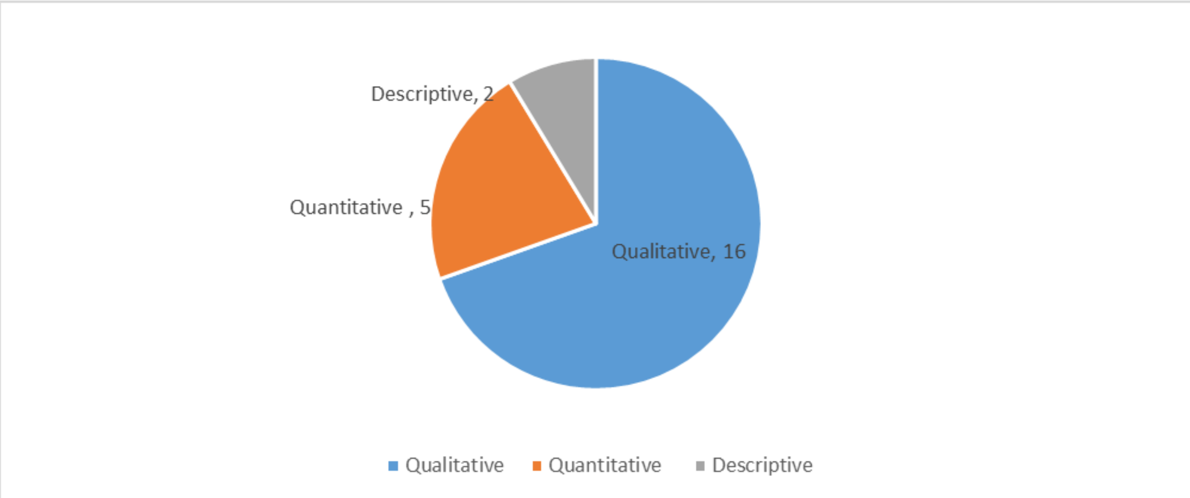

Figure 3: Research Methodology of Literature

3.1 Change drivers

The first theme, which emerged from this literature review was the articulation of the need for change and its drivers. Many change drivers were identified, that need to be considered when establishing the best form of leadership to be deployed.

Globalisation and technology drivers are forcing organisations to change, in order to remain competitive and survive (Geraiden et al, 2018). Finances for HEIs are in a state of disruption as state funding for education will more than likely continue to decline for the foreseeable future (Collins, 2014). With ongoing technology advancement throughout all levels of higher education, systems thinking is important, but it is "applied within a complex, imperfect social and organizational cultural context that requires compromise, consensus building, patience and a willingness to proceed slowly" (Chow, 2013 p 64).

Many structural governance and institutional changes are occurring in Higher Education across Europe, Australasia and North America, associated with achieving greater productivity and economic performance. This new managerialism can be described as New Public Management (NPM) and is having a significant impact on higher education (Howells et al, 2014). Waring (2017) believes that such change has transformed academic departments to focus on corporate targets but with tight budgets. Higher Education is increasingly decentralised, due to devolved agency of the state, and more fragmentation, due to an increasing number of actors in the higher education field such as ranking agencies and funding agencies (Howells et al, 2014). In Finland for example, universities underwent reform in 2010 to transform from state agencies to a more responsive market focused independent entity (Kohtamaki, 2019).

Internationalisation is a key driver of change as it is an important component to the experience of learners living in a globalised world (Said et al, 2015). HEIs must deal with increasingly diverse students who engage differently with higher education (Kezar, 2014). In addition, Dahlvig (2018) states that as a result of marketization and globalisation, institutions are aiming to reach broader markets by recruiting international students. In addition to standard full-time face to face programmes, many other types of educational programmes have been developed to cater for diverse requirements including apprenticeships, part time online programmes and work-based learning programmes.

Climate change and environmental sustainability are highlighted as the most pressing issues facing mankind, but the focus of Higher education has become more aligned to the private benefit of students than to build a civil society and that rebalancing this will take expert leadership (Dahlvig, 2018). A case study embedding this philosophy into curriculum at Plymouth University was published by Warwick (2016), which shows how curriculum can consider three dimensions- concern for people and planet, from local to global geography and from present to future.

More recently, research is emerging in relation to how HEI's have coped with Covid-19 (Makaram et al, 2021) and how they are addressing the gender balance issue (Gebretsadik, 2021; Lagesen and Suboticki, 2022).

Most change drivers found in this research could be potentially related. For example, with increased globalisation and associated competition, countries are decentralising educational governance and performance management is being used. In addition, HEIs seek to diversify income streams through international and diversified recruitment, which also benefits the experience of learners.

3.2 Change context

The influence of HEI's internal and external context was found to be another theme from this research. Human Resource Management practices, politics, culture, traditions, and the developmental stage of the higher educational system were identified by researchers as being important. Contextual factors are important when researching change (Ben et al, 2013) and educational leaders need to take these into account when determining their approach to change leadership.

Human Resource Management was identified as a management ideology, but Waring (2017) believes it must be abandoned and a judgemental approach to performance management replaced by one that is employee centred. In some institutes, the pressure to publish or perish may leave little time or energy for other activities as faculty and institutions typically focus on research identity (Dahlvig, 2018). However, as a result of performance management initiatives, recruitment in a Norwegian University was focused on research performance, which led to recruitment of highly published staff who could not teach (Rasmussen, 2015).

It is suggested that the western world has four different types of HEI models, which influence leadership structures and operations (Tjeldvoll, 2011). In this particular research, contracts in internal factors are formed between HEIs made up of self-governing community of scholars, driven by internal dynamics to those which have representative democracy where change depends on bargaining and conflict resolution. External influencing factors are also contrasted between HEI's that are modelled as instruments of national policies and deliver political objectives, to HEIs that are more geared towards addressing globalisation by being a service to the community and adapting to changing circumstances and customers. However, some countries have less developed educational systems such as that in Albania, where twenty years after the collapse of communism, their centralised and public education systems have not evolved like others across the world (Dobi, 2012).

Cultural influences and traditions may also have a significant impact on leadership and the performance of higher education (Tjeldvoll, 2011). Universities in East Asia with strong Confucian traditions of knowledge importance, have not evolved like Anglo- American universities and retain hierarchical structures, as their culture accepts leaders to lead and give instruction. In addition, learners in these universities have a hunger for knowledge, work hard and expect to complete (Tjeldvoll, 2011). Collins (2014) argues that effective leadership in any organization especially not for profit ones, relies on persuasion and any effort to encourage and teach leadership will fail unless it is sensitive to the distinctive challenges of higher education's individualistic culture.

3.3 Academic staff

To deal with issues and challenges facing HEI's, building and maintaining the team and developing the individual is necessary (Drew, 2010). However, Collins (2014) states that as a result of the culture of individual scholarship, HEIs do not encourage academics to develop as academic leaders and many lack leadership training programmes for academics. Several key staff attributes that support change were identified in this literature review, but little emphasis on the need for staff training was present. Drew (2010) suggests that academics as independent thinkers, find collaborating a challenge. Geraiden et al (2018) believes emotional intelligent employees are more open to change. Additional research suggests that staff mind set (growth or fixed) influence people's choices in approaching or avoiding risk, as well as their willingness to exert effort (Dahlvig, 2018). Therefore, leaders need to source and retain suitable academic staff with the right skill sets, and further research to support staff development in areas such as collaboration, mind-set and emotional intelligence would strengthen the case for this type of training and possibly lead to HEIs being more open and proactive to change.

Another important area identified in this research is that leaders need to be aware of the academic context and expertise of staff who have increasing demands and form complex social organisations. Drew (2010) points out that HEI tensions exist at an academic level, between pedagogy and research versus creating efficiencies. In the context of resource reduction, academics have higher academic workloads and increased administration associated with managerialism (Drew, 2010). Chow (2013) highlights that HEIs are complex, imperfect social organisations that require compromise and consensus building and this leads to proceeding slowly with changes and that challenges were less technological and more related to relationships between different stakeholders and differing expectations and that getting consensus on the vision at the initial stages of change prevented future barriers. The human dimension is critical in issues and challenges to do with leadership (Drew, 2010). In the context of merging two public sector institutions, Choi et al (2011) argues that top-down management carries a lot of risk as the clash between professionalism and managerialism is a bigger issue for leadership than differences in organisational cultures and that inter and intra-organisational dynamics are critical in change processes. Edwards et al (2018) believes that most HEIs should have a systematic approach to strategies by utilising staff expertise to appreciate thinking, improve ownership and identify solutions. Research provides evidence that leaders influence readiness for change at both the individual and organizational level and such leaders may be positional leaders or opinion leaders (Dahlvig, 2018).

3.4 Leadership approaches and characteristics

In order to address the implementation of change in the context of Higher Education, many different approaches to leadership have been revealed through this research and vary in terms of the degree to which control is dispersed or distributed (Lazaridou, 2019). As well as leadership approaches, various leadership characteristics emerge from this research, which are important to reflect on so that we can get a deeper insight into leaders as individuals.

Burrell and Rahim (2010) recommend that a strategic thinking approach is taken for higher education leadership, one that utilises strategic planning and change frameworks, which encourages support for change and creative organisational structures. However, due to the complexity involved, they highlight that higher education has not operated in this way previously. In addition, Choi et al (2011) warns through a research case study, that a top-down leadership approach leads to a limited sense of organisational complexity as well as the impact that the professionalism of staff can have on resisting change. Therefore, this approach does not carry much support from scholars in this research.

A more collegial approach to leadership is supported in this research. Bolden et al. (2009) supports an emergent leadership style, which is characterised as an unplanned, bottom-up informal approach and does not adhere to clear lines of hierarchy and command but emerges from staff interaction and initiative. This approach resonates with the concept of adhocracy that promotes inclusivity, flexibility and devolution of power, which are being seen as the best means of engaging staff in a time of rapid change and increasing competition (Waring, 2017). Distributed leadership is another term found in this research, which has similarities to emergent leadership and was seen to counteract the negative effects of managerialism and performance management (Jones and Harvey 2017; Waring, 2017). Apart from better staff engagement, research indicates that a more decentralised organisational model has many other benefits including enhanced student communication and involvement (Dobi, 2012). In the context of Covid-19, Mukaram (2021) suggests that adaptive leadership contributes to organisational readiness for change. However, given that distributed and adaptive leadership approves involve extensive consultation which takes time, some critical research in this area would be worthwhile.

Many personal leadership characteristics were threaded through this research. Although these characteristics are fragmented and diverse, they enable a deeper understanding of leaders as individuals, and identifies several personal traits needed to successfully lead change in HEIs. Kohtamaki (2019) believes that leaders have three roles- symbolic, responsive and discretionary (focusing their direction based on their interpretations) and by applying resource dependent theory, crucial resource types sought by leaders were identified, which drive their action and effort; these are financial, power and human resources. The topics of finance and human resources have been previously unpacked in other themes, but further research on the topic of leadership power through relationship networks would be very useful. When incorporating new performance mechanisms, Kohtamaki (2019) also discovered that leaders worked with people to develop trust, and this is also supported by Waisy and Wei (2020). Finally, Kohtamaki (2019) provides evidence that leaders use a positive spirit, which resonates with positive leadership research by Dahlig (2018). The benefits of positive leadership are well documented during times of change and utilises positive psychology to improve staff efficacy, optimism, hope, and resilience (Dahlvig (2018). This resonates with the previous theme of staff and the development of teams as well as everyone (Drew, 2010). The area of positive psychology is not well developed in this literature review and requires further research to determine its influencing potential on change and associated leadership.

Elsewhere, research by Howells et al (2014) characterises leadership agency into four themes of vision, alignment, strategic collaboration and innovation. Having a vision, while aligning the direction of departments was seen as important as well as strategic collaboration with other institutions and innovative approaches underpinning the institute (Howells et al, 2014). Murphy (2010) also highlights the importance of innovation by outlining practical rules for effective leadership which include a search for solutions and creative thinking. Creativity and innovation are important factors for change management and facilitates organic change (Buller, 2014). However, these topics require further research to determine their potential strategic impact to HEIs.

Another key leadership characteristic found in this research is the ability to understand the type of change being made and the appropriate timescale. Laxaridou (2019) distinguishes between technical and adaptive changes in order to have appropriate and effective leadership responses, but elsewhere the types of changes and their influence on leadership was absent. In relation to timelines, Waring (2017) makes a case for incrementalism by making small shifts and building commitment gradually and argues that resistance is minimised as people come to accept new methods of working or behaviour over time. Kohtamaki (2019) reinforces this approach through a research case study that implemented a new management culture. In addition, Geraiden et al, (2018) provide evidence that organizational readiness for change is usually supported by making change gradually. However, as previously stated, some changes may need to be implemented quickly so this incremental approach many not always be feasible, so additional research is required to examine this area.

To enable effective leadership, Murphy (2010) argues that leaders need have full commitment, be able to act with others (teams) and act alone (uniqueness), manage risks, learn to lead, and be able to sell ideas and have perseverance and passion. However, Howell et al (2014) argues that leadership qualities need to be closely aligned with the nature and types of institutional work in which the leaders should be engaged. Leadership qualities identified include ensuring internal integration, creating formal structures and frameworks, linking past and present actions, making the hard choices and being self-aware (Howell et al, 2014).

3.5 Leadership recruitment and development

With regards to leadership recruitment, it is recommended that HEIs think now about what sort of leadership their institutions need, then recruit people who will be effective in that environment (Collins, 2014). However, concerns in relation to recruitment processes for staff have previously been highlighted, which are also applicable for leaders (Waring 2017; Rasmussen 2015). Gender balance is still a concern in higher education and leaders have a key part to play in addressing this key issue which is experiencing a slow pace of change (Lagesen and Suboticki, 2022; O'Connor, 2020). In addition, Collins (2014) believes that staff recruited for their individual scholarship may not have the leadership skillsets to inspire and persuade. Management roles are very different and Waring (2017) stresses that departments are being transformed into business units run by management teams focused on corporate targets, working within tight budgetary constraints.

This research identifies an alternative to specific recruitment of leaders which is upskilling and development of existing academic staff. Patton (2021) argues that academic leadership expertise is developmental and evolutionary and requires continuous refinement. However, Collins (2014) maintains that faculty members are seldom facilitated to develop as academic leaders and there is a lack of leadership training programs for the average faculty member, as there seems to be an assumption that good scholars make good leaders, but this is not always the case. As a result, there is the need for appropriate and ongoing leadership training and development (Field, 2015; Waring, 2013). Many potential benefits have been identified in this research, from developing local leaders on the first stage of their career trajectory (Irving, 2015) to developing a more inclusive approach to leadership that enables universities to respond to opportunities with greater agility (Waring, 2017).

With regards to leadership training and development, which compliments the previous topic of developing staff as individuals, Kohtamaki (2019) suggests that leaders benefit from courses in business administration, human resources/leadership and psychology and that mid-level managers' professional development has been shown to involve three phases: learning, function development and institutional projection and transmission of management tasks. Waring (2017) believes that HEIs already have the Academic specialists in these relevant areas to develop such programmes and that the involvement of trade union representatives would prepare leaders for dealing with individual grievances, disputes and conflict. Gebretsadik (2022) highlights that leaders need to also be committed to change tools and provide resources such as training for smooth implementation of change at universities. However, evidence of appropriate training courses is absent in the literature.

3.6 Gaps and limitations in literature reviewed

Although this literature review focused solely on peer reviewed journal articles, a methodical approach was taken, and a critical mass of articles was uncovered. Therefore, there is merit in identifying the gaps in research. Although themes were identified from the 19 articles, the research appears to be very fragmented with little consensus overall. This may be related to the variety of journal sources from around the world. In addition, there is a lack of empirical and quantitative data to support the predominantly qualitative research undertaken to date. Although the change drivers and staff profile are well documented and the context is well developed, many gaps have emerged.

The first major gap appears to be the lack of research in the instrumental knowledge domain, which is associated with tangible models, processes and tools for effective change leadership implementation. Although creating a vision is referenced (Howells et al, 2014) as well as strategic thinking positioned by Edwards et al (2018), little exploration has been done to demonstrate successful models of strategic plan development and implementation. In addition, this literature review did not identify the various weaknesses of strategic management or alternative approaches of scenario planning or a strategic compass, which are described in detail in a book by Buller (2014). Research is required to develop the concept of multiple approaches or types of leadership being required simultaneously at different levels of the organisation (Kohtamaki, 2019). In the context of increasing financial and time constraints, there is also no reference to how technology can assist in change leadership efficiency or any reference to quality or project management for productivity improvement and how they relate to change leadership. Innovation is introduced by Howells et al (2014) and could lead to emergent/organic leadership, but further research is needed to integrate its influence on leadership. Regarding change management, Ben et al (2013) states that researchers should examine context, content, process and outcomes when studying change. From this literature review, context is reasonable well addressed. However, the content, scale or type of change is not always clarified, and the presence and outcomes of change processes are absent, even though they are significant for change leadership (Buller, 2014). It must be noted that many theoretical change management models have been developed in literature but only two are referenced in this research by Dahlvig (2018) and Geraiden et al (2018). Exploring how various change management models relate to leadership is not established and it would be interesting to examine how each stage may influence the leadership approaches used and how leaders balance their time between the softer people development skills and harder process related skills, two key areas vital for successful change leadership identified by Buller (2014).

From a humanistic perspective, there is a reasonable coverage of knowledge in change leadership and its interactions with staff, leaders and organisations overall. However, there is further opportunity for research relating to change drivers and contextual factors, and their impact on staff and leaders. Also, there is no analysis done to demonstrate the different change leadership skills, activities and relationships required by key academic roles such as Programme Chair/Director, Head of Department or Head of School/Faculty. Geraiden et al (2018) suggests future research is needed to investigate the effects of factors such as training, motivation, culture, and recognition. Training and development of both staff and leaders was found to be important to enable effective and successful change and skills required were identified and the potential of positive psychology touched upon. However, further research to support staff and leader development in areas such as innovation, collaboration, positive psychology (including mind-set and emotional intelligence), would strengthen the case for this type of training and possibly lead to HEIs being more proactive to investment in this area, which could result in more agile organisations.

Finally, there are gaps in research from a critical and philosophical perspective. The topic of distributed/emergent leadership was a frequent occurrence, but further research from a critical viewpoint would balance this topic. The fundamental question of why changes are required, and what changes should be implemented can be further explored. In addition, we see globalisation as a major influencer of change but additional research to see how this can be counterbalanced with ethical demands from a civil society perspective would be worthwhile.

4. Conclusion and recommendations

This literature review is the first of its kind on these topics and is very timely in the context of Covid-19. An array of change drivers was identified, and the internal and external context associated with politics, culture and traditions and the developmental stage of the higher educational system were found to be important influencers to change and leadership. Staff utilisation, collaboration and development were additional themes identified that set the scene to determine effective leadership approaches and characteristics. The final theme identified was leadership recruitment and development.

Many knowledge gaps from an instrumental, humanistic, critical and philosophical perspective have been presented. These gaps as well as the themes identified, resonate and build on previous literature reviews completed in the fields of higher education change management by Ben et al (2013) as well as leadership by Dobson et al (2018). It is evident that there is little consensus emerging from this literature review and further research to address the gaps outlined is required to further develop knowledge and provide a critical mass to enable consolidation. It would also be interesting to broaden the research sources to include books, dissertations, and conference papers as well as policy documents to get a deeper insight into exist knowledge in this field, which his growing in importance.

This research has outlined the complexities and challenges associated with change in Higher Education and provided an analysis of leadership. Having identified many areas of future research opportunities, it is hoped that this literature review will aid further scholars in their research and develop new knowledge so that convergent views on this important topic will surface.

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The Convergence of Customer Orientation and Collaborative Health Care Leadership in Lithuania

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Abstract. Improving health care quality is a continuous goal that requires constant attention and innovative solutions. One of the sources from which we can learn about what quality changes are needed is patient experience. "Collaboration" is one way to develop instruments and use them to gather knowledge about patient needs related to the patient journey and measures to improve the quality of services, such as service collaboration. The direction, in terms of the identification of patient needs and relatively urgent changes to the system, depends on the organizational culture determined by leadership. Different approaches towards leadership initiate different outcomes and consequences. Collaborative health care leadership comes with the decision to strengthen collaboration between health professionals and patients, thus addressing service quality gaps. Therefore, it becomes important to understand patients' expectations in terms of such cooperation. **The study aim is** to investigate whether patient satisfaction barriers can be linked to shortages in collective leadership. All three dimensions of collaborative leadership (horizontal collaboration, interorganizational (vertical) collaboration, and collaboration with patients) demonstrate the link between leadership and accepted health care quality.

Keywords: patient journey, collaborative leadership, health care service quality

1. Introduction

Improving health care quality is a continuous goal that requires constant attention and innovative solutions. One of the sources from which we can learn about what quality changes are needed is patient experience, which is not so easy to translate into quality management information (Agoritsas, Schiesari and Perneger, 2011). However, it has been proposed that interactivity helps to better access the patient experience (Philpot *et al.*, 2019). It is currently recognized that directions for improving health care quality can be identified through new interactive methods, such as patient journey. Patient journey (McCarthy *et al.*, 2016) provides new and instant information on the current status of quality of service. Recent research increasingly shows that the development of health services is focused on patient needs, which are most keenly focused on patient involvement and collaboration (Tretiakov, Whiddett and Hunter, 2017). As such, collaboration is a guiding trend for the collection of patient needs regarding patient journey and quality improvement measures such as collaboration in service provision. Once the patient's needs are identified, transformational changes in health care services are required, which may be difficult to initiate in the current fixed management structure with the current leadership style. The direction in the identification of patient needs, and then the relatively urgent changes to the system, depends on the organizational culture determined by leadership. Different approaches towards leadership initiate different outcomes and consequences (Endres and Weibler, 2017). Collaborative health care leadership comes with the decision to strengthen collaboration between health professionals and the patient (Buyan, Aylott and Carratt, 2020), thus addressing service quality gaps. A comprehensive stream of literature regarding collaborative leadership demonstrates desirable new values in health care quality management. Therefore, it becomes important to understand patients' expectations in terms of such cooperation. Although there is evidence to support the relationship between collaborative leadership and improved quality of patient care, there is a gap in managerial knowledge about how patient-reported quality disparities/imperfections may be related to a specific type of collaborative leadership. The research question then becomes: can collaborative leadership be identified as desirable or lacking in existing quality management systems in terms of patient satisfaction with services?

The study aim is to investigate whether barriers to patient satisfaction identified by patients may be linked to the absence of collaborative leadership. For this purpose, it is first of all necessary to assess how the health care delivery system works from a patient perspective and which elements of collaborative leadership could have the potential to eliminate quality gaps. As qualitative research, patient journey mapping was used to identify health care quality gaps. Patient journey can also be used to capture the moment of the complaint in the organizational chain and identify which health care professionals interacted at a particular point in the service. This approach provides valuable insights. Organizational, procedural, and staff interaction moments can lead to the leadership elements necessary to deal with quality improvement. The qualitative study was later refined by a patient survey (quantitative research) to determine patient expectations and satisfaction.

2. Literature review

Health care service quality. Presently, quality has become the main construct that shapes health care services in terms of medical professionals (physicians), health care institutions (hospitals), and executives who lead health care infrastructure (Buttell, Hendler and Daley, 2008). To measure the quality of health care services is a complex task, mainly due to the asymmetry of knowledge between the patient (service user) and the service provider (Upadhyai, Upadhyai, Jain, Roy and Pant, 2020). The patient cooperates with the health care practitioner and becomes a co-producer of the service, providing the information needed for the selection of the best health care decisions. Meanwhile, the health care service provider uses the patient's information and their own professional knowledge and skills to select the best care outcome. Seeking to reduce the asymmetry between patients and service providers, the different dimensions of health care quality have been analyzed in great depth (Upadhyai *et al.*, 2020). Those dimensions are efficiency, cost effectiveness, performance, the interpersonal relationships of management, the amenities of care, responsiveness to the patient's preferences, and patient safety (Ransom, Joshi and Nash, 2005). This also leads to the dimension of physical access to health care, which is one of the most important quality indicators (Gulliford, Figueroa-Munoz and Morgan, 2002) that significantly determines quality output and patient satisfaction (Manzoor *et al.*, 2019). Knowing that accessibility is higher if patients and medical staff are involved in both maintaining and improving the quality of services (Mosadeghrad, 2014), leadership has a relatively clear course of action to strengthen cooperation between all health care actors, including the patients. The basic concept of patient-centered healthcare is realized by involving the patient in decision-making and implemented by measuring patient satisfaction and studying the subjective quality of healthcare. Meanwhile, there is still a lack of management linkages with quality dimensions that can realize greater patient engagement, satisfaction, and service quality. The ever-increasing complexity of the service (Plsek and Greenhalgh, 2001) (new health technologies, holistic patient needs, psychological security and motivational health solutions) makes it necessary to use collaborative leadership skills to mobilize the collective efforts of relevant actors to improve this access in a timely manner.

Collaborative leadership. Leadership in the health sector could be described as a social construct that affects the success of the organization and the quality of its activities (Endres and Weibler, 2017). Whether natural or accidentally created managerial and organizational barriers to the provision of health care services are often the cause of imperfections in the quality of health services. Eliminating such barriers requires a coordinated effort that brings together heath care practitioners and patients. The coordinating element in management is ensured through adequate forms of leadership. A leadership style capable of overcoming boundaries within a health care system should be focused on unification and commitment to one common goal. Due to the complexity of quality perception, the leadership construct is increasingly modelled to include not so much individual-centered, but more dynamic, process-oriented, and group-driven functioning within an organization valuable for the health care sector (Tretiakov, Whiddett and Hunter, 2017). The leadership context is no longer tied to formal responsibilities or hierarchy in the organization, but instead emphasizes the emerging potential for supervision through formal divisions, organizational functions, and performance.

Collaborative leadership represents the shift from traditional leadership, with the attributes of authority, to collaboration, and is defined as leadership with the "distribution of leadership influence across multiple team members" (Carson, Tesluk and Marrone, 2007). As such, collaborative leadership is a concept that encourages teamwork. Collaborative leadership is already recognized as a competency domain for practitioners, and we can take Canada as an example where it is promoted through the Canadian Interprofessional Health Collaborative framework (Iachini *et al.*, 2019). The importance of collaboration leadership is confirmed by its prevalence in other sectors, such as marketing and sales, where more emphasis is placed on customer focus and multi-relationship collaboration between teams (Accardi-Petersen, 2011). Collaborative leadership constructs are developed to such a level that their potential benefits are already agreed upon. There are numerous advantages gained from collaborative leadership in health care:

- By structuring key collaborative leadership achievements, research shows that the "adoption of collaborative patient care enhances physical access to healthcare services" (Okpala, 2017). Studies show that access to health care is increasing due to: collaborative leadership skills that are more often formed in a network, collaborating between different providers of health care, and engaging the patient in a network. Increasing collaboration in the provision of services at the primary health care level is also reflected in greater accessibility.

- A collaborative leadership approach can increase a patient's access to health care by ensuring a link between the patient and the funding institution.
- A collaborative leadership approach can also help to increase the availability of health care resources and involve more staff who work in a team and share responsibilities and knowledge to address a patient issue. By involving different stakeholders for structural and organizational adjustments, a greater degree of patient satisfaction can be achieved.
- **Collaborative leadership implementation**. In considering how to select the content of the implementation of collaborative leadership, the Social change model of leadership is effective (Komives and Wagner, 2009)(Iachini *et al.*, 2019). The Social change model embraces seven values: a) commitment, b) consciousness of self, c) congruence, d) collaboration, e) common purpose, f) controversy with civility, and g) citizenship. All together, these values represent the necessary interconnection between three different levels of interaction: individual, group, and community approaches.

By balancing individual intentions to be committed through the values of commitment, consciousness, and congruence, harmony is achieved through collective efforts (through the values of cooperation, common purpose, and consensus with citizenship) directing coherent strengths for the sake of citizenship.

Although the need for its expediency and efficiency has been proven, collaborative leadership is one of the most difficult forms to achieve and overcome, and its implementation becomes an important challenge of organizational management (Accardi-Petersen, 2011). Implementation difficulties are related to the complexity of dimensions of quality, mainly due to the fact that "complex patient needs, different roles of actors, different responsibilities among a variety of care providers, along with historical tensions stemming from timing of professional socialization," along with the "professional hierarchy within healthcare," all impact leadership within interprofessional teams (Reeves *et al.*, 2010).

The main managerial elements of collaborative leadership. The essence of cooperative leadership is collaboration, that can involve "simple coordination, synergistic behavior, mutual work processes, partnerships, and so on" (VanVactor, 2012). Adapting Jerry D. VanVactor's model (VanVactor, 2012), we can distinguish several multi-directional collaboration vectors: a.) cooperation between health care professionals; b.) cooperation with patients; and c.) the impact of cooperation on performance, when performance indicators are formed based on the available knowledge about service quality measurement, including patient feedback and satisfaction. In the following, we organize this research based on these dimensions and draw up a framework of collaborative leadership as multidirectional and reciprocal cooperation with those actors:

1. with different teams of health care providers;
2. within health care providers teams;
3. with other health care organizations and across health care structural levels; and
4. with patients.

After grouping the elements of collaboration according to the organization's dependencies, three types of collaboration are distinguished for the study: 1) vertical cooperation (when specialists from different levels of health care in a network provide an integral service to the patient); 2) horizontal cooperation (supposing each specialist works in a supported interdisciplinary team); and 3) collaboration with the patient.

3. Methodology

3.1 Qualitative analyses

The study is based on qualitative focus group interviews.

Method. Patient journey mapping technology was chosen for the study. Patient journey mapping is intended to study the patient's experience using health care services (or a set of them) and to reflect the emotional reaction caused – from the first contact in order to receive the desired service to the result obtained at the end of the process. It is a useful tool when trying to describe a patient's experiences, thoughts and reactions (McCarthy *et al.*, 2016).

The patient's journey is understood as the patient's encounters with health care providers in the health care system, starting from registration with a primary health care specialist complaining about their health condition to treatment, rehabilitation, and care at a specialized tertiary health care level. The construct of the patient's journey, when the patient's opinion, experience and expectations are recorded throughout their treatment, helps not only to detect health care service irregularities, but also to make timely management decisions, especially in order to shorten the time intervals between different stages of the journey (Philpot *et al.*, 2019).

The following ontology is used to structure the patient journey process: emotional journey, physical journey, and equipment-related touchpoints. This is a way to recognize "the patient's behavior, their feelings, motivations and attitudes" at each stage of the journey (McCarthy *et al.*, 2016). In this way, the patient pathway ontology can relate the patient experience to the organizational structure, relationships between elements, and leadership (Perzynski *et al.*, 2019). This study was carried out over two weeks in November 2020.

Participants. Three focus groups with 10–12 participants in each group were gathered for a discussion of issues regarding patient experience. Participants represented three different patient audiences: parents of children with nephrological and oncological diseases, young patients (around 18 years of age) with nephrological diseases, and adults with oncological diseases.

Instrument. Some unstructured interview questions were presented to the focus group for discussion, following Myers and Newman's unstructured interview recommendations (Myers and Newman, 2007).

Focus group participants were asked to briefly describe their positive and negative experiences of interacting with the health care system since the onset of illness (i.e., first visit to the doctor, outpatients, tests, hospital stay, rehabilitation, nursing, social and educational experiences, and other areas). Discussions regarding the major problems and the smoothest encounters at each stage took place separately. We focused on the following ideas: where were the most common problems encountered and what needs were not addressed; where were the most unpleasant memories of encountering organized care experienced; and what would patients suggest fixing.

Data. The data was available as transcribed text. The responses were grouped into categories and subcategories by means of the NVivo quality data analysis software. Coding and categories are detailed in previous research articles (Mockevičienė and Jankauskienė, 2021). Frequency of used concepts was identified, with the distinction of major problems. The specific categories used to code observations were problems/challenges (any issues that could be recognized as complaints, dissatisfaction, unmet needs, or discomfort).

3.2 Quantitative analyses

The primary objective of the quantitative survey was to identify the most important gaps in health care service quality, while the secondary objective of this survey was to determine patient satisfaction with services, seeking justification for collaborative leadership interventions. The questionnaire consisted of 29 questions split into 6 groups according to the topic of the questionnaire: 1) general (demographic, educational, employment) questions; 2) experience of using health care services; 3) meeting patients' expectations; 4) availability and quality of services, issues identified by patients; 5) patients' behavior, collaboration between doctors and patients; and 6) overall evaluation of health care services.

For most questions, 5 response options were given based on a Likert scale ranging from 1 (*did not meet at all*, *very poor*, or *never*) to 5 (*fully met*, *very good*, *regularly*). The survey was carried out via telephone (CATI) between 17 March and 9 April 2021, and 1,033 respondents took part.

Data analysis. The data obtained from the survey were processed using Microsoft Office Excel 2016 and Statistical Package for the Social Sciences (SPSS) 26, applying methods of descriptive statistics.

4. Findings

In order to highlight which elements of collaborative leadership can be useful in solving the current problems of inconsistent quality limiting patient satisfaction, it is necessary to have a good understanding of systemized patient opinion. Therefore, we will first present information about patient experience collected from focus group interviews.

4.1 Analysis of focus group interviews

In order to understand how often one or another problem was mentioned during the interviews, the frequency of categories was recorded. An analysis of the most common problems during the patient journey identified 16 categories, and individual codes were grouped. All identified inconsistency and quality gaps, as often encountered in conversation, are presented in Table 1. It is not surprising that not all categories that correspond to barriers to patient satisfaction appear to the same extent at different patient stages. At some stages, one or another complaint dominates.

During discussions with patients, several stages of the patient journey clearly emerged: symptoms, diagnosis, treatment, rehabilitation, examination, and follow up. Such discretization is sufficient so that research participants can easily assign their experiences and remember the problems encountered. The discretization of steps along the patient journey has also contributed to the possibility of revealing quality disparities associated with the secondary specialist level.

Horizontal cooperation. Patients are best acquainted with the primary care level, so the longest and most detailed discussions took place specifically about the activities of the general practitioner and their related experience. Problems related to diagnostics such as late diagnosis, lower expertise in rare diseases, and lack of information were mentioned. During the interviews, the majority of complaints and criticisms were made about secondary-level specialists. At all patient journey steps, the secondary level of practitioners was usually mentioned. Such an emphasis perhaps indicates not so much the content of the clinical competence of secondary level specialists, but rather their isolation and fragmentary participation in the patient's journey. This is most likely due to the fact that in the post-diagnostic period of a disease, the main contact person with the patient is usually a general practitioner or a specialist of a high tertiary level. Short-term and fragmented contacts with other specialists lead to a more fragile emotional connection with the patient and more frequent complaints. This should not be surprising, because such fragmentary relations with the patient – when the patient is referred to the secondary level for examination and returns to their treating physician for intermediate diagnosis, treatment and care – are presumed in legal acts (rules and procedures regulating the course of treatment).

Vertical (interorganizational) cooperation (physician, pharmacist, policy maker). A lack of initiative of the general practitioner and interference with the reimbursement of medicines were more often encountered at the treatment stage. The issue of medication was the most sensitive issue at this stage for all discussants. Although patients mentioned the family doctor regarding the issue of prescribing and obtaining medicines, this is a problem of greater content, which combines the reimbursement rules approved at the political level, the doctor's competence in selecting the medication, the ability to quickly access information about the reimbursement options, and the pharmacist who serves e-prescriptions in the pharmacy.

Collaboration with patients. Deficiencies in cooperation with the patient were highlighted at all stages, especially when secondary specialist services were accessed. This was mostly mentioned in the context of complaints about a lack of information or a lack of clarity regarding health condition. For instance, the "monitoring" patient journey stage is characterized by the theme of cooperation, when both the patients themselves and the doctors or their institutions are visible in the dichotomy of cooperation. Some complaints were related to the services of a psychologist. Patients were also doubtful as to whether their specialist addressed their problem with sufficient depth. Such complaints seemed to be more emotional in nature and were perhaps caused by low cooperation and a lack of mutual understanding.

Communicational links between stages of the patient journey. The stories of patients were consistent here: greater complexity occurred when categorizing patients' experiences as they encountered the system repeatedly for a new ailment. Although it would seem that a trip should repeat itself and proceed consistently, these stories show that there was no such consistency. Instead, patients went to the general practitioner, then to the emergency medical service. They were then directed to take a step back, and when they got there, they felt as if their needs were not being met, their condition was being ignored, and their treatment or diagnosis was considered inappropriate until they reached the station where they received treatment for the first time. This is usually the tertiary level. Such dynamics of the patient journey signal a lack of cooperation between different stages and miscommunication at the primary levels.

4.2 Analysis of the survey

Frequency of patient visits to health care institutions. According to the survey, all 1,033 respondents visited primary-level health care institutions in the last 3 years, and 92% of respondents used the services of these institutions 1 to 3 times a year. Furthermore, 990 respondents visited secondary-level institutions (specialist doctors), with 64% visiting such institutions 1 to 3 times a year, while 507 respondents visited specialists at tertiary-level institutions, with 190 (or 37%) attending 1 to 3 times a year.

Most common issues encountered by patients. The survey showed that the vast majority (70%) of respondents stated that they did not encounter any issues in their contact with the health care system. In the following discussion of the issues most frequently encountered by patients, we will only consider the responses of those respondents who did experience difficulties in using health care services.

Horizontal cooperation. Of those who had experienced difficulties, as many as 99% mentioned the issue of "difficulty in getting access to specialists," with more than half (65.1%) saying that they experienced this "regularly" or "frequently." The situation is different regarding the issue of empathy ("Is there a lack of understanding, attention, or compassion from medical staff?"). While 70% of respondents said that they had experienced this "often," only around 3% said they had experienced it "regularly."

The most common issues encountered by the respondents were difficulties in gaining access to primary-level doctors (65% of respondents experienced this either regularly or frequently) and waiting time (most respondents had to wait for a week up to a month in order to visit a GP).

Vertical (interorganizational) cooperation. The only issue identified as very acute (experienced on a regular basis) was limited access to specialist doctors.

Other issues were mentioned as frequently occurring. Among them were issues such as "difficulties in getting reimbursement for medicines and medical aids," and "failure on the part of the doctor to prescribe sufficient tests and comprehensive diagnostics."

The situation changes considerably when it comes to the lack of information obtained about an illness from medical staff. In this respect, the majority of the respondents (67%) rarely experienced this absence. An even greater difference is observed when it comes to rehabilitation services and cooperation between health care professionals. In this area, complaints accounted for less than 5% of respondents.

Cooperation with the patient. The level of cooperation with the patient is well revealed by the patient's behavior in case of illness, recorded in terms of when they apply to the health care institution. Behavior in the event of an ailment reflects a certain degree of trust in the system. Thus, the study showed that if the ailment is not serious, the first thing to do is to discuss it with family members and acquaintances (37% of the respondents claim so), to view available sources on the internet (22.5%), or to consult a doctor that the patient is acquainted with (22.4%). Referring to a general practitioner (GP) was only the fourth most frequent choice (12.9%). Consulting a pharmacist was completely unpopular (only 5.3%), despite the fact that a framework for pharmaceutical care and pharmacists is already being set up to provide advice to patients. For more serious ailments, it was more common to wait for them to subside than to go to the GP straightaway (54.4%). However, a fairly significant percentage of the respondents would seek help from their GP or call an ambulance. Moreover, a fairly adequate perception of the functioning of the system is manifested in the fact that only 0.2% of the respondents would call an ambulance.

The success of treatment depends to a large extent on a patient's attitude to it, i.e., the extent to which the patient is willing to follow the recommendations of a health care professional. It is encouraging that 54.2% of the respondents firmly chose the answer "yes, I follow all" with regards to this topic. The rest indicated that they do not follow all prescriptions. When it comes to the reasons that make it most difficult to follow prescriptions, two seem to dominate: improvement in health condition or fear of side-effects ("I stop taking a medicine because I start feeling better or my health condition does not improve" – 45.3%; "I stop taking a medicine when I learn about its side-effects" – 34.5%). Only 0.9% of the respondents admitted that they do not follow doctors' recommendations because of their current habits. The rest, however, doubt the effectiveness of their doctor's prescription (3.4%) or do not feel they have received enough information (4.9%).

The alternative opinion of doctors (to be tested again for the same symptoms) is sought by as many as 34.2% of respondents. Others do so with a “maybe” proviso, and no respondent answered negatively to a repeat test.

When assessing the doctor’s matter-of-fact approach during a visit, the majority of assessments were very positive. However, there is still a gap between how doctors usually communicate and what patients expect. Patients expect more attentive and empathic communication, rather than matter of fact. As many as 70% of the respondents would prefer empathic communication.

When patients’ expectations are considered in the context of the concept of patient-centered care, shared decision-making with a patient becomes one of the indicators of health care service quality. However, it is puzzling that as many as 53.8% of the respondents felt as if their doctor “usually does not take into account” or “does not take into account” the patient’s opinion when making decisions on tests and selecting the method of treatment. The rest acknowledged that their opinion is considered, with 13.8% saying it is always taken into account.

5. Discussions and conclusions

In order to investigate whether patient satisfaction can indicate the desirability of collaborative leadership for quality management improvement, data on the evaluation of health care services by patients were collected in two ways: qualitative and quantitative study. All three dimensions of collaborative leadership (horizontal collaboration, vertical (interorganizational) collaboration, and collaboration with patients) demonstrate the link between leadership and accepted health care quality. The links between quality disparities/imperfections and elements of collaborative leadership is summarized in the Table 1.

The areas where patients are most sensitive to service quality (service infrastructure, service availability, staff behavior) are filled with a greater need for information and greater personal attention to the patient’s problem. Patients’ subjective well-being (including psychological well-being becoming more and more recognizable as a part of treatment) and engagement in choosing a treatment strategy are an indication that the existing health care service system has reached the saturation of its quality improvement and does not satisfy patients’ current emotional needs.

Elements of this research clearly indicate the considerable potential of collaborative leadership in solving quality gaps. The complaints of patients – such as missing information from other specialists, not knowing whether specialists review all performed tests, consultations being too short, and the long times before specialists accept consultations – show that health care providers’ teamwork is weak and internal horizontal communication is without results. With horizontal collaboration, specialist teams could manage patients’ emotions more effectively, hear patients’ problems in time during the patient journey, and reach treatment solutions after responding.

The insufficiency of inter-organizational cooperation is seen even more clearly. Patients complain about the involvement of secondary specialists in their treatment plan; they are always looking for additional specialist consultations and alternative diagnosis. In addition, there are minimal social services and limited educational services. All of this shows not only that there is no connection between different levels of health care, but also that there is no integration between the nature of health, social and education services.

The elements of collaboration with patients are the easiest to capture. The very fact that patients do not feel included in the decision-making process of choosing a treatment strategy and that they would prefer empathic communication, but instead receive business-like communication, shows that the average patient does not feel as if they are part of a collaborative process. Nevertheless, it should be clarified that, at the tertiary level, patients with very serious health issues (oncological patients) are engaged widely and they respond with greater satisfaction.

Table 1: Link between elements of collaborative leadership and representation of findings

	Elements of Collaborative Leadership	**Quality disparities/imperfections according patients Study I (focus group interview)**	**Quality disparities/imperfections according patients Study II (Survey)**	**Actors involved**

1	**Horizontal cooperation**	• Week team work: (Short consultation, lack of information)	• Week team work (short consultation, lack of information)	Primary level (general practitioner**)**
2	**Vertical (interorganizational) cooperation**	• Limited links between patient journey stages (lack of communication between stages during the patient journey, uncertainties within the medication and prescription procedures	• Independent operation between primary, secondary, and tertiary levels and limited communication (long wait for secondary level specialists for consultation, more than 4 weeks, certain dissatisfaction with the services of secondary level of specialists	Specialists of primary-, secondary-, tertiary - levels, Pharmacy, Regulatory bodies
3	**Collaboration with patient**	• Limited (Follow up stage – patients are not involved in decision making; Lack of engagement; There is a lack of empathy, compassion)	• Limited (Referral to a general practitioner is only the fourth most common choice for a patient's with health issues; Lack of engagement; There is a lack of empathy, compassion; Desire for empathic communication)	Medical staff from every health care level, pharmacists.

In summary, it can be determined that despite the compliance of essential elements of health service quality with patients' expectations and a positive assessment of services (efficiency of service procedures), there are still certain elements of service quality that require the organizational contribution of the service provider. This research demonstrates limited patient involvement, decision making and information interpretation. A study of patient experience alone (patient satisfaction or subjective quality assessment) may indicate the need for changes in leadership principles that could lead to more collaborative health care. Therefore, in response to the question raised by the study "whether collaborative leadership is desirable or lacking in the existing quality management systems from patient satisfaction?", patient satisfaction studies can be an indication of the leadership style if the components of the considered leadership style are defined in advance, as was done in this study. The missing elements of collaborative leadership are more easily captured in the direct objects of the study (on cooperation with patients), but they can also be traced in the indirect elements of the study (collaboration in the team).

Practical implications of the study include linking patient satisfaction surveys with elements of collaborative leadership so that patient feedback can be used to inform management decisions and thereby improve the quality of healthcare.

However, some limitations of the study are related to the research framework, which was conducted from the patient's perspective, asking how they evaluate health services (health care system output), but not asking direct questions about the dominant leadership style as an input variable. The limitation arises from the recommendation to formulate direct questions in sociological surveys.

Further research could be organized through a direct study of collaborative leadership, organizing research on internal leadership practices from an organizational perspective to measure how specifically management is organized and what collaborative practices are fostered that could be related to specific patient dissatisfaction.

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The Influence of Board Gender Diversity on the Sustainable Development Goals Reporting: Evidence from Portuguese Companies

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Abstract: Aim: The aim of this paper is to analyze the influence of female presence on boards on the level of disclosure about the sustainable development goals (SDGs). **Methodology and Sample:** This study used a content analysis of the sustainability/integrated reports published by a sample of the largest Portuguese listed companies. A set of panel data regression analyses on the SDGs disclosure index from 2016 until 2020 was run. **Research Findings:** It was expected that there would be higher levels of SDGs-related disclosures in companies with female presence on boards. However, the results do not reveal any significant association with the dependent variable (SDG_IND). Contrary to our expectation, the presence of female on boards does not influence the disclosure about the SDGs in the largest listed companies. **Theoretical/Academic Implications:** Little research has addressed the influence of females on SDGs reporting (Rosati & Faria, 2019b, Pizzi et al., 2021). To the best of our knowledge, this study provides a first insight at the influence of the board gender diversity on SDGs reporting in the Portuguese context. **Practitioner/Policy Implications:** This study helps to highlight the importance of women on boards' role by increasing awareness about UN 2030 Agenda and ensuring the transparency of SDGs-related disclosure. Thus, our findings could have implications for policy formulation, to encourage board gender diversity and its effects on SDGs reporting quality.

Keywords: Women on boards, Board gender diversity, Sustainable development goals, Reporting, Agenda 2030

1. Introduction

Gender composition on the board is an important dimension of Corporate Governance, because women and men are traditionally, culturally, and socially different (Liao, Luo & Tang, 2015). At European Union (EU) level, women account just over a quarter of board members of publicly listed companies. In Portugal, after the entry into force of Law No. 62/2017, the percentage increase is notorious. As of 2018, 33.3% of the boards of directors and supervisory bodies of public companies will have to be occupied by women. In listed companies, the minimum is 20% and rises to 33.3% in 2020.

Several benefits of female representation on boards are provided by the literature. Literature provides arguments related to the female cognitive frame, suggesting that greater female board representation may improve the quality of board discussion and decision making, which generates a stronger financial performance. Thus, companies that do not include women to their boards are at risk of underperforming because they fail to make use of the intellectual and social capital that women offer (Campbell & Bohdanowicz, 2015).

Galbreath (2011) and Ben-Amar, Chang, and McIlkenny (2017) suggest that gender diversity enhances board effectiveness and promotes the adoption of sustainability initiatives. By other hand, Liao, Lin and Zhang (2016) argue that gender diversity might be seen as an indicator that companies have higher levels of social responsibility and management accountability.

The board is the main vehicle through which corporate governance occurs. Therefore, it is responsible for protecting the interests of the stakeholders (Quattrociocchi, Mercuri & Sergiacomi, 2019) and for the company's accountability and transparency through information disclosure (Dias, Rodrigues & Russell, 2017). Board composition is a determinant factor for Corporate and Social Responsibility (CSR) disclosure, as it is influenced by the choices, motives and values of those involved in the decision-making process (Khan, Muttakin & Siddiqui, 2013). Female participation on boards favorably affects CSR/sustainability engagement and reporting and the establishment of social policies (Jizi, 2017).

For listed companies, several disclosure obligations are imposed on the company and its directors. However, information concerning sustainable development has a voluntary character. In 2015, the United Nations adopted the 2030 Agenda, containing 17 Sustainable Development Goals (SDGs). This agenda defines the priorities and requires global action by governments, business, and civil society. Among the goals of Agenda 2030, the target 12.6 encourages companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle.

Over the last few decades, reporting models have been developed to help assess and manage the current state of an organization's sustainability and communicate it to stakeholders. Since 1999, the Global Reporting Inititative (GRI) has published a set of guidelines for the preparation of sustainability reports, for voluntary adoption, initially contemplating performance indicators grouped by the economic, environmental and social areas. However, in 2016 the GRI Standards were published in response for UN target 12.6 that calls for corporate transparency mentioning the benefits of reporting sustainability actions. GRI remains the dominant global standard for sustainability reporting (KPMG, 2020).

In the last years, Integrated Reporting (IR) also emerges as a viable model to the business reporting process, making organizations' strategies and business models more transparent to stakeholders. It is intended to increase the relevance, consistency and comparability of the information disclosed, adding in the same report all the “capitals” (manufactured, intellectual and organizational, natural, human, social and relational) that contribute to business success and creating value over time (IIRC, 2013).

Organizations will need to assess their activities’ impact on the SDG achievement and to review their strategies and practices. For that purpose, they need to be able to collect and report new data. Thus, it is important to align the organizations' strategy and corporate reporting with the SDGs. However, none of the above frameworks (GRI or IR) include specific guidance on SDGs-disclosures. Thus, the linkage of SDG into corporate reporting is at an embryonic stage and it is, therefore, necessary to promote their progress.

Empirical research in SDG reporting is still in its infancy and limited to few studies (Fonseca & Carvalho, 2019, Rosati el al., 2019a-b, Monteiro et al., 2020; Izzo et al., 2020a-b; Pizzi et al., 2021-2022, Elalfy et al., 2021, van der Waal & Thijssens, 2020, Tsalis et al., 2020, Haywood & Boihang, 2021, Erin & Bamigboye, 2021, Curtó-Pagès et al., 2021, Hummel & Szekely, 2021,). Empirical studies suggest that large companies from Europe are significantly more likely to report on the SDGs than companies in other countries. However, the numbers are currently too low to draw meaningful regional or sector conclusions (KPMG, 2018).

The sustainable development and commitment to the 2030 Agenda are more likely to exist in organizations characterised by strong internal governance (Martínez-Ferrero & García-Meca, 2020). However, the literature still has scarce evidence regarding how the strength of the board of directors affects the implementation of SDGs. A growing number of studies suggest there may be a link between gender balanced boards and CSR/sustainability disclosure (Ben-Amar, Chang, & McIlkenny 2017; Al-Shaer & Zaman, 2016; Jizi, 2017; Ong & Djajadikerta, 2018, Mahmood et al., 2018; Anazonwu, Egbunike & Gunardi, 2018, Cucari, De Falco, & Orlando, 2018; Correa-García, García-Benau & García-Meca, 2020). These studies support their findings in the agency theory and suggests that boards can contribute to the legitimacy claims of firms, by promoting broader voluntary sustainability disclosures.

As far as we know, little research has addressed the influence of female on SDGs reporting (Rosati & Faria, 2019b, Pizzi et al., 2021). Thus, the aim of this paper is to study the influence of female members on boards on the level of disclosure about the SDGs, in a sample of largest Portuguese listed companies.

After this introduction, the rest of the paper is organized as follows: the next section presents the theoretical background and our research hypothesis. The methodology and research design are described in the second section, including the sample and the methodology used. In the third section, the findings are presented and discussed. The final section summarizes the main conclusions of the study, the discussion of its limitations and implications for future research.

2. Theoretical background

In order to meet the goals proposed in Agenda 2030, companies need to assess how organizational practices can be developed and how to articulate the organizations' strategy and reporting with the SDG. Integrating the SDG into the reporting process is, therefore, one of the major challenges for the organizations.

To facilitate the integration of the SDGs into the reporting process, GRI has developed tools and initiatives that help enable a strong private sector role in measuring and achieving the SDGs. This include two key[1] documents, created in collaboration with UN Global Compact, that should be used together as part of the business reporting cycle.

It is not intended to create a new reporting structure, but to help companies to highlight their contribution to SDG and provide relevant information to stakeholders through qualitative and quantitative disclosures for the SDG targets (that are likely to be relevant to business, regardless of the size, sector, or location of operations). The document "Linking the SDGs and the GRI Standards" – helps companies to report on progress in support of the SDGs through the GRI Standards, covering the 17 SDGs and maps them against the Standards and disclosures that apply for each.

Adams (2017) considers <IR> Framework (IIRC, 2013) is the best approach to disclose the organizations' contribution to the SDG, by integrating them into the strategy and the organizational report. Organizations can illustrate how and for whom they create value and can develop strategies that contribute to the 17 SDG, through the 6 capitals of <IR>. The report "The *Sustainable Development Goals Disclosure (SDGD) Recommendations"*, authored by Adams, Druckman and Picot, (2020), offers a new approach for organizations to address sustainable development issues aligned to the <IR> Framework, the Task Force on Climate-related Financial Disclosure (TCFD) and the GRI. These recommendations are an opportunity to establish a best practice for corporate reporting on the SDGs and enable more effective and standardized reporting and transparency on climate change, social and other environmental impacts.

As stated before, empirical research is still very embryonic in the scope of SDG reporting. The studies found that a minority of companies currently mention the SDGs in their reports (Schramade, 2017, KPMG, 2020, van der Waal & Thijssens, 2020, Haywood and Boihang, 2021).

Most SDG reporting literature is based on European countries. According to Gazzola et al. (2020), under government regulation, companies are increasingly adopting Agenda 2030. In fact, EU law (Directive 2014/95/EU) requires certain large companies to report on sustainability, and they increasingly include the SDGs in their reports. Non-financial disclosure European regulation positively impacts SDG reporting (Hummel & Szekely, 2021). Empirical studies suggest that large companies from Europe are significantly more likely to report on the SDGs than companies in other countries. However, the numbers are currently too low to draw meaningful regional or sector conclusions (KPMG, 2018).

In Portuguese context, a few studies have urged regarding SDGs disclosure. Fonseca & Carvalho (2019) carried out a study based on Portuguese certified companies, reported which SDGs were most mentioned among companies SR (SDG 12, 13, 9, 8 and 17). However, in this study it was found that only 23,8% of companies mention the SDGs in their sustainability reports. Monteiro et al. (2020) conclude that from a sample of 46 Portuguese listed companies in 2017, none published integrated reports. But 9 of those companies refer to the SDGs in their reports.

There are few studies related to the explanatory factors of SDGs reporting. Datta and Goyal (2022) identify three categories of determinants that impact SDG reporting: (a) firm-level: focusing on firm size, performance, sector etc., (b) report-level: focusing on the report type, framework, assurance, etc. and (c) regulation-level: focusing on governmental and other regulations. Determinants are often studied together and may need separate

[1] UN Global Compact Network and GRI, "Integrating the Sustainable Development Goals into Corporate Reporting: A Practical Guide", http://globalcompact.pt/images/pdf/Practical_Guide_SDG_Reporting_08_2018.pdf "Business Reporting the SDGs "Analysis of the Goals and Targets https://www.globalreporting.org/resourcelibrary/GRI_UNGC_Business-Reporting-on-SDGs_Analysis-of-Goals-and-Targets.pdf

studies to isolate their combined impacts and different studies have highlighted contradictory findings on the impact of certain factors.

As stated before, several studies suggest a relationship between gender balanced boards and CSR/sustainability disclosure, but few studies explore specifically the linkage between the SDGs reporting and boards composition and/or gender diversity (Rosati & Faria, 2019b, Pizzi et al.2021, 2022). Thus, our study extends previous studies by analyzing the impact of board's female presence on SDGs-related disclosure.

Several theories, such as agency theory, stakeholder theory and legitimacy theory, are used in literature to explain why companies are involved in voluntary disclosures. These theories are used as a support for the link between corporate governance and disclosure behavior. The agency theory is the dominant theoretical framework in the context of corporate governance disclosure (Khaireddine et al., 2020). From the agency theory perspective, corporate disclosure is used to harmonize the interests of managers and shareholders (Khaireddine et al., 2020). Agency theory suggests that the monitoring role of boards influence firms to disclose sustainability information in capital markets to reduce agency costs and information asymmetry between managers and shareholders (Quattrociocchi, Mercuri, & Sergiacomi, 2019). Galbreath (2011) finds that boards that have a strong complement of gender diversity are expected to offer more effective monitoring of agents, as well as lead to stronger enforcement of ethical conduct.

The legitimacy theory is also frequently used to explain the motivations for CSR disclosures. According to this theory the organization's top management is responsible for recognizing the legitimacy gap and developing and disclosing CSR practices in agreement with stakeholders, to ensure accountability. Thus, board composition is likely to play an important role in bridging the legitimacy gap through CSR disclosures (Khan et al., 2013). Legitimacy theory extends the principal-agent relationship to include a wider group of stakeholders representing societal interests (Shamil et al., 2014). The legitimacy theory suggests that non-financial disclosure allows firms to legitimize its performance and manage the perception of their stakeholders, preserving the status of legitimacy in society (Cucari, De Falco & Orlando, 2018).

It has been argued that a single theory approach in not adequate to explain the multifaceted nature of corporate reporting. Our study adopts a complementary approach to explain the association between board gender diversity and SDGs reporting. This paper focus on the mediating role of female on boards to produce completed sustainability/integrated reports regarding SDGs-related information, which results from the need for legitimize companies' practices to manage their own image and reputation (Legitimacy theory) and to reduce information asymmetry and cost problems (Agency theory).

According to empirical literature, female directors are likely to play unique roles in enhancing a firm's moral legitimacy through CSR activities (Post, Rahman & Rubow, 2011). "Females' participation on boards of directors encourages the establishment, implementation and reporting on energy efficiency policy, green building policy and climate change policy to enhance shareholders' social welfare and promote the good image of the firm" (Jizi, 2017: 652).

This discussion leads to the following research hypothesis: "*The presence of female members on the board influences the level of disclosure about the SDGs".*

According to literature women in management boards, given their different psychological features, provide unique skills, knowledge, and experiences, with a positive impact in on firm's sustainability-orientation (Calabrese et al., 2018). In addition, gender-diverse boards improve the quality of public disclosure through better monitoring. Female participation in the boardroom enhances board effectiveness (Ben-Amar, Chang & McIlkenny, 2017) as a result of the improved quality of board discussion and deliberations (Campbell & Bohdanowicz, 2015) and better supervision of the firm's disclosures (Gul, Srinidhi & Ng, 2011).

We expect that the level of SDGs disclosure depends on gender diversity, but also that it is influenced by some firm attributes. Thus, we consider company size as control variable. Theoretical underpinnings suggest that managers of large firms are motivated to increase disclosures to reduce agency costs and claim legitimacy (Shamil et al., 2014).

3. Research design

3.1 Sample

Larger companies are increasingly concerned with improving their public image and reputation before society, considering that communicating information about their sustainable performance is a good way to legitimize themselves. Previous studies indicate companies' size is a determinant factor for SDGs disclosure or SDGs-related information (Rosati & Faria, 2019a-b; Fonseca & Carvalho, 2019; Pizzi et al., 2021). Additionally, most studies consider listed companies in their samples (Izzo et al., 2020 a-b; Monteiro et al., 2020; van der Waal & Thijssens, 2020; Haywood & Boihang, 2021).

Moreover, concerning corporate governance, listed companies have several disclosure obligations, imposed on the company and its directors. In this sense, the starting sample was selected from a special edition of Exame magazine "500 Maiores & Melhores empresas portuguesas" published in December of 2020. Thus, from the 500 largest companies we selected the entities listed in the Portuguese stock exchange on 31 December 2021, in a total of 9 companies eligible for this empirical study (Ttable 1). The small sample reflects the Portuguese business context, with few large companies listed in the Euronext Lisbon Market.

Table 1: Sample characterization

Company	Turnover	nº employees	Board size	% women on board
EDP - ENERGIAS DE PORTUGAL, S.A.	2 968 760 000.0	581	9	22,00%
THE NAVIGATOR COMPANY, S.A.	2 422 451 231.0	594	14	0,00%
CTT - CORREIOS DE PORTUGAL, S.A.	522 297 558,6	10870	11	18,18%
TEIXEIRA DUARTE - ENGENHARIA E CONSTRUÇÕES, S.A	377 183 739.0	3 418	5	0,00%
MOTA-ENGIL- ENGENHARIA E CONSTRUÇÃO, S.A.	326 696 954.5	2164	21	23,80%
AMORIM CORK, S.A.	281 909 842.6	868	6	33,00%
ALTRI ABASTECIMENTO DE MADEIRA, S.A.	259 262 119.0	0	7	28,50%
GALP ENERGIA, S.A.	123 855 701.7	515	19	15,79%
MARTIFER - CONSTRUÇÕES METALOMECÂNICAS, S.A.	81 965 336.0	733	8	25,00%

3.2 Methodology

Sustainability reports or integrated reports (that integrates financial and non-financial information) are the primary source for companies to highlight their alignment to 2030 Agenda by reporting on SDGs (Datta & Goyal, 2022). Sustainability reports that disclose a firm's sustainability initiatives, impact the adoption of SDGs and have been also used to measure a company's alignment towards UN SDGs (Izzo et al., 2020a). Romero, Ruiz and Fernandez-Feijoo (2019) argue that higher reporting quality exists in sustainability reports than integrated reports and integrated reports disclose higher quality information than annual reports.

Pizzi et al (2021) demonstrated a positive relationship between standalone reports and the SDG disclosure quality. Thus, for our study, we collected the sustainability reports and/or integrated reports since 2016, which corresponds to the first period after for the UN 2030 approval. The collected data was extended until 2020 for a longitudinal perspective, like Curtó-Pagès et al. (2021) in the Spanish context.

In this study a qualitative methodology was adopted through the content analysis of the non-financial reports, in order to verify the presence or absence of a reference to the SDGs.

We analyze the SDGs reported in the 9 largest Portuguese listed companies, during the period 2016-2020. The observations are treated as panel data, in order to control for omitted/unobserved variable bias. Panel data provides an efficient and cost-effective means to measure changing behaviors and attitudes over time. The content analysis aims to identify the fastest and best adopters of SDGs reporting and the evolution of the SDGs reporting during that period 2016-2020. The content analysis technique to collect the data is an approach successfully advocated in the empirical literature review. This technique consists in the codification of qualitative information related to the SDG into pre-defined categories of analysis (Krippendorff, 2013), in our case, the 17 SDGs.

To measure the degree of SDGs disclosure, a non-weighted disclosure index (SDG_IND) was created, following criteria: 1 if the company discloses information about the SDG in question and 0 if it does not. The total SDGs_IND value is the result of the division of the total score obtained by each company by the maximum number of assigned points (17), as described in Table 2.

Table 2: SDG disclosure index determination formula

$SDG\_INDj = \sum_{n=1}^{i} SDGn/i$	SDG_IND j	SDG disclosure Index - Company Total j
	SDG_n	**SDG_n** under analysis. Dichotomous dummy variable with value 1 if the company discloses information about the SDG and value 0 if the company does not disclose information about the SDG
	i	Maximum number of SDGs (17)

To analyze the influence of the female presence on boards on the level of SDGs disclosure, we developed a multiple linear regression model, using the disclosure index as dependent variable, as described in table 3. Beside the board gender diversity, we have introduced in our empirical model a firm-specific variable, the company size, as control variable, with the intention of enhancing the accuracy of predictions and the reliability of the inference from the analysis.

Table 3: Multiple Linear Regression Model

(1) SDG_IND= $\alpha_0 + \beta_1$ GEND + β_2Size +e_i
SDG_IND: SDG disclosure Index *GEND*: Board gender diversity (% of female members on board) SIZE– Company size (asset logarithm)

We used a content analysis where we only confirm whether or not the SDGs were disclosed, but we did not analyse the extent of its content or the quality of the information. In addition, the content analysis technique is somewhat subjective and involves value judgements. This can be pointed as a limitation of the methodology.

4. Results and discussion

After consulting the websites of the 9 companies, we observed that not all of them had a sustainability report or an integrated report for the entire analysed period. Thus, 35 reports were collected (Table 4), making a total of 35 observations, to be treated as panel data. It should be noted that in 2018 and 2019, all companies published one of these types of reports (although, with a clear preference for the sustainability report).

Table 4: Non-financial reports published (2016-2020)

Year	Sustainability report	Integrated report	Total	% (n=9)
2016	2	0	2	22,22
2017	7	0	7	77,78
2018	7	2	9	100
2019	7	2	9	100
2020	6	2	8	88,89
	29	6	35	100%

We started by analyzing whether the SDGs were mentioned in the reports. We observed that from the 35 reports analyzed, in 29 reports there is such mention. We observed a clear increase in the number of reports with SDGs-related disclosures. Moreover, in 2020 all companies with a published report disclose about the SDGs. Findings are in line with Curtó-Pagès et al. (2021), who found Spanish listed companies that publish non-financial reports are increasingly reporting on the SDGs. From those 29 reports with SDGs-related disclosures, in 20 reports the SDGs prioritization by companies was made. During the period 2016-2020, there is an increase in the number of reports that disclosure the priority SDGs. In 2020, this information is present in all published reports (Table 5).

Table 5: SDG reporting (2016-2020)

Year	Disclosure about SDGs		Total	% (n=29)	Disclosure about prioritary SDGs	% (n=29)
	Along the reporting	Specif seccion				
2016	1	-	1	50	1	100
2017	2	2	4	57,14	2	50
2018	5	3	8	88,89	4	50
2019	7	1	8	88,89	5	62,5
2020	8	0	8	100	8	100
	29				20	

We also analyze which SDGs were most referred to in the reports (Table 6). We observed that SDG 8 – "Decent work and economic growth" and SDG 12 – "Responsibility, consumption and production" are the ones mentioned in a larger number of reports (65.52%). These were followed by SDG 13 – "Climate action", SDG 9 – "Industry, Innovation and Infrastructure" and SDG 4 "Quality Education" (55,17% and 51,72%, 44,83, respectively), while SDG 1 – "No poverty", SDG 2 – "Zero hunger" and SDG 14 – "Life below water" were not mentioned in any of the reports. Similar results were obtained by Gazzola et al. (2020): goals like gender equity, decent work, economic growth, and responsible consumption and production were present in almost all Italian company's non-financial information reports, while others— like no poverty and life below water—are present only in a minimal percentage.

The Portuguese report on the implementation of the 2030 Agenda for Sustainable Development presented in 2017 defined as priorities, in the Portuguese case, SDGs 4, 5, 9, 10, 13 and 14. The results obtained in our study indicate that, in general, the priority of companies in relation to relation to the fulfilment of the SDGs is in line with the national strategy.

Table 6: SDGs prioritization

SDG	2016	2017	2018	2019	2020	Total	% (n=29)
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	1	1	3	4	9	31,03
4	1	2	2	4	4	13	44,83
5	0	0	1	1	4	6	20,69
6	0	0	1	1	2	4	13,79
7	0	1	2	3	5	11	37,93
8	1	2	3	5	8	19	65,52
9	1	1	3	4	6	15	51,72
10	0	0	0	0	1	1	3,45
11	0	0	2	2	4	8	27,59
12	1	1	4	5	8	19	65,52
13	1	2	4	3	6	16	55,17
14	0	0	0	0	0	0	0
15	1	1	2	2	4	10	34,48
16	0	1	0	1	2	4	13,79
17	1	1	3	2	2	9	31,03
Reports- SDGs disclosure	1	4	8	8	8	29	

Subsequently, we calculated the average SDGs disclosure index obtained by each company, in the period under analysis (Table 7). Apart from the company Martifer, where there aren't any SDGs-related disclosures, we observe a clear evolution between the index values presented in 2016 and those presented in 2020. We also observe that Navigator is the company that presents the highest average value during period (SDG_IND=0.86), followed by CTT and Galp (0.61 and 0.6, respectively).

Table 7: SDG disclosure Index

Company	2016	2017	2018	2019	2020	Average
EDP - ENERGIAS DE PORTUGAL, S.A.	0.00	0.94	0.53	0.53	0.65	0.53
THE NAVIGATOR COMPANY, S.A.	0.82	0.82	0.82	0.82	1.00	0.86
CTT - CORREIOS DE PORTUGAL, S.A.	0.00	0.41	0.88	0.88	0.88	0.61
TEIXEIRA DUARTE - ENGENHARIA E CONSTRUÇÕES, S.A.	0.00	0.00	0.65	0.47	0.88	0.40
MOTA-ENGIL- ENGENHARIA E CONSTRUÇÃO, S.A.	0.00	0.00	1.00	1.00	0.94	0.59
AMORIM CORK, S.A.	0.00	0.65	0.71	0.65	0.65	0.53
ALTRI ABASTECIMENTO DE MADEIRA, S.A.	0.00	0.00	0.76	0.53	0.82	0.42
GALP ENERGIA, S.A.	0.00	0.00	1.00	1.00	1.00	0.60
MARTIFER - CONSTRUÇÕES METALOMECÂNICAS, S.A.	0.00	0.00	0.00	0.00	0.00	0.00

Table 8 allows us to make a comparison between the SDG_IND average and the presence (%) of women on the board. Contrary to what was expected, we observe that the top companies concerning the SDGs disclosure are not those with the highest female representation on boards. On the contrary, the top 3 companies (Navigator, CTT and Galp) are among those with the lowest percentage of women.

Table 8: SDG disclosure Index *versus* women on board

	SDG_IND average (2016-2020)	% women on board
THE NAVIGATOR COMPANY, S.A.	0,86	0,00%
CTT - CORREIOS DE PORTUGAL, S.A.	0,61	18,18%
GALP ENERGIA, S.A.	0,60	15,79%
MOTA-ENGIL- ENGENHARIA E CONSTRUÇÃO, S.A.	0,59	23,80%
EDP - ENERGIAS DE PORTUGAL, S.A.	0,53	22,00%
AMORIM CORK, S.A.	0,53	33,00%
ALTRI ABASTECIMENTO DE MADEIRA, S.A.	0,42	28,50%
TEIXEIRA DUARTE - ENGENHARIA E CONSTRUÇÕES, S.A.	0,40	0,00%
MARTIFER - CONSTRUÇÕES METALOMECÂNICAS, S.A.	0,00	25,00%

Based on the previously delineated linear regression model, panel data treatment was used, using the 35 observations, and the results were estimated considering the random effects model[2] (Table 9).

Table 9: Results of the Multiple Regression Model

```
Random-effects GLS regression                   Number of obs     =         35
Group variable: A                               Number of groups  =          9

R-squared:                                      Obs per group:
     Within  =      .                                         min =          2
     Between = 0.1053                                         avg =        3.9
     Overall = 0.0412                                         max =          5

                                                Wald chi2(2)      =       0.60
corr(u_i, X) = 0 (assumed)                      Prob > chi2       =     0.7406
```

IND_DIV	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
log_ativo	.0205415	.0624837	0.33	0.742	-.1019244	.1430074
GEN_CA	-.4961623	1.006388	-0.49	0.622	-2.468647	1.476323
_cons	.3038132	1.360521	0.22	0.823	-2.362758	2.970384
sigma_u	.26470978					
sigma_e	.29764849					
rho	.44162779	(fraction of variance due to u_i)				

As can be seen in Table 9, for a significance level of 5%, the variables SIZE and GENDER do not have significant association with the dependent variable (SDG_IND). Contrary to our expectation, the presence of female members on the board does not influence the disclosure about the SDGs in the largest listed companies. Thus, and it is not possible to validate the hypothesis. Having female directors in the boards may not be an effective governance mechanism to provide higher levels of voluntary disclosures, such as SDGs disclosures. These results are in line with Calabrese et al. (2018), who found that the fact that a women's participation in management is not directly link to a sustainable-oriented approach.

Gazzola et al. (2020) show that under the non-financial reporting European regulation, companies are increasingly adopting Agenda 2030 as non-financial disclosure regulation positively impacts SDG reporting. The Portuguese Decree-Law nº. 89/2017, which transposed the Directive 2014/95/EU, requires that large companies that are entities of public interest with more than 500 employees (including companies listed on the stock exchange) disclose non-financial information (information related, at least, to environmental, social and worker-related issues, to respect for human rights, corruption fighting and bribery attempts). Monteiro el al. (2021) provide evidence on board-gender diversity as a determinant factor of this mandatory non-financial reporting, in the Portuguese context. Our findings help to highlight the importance of reinforce the women on boards' role, in order to increase SDGs-related voluntary disclosures.

[2] The random effects model considers the individual effects as resulting from a series of random and unobservable factors and, therefore, does not consider the existence of an unobservable individual effect for all periods. This model is based on two assumptions: the unobserved individual effects are random, and the explanatory variables are strictly exogenous. This means that the error terms are not correlated with the past, present and future values of the regressors (Hsiao, 2003).

5. Conclusion

The target 12.6 of Agenda 2030 encourages organizations to adopt sustainable practices and to integrate sustainability information into their reporting cycle. Thus, transparent and relevant reports on SDGs are important to communicate to stakeholders how companies are meeting their set goals. Empirical studies suggest that business interest in the SDG has grown quickly since their launch in 2015. However, there is not yet an established process, benchmark, or standard for reporting on the SDGs. The GRI Standards are the world's most widely used for sustainability reporting, and GRI has developed some resources to assist companies to report on SDGS' progress.

The composition of corporate boards and board diversity has been a growing research field (Cucari, De Falco, & Orlando, 2018). Campbell and Bohdanowicz (2015) provides arguments related to the female cognitive frame, suggesting that greater female board representation may improve the quality of board discussion and decision making. From an agency theoretical perspective, a balanced mix of capabilities and experiences is essential for the board to exercise an effective monitoring function, and to encourage the disclosure of several information to stakeholders.

Prior studies show female members promote sustainability and CSR reporting. Female directors may improve the connections between all stakeholders, persuading board members to establish sustainable practices and, ultimately, may encourage the disclosure of SDGs information. Female directors reduce information asymmetry and cost problems (Agency theory), mitigating pressures from key stakeholders and satisfying the demands of different stakeholders (Stakeholders Theory).

Thus, we have empirically tested the expected relationship between female presence on board and the SDGs reporting, based on a sample of the largest Portuguese listed companies.

Considering a total of 35 sustainability/integrated reports, published in the period 2016-2020, we observed disclosures about SDGs in 29 reports. These data agree with others already accomplished demonstrating that the number of companies mentioning the SDGs in their sustainability reporting is still below a desirable level (Rosati & Faria, 2019b). However, we observed a clear growth in the number of reports with SDGs-related disclosure during the period under review.

There is a consensus in literature that women care more about sustainable development issues. Thus, it was expected higher levels of SDGs-related disclosures in companies with female presence on boards. However, the results do not reveal any significant association with the dependent variable (SDG_IND). Contrary to our expectation, our findings do not support empirical evidence of the role of women in boards as a driver of SDGs reporting.

This study has some limitations that could be addressed in future research studies. The sample being analyzed includes a limited number of companies. The small sample reflects the Portuguese business context, with few large companies listed in the Euronext Lisbon Market. In the future, we should include non-listed largest companies to compare SDGs-related disclosure practices.

We do not have available data for considering some personal attributes of the women in the sample (e.g. age, educational levels), which could be an interesting moderator variable of the relationship studied here. This study was limited to examining the impact of board gender diversity in the Portuguese context. Further studies may investigate other corporate governance characteristics (such as board size, board independency, CSR committees, etc.) which may extend the understanding of how corporate governance characteristics determine SDGs reporting practices in Portugal.

Nevertheless, the contributions of this paper to the literature are several. There is a paucity of research on determinant factors of SDGs reporting and commonly do not consider corporate governance variables. Thus, the paper extends prior empirical research regarding corporate governance and organizational disclosure, which mainly focus on CSR/sustainability disclosures. Empirically, this study provides comprehensive insights specifically on SDGs-related disclosure practices over time. The paper contributes to the country-level analysis of SDG reporting by performing a longitudinal analysis over the 5-year period encompassing 2016 to 2020, after the UN Agenda 2030 approval.

Our findings could have implications for policy formulation, to encourage board gender diversity and its effects on SDGs reporting quality. The SDG reporting frameworks already developed SDGs reporting are still at a very embryonic stage and it is therefore necessary to improve their maturity.

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Community-Based Tourism as an Approach to a Solidarity Economy

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Abstract: Tourism is an activity established as an alternative in the rural territory and there are few investigations that have contributed to the understanding of its development with the solidarity economy. Even tourism as an economic activity is of great importance; for this reason, research must be carried out to allow recognition of the relationship between community tourism and the foundations of the solidarity economy. For the development of this research, two theories of the social sciences were analyzed, on the one hand, the concept of solidarity economy and its main characteristics are reviewed, and on the other, the theories of community-based tourism in a rural context are reviewed. These two elements allow a discussion between the theoretical assumptions, the case study and reality. This allows describing the way in which the community manages tourism and how it incorporates the solidarity economy. The methodological structure used for this research is based on a mixed approach based on a case study. The research analyzes rural community tourism from a local perspective and with a socioeconomic point of view. This case study allows us to recognize the tourism phenomenon and the solidarity economy, delimiting the object of study to a geographical context, in which social and productive relationships are recognized. This study is analyzed from what was found in the Municipality of Gachala, located in the department of Cundinamarca in Colombia. For this, interviews were conducted with the people of the community to recognize the socioeconomic aspects that were raised for this investigation. A diagnosis was made to know the tourist services offered. In the same way, quantitative aspects were examined by means of an instrument for the measurement of community-based tourism. Where, aspects such as: employment, investment, training, value chain and the incorporation of tourism with the community are reviewed. In conclusion, tourism is an opportunity for rural communities to expand their sources of income and publicize their local activities and their territory in general.

Keywords: Community Based Tourism, Solidarity Economy, rurality

1. Introduction

Community-based tourism is an activity established as an alternative type of tourism, especially in rural areas (Mora *et al.*, 2019; Saavedra *et al.*, 2021). Therefore, studying the topic can contribute to the academic development of tourism in rural territories from a social and economic aspect, through a perspective of community integration in the supply of tourism services. The study of community-based tourism allows us to understand the relationship between tourism and a solidarity economy, a phenomenon that remains understudied. Recognizing the development of tourism through the self-management of the territory's inhabitants contributes to the construction of new positions and the consolidation of community tourism. Research related to community tourism in Colombia is scarce, and few authors agree that the field should be deepened to understand the relationships of this phenomenon (Crespi *et al.*, 2019; Sánchez, 2018; Galán and Rueda, 2019; Saavedra and Mora, 2022). Thus, this research describes the management of community-based tourism from a social and economic perspective; to understand how communities appropriate natural and cultural attractions through tourism.

Beyond that, the crisis caused by the pandemic increased the uncertainty about the situation of different destinations (Mora & Rodríguez, 2021). Tourists increasingly demand sustainable tourism services, where communities are involved in the care of their resources and traditions. In addition, there is a greater impact on the tourism experience of travelers when communities are the creators of recreational activities because there is more learning about natural and cultural resources (Liang, 2022).

This research analyzes elements of community-based tourism. For example, the high flow of visitors in a community sometimes affects their lifestyle and increases social tensions (Hwang *et al.*, 2012). In this way, community-based tourism is outlined as a way to have direct contact with the communities, allowing them to have an authentic tourist experience and recognize the traditions and customs of the people. Therefore, it is essential to generate proposals for communities so that they can carry out tourism projects where community tourism is the protagonist. Therefore, it is important to show the reality of the communities and how tourism appropriates spaces that previously had no tourist vocation, as well as to analyze how it is incorporated into the tourist growth and the new proposals. In this way, this research aims to describe the management of solidarity economy and community tourism through the case study of Corgachalá, which provides its services in the municipality of Gachalá, located in the department of Cundinamarca in Colombia.

This research contributes to the academic development of community tourism and solidarity economy because it analyzes the relationship between these two aspects. In addition, it must be considered that these two categories are articulated with the social sciences, which allows generating a reflection on how processes of social appropriation can be generated from the resources established by the territory. Similarly, this research establishes through a case study the way in which tourism is managed through social organizations. This allows generating an approximation and academic analysis of two theoretical axes that have been little addressed in the academy.

1.1 Framework

This research is articulated with theoretical aspects of the social sciences, on the one hand, it performs an analysis of the literature on the development of the social economy, which considers the development of a small-scale economy. In the same way, the theory of community-based tourism is articulated in how the inhabitants of the territory empower themselves with natural and cultural resources. This allows to identify two theories than have in common the development of the appropriation of the territory. In short, this research adopts the theoretical elements of the social sciences and the theoretical discussion that arises is given from this perspective.

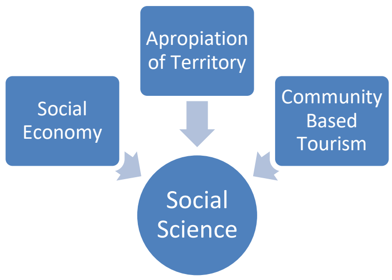

Figure 1: Theory aspects in the research

Own elaboration

1.2 Community-based tourism

Community-based tourism emerged in the 1970s as an option to mass tourism at a time of change in tourism demand, when the structure was strengthened, allowing the inhabitants to open their homes to urban visitors eager for new tourism and gastronomic experiences (Bringas and Ojeda, 2000). It should also be mentioned that community tourism is generally developed in rural environments, in areas far from urban centers, in order to explore and develop production processes and offer different services, focusing in this way on endogenous and exogenous factors of the territories, which allow the use of comparative advantages, taking advantage of their potential (Mejía, 2019).

To promote community tourism, it is necessary to facilitate progress in places with a potential for the development of activities that can positively impact the territory (Martínez et al., 2019). According to previous studies, community tourism should have aspects of emotional energy, security, and decision-making power to achieve partnerships with various entities (Yang et al., 2021). In addition, for the development of community-based tourism, adequate planning is required, which must be related to the management of land management, fully complying with policies, and ensuring the sustainability of the region and its natural resources; tourism development along with social economy strategies (Hu et al., 2021).

Community-based tourism has been the subject of academic studies from various perspectives, including socioeconomic ones. Well, community-based tourism is recognized as an activity that reconciles social equity and preservation of natural heritage; without risking the heritage of future generations (Mathew and Sreejesh, 2017; Mora and Rodriguez, 2019). Therefore, community-based tourism must establish its bases through economic democratization and socialization of tourism activities developed in the territory.

This type of tourism is an opportunity for communities to diversify their economic activities. From the academic perspective, community tourism is established as a way to know the reality in tourism research and economic and social studies (Fang, 2020). Hence, community tourism is a concept that has been developing towards social aspects (Lane and Kastenholz, 2015). Nowadays, the rural environment is perceived as an area that offers experiences of rest, leisure, and safety. In this space, tourists make an economic exchange for acquiring tourism experiences with a socioeconomic perspective in the territory (Mora and Motato, 2019).

Community-based tourism is generally seen as a form of resistance by people against traditional economic models. In addition, it allows the development of great value activities in the territory. For this, traditional rural activities, such as agriculture and livestock, must be linked; commonly, this is the motivation of many travelers who want to learn about the countryside. It is also valid to highlight that tourism in the territory generates changes not only in the physical area but also in its social framework, which is why all community members must be involved (Deason et al., 2022). For this research, we accounted for the impact of tourism through a social organization.

Consequently, community-based tourism is established as a trend because people now seek to avoid crowds (Saavedra and Mora, 2022). However, actions are required for tourism to be sustainable, that is, to guarantee the present resources for future generations. Likewise, it is essential to establish the necessary measures to guarantee the health and safety of tourists, tourism service providers, and host communities.

1.3 Solidarity economy

A Solidarity economy accounts for the organizational aspects of a collaborative and equitable local development. One of the foundations is fair trade, which is considered a tool to change the current capitalist system's model, promoting local development (García, 2011). On the other hand, Chaves and Monzón (cited by Gómez and Gómez Álvarez, 2016) state that the solidarity economy is based on companies with decision-making autonomy and freedom of membership, which distribute profits fairly among partners. Generally, the solidarity economy is related to social responsibility and the common good. In addition, a solidarity economy emerges as an opportunity to achieve associative and cooperative local development. This is the case of this research, where community ownership generates social development. Similarly, the solidarity economy is articulated with the aspects of community-based tourism, given its high degree of responsibility to the environment and the community and the equitable distribution of profits and utilities.

For Fajardo García (2019), the solidarity economy is based on initiatives and models of economic organizations different from traditional business models. This economy focuses on solidarity and has acquired greater relevance in government policies. Also, the solidarity economy gives a new meaning to economic reflection and inclusion of the term solidarity in all processes of the economy, this in favor of disadvantaged populations, which did not benefit from the traditional economic model (Artavia-Jiménez *et al*., 2019).

Besides, Núñez (2019) assures that the solidarity economy is how people express their struggle against exclusion from the labor market. It is also related to the search for an economy that is not predatory to nature but, on the contrary, that works for conserving and promoting values. Similarly, Gómez (2019) states that the solidarity economy is based on each territory's needs and economic characteristics. That is, the implementation of jobs, the correct distribution of wealth, the value of the human being, and respect for the diversity of identities bring a quality of life for people.

Solidarity economy groups all activities to promote the democratization of the economy in order to generate progress and welfare based on the productive resources raised through different initiatives in the various economic sectors of the regions, having solidarity and teamwork as a basis (Cárdenas Trujillo *et al.*, 2018). This puts the economy in perspective as a means for personal and community development. Therefore, axioms must be established for optimal development and as a strategic axis for rural growth (Silva, 2020). Similarly, Cárdenas Trujillo et al. (2018) state that a solidarity economy focuses on the implementation of cooperation and solidarity in organizations, institutions, and economic activities, which results in cultural and social benefits for the community.

Consequently, the solidarity economy is an alternative to capitalist economic development models and prioritizes the valuation of employment based on own resources through associativity and cooperation.

However, despite being presented under a fair scenario, this economy has several challenges in sustaining itself over time.

2. Methodology

The methodological structure used for this research is based on a mixed approach, and the type of research is descriptive, which teaches the reality of the tourist offer and the economic management of the case study approach. The research analyzes community tourism from a local perspective and a socioeconomic point of view. This case study makes it possible to recognize the tourism phenomenon and the economy, delimiting the object of study to a geographical context in which the social and productive relations are recognized.

The study is based on the findings at Corgachalá, located in the municipality of Gachalá in Cundinamarca, Colombia. Gachalá is a municipality located east of the department of Cundinamarca, Colombia. This municipality has its southern limits with the department of Meta, northeast with the department of Boyacá, and is in the Guavio Dam, which has high tourism potential. Corgachalá is a travel agency operator integrated by members of the community of the municipality of Gachalá, whose purpose is to develop community tourism.

From the theoretical point of view, two theoretical axes of the social sciences are addressed. On the one hand, the concept of a solidarity economy and its main characteristics are reviewed. On the other hand, the theories of community-based tourism in a territorial context are reviewed. These two elements allow us to discuss the theoretical assumptions, the case study, and reality; additionally, they make it possible to describe how the community manages tourism and incorporates the solidarity economy.

The fieldwork was conducted during the year 2022. The place of the case study was visited to identify the territory's tourism potential. In the same way, a structured interview was conducted to identify the aspects of tourism and the economy which can be seen in the results. This allow to make a quantitative diagnosis about the details of Pacheco *et al*. (2011), where aspects such as: employment, investment, training, value chain, and the incorporation of tourism with the community are reviewed. Additionally, elements of a solidarity economy were measured according to Espín Maldonado *et al.* (2017), in which the following aspects are reviewed: fair trade, equitable distribution of profits, associativity, and cooperativism, among others. The assessment was given through the observation carried out in the fieldwork and considering the interview answers with the community leader.

3. Results

The information described below is obtained through the interview with the leader of Corgachalá and the fieldwork carried out. To begin with, it is essential to mention that the initiative to carry out tourism arises from the community, which is solidary due to the bonds that the peasantry establishes and that Corgachalá establishes a social and economic link. Its members are interested in the proper development of tourism. However, according to the community leader, some people do not like to associate and prefer to provide services independently.

The tourism development implemented by Corgachalá has an educational orientation aimed largely at students from schools and universities. The tours and tourism workshops seek to generate environmental awareness through agrotourism and ecotourism, promoting the region's experience. Thanks to the location of the municipality, Corgachalá offers different tourist activities, such as: The winemaking festival; sanctuaries; churches and spiritual retreats; smells, colors, and flavors; cheeses, meats, and wines; waterfalls, mountains, and hills; Myths, culture, and handcrafts; honey; conservation and health of singing birds.

The members of Corgachalá have other economic income, independent of tourism. Tourism is a complementary economic activity that improves the finances of members and the community of the municipality of Gachalá that contribute to the various tourist activities provided by the organization. For example, depending on the place they visit, they have their restaurants in the region that take the tourists, in the same way, the people who provide guide and transport services are from the community, in addition, they promote among tourists the purchase of products and handicrafts from the region.

Thus, tourism activities are developed in harmony with the social environment and integrate the community members. In the same way, the income from this activity is distributed equitably and fairly among all members. The tourist offer of this place allows evidence of originality in their activities. For that reason, they can target a different public, although mainly they are oriented to students of schools and universities. Also, they have had foreign tourists who want new experiences and national tourists who look for different tourism to the traditional sun and beach tourism.

Now, the prices are competitive in the market, and the community organized itself to provide a quality service without increasing costs. The advantage is that they work together for the same goal, allowing everyone to win. The tourists are satisfied with the service provided by the members of Corgachalá and by people from the municipality. According to the comments of the leader of the organization and the observation made during fieldwork, the community supports the tourism offer. However, collaboration is needed from public entities and academia in training processes and guidance in the development of tourism projects.

It is important to point out that the community has not conducted studies that allow them to measure the success or failure of their economic management by employing financial indicators. However, according to what was discussed with the community leader, an equitable organization is identified in the income distribution, with a clear definition of the roles of each community member. This favors the full development of tourism in the territory and avoids tensions among its participants.

Table 1 shows quantitatively the elements found in the management of community tourism and economic solidarity actions. For the quantitative diagnosis, three factors of compliance are proposed, where 0 indicates that it does not comply, 1 indicates that it partially complies, and 2 indicates that it complies.

Table 1: Quantitative results

Tourism and solidarity economy	Corgachalá
Economic benefit for the majority of community members.	2
The tourist activity generates direct jobs	2
The tourist activity generates indirect jobs	2
Financing for tourism projects by external actors	2
Financial resources available for social investment	2
Payback analysis	0
The price of the tour package is competitive	2
Distribution chain of the tourist product	2
Ease of access to the consumer market	1
New economic activities for the community	2
The tourism project includes investment in staff training.	2
Investment in advertising for the sale of the tourist package	1
Precedence of collective interests over individual interests	1
Associativity according to cultural identity	2
Social and solidarity economic knowledge by the community	2
Fairtrade development	2
Democratic control by members	2
Equitable distribution of profits	2
Accountability or surplus	2
Total	**87%**

Source: authors based on Pacheco *et al.* (2011) and Espín Maldonado *et al.* (2017).

The percentage of 87% shows that Corgachalá has the potential to develop a solidarity economy through community tourism. Besides, it requires guidance to have greater control of their finances, state support, or third parties to increase tourism publicity and finally must work on access to the municipality. However, it is not something that depends on them if it affects them directly. Gachalá is a municipality far from the main cities. The road does not have good signage and is not in good condition, hindering access to the consumer market. In the fieldwork, it is evident that the economic development of Corgachalá is based on cooperativism and associativity, elements that are axioms for its members. In addition, there is good management in the democratization that demonstrates an administrative and economic organization and equitable financial management among its members.

Corgachalá has information on social networks but does not have a website that provides information on tourism activities. It is suggested to invest in this aspect, which will allow them to increase the number of tourists and therefore their income. Additionally, it is recommended to carry out studies that lead to a financial projection and planning of a commercial and economical strategy to consolidate community tourism in this territory. Although it can be argued that there is a good performance in the tourism activity of the agency, empiricism is observed in its members. This can be compensated with the orientation of the academy in research, training, and social projection processes. In this way, this initiative would have greater recognition and could improve its profitability.

As mentioned in the theoretical aspects, the solidarity economy is based on equity and associativity. In Corgachalá, there is a link between the community members, which allows tourism development as a small-scale economic activity in an associative way. Similarly, community organization favors the development of tourism activities in a cooperative manner, which can be described as community-based tourism.

4. Conclusions

Community based tourism has not been widely investigated with others academic areas, so this paper aims to provide bases for other researchers who want to continue investigating about it. In addition, it proposes an analysis between the relationship between Community based tourism and the solidarity economy, as elements that, developed together, allow the initiatives of the communities to be strengthened, proposing for the scientific and practical community a way to study the cases. In the same way, this research contributes to the academic development of the social sciences through two topics little addressed.

As described in this case study, community-based tourism demonstrates that communities are increasingly seeking new alternatives for achieving financial sustainability. They meet and agree to work together for their territory, respecting their customs, traditions, and resources. In the case of Corgachalá, tourism is not the main source of economic income, but it does represent an alternative source of income. The community tourism promoted in this case study involves the traditional and cultural activities of the municipality to make their territory known, seeking to generate a community tourism experience through experiential practices of their customs.

As a result of the fieldwork, it was identified that the members of Corgachalá understand the concept of associativity, solidarity economy, and fair trade and work hand in hand with the community of the municipality, using traditional resources and knowledge to provide an authentic tourism experience. It is recognized that the project has a wide variety of tourism activities that can be aimed at different audiences, the prices of the tourism package are competitive, and there is a distribution chain for the tourism product. However, it is recommended that they build and invest in a constant marketing and commercialization strategy that will allow them to increase visitors and tourists and thus improve their profitability. Additionally, they must perform a financial analysis that allows them to measure the financial strengths and weaknesses of the organization.

In conclusion, Corgachalá is an example of community tourism, where people gather looking for a different alternative economic activity and are with a possibility not only business but the growth of its territory, because they can make known their region, extolling their traditions, customs, and culture in general. All this is built in favor, not only of their personal benefits but of the collective benefits of the community. Therefore, they decide to have a solidarity economy, equitable, cooperative, and transparent, where together they work to achieve the goals and distribute the resources, always respecting the democratic control and fair trade.

Consequently, the communities must count on the collaboration of state and private entities, such as municipal and departmental mayors' offices, private and public tourism organizations, and universities. This collaboration will provide training and guidance to develop and strengthen the community’s tourism projects. In general terms, community-based tourism is an economical alternative for regions seeking to increase their income. It allows the territories to be known and visitors and tourists to live the experience of their customs and traditions, thus preserving the local identity. For this, it is fundamental the teamwork of the community; it is here where the solidarity economy has a relevant role since it seeks the priority of the collective interests over the individual ones, finding the common good.

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Leadership Diagnostic: Unlocking Human Competence for Effective Strategy Execution

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Abstract: Despite unprecedented technological advancement, people remain the most important resource for businesses to execute strategy. Yet, research reports that not all businesses ensure the optimum functioning of their people. This is evident from reports on (a) low levels of employee engagement, (b) deployed positions do not utilise peoples' 'competence', (c) leadership lacks information linking employees to strategy execution and resultant business performance, (d) measuring employees' contribution to business performance more readily at the tactical and operational levels than the strategic level of measurement, and (e) failure of strategy execution. Neglecting people is an enigma as leadership has long honed tools to make the most of their employees. One such tool is people analytics and another is strategy shaping. Consequently, we explored businesses use of people analytics in strategy execution, the vehicle ensuring business performance. This paper reports on the study. A literature review integrated strategy and people analytics culminating in a diagnostic which leadership can use to unlock human competence. An empirical study followed. Limited empirical evidence on the topic justified an exploratory survey which utilised an online questionnaire to collect vast amounts of standardised data from a purposively selected sample as best fit, which is uncommon. The data were descriptively analysed. The findings (a) showed that strategic level measurement is present at all levels of strategy shaping, and (b) overlooked at the business operational level where strategy is translated and executed, (c) revealed that these overlooked measurements are consequential for unlocking human competence, and (d) illustrated how people link to strategy execution. These findings provide preliminary evidence necessitating further descriptive and explanatory studies. This diagnostic provides requisite information enabling leadership to optimise the functioning of their employees by deploying suitably competent people in appropriate positions, rendering them available to perform, resulting in higher engagement levels, enhancing effective strategy execution, and improving business performance. This study contributes knowledge by demonstrating how people link to strategy execution, enabling leadership to make better decisions by discerning and selecting the critical people measures ensuring strategy execution and thus, business performance.

Keywords: Leadership diagnostic, human competence, people analytics, strategy execution, business performance

1. Reconsidering People's Role in Strategy Execution

> *"However hard it is to devise a smart strategy, it's ten times harder to get people to execute that strategy. And, a poorly executed strategy, no matter how clever, is worthless."* (Bregman, 2017: n.p.).

Despite unprecedented technological advancement, people remain the most important resource for businesses to achieve their goals. This is due to their competence to execute strategy in pursuit of business performance (Fayol, 1916; Barney, 1991; CIPD, 2018; Hogan et al, 2021). Competence refers to people's inborn need to master their environment. Competence is associated with peoples' desire to learn and grow and is attained via 'training' opportunities (Hogan and Sherman, 2020; White, 1959). However, they should deem these training opportunities necessary for, and meaningful in, task execution (White, 1959). The satisfaction of the need for competence causes autonomy – to be one's authentic self by experiencing free-willed and self-endorsing behaviour (deCharms, 1996; Hogan and Sherman, 2020). Autonomy implies time to think, experiment, and learn, which involves risk-taking and innovative behaviours, enabling people to proactively adapt to change. Autonomy in turn fosters relatedness – to form and maintain a few sincere relationships which produce behaviour, emotion and thought (cf. Baumeister and Leary, 1995; Hogan and Sherman, 2020). These three inborn human needs - competence, autonomy, and relatedness - are experienced as the ability to get ahead, find meaning, and belong and serve as motivational levers ensuring the *optimum* functioning of people (Hogan and Sherman, 2020) thus, influencing employees' willingness to execute strategy.

Research spanning decades confirms that strategy execution failure is the primary cause of the gap between planned and realised performance (Bourgeois and Brodwin, 1984; de Oliveira, Carneiro and Esteves, 2019; Mintzberg, 1994). Yet undeterred by knowledge of the essential role people play in strategy execution, research reports that not all businesses ensure the *optimum* functioning of their employees. This transpires from abundant reports on (a) low levels of employee engagement (Harter, 2020), (b) people being deployed in positions that do not utilise their competence (CIPD, 2018), (c) leadership lacking information linking employees to business performance (Boudreau and Cascio, 2017; Levenson, 2018), and (d) measuring employees' contribution to business performance more frequently at the tactical and operational level than the strategic level of measurement, while the latter matters most in strategy execution (Angrave et al, 2016; Hamilton and Sodeman, 2020; Schiemann, Seibert and Blankenship, 2018).

Businesses failing to optimise the functioning of their employees is puzzling since leadership has access to sound tools to maximise employee competence. One such tool is *people analytics* and another is *strategy shaping.* People analytics is the data-driven measuring, analysing, and reporting of employees' impact on business performance in support of evidence-based decisions (CIPD, 2016; Margherita, 2021). Strategy shaping aims to deliver 'value' and is the tool leadership uses to attain business goals or performance (Pearce, Robinson and Mital, 2018). People play a vital role in strategy execution by performing their daily activities (Barney, 1991; CIPD, 2018).

Research recurrently cites the physical and/or psychological unavailability of people as a top-ranked reason for the strategy execution breakdown (Harter, 2020; Mankins and Steele, 2005; Mintzberg, 1994). This hints that some businesses ineffectively use people analytics and strategy shaping. Consequently, scholars argue for the use of an integrated people analytics model that reinforces value creation while contingent on the business strategy and guided by business leadership (Angrave et al, 2016; CIPD, 2016; Hamilton and Sodeman, 2020; Levenson, 2018; Marler and Boudreau, 2017; Nienaber and Sewdass, 2016; Schiemann et al, 2018). Accordingly, this study explored businesses use of people analytics in strategy execution for ensuring business performance. The research question was: "What is the state of the use of people analytics in strategy implementation." This paper reports on a part of the larger study.

We address the research question in five parts. First, we review the literature on strategy and people analytics. Second, we present a diagnostic (Figure 1) derived from the literature review that leadership can use to unlock human competence for successful strategy execution. Third, follows an explication of our research methodology. Fourth, findings are presented and discussed. Finally, the paper closes with conclusions, contributions, limitations, and recommendations for future research.

2. Review the Literature on Strategy and People Analytics

Successful business performance depends among others on customer support, which derives from positive, albeit subjective, judgments of *value* obtained. Business performance is a derivative of the attainment of goals – simultaneously for both the organisation, intermediated by their fulfilling employee resources and mandatory customer support. The business wants performance and often opaquely understands that it is manifested by delivering value to targeted customers through its employees, processes and other resources. Value can be either one or a combination of (a) economic value – the price or cost to acquire or use the product or service, (b) functional value – the solution to a problem or satisfaction of a need, or (c) psychological value – such as experience or risk reduction (cf. Morkel, Nienaber and McNeill, 2021). Customer support – the result of business performance – is embodied in *competitive advantage*, the quintessential element of a sound strategy.

3. Competitive advantage

Competitive advantage enables businesses to attain superior financial returns in comparison to a benchmark, typically an industry average. Attaining competitive advantage results from outperforming rivals in offering customer value by executing value-creating activities better or differently from rivals (Porter, 1985; Sheehan and Foss, 2017). Competitive advantage comprises three interconnected dimensions: the chosen competitive arena, customer value, and the availability of resources, for delivering customer value in the selected arenas (Morkel et al, 2021; Nienaber and Sewdass, 2016). People are the most consequential resource because of their competence to execute value-creating activities efficaciously (Barney, 1991; CIPD, 2018). Therefore, leadership must ensure that people can perform productively. This is achieved by deploying appropriately competent people in suitable positions and providing them with the requisite resources, including training opportunities so that they can fruitfully execute strategy to secure business performance (Barney, 1991; Harter, 2020; Schiemann et al, 2018). Enabling people to perform productively requires an understanding of human competence and unlocking such competence as exemplified by the structural dimensions of organisation for executing strategy.

3.1 Structural dimensions of organisation for executing strategy

Structural dimensions of organisation for executing strategy enable coordination and cooperation and are integral to leadership (Fayol, 1916; Skivington and Daft, 1991). This reality is reflected in the definition: "Leadership is employees' perception of the capacity of their hierarchical superiors to direct their subordinates' activities and behaviours to pursue a desired outcome (like a business goal) in an (intended) coordinated system of cooperation in conjunction with other resources, all of which are interlinked" (cf. Morkel et al, 2021:26). Coordination synchronises all activities within the business to facilitate its efficient functioning. Cooperation entails spurring people to optimise their competence willingly in pursuit of business performance via strategy execution. Coordination and cooperation impact employees' motivational needs for competence, autonomy, and relatedness. Coordination and cooperation interact because coordination partly regulates cooperation and cooperation also impacts coordination. Coordination and cooperation derive, respectively, from the *framework* and *processes* structural dimensions of organisation for executing strategy (Nienaber, 2019; Skivington and Daft, 1991) as illustrated in Figure 1.

Framework is relatively stable and methodically links activities and resources of the business through *structure* and *systems. Structure* represents the formal arrangement of roles and responsibilities and is reflected in job design. It also specifies authority, policies, procedures, culture, and leadership. *Systems* allocate resources through budgets, management information, training/learning and development, and operational controls (Skivington and Daft, 1991). Research highlights the framework dimension of organisation for executing strategy as contributing to either the successful strategy execution or its failure (de Oliveira et al, 2019; Mankins and Steele, 2005; Mintzberg, 1994; Morkel et al, 2021).

Processes are fleeting and involve individual behaviours or actions and reflect the relationships between business members. Processes comprise *interaction* – specifically communication on the one hand and *sanctions* – explicitly power and rewards, on the other. Interaction and sanctions continuously create roles in the minds of business members and may or may not correspond to the formal roles specified by the framework. Thus, relationships between business members create meaning and consensus while governing behaviour including employees' willing pursuit of business performance (Skivington and Daft, 1991). Research validates the *processes* dimension of organisation for executing strategy as either facilitating or hindering strategy execution (de Oliveira et al, 2019; Mankins and Steele, 2005; Mintzberg, 1994; Morkel et al, 2021).

Leadership can use the *structural dimensions of organisation* (see Figure 1) to execute strategy by changing the framework, the processes, or both dimensions. Therefore, leadership creates an environment conducive to strategy execution and thus business performance (Barney, 1991; de Oliveira et al, 2019). Leadership's decisions influence employees' motivational needs for competence, autonomy, and relatedness. These decisions satisfy or frustrate the motivational needs, affecting the willingness or unwillingness (availability/unavailability) of employees to execute strategy. Leadership can use people analytics to mobilise human competence to effectively execute strategy.

3.2 People Analytics: Mobilising Human Competence

Effective *people analytics* provides quality information for making evidence-based decisions to mobilise human competence in performing value-creating activities. Well-designed people analytics offers an integrated measurement system for analysing business performance and effectually create and deliver value (CIPD, 2016; Levenson, 2018; Schiemann et al, 2018).

An integrated measurement system (see Figure 1) reflects inputs feeding into activities, leading to outputs, and culminating in business outcomes or performance. Such a system would account for measurement at the tactical (input), operational (activity), and strategic (output and outcomes) levels, all of which are central to the strategy of the business (Boudreau and Cascio, 2017; CIPD, 2016; Hamilton and Sodeman, 2020; Levenson, 2018). Each level of measurement contains several measures for determining value (cf. CIPD, 2016) and reflected in Figure 1. Businesses generally use some of these measures according to their judgment.

3.3 Input level measurement

Input level measurement represents the basic building blocks and provides essential data about employees that the business relies upon as a source of differentiation. Input measures include *regulatory compliance* such as *health and safety regulations*.

3.4 Activity level measurement

Activity level measurement represents the next level of measurement and shows the transformation of inputs, through processes, to outputs, which constitutes value creation (Porter, 1985; Sheehan and Foss, 2017). People are central in transforming resources into products and services valued by customers. Activity measures include *employee welfare* such as *employee satisfaction* and *job satisfaction* surveys.

3.5 Output level measurement

Investments in the activity level result in outputs, which provide the means for assessing the impact of employees, their development, their management, and how to improve these investments to meet business needs. Output level measurement indicates quantifiable value-add to the business, resulting from effective human resource practices. At this level, data are less tangible and difficult to measure. Output measures include *employee engagement and well-being* such as *climate surveys*.

3.6 Outcome level measurement

Finally, outcome level measurement mirrors the quality of outputs, resulting from combining inputs and activities, and their subsequent business impact. Outcome level measurement reflects value delivery to the business and its stakeholders. Given the complexity of this level of measurement, many of the measures are indirect. Outcome measures include *business performance* indicating how well the realised performance compared to the planned performance expressed in *financial and non-financial terms* such as *return on investment* (ROI) and *customer satisfaction*.

4. A Leadership Diagnostic Derived from the Literature Review

Figure 1 illustrates a leadership diagnostic for unlocking human competence to successfully execute strategy,

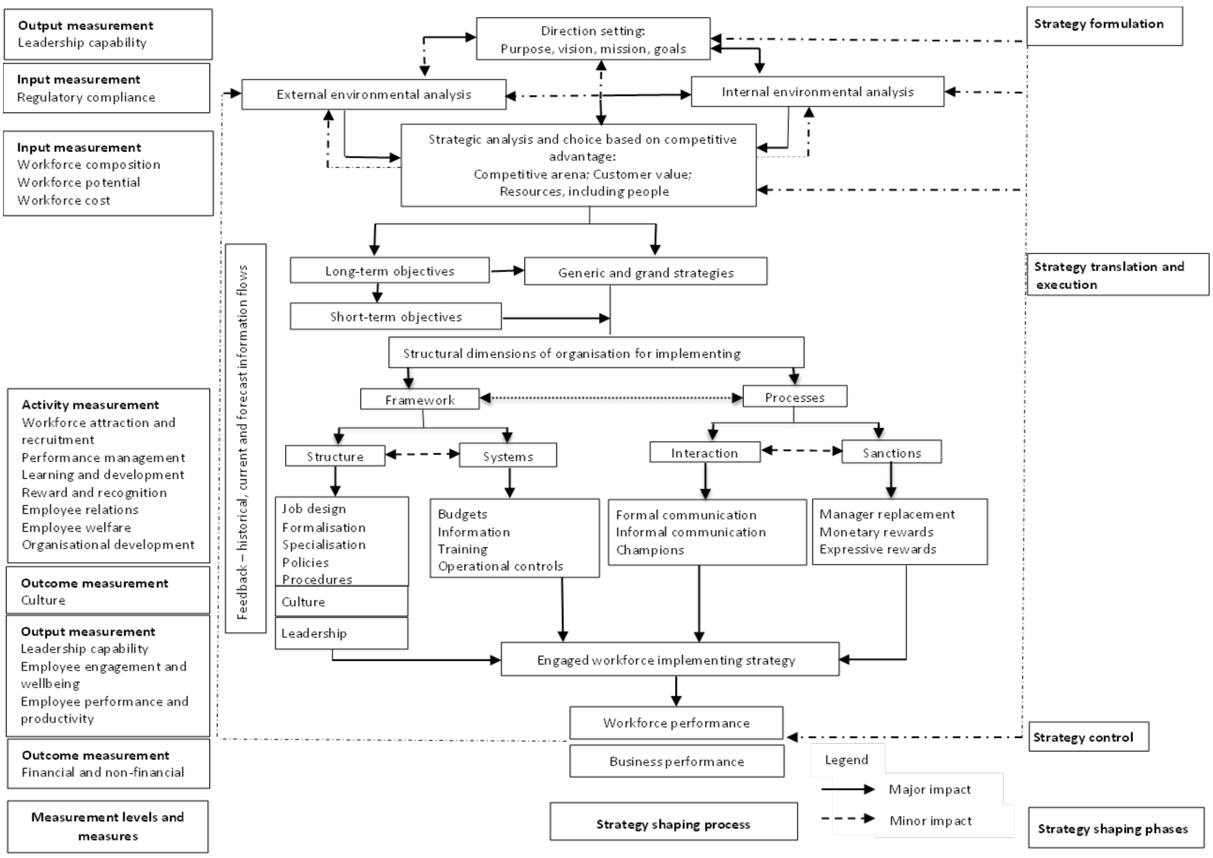

Figure 1: Leadership diagnostic to unlock human competence for successful strategy execution

Source: Adapted from CIPD (2016), Nienaber (2019), Pearce et al (2018), Skivington and Daft (1991)

which is derived from the literature review. Figure 1 necessitates a few brief observations:

- Illustrating measurement levels comprising people analytics against the strategy shaping process is unprecedented. It reflects the business entity as a total system. It displays the core business components which are integral to its functioning – people analytics, inputs, activities, outputs, and outcomes, and impacted by the external business environment as well as by performance feedback loops.
- Measurement levels and examples of measures are on the left-hand side, the strategy shaping process in the middle, and the strategy shaping phases on the right-hand side.
- Measurement levels do not build sequentially on each other, as one may expect.
- Strategy shaping is an intertwined process: formulation is at the strategic level of the business and relies on measurement at both strategic (output) and tactical (input) levels; translation and execution is at the operational level of the business and relies on measurement at both the operational (activity) and strategic (output and outcome) levels; and strategy control is at the strategic level of the business and relies on measurement at the strategic level (output and outcomes). The vast majority of measures (both activity and strategic) are at the operational level of the business where strategy is translated and executed – the core of a business. Notably, strategic level measurement (output and outcomes) is present at each strategy shaping phase and provides measures that can assist leadership in bridging the formulation-implementation divide, without abdicating the execution responsibility to lower hierarchical levels and overlooking strategic issues.
- It visually shows how people link to strategy execution and thus, business performance. It confirms that a holistic approach is required to ensure all performance variables impacting the functioning of a business are accounted for to ensure performance effectiveness by optimising resources, particularly people. Moreover, people analytics data are dispersed throughout the business and provide information about the total system. Thus, all stakeholders in the business should partner to collate, analyse, and report on the impact of people on business performance to ensure evidence-based decision-making in support of strategy execution and thus business performance.
- It suggests that leadership's influence permeates the entire business and ultimately impacts employee motivation and consequently business performance. It demonstrates that people analytics can provide information about:
- leadership's ability to set the direction of the business and choose an appropriate strategy for pursuing the direction as impacted by environmental variables, while executing it through the framework and processes structural dimensions of organisation;
- the structure, specifically job design that impacts the fit between roles and employee competence and whether the right person is deployed in the appropriate position to attain the business' goals or performance;
- the conduciveness of policies, procedures, and culture to support goal achievement;
- the effectiveness and efficiency of systems in endowing employees, swiftly, with the requisite financial and non-financial resources for executing value-creating activities in a way that creates competitive advantage;
- the impact of the framework structural dimension of organisation on the processes structural dimension of organisation, as well as the alignment between the processes structural dimension of organisation and the framework structural dimension of organisation; and
- the impact of interaction and sanctions on goal achievement or business performance.

5. An Explication of Research Methodology

The methodology is exploratory and conducted by a survey. This approach was guided by the purpose of the research and the limited empirical evidence on the use of people analytics in business performance, and studies integrating strategy (execution) and people analytics (Jann and Hinz, 2017; Jansen, 2010; Lavrakas, 2008; Margherita, 2021; Marler and Boudreau, 2017; Nienaber and Sewdass, 2016; O'Leary, 2021; Tursunbayeva, Di Laura and Pagliani, 2018). The exploratory nature of the study and the kind of data required to solve the research problem justified an exploratory survey *as best fit* with the research question (Jann and Hinz, 2017; Jansen, 2010).

Survey research, whether exploratory, descriptive, or explanatory, is a systematic method for collecting large amounts of standardised factual data about a social reality, such as behaviours and trends or opinions, at a relatively low cost, in a short period, from a purposively selected sample of respondents, with a wide variety of views, using an instrument, such as a self-report questionnaire, consisting of structured closed-ended and/or open-ended questions, to provide a record of a social reality at a specific time (Jann and Hinz, 2017; Lavrakas, 2008; O'Leary, 2021).

Exploratory surveys aim at *understanding* a social reality and should be used as a basis for developing a more detailed, systematic descriptive, or explanatory survey (Forza, 2016; Jann and Hinz, 2017). Exploratory surveys use small samples/number of responses as the focus is on uncovering insights from a diverse sample to understand a social reality as opposed to conclusive analyses and generalising (Forza, 2016; Jann and Hinz, 2017; Jansen, 2010; Lavrakas, 2008). However, these scholars do not specifically numerically clarify a *small* sample. Daniel (2012) concurs with these scholars and advises that (a) sample size should be adequate to satisfy the objectives of the study and return useful results with scientific and practical value, (b) to be ethical one should consider the burden on participants and use the smallest possible sample necessary to satisfy the objectives of the study, and (c) typical samples or 'rule of thumb' for exploratory research, pilot studies and pretesting range from 20 to 150.

5.1 Instrument

We developed an online self-report questionnaire following the literature review. We enhanced trustworthiness by attending to construct identification, linked the questions to the study objectives, and followed basic design rules: selecting the appropriate data collection method, attention to flow, layout and the wording of questions, and the pre-test of the questionnaire with experts (Human Resource professionals) before the main study (Forza, 2016; O'Leary, 2021). After the pre-test, we adjusted the wording of a few questions to improve readability. The questionnaire contained two sections: one collecting demographic variables and the other involving perceptions of respondents regarding the use of people analytics to execute strategy for business performance. The questionnaire consisted of 16 questions (14 closed- and 2 open-ended). Examples of questions include: "The following is most descriptive of my firm's performance"; "My firm employs the following number of persons"; "My organisation uses the following metrics (accompanied by a short description of the metric to ensure shared meaning) to manage organisational performance"; "In your view explain how … ." The study was conducted following ethical research principles: Ethical clearance was granted by the university and voluntary participation ensued from informed consent, and safeguarding anonymity and confidentiality. Participants could withdraw at any stage without negative consequences.

5.2 Population and Sample

Survey participants were members of the South African Board for People Practices (SABPP). The SABPP was purposively selected for this study because of its diverse members (Jansen, 2010; Lavrakas, 2008; O'Leary, 2021) in terms of economic activity, size of business, and potential use of people analytics in ensuring business performance. Thus, SABPP members would be the best source of information to solve the problem investigated (Jann and Hinz, 2017; O'Leary, 2021).

An online, cross-sectional survey link was distributed in June 2018 by the SABPP to their members inviting their participation on a voluntary, anonymous, and confidential basis. The invitation stated the purpose and objectives of the survey, and why it was important to participate in the survey. It also explained that aggregated, anonymised survey results would be shared with the SABPP along with individual respondents interested in the results. The survey closed in September 2018.

6. Discussion of Research Findings

6.1 Respondents

We received 61 completed surveys matching Daniel's (2012) numerical rule of thumb - discussed above - and trends in survey research (Jansen, 2010; Mayer, 2021). These responses could be used, as progress cannot be made without empirical information on this topic (Daniel, 2012; Forza, 2016; Lavrakas, 2008).

A diverse sample was achieved (Jansen, 2010; Lavrakas, 2008; O'Leary, 2021). Respondents varied in terms of hierarchical positions, business size, and economic activity. Hierarchical positions ranged from frontline staff (12/61) to HR specialists (23/61) and top management (26/61), reflecting views from all hierarchical levels. Business size in terms of employment ranged from two to more than 500 persons and represented all standard industrial classification sectors. Since the vast majority (53/61) of respondents had more than 10 years work experience, they may well have had an understanding of their businesses and were thus appropriate respondents.

6.2 People analytics used

Respondents reported the use of input, activity, output, and outcome measures, representing the tactical, operational, and strategic levels of measurement and corresponding to the discussed literature. Consistent with previous research (Boudreau and Cascio, 2017; Levenson, 2018; Schiemann et al, 2018), activity (operational) level of measurement dominated, followed by input (tactical), while output and outcome (strategic) levels lagged. This observation seems unsurprising as activity level measurement reflects the operational level of the business, where inputs are transformed through processes into outputs, which constitutes value creation (Porter, 1985; Sheehan and Foss, 2017). This transformation amounts to translating strategy into action – the core of a business. The observation that activity level measurement dominates at the operational level of the business coincides with Figure 1. However, Figure 1 also illustrates the presence of output and outcome or strategic level measurement at the operational level of the business. Hence, the infrequent use of strategic level measurement, especially at the operational level of the business, is unexpected and warranted further examination.

We used frequency counts, which are either neglected or ambiguously used (e.g. some, most, few) in exploratory research, as coding to be precise, thus enhancing trustworthiness (Fife, 2020; Hannah and Lautsch, 2011; Maxwell, 2010; Sandelowski, 2001; Seale and Silverman, 1997). These frequency counts directed our attention to those measures and measurement levels that were neglected. Some respondents regardless of hierarchical position, size of business, economic activity, and perception of business performance reported the infrequent use of:

- *activity measures*, specifically (a) attraction and recruitment measures (rate of retention of recruits (35/61), turnover and termination (48/61)), (b) employee welfare (employee satisfaction (38/61) and job satisfaction (28/61) surveys), and (c) workforce planning (42/61);
- *output measures*, specifically (d) leadership capability (36/61), (e) employee productivity and performance measures (45/61), (f) employee engagement and well-being measures (engagement (38/61), organisational commitment (31/61) and climate (33/61) surveys), (g) did not report the use of business models; and
- *outcome measures*, specifically (h) alignment measures that form part of culture (37/61).

The significance of these neglected measures (a-h) is evident from the interpretation i.e. these measures are designed to (a) provide the business with vital data regarding available employees to execute strategy; (b) create a healthy and happy workforce; (c) continually align changing business needs and priorities with the workforce to meet compliance, customer value and business imperatives; (d) promote leadership capacity to set direction and ensure a shared understanding of the direction while empowering the workforce to unify their efforts by asserting their competence autonomously in pursuit of strategy execution/business performance; (e) reflect the quality of individuals performing against role-based objectives to produce outputs and outcomes; (f) are aimed at creating an environment that is conducive to employees asserting their competence autonomously, which nurtures relatedness; (g) deliver value; and (h) gauge the alignment of employee, team, and functional objectives with business goals. These measures are consequential for unlocking human competence to effectviley execute strategy for business performance.

These neglected measures imply that leadership lacks the capacity to: set direction, choose an appropriate strategy to pursue the direction, and execute the strategy via the structural dimensions of organisation to achieve business performance. Notably, all of these neglected measurements pertain to the structural dimensions of organisation for executing strategy, which activate the levers of motivation which in turn unlock human competence, as illustrated in Figure 1. Thus, these responses suggest leadership fails to create an environment in which suitably competent employees can perform productively in pursuit of business performance. This observation further suggests that leadership may not know how people link to strategy execution and supports the literature (CIPD, 2016; Levenson, 2018; Margherita, 2021; Marler and Boudreau, 2017; Schiemann et al, 2018). This observation raises the question of whether the respondents' reported measures used are the most appropriate, comprehensive, or relevant in linking employees to business performance. This is consistent with the literature (Boudreau and Cascio, 2017; Levenson, 2018). In summary, these responses indicate that leadership renders people physically and/or psychologically unavailable to execute strategy and consequently jeopardises business performance. These results are consistent with Hogan et al (2021).

The survey responses verify that the strategic (output and outcome) level of measurement is primarily overlooked (Angrave et al, 2016; Boudreau and Cascio, 2017; Hamilton and Sodeman, 2020; Levenson, 2018; Maxwell, 2010; Schiemann et al, 2018). These responses build on previous research and provide new insights. The overlooked strategic level of measurement is present at the operational level of the business (Figure 1). This mirrors the structural dimensions of organisation, where strategy is translated and executed. The overlooked measures are consequential for unlocking human competence to execute strategy in pursuit of business performance.

6.3 Business performance

The respondents indicated that they use a variety of strategies to achieve business performance. They also indicated that they were generally satisfied with strategy results. However, regardless of hierarchical position, size of business, and economic activity, 46 respondents reported a discrepancy between planned and realised performance. The reasons offered for the ineffectiveness of strategies were: inappropriate strategies for achieving the business' goals (10/61), inappropriate business goals (8/61), and external and internal environmental factors. Their reasons offered concur with previous research (Mankins and Steele, 2005; Mintzberg, 1994; Morkel et al, 2021). Moreover, these reasons suggest that there are many points involving people where strategy shaping can fail. This is consistent with the reported neglected people measurement and Figure 1.

7. Conclusions, Contributions, Limitations, and Recommendations for Future Research

This study answered the research question and the results can be accepted as contributing to knowledge as the study meets discussed trustworthiness requirements (Forza, 2016; O'Leary, 2021). The findings concur with previous research, namely, some businesses do not optimise the functioning of their employees. Thus, some leader decisions destroy instead of creating value. Additionally, this study extends previous research. It provides details on neglected people analytics. Specifically, operational and strategic people measurement at the operational level of the business, where strategy is translated and executed, are overlooked. It revealed that these overlooked people measurements are consequential for unlocking human competence and thus render people unavailable to execute strategy to the detriment of business performance.

The leadership diagnostic (Figure 1) illustrates how people link to strategy execution and business performance. Leadership can use the diagnostic to optimise the functioning of their employees by deploying suitably competent people in appropriate positions, rendering them available to perform, resulting in increased engagement levels, enhance strategy execution, and business performance.

This study contributes to theory, practise, and methodology. It provides information on understudied areas of research that are significant in business performance (de Oliveira et al, 2019; Margherita, 2021). The reported infrequent use of measures at the operational (activity) and strategic (output and outcome) levels of measurement is consequential in unlocking human competence, which is the cornerstone of competitive advantage and the quintessential element of a sound strategy. The neglected measures are present at the operational level of the business, mirroring the structural dimensions of organisation where strategy is translated into action, thus aiding strategy execution to realise business performance. Thus, some respondents' use of people analytics does not unlock human competence to execute strategy and, thus it exposes a lack of competitive advantage. Ultimately, these responses reveal ineffective strategy shaping, which jeopardises business performance.

The diagnostic has utility for practitioners. It revealed many points where strategy shaping can go wrong. All of these points impact people requirements to execute strategy and are aggravated by the abstractness of especially strategic level measures that matter most in strategy execution. The diagnostic can assist leadership in running their businesses systematically and systemically while linking people to strategy execution. Thus, it provides actionable insights enabling leadership to make better decisions based on evidence to modify business conditions, such as the direction of the business, the strategy to arrive at the direction, and the structure, systems, interaction, and sanctions, to successfully execute strategy. Thus, the diagnostic enhances understanding of how each component, particularly people, in this intertwined process impacts business performance. It provides the required information to assess the business' functioning, specifically about people.

The successful use of people analytics can minimise, if not prevent, the strategy execution breakdown while ensuring effective strategy shaping, which ensues from leadership capacity as shown in Figure 1. The diagnostic, therefore, presents a properly signposted route linking people to business performance. Businesses can embrace this diagnostic for success.

This study contributes methodologically by employing an exploratory survey using an online questionnaire to collect data and frequency counting as part of data analysis, which should not be misconstrued as statistical analyses (Fife, 2020; Hannah and Lautsch, 2011; Maxwell, 2010; Sandelowski, 2001; Seale and Silverman, 1997). Counting improved precision and directed attention to the neglected people measures and levels of measurement. However, the interpretation of these neglected measures provides insights that can ameliorate the use of people analytics enhancing strategy execution and business performance. Furthermore, the study augments the literature, specifically the theoretical studies and viewpoints (Angrave et al, 2016; Margherita, 2021; Marler and Boudreau, 2017; Nienaber and Sewdass, 2016; Tursunbayeva et al, 2018), with empirical evidence.

There are some limitations, specifically the cross-sectional nature of the study and the preliminary evidence that needs further scrutiny. Consequently, future descriptive and explanatory studies are recommended.

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Task Uncertainty on the Relationship Between Social Hierarchy and Leadership Emergence

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Abstract: Self-managing teams have gained popularity, yet those teams in practice often have limited formal hierarchical differentiation, formal order, or imposed coordination. Social hierarchy has functions of establishing order and facilitating coordination, and it plays important roles in teams where team members autonomously interact and manage tasks. Two important forms of social hierarchy, status and power, critically affect how individuals on a team emerge as leaders, and thus help self-managing teams' coordination. In the current study, two questions are explored: 1) How do informal status and power affect leadership emergence in project teams? 2) How do team task types affect the relationship between informal status/power and leadership emergence in project teams? A field study was conducted in a consulting firm in South Korea. The results show that the high-status individuals are most likely to emerge as leaders of project teams, and that the relationship between status and leadership emergence is stronger in teams dealing with highly uncertain tasks.

Keywords: task uncertainty, social hierarchy, status, power, social networks, leadership emergence

1. Introduction

Social hierarchy is a fundamental feature of social relations (Magee & Galinsky, 2008), and it has two functions in organizations: (1) to establish order and coordination, and (2) to motivate employees to strive for promotion (Magee & Galinsky, 2008). Hierarchy provides clear social governance in groups by allowing leaders to assign tasks or allocate resources (Hogg, 2001), and it provides incentives for individuals to climb the organizational ladder to obtain greater compensation and comfort (Tannenbaum, Kavcic, Rosner, Vianello, & Wieser, 1974).

The two functions of social hierarchy, coordination and motivation, are important in groups where roles or formal positions are ambiguous, where group tasks are confusing, or where work is poorly coordinated (Greer & Caruso, 2007; Overbeck, Correll, & Park, 2005). Successful teams should have clear hierarchical roles, while those lacking structure perform more poorly (Hackman, 1987). Well-designed team structure has a positive influence on a team's engagement in learning and continuous improvement (Bunderson & Boumgarden, 2020). Contemporary organizations are increasingly adopting self-managing teams as working units (Gerard, 1995). Yet, self-managing teams often have limited formal hierarchical differentiation, formal order, or imposed coordination. Consequently, status and power - two important forms of social hierarchy - may critically affect how team members interact, manage tasks, and experience conflict.

Two forms of social hierarchy have been frequently studied. Social status is defined as the extent to which an individual is respected or admired by others (Magee & Galinsky, 2008). People tend to gather information about a target individual's ability and expertise from direct interactions or interpersonal observations, and they tend to respect and admire those perceived to be highly competent (Ridgeway, Boyle, Kuipers, & Robinson, 1998). Social power is defined as control over valued resources in social relations (Magee & Galinsky, 2008). Individuals depend on more powerful individuals to obtain resources. Power and status are related but distinct constructs (Magee & Galinsky, 2008). Both social power and social status significantly affect employee behaviors, but empirical evidence has indicated that status and power levels have unique qualities and effects on employee behaviors (e.g., Blader & Chen, 2012; Hays & Bendersky, 2015). For example, high status individuals may show more helping and cooperative behaviors (Cheng, Tracy, Henrich, 2010; Willer, 2009) and willingness to take the perspective of others (Blader & Chen, 2012). In contrast, holders of power tend to act according to their own goals and interests (Hirsh, Galinski, & Zhong, 2011). These respective influence of status and power may play different roles in establishing order and facilitating coordination in self-managing teams.

Establishing order and facilitating coordination - functions of social hierarchy - may play important roles in teams where individuals on a team emerge as leaders. In competitive environments, individuals claim a leadership role (e.g., individuals decide to initiate projects or to perform leadership behaviors) and others consent to that individual's identity as a leader (DeRue &Ashford, 2010). In self-managing teams, members may assume leadership by taking advantage of social hierarchies that will grant the member the power to coordinate work and assign tasks.

Leadership emergence is an important research topic because of its critical influence on team processes and performance.

Research regarding approaches to leadership emergence have predominantly focused on individual levels and have vastly explored facets such as personality, values, knowledge, and skills (Judge, Piccolo, & Kosalka, 2009). However, this approach focuses only on individuals' innate characteristics and fails to consider individuals' potential interactions with team and organization members. Consequently, I provide insights beyond the individual approach. For example, teams must continually check their direction and progress to confirm they are parallel with organizational directions. We cannot understand how self-managing teams form and function without considering individual positions in organizations. As a result, approaches that consider social interactions among team and organizational members can help scholars better understand leadership emergence in teams (Azumi & Hage, 1972).

Thus, a structural approach based on social interactions among organizational members can be especially useful in explaining leadership emergence in teams (Bryson & Kelly, 1978) because it can answer questions that an individual approach has not been able to answer. That is, studying social hierarchy, social networks, and interactions within and outside teams may reveal how leaders emerge in teams and how team members work together. Scholars have called for using a structural perspective for studying leadership in teams (e.g., DeRue & Ashford, 2010; Grant & Parker, 2008).

2. Hypotheses

2.1 Status and Leadership Emergence in Project Teams

Social status is defined as the extent to which an individual is respected or admired by others (Magee & Galinsky, 2008). People tend to gather information about a target individual's ability and expertise from direct or observed interpersonal interactions (Ridgeway, Boyle, Kuipers, & Robinson, 1998). They tend to respect and admire those who exhibit high competence. High social status tends to be self-reinforcing by generating (1) opportunities for advancement, and (2) expectations for behaviors that fit with status advantage (Magee & Galinsky, 2008).

First, respected individuals are likely to have better opportunities (Merton, 1968; Ospina, 1996) to choose the best jobs or positions. For example, an opportunity to conduct high quality research is more likely to be given to a PhD student from a more prestigious undergraduate school than to a student from a lower status school. At the same time, high status individuals will be more likely to claim rather than grant leadership. Second, potential leaders are expected to behave in ways that are consistent with their status. Social interactions are most harmonious when individuals act consistently with their position in the social hierarchy (Magee & Galinsky, 2008). High-status individuals must behave in ways that are parallel with the social hierarchy to maintain admiration and status (Flynn et al., 2006). Respect is strongly based on perceptions that the admired individual is competent. In team activities, team members expect that high status individuals will support, encourage, and motivate the team—all competencies inherent in potential leaders. Individuals who behave inconsistently or inappropriately with expectations are often negatively evaluated and socially rejected (Magee & Galinsky, 2008), and lose their status. The ultimate result of the opportunities for advancement and expectations for behavior is that high-status leads to the likelihood of claiming team leadership by initiating projects.

The leadership emergence process requires that aspirants claim leadership and that team members grant the claims. Followers tend to select leaders from members who (1) contribute in ways that satisfy members' needs, (2) fulfill roles necessary for successful team functioning, and (3) act in accordance with socially defined leadership expectations (Mann, 1959). The first and third qualities closely fit the relationship between status and leadership emergence. First, high status individuals tend to act competently, as team members would expect leaders to do. Because high status individuals have more advancement opportunities, they are more likely than low status individuals to actively initiate discussions or team projects. More important, they are better able to satisfy team members' needs. They tend to focus on their interpersonal relationships (Blader & Chen, 2012; Galinsky et al., 2008), to consider others' needs (Blader et al., 2013; Galinsky et al., 2006), and thus engage in helping and cooperation behaviors (Cheng, Tracy, & Henrich, 2010; Willer, 2009). As team members observe those behaviors, they are more likely to grant leadership to high status individuals. Although most team members would like to acquire the benefits that come with leadership, high status individuals would be more motivated to claim the role. Simultaneously, team members would be more likely to grant their leadership claims. Therefore, I hypothesize:

H1. Individuals with high informal status are more likely to be leaders of project teams than individuals with low informal status.

2.2 Power and Leadership Emergence in Project Teams

Power is also an important predictor of leadership emergence. Social power is defined as control over valued resources in social relations (Magee & Galinsky, 2008). Individuals who lack power depend on those in power to obtain more information or larger budgets. Power is similar to status in being self-reinforcing through (1) participation/influence and (2) confidence. First, powerful people are more likely than those who lack power to voice concerns in group activities (Brown & Levinson, 1987) and to openly express their opinions (Anderson & Berdahi, 2002; Berdahl & Martorana, 2006). When leadership positions are open, they are more likely to claim leadership without hesitation. Second, they are more likely to make choices confidently and to be more action-oriented (Anderson & Galinsky, 2006). They also tend to make the first offers in bargaining contexts (Magee, Galinsky, & Gruenfeld, 2007). In the leadership claiming process, they may find it easier to talk with potential followers, to be first to confidently claim the leadership position through goal-directed action (Galinsky et al, 2003; Magee & Galinsky, 2008). They will have better access to resources and will be more likely to recognize issues, devise solutions, and provide opportunities for group improvement (Baldwin, Bedell, & Johnson, 1997). That is, they are more likely to claim leadership by initiating projects.

Mann's (1959) arguments can be applied to explain how team members grant leadership status to high power individuals. Mann's second observation—that leaders are chosen from those who can fulfill roles necessary for successful team functioning—fits closely with the logic. When team members select their leaders, they consider whether the leader can successfully lead the team toward achieving its goals. They evaluate whether the potential leader takes initiative, connects ideas to action plans, and can provide resources needed for team activities. High powered individuals are action-oriented, especially regarding goal-directed actions (Galinsky et al., 2003). They participate actively and lead team discussions confidently. Consequently, team members are more likely to grant high powered aspirants the leadership role. In sum, while most team members want to be team leaders, high powered individuals are more motivated to claim leadership, and team members are more likely to grant their claims. Therefore, I predict:

H2. Individuals with high informal power are more likely to be leaders of project teams than individuals with low informal power.

2.3 Status and Leadership Emergence under High Task Uncertainty

Teams tackling highly uncertain tasks have a range of appropriate responses and need a wide range of knowledge, skills, ideas, opinions, and perspectives from all team members. Because of their tendency to focus on interpersonal relationships, to consider the needs of others, to engage in helping and cooperation, and to consider others' perspectives and opinions, high status members are the ones most likely to give team members the development and mentoring they desire (Blader et al., 2013; Galinsky et al., 2008). Teams confronting high task uncertainty face greater risks of task failure. When difficulties rise, warm, involved, and considerate high status individuals are more likely to help. Therefore, high status individuals would choose to lead project teams facing high uncertainty, while team members would consent to their leadership.

Powerful individuals might seem to be ideal for teams facing high uncertainty because powerful leaders can use their vast resources to find appropriate solutions. However, power is more useful for teams facing highly complex rather than uncertain tasks. If leaders lack clear direction and attempt to utilize resources alone, they will be a burden, not a help, because using resources without clear direction can be waste and make it more difficult to change direction in case a leader makes a mistake. Moreover, when difficulties rise, powerful leaders may blame rather than support other team members because powerful leaders tend to express attitudes and emotions straightforwardly (Brinol et al., 2007). In other words, powerful leaders may fail to provide consideration or patience, and will instead focus on the task. Even more detrimental case is that those high-power leaders derogate (Overbeck & Park, 2001) or threaten subordinates (Mead & Maner, 2012) when they actually need more ideas and suggestions to perform high uncertainty tasks. Therefore, individuals with high power may be less suitable for teams dealing with high uncertainty.

H3: Individuals with informal status are more likely to be leaders of project teams performing tasks of high uncertainty than individuals with informal power.

2.4 Power and Leadership Emergence under Low Task Uncertainty

Team tasks of low uncertainty can be solved in a few desirable ways, and thus require that leaders have specific knowledge or skills. In teams performing tasks of low uncertainty, or clear tasks, team members expect leadership that provides compelling solutions and action plans. What is required in these teams is a leader with initiative and drive. High power individuals can meet those expectations because they are able to set agendas, norms for discussion, rules for behaviors, and opinion standards (Magee & Galinsky, 2008). They also address team tasks and goals more directly (Galinsky et al., 2003), and thus ensure that members work efficiently. Therefore, high power individuals would choose to lead project teams dealing with tasks of low uncertainty, while team members would consent to their leadership.

In contrast, high status individuals may be unsuitable for leading teams handling tasks of low uncertainty. When clear solutions, action plans, and limited timelines are required, they may fail to contribute to team success or members' development. For example, a leader who cares too much about everyone's ideas and opinions (Blader & Chen, 2012) or personal development, and spends time helping (Cheng, Tracy, Henrich, 2010; Willer, 2009) may prevent the team from progressing toward its ultimate goals. Therefore, high status individuals may be less suitable for teams dealing with low uncertainty.

> *H4: Individuals with informal power are more likely to be leaders of project teams performing tasks of low uncertainty than individuals with informal status.*

3. Field Study

3.1 Sample and Study Design

To examine the effects of status and power on leadership emergence in project teams and the effect of team task types on status/power-leadership emergence relationships, I collected data from a company that uses self-managing teams as its primary working unit. The organization employed 101 consultants and 20 administrative support staff.

The company has an unconventional procedure for forming project teams. Employees are allowed to freely and voluntarily initiate and join teams, so that project teams are formed naturally. Any employee can initiate a project and become a project team leader. Consultants typically communicate with key people in the client companies to discuss goals for the consulting projects. The initiator then announces the project through the company intranet six weeks before the project team is launched, so team members are recruited via web-board, online messenger, phone, or in-person meetings. All consultants can apply to any team openings. If they are offered the job, they can choose whether to join the team. Initiators can also accept or reject candidates. Once the team is assembled, the initiator officially registers the project in the administrative office and receives financial and other resources for the project. Each employee works for one project team at a time; participating in multiple projects simultaneously is not allowed.

I first obtained HR archival data to gather employees' demographic information. Then I conducted an online survey with questions asking about their individual dispositions and ties with other consultants in three types of social networks: communication, respect, and advice. Two years after the online survey, I collected data about project team history to get a sufficient sample size before too many formal hierarchical changes had occurred, for example, by promotion. During the 2-year window, 319 consulting project teams were formed, and each employee participated in an average of 9.21 projects. The average team size was 3.5 members, and the average project took 9 weeks. After I obtained data about the projects, I asked two senior managers to rate task uncertainty for each of the 319 projects.

3.2 Measures

Informal power. Informal power was measured with betweenness centrality in communication network by asking employees to identify their communication relationships with their colleagues. I provided an alphabetized list of all employees and asked: "Please check the names of people in this organization with whom you communicate for job-related or firm-related information."

Informal status. Informal status was measured with in-degree centrality in respect network by asking "Please check the names of people in this organization whom you respect, admire or look up to." Respect network measures sentiment relations (Wasserman &Faust, 1994). Calculating individual prestige in respect networks requires directional relation assumptions. Using data with directional relations, researchers can distinguish between choices made "out-degree" and choices received "in-degree." The simplest individual-level measure of prestige is the in-degree of each individual. The idea is that prestigious individuals tend to receive many nominations or choices.

Task uncertainty. Two senior managers at the research site rated the task uncertainty of 319 projects following my instructions: "Task uncertainty is defined as a lack of predictability associated with inputs, processes, and outputs of the broader technical system within which the work is performed. Please rate task uncertainty of each project from 1 = Very low to 5 = Very high." I calculated Cohen's kappa to check for agreement regarding uncertainty inherent in each consulting project. Agreement was $\kappa = .91$, $p < .001$.

Leadership emergence. I operationalized leadership emergence as "likelihood of becoming a project team leader" because the research site used self-organizing as a method for forming consulting project teams and selecting leaders. Each employee must work in project teams, as leaders or as members. I counted how many projects each employee had worked on and how many leadership positions they had taken.

(The likelihood of) leadership emergence = the number of leadership positions taken / the total number of projects.

I controlled for age, gender, big 5 personality traits, organizational tenure, working experience, and organizational rank in the model.

4. Results

Table 1 shows the descriptive statistics, reliability coefficients, and correlations. Table 2 shows the results of regression analysis for the effects of power and status on leadership emergence. Informal status was positively related to leadership emergence ($\beta = 2.02$, $p < .01$). The positive effect of status on leadership emergence was consistent in all models when demographic information, personality traits, formal social hierarchy, and project-related control variables were added. Power had a positive and significant effect on leadership emergence in Models 2, 3, and 4 ($\beta = 5.61$, $p < .01$; $\beta = 5.68$, $p < .01$; $\beta = 5.56$, $p < .01$, respectively), but the effect disappeared when big 5 personality traits were included in the models ($\beta = 3.90$, $p > .05$; $\beta = 3.89$, $p > .05$). Therefore, Hypothesis 1 was supported but not Hypothesis 2. Table 3 shows the results of regression analysis for the effects of power and status on leadership emergence by project uncertainty score. In Model 6, informal status was positively related to leadership emergence ($\beta = 5.66$, $p < .05$). Power had no significant effect on leadership emergence in any models. Therefore, Hypothesis 3 was supported but not Hypothesis 4. The results support my prediction that the individuals most likely to emerge as leaders of project teams during team formation stages are those who have informal status in the social hierarchy of organizations. Furthermore, the type of team tasks may determine the impacts of status and power on leadership emergence. That is, status affects leadership emergence in teams dealing with highly uncertain tasks, but power doesn't have such effect in teams with low task uncertainty.

Table 1. Descriptive Statistics, Reliability Coefficients, and Correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8
Leadership emergence	0.33	0.37	*n.a.*							
Average uncertainty of projects involved	2.11	0.82	0.22*	*n.a.*						
Power	0.005	0.008	0.30*	0.19	*n.a.*					
Status	0.035	0.056	0.61*	0.33*	0.40*	*n.a.*				
Gender	0.31	0.46	-0.19*	-0.11	-0.09	-0.21*	*n.a.*			
Age	37.93	6.92	0.56*	0.00	0.04	0.60*	-0.39*	*n.a.*		
Organizational rank	3.31	0.98	0.61*	0.02	0.02	0.58*	-0.23*	0.84*	*n.a.*	
Organizational tenure	8.72	6.62	0.67*	0.05	0.07*	0.55*	-0.36*	0.85*	0.80*	*n.a.*
Education	2.12	0.41	0.26*	-0.18	0.19*	0.33*	-0.09	0.42*	0.39*	0.38*
On leave	0.05	0.22	0.10	0.23	-0.09	-0.05	-0.08	0.00	-0.12	0.03
Openness to experience	3.48	0.73	0.15	0.11	0.06	-0.12	0.01	-0.11	-0.05	-0.05
Conscientiousness	3.41	0.79	0.00	0.03	0.01	-0.10	0.24	-0.11	0.00	-0.09
Extraversion	2.75	0.90	0.06	0.02	0.12	-0.09	0.26	-0.22	0.03	-0.16
Agreeableness	3.41	0.77	0.00	0.01	-0.12	-0.18	0.15	-0.07	-0.03	-0.03
Neuroticism	2.72	0.67	-0.04	-0.04	-0.01	0.17	0.12	0.20	0.16	-0.01
Number of project involved	9.21	4.24	-0.11	0.06	0.15	0.35*	-0.15	0.13	0.06	-0.04
Average number of available projects	20.42	1.85	-0.05	0.05	0.08	0.08	0.17	-0.15	0.00	-0.15
	9	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	
Education	*n.a.*									

On leave	-0.06	*n.a.*							
Openness to experience	-0.25	-0.04	1.00						
Conscientiousness	0.11	-0.05	-0.22	1.00					
Extraversion	-0.03	-0.11	0.41*	-0.06	1.00				
Agreeableness	0.01	0.11	0.41*	0.19*	0.24*	1.00			
Neuroticism	0.09	0.01	-0.05	-0.32*	-0.08	-0.39*	1.00		
Number of project involved	0.00	-0.21*	-0.05	-0.29	-0.16	-0.19	0.32	*n.a.*	
Average number of available projects	-0.08	-0.27	-0.17	0.07	0.24	-0.25	-0.10	-0.13	*n.a.*

Note. N = 101; * p<0.05; coefficient alpha reliabilities are reported on the diagonal

Table 2: Results of Regression Analysis for the Effects of Power and Status on Leadership Emergence

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	0.16**	-0.54**	-0.54**	-0.43**	-0.35	0.24
Power	4.20	5.61**	5.68**	5.56**	3.90	3.89
Status	4.08**	1.70**	1.70**	1.96**	1.98**	2.02**
Gender		0.00	0.00	-0.01	0.05	0.06
Org rank		0.20**	0.20**	0.19**	0.19**	0.20**
Education		0.06	0.06	0.05	0.06	0.04
On leave			0.03	-0.02	-0.07	-0.10
Openness to experience					0.06	0.06
Conscientiousness					0.01	0.02
Extraversion					0.00	0.01
Agreeableness					-0.04	-0.06
Neuroticism					-0.07	-0.08
Number of project involved				-0.01	-0.01	-0.01
Average number of available project						-0.03
Observations	101	101	101	101	72	72
R-squared	0.46	0.66	0.66	0.66	0.66	0.67

Note. * p<0.05, ** p<0.01; values are unstandardized regression coefficients

Table 3: Results of Regression Analysis for the Effects of Power and Status on Task Uncertainty

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	1.86**	3.23**	3.21**	3.16**	2.73*	0.88
Power	10.25	9.87	10.49	10.57	7.61	7.30
Status	3.07	4.66*	4.60*	4.49*	5.94*	5.66*
Gender		-0.11	-0.09	-0.09	-0.25	-0.26
Org rank		-0.05	-0.04	-0.03	-0.18	-0.18
Education		-0.55*	-0.58*	-0.57*	-0.74*	-0.70*
On leave			0.38	0.40	0.32	0.56
Openness to experience					0.03	0.07
Conscientiousness					0.16	0.15
Extraversion					-0.01	-0.05
Agreeableness					0.14	0.18
Neuroticism					0.07	0.09
Number of project involved				0.00	0.01	0.01
Average number of available project						0.08
Observations	64	64	64	64	50	50
R-squared	0.12	0.21	0.22	0.22	0.34	0.35

Note. * p<0.05, ** p<0.01; values are unstandardized regression coefficients

5. Conclusion

From the study, status and power are shown to be two forms of informal social hierarchy, apart from formal hierarchical organizational rankings. The findings suggest that social hierarchy, especially informal status, plays a critical role in leadership emergence. This relationship is more prominent when teams' task uncertainty is high. My investigation extends previous research and contributes to the literature in several ways. First, going beyond an individual approach, I adopt a structural approach to investigate the effect of social hierarchy on leadership emergence and conflict in teams. Second, this study expands the structural boundaries affecting the emergence of power and status. Third, I identify the mechanism by which social networks affect leadership emergence. Fourth, status is added to the social network discussion, which has generally focused on power and gave less attention to status.

Managers are advised to carefully consider individuals' structural characteristics such as informal status and informal power in addition to innate characteristics when forming teams and assigning leaders. Further, the moderating effect of task uncertainty on the relationship between social hierarchy and leadership emergence seems significant. Teams should be careful about choosing, electing, or designating team leaders according to the types of team tasks.

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CSR in the Retail food Industry: An Empirical Study of Sustainability Measures

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Abstract: Firms face increasing demands from a multitude of stakeholders to behave responsibly, but it is important to recognize that at the very core of sustainability lies compromise. None of the extreme alternatives—either the firm shutting down or the firm disregarding all societal demands—provide optimal solutions. The rational approach to sustainability is to seek 'win-win' solutions, as it clearly mandates achieving two different goals—for at least two different stakeholders, and this leads to goal conflicts and paradoxes. Not surprisingly, reducing costs while bolstering the firm's reputation as an environmentally responsible organization to the increasing number of climate-conscious consumers has become a common strategy for creating shared value. However, firms may face the paradox of choosing between those sustainability measures that are most beneficial to the firm and/or society, versus those measures that are most communicable to key stakeholders and thus most likely to provide reputational gains. There are very few studies on how approaches to food waste management in the retail sector contributes to CSR. The current study provides insight into resolving some of the paradoxes inherent in CSR-motivated strategies by describing how two of the biggest grocery chains in Norway—Coop and Norgesgruppen, seek to create more shared value through handling waste management. The data were collected through in-depth interviews with key informants at these two firms, that combined represent approximately 70% of the Norwegian food retail industry. In addition, data from expert interviews with key members of industry bodies provide further insights into the challenges in CSR issues. Our contribution is twofold, we develop insight into how retail chains handle conflicting goals from different stakeholders, and we show how using theory on paradoxes may contribute to achieving key CSR goals in the retail sector.

Key words: CSR, waste management, retail industry, competitive advantage

1. Introduction

This paper describes how firms may use paradox theory to deal with the intrinsic goal conflicts that characterize Corporate Social Responsibility (CSR) initiatives such as waste management. The fundamental question: *Can we do well by doing good?* has been asked and discussed from a multitude of perspectives, Among the vast number of studies on CSR, many support a positive relationship between Corporate Social Performance (CSP) and Corporate Financial Performance CFP (Velte, 2021). However, most studies answer the question: *Can* we do well by doing good? However, the principal question for most managers that routinely face challenging goal conflicts when making strategic choices on CSR issues is: "*How* do we do well by doing good"? Porter and Kramer (2006, 2011) suggested that firms should try to move beyond the prevailing opinion that most CSR activities are at odds with maintaining profitability and seek CSR initiatives that can create shared value (CSV)—for both firms and society. As the CSV concept received criticism for being simplistic (Crane et al, 2014), and not clearly defined (Dembek et al, 2016), Porter and Kramer have subsequently outlined three ways for firms to create shared value (Porter and Kramer, 2019): (i) by reconceiving products and markets, (ii) by redefining productivity in the value chain, (iii) by enabling local cluster development. It is the second approach that is relevant for our study on waste management,

One of the key issues that Porter and Kramer seek to establish is that rather than viewing the goal conflicts that are inherent in most CSR initiatives as insurmountable barriers, both firms and society may benefit more if managers seek to identify and resolve the paradoxes at the core of these conflicts and recognize them as opportunities to resolve competing, yet interrelated, economic, environmental, and social concerns—issues that afford win-win situations. One such issue is waste management, which is interesting from both a theoretical and a practical perspective as it bridges theory domains (Chkanikova and Mont 2015; Stindt 2017; Richards et al 2020; Carter et al. 2021). This research presents some of the paradoxes that arise when firms who are involved in one of the most ubiquitous and indispensable of industries—one with which all of us interact on an almost daily basis: the retail grocery industry, try to resolve the goal conflicts that arise from improving waste management. Our contribution is twofold, we develop insight into how retail chains handle different pressures, and we apply theory on paradoxes on CSR in the retail sector by discussing different paradoxes in the sector. The paper is divided into the following sections: Theoretical background, methodology, presentation of the findings, and concluding discussion.

2. Theoretical background

2.1 CSR Theory

In the five decades since the publication of Bowen's landmark book (Bowen 1953), the literature on CSR has burgeoned to the point where we now find meta-analyses on several topics within CSR (Velte 2021). The number of issues considered relevant for CSR increased rapidly, and by the 1970s included minority hiring and training, ecology, truth in advertising, package labels, guarantees and warranties, civil rights, etc.— highlighting one of the challenges identified by Friedman (1970): *Which issues should the firm address?* And, more importantly: *Which criteria should the firm use to choose these issues?* If managers choose the wrong issues, they not only run the risk of not having their firms' efforts recognized as legitimate responsibility initiatives, they might even be accused of cherry-picking easy, low-cost targets. However, recent global developments have pushed one major issue to the front of CSR priorities: *Sustainability*—which essentially subsumes several CSR issues originating with 'pollution' (Claro et al. 2013; Chkanikova 2016; Béné et al. 2020). One of the interesting aspects of sustainability is that the term itself embodies paradox—and not only does sustainability involve managing goal conflicts between firms' profitability and far-reaching societal goals; but it also allows firms to work more constructively with specific paradoxes by encouraging them to reframe important issues—such as waste management—in such a way that what may previously have been considered internal efficiency drives with limited upside may now be considered a win-win initiative.

The question "Can we do well by doing good?" has existed almost from the very moment it was suggested that firms should assume social responsibilities; it highlights the fundamental paradox at the core of CSR activities and conceptualizes CSR through the business-case perspective as a zero-sum game requiring managers to spend shareholders' money on societal goals. The search for evidence of the business case for CSR—that CSR initiatives can be profitable, resembles the search for the holy grail, and this has inspired so many studies that there has even been fierce debate on the methodological choices and institutional logics that may have affected the numerous meta-analyses on the Corporate Social Performance (CSP) – Corporate Financial Performance (CFP) link (Carroll and Brown 2018; Orlitzky and Rynes 2003; Orlitzky 2011; Velte 2021; Wójcik 2018).

When we consider the way CSR has impacted both research agendas and business practices, it is important to note that although most would agree that the question "Can we do well by doing good?" is fundamental, some have argued that firms should proactively assume these social responsibilities and in effect provide evidence that one can do well by doing good by expanding their accounting reports to include not just the bottom line, but also the firm's impact on all stakeholders—what has become known as the Triple Bottom Line (TBL) (Elkington 1999; Tate and Bals 2018). Although TBL has received criticism for being vague and easily manipulated, there is strong evidence that it leads to an increased focus on outcomes for all stakeholders and more win-win win-win opportunities (Mish and Scammon 2010; Isil and Hernke 2017).

A considerable amount of research on the business case for CSR has focused on the non-financial consequences, often in the form of reputational gains and losses (Dowling and Pfeffer 1975; Michelon et al. 2013; Vishwanathan et al. 2020). Certain CSR issues—e.g., sustainability— have been better integrated into business practices. While CSR initiatives can still be viewed as internal processes and company culture that may affect company reputation, the expected impact has become valuable financial information, and it is no longer just public opinion that firms must answer to if they do not report correctly on CSR initiatives. The *Environmental, Social, and Governance* framework (ESG) involves a set of standardized criteria that firms use to report compliance on key CSR issues. Increased use of the ESG reporting framework has itself led to a paradox—there are indications that firms are giving more priority to ESG *reporting* than to ESG *performance* (Arvidsson and Dumay 2022). Further, the consequences of violating these reporting standards are far more serious than potential reputational damage. Recently the CEO of one of Germany's top asset management firms—DWS Group—resigned after the firm's offices in Frankfurt were raided by police investigating claims of DWS' complicity in greenwashing investment funds under DWS management. (Langely and Miller, 2022).

However, after more than five decades of research on CSR, it is perhaps time to reframe the question. In trying to answer the question: "Can we do well by doing good?" both researchers and practitioners have focused on the business case for CSR, and most of the research and reporting is done at the firm level. While it is certainly interesting to provide evidence of a positive CSP-CFP link, this does not inform the managers who need to make decisions about specific initiatives; the question they need to answer is "*How* do we do well by doing good?".

To answer this question, managers must recognize that they are dealing with a paradox, and rather than focusing solely on the business case, there is more to be gained—for all stakeholders—by identifying the options that provide utility for all (Hahn et al. 2018; Chen et al. 2021; Pålsson and Sandberg 2021).

2.2 Paradox theory and CSR

Is the sentence "I always lie" true or false? This small piece of logic has challenged philosophers from around 400 years B. C. to our time (Poole and Van de Ven, 1989). A paradox relevant in our world of organizations is the paradox of success, also called the Icarus paradox or the performance paradox (Cunha and Putnam, 2019: 95). We optimize and measure our organizations for success, but too much success over time can often lead to the opposite result. Smith and Lewis (2011: 382) "define paradox as contradictory yet interrelated elements that exist simultaneously and persist over time. This definition highlights two components of paradox: (1) underlying tensions - that is, elements that seem logical individually but inconsistent and even absurd when juxtaposed - and (2) responses that embrace tensions simultaneously (Lewis, 2000)"

Paradoxes are very well suited to discuss and clarify opposite logics, conflicting demands, and simultaneous challenges. CSR as a research area is dominated by conflicts and opposing logics. In many cases, the optimal way to deal with CSR would be to go out of business or cease production. However, in this dilemma lies the core challenge of CSR, that two opposing and conflicting demands must be met and treated with care. Paradoxes can provide insight into how we deal with opposing forces, where we cannot deny the existence of either force. The forces underlying paradoxes may, at first sight, seem to be unresolvable, and we often jump to the conclusion that this is impossible to resolve the opposing forces. The beauty of using paradoxes as an approach is that it allows us to understand the underlying challenges and to find new ways of handling the unresolved dilemma. Thus, paradoxes can create new insights, encourage creativity, and foster new solutions.

We will use paradox theory as a template for discussing various conflicting demands that we find in the CSR area. Margolis and Walsh (2003) described the tension between corporations and social challenges, highlighting the tension between stakeholders and shareholders, and we extend this approach to understand specific CSR challenges in the retail industry. Schrage and Rasche (2022) use paradoxes to explain the duality in supply chain challenges in European manufacturers and suppliers from Asia. To our knowledge, there are few studies using paradox theory in the area of waste management, so we will discuss possible solutions to the different paradoxes emerging from the empirical case material.

So, how can paradox theory be used as a theoretical frame for discussing CSR challenges? Poole and Van de Ven (1989) provide four different ways of working with paradoxes in management: Accepting the paradox and using it constructively, spatial separation to clarify the level of analysis, temporal clarification and taking time into account, and synthesis to introduce new terms and resolve the paradox. De Wit (2020: 17) describes six ways to solve paradoxes: navigating, parallel processing, balancing, juxtaposing, resolving, and embracing. We want to use the insight on how to solve paradoxes together with insights from our empirical material for discussing possible solutions to utilize paradoxes within CSR as a research area for the future.

3. Methodology

Qualitative research has certain advantages when the phenomenon at hand is not well understood and when the variables are difficult to define (Johnson and Harris 2003). The insights from this research project are based on the logic of a multiple case study (Yin, 1984), which allows for comparison between the different cases to understand differences and similarities. Eisenhardt (1989) argues that cases can be used to generate analytical insights across different cases. It is possible to create a logic of generalization by choosing either similar or different cases. This research utilizes the Gioia-method as a methodological approach – assuming that the researchers are knowledgeable agents searching for new constructs and meaning in the data material, developing first and second-order concepts (Gioa et al, 2012). The case study was conducted in 2021 on three different retail chains in Norway: Coop, Meny, and Kiwi – the latter two chains are both owned by NorgesGruppen. In addition to this, a representative from the industry body Matvett—which was established to deal with food waste in the retail- and food service industries—was interviewed to triangulate and compare data. The cases in this study are drawn theoretically from a larger Norwegian sample within their respective industries and represent approximately 70% of the revenue in the Norwegian retail industry. The firms were selected based on their size but also to reflect variation due to different ownership – as Coop is owned by the customers, while Meny and Kiwi are privately owned by Norgesgruppen.

4. Empirical Findings

4.1 Background, motives, and responsibilities

We asked the informants about their CSR strategy, why and how they work systematically with sustainability, and their motives for reducing food waste. The informant from NorgesGruppen was clear that their ambition is to become climate neutral by 2030, and they are working on sustainability in three areas environment, health, and climate. According to an industry agreement, the aim is to reduce food waste by 50% by 2025, but NorgesGruppen says that their goal is 55%, Kiwi says they have set the target at 60%, and Coop Norge says they are working towards similar goals and have a vision of zero food waste. All three chains emphasized that they work hard to govern and structure the value chain to deal with the broader CSR issues.

> *"We work along three main lines, which are the environment, public health and people"* – the informant from NorgesGruppen

"Ethical trade is an important part of it. Diet is an important part of it. Climate footprint is an important part of that. Animal welfare is an important part of it»- the informant from Coop Norge explained, and also pointed out that with 1.9 million Norwegians as members they feel an extra responsibility. This informant also pointed out that social responsibilities are "extremely relevant these days", "are as important as the economic indicators", and "Fortunately, in many situations, the economic indicators and sustainability indicators indicate win-win situations".

All informants describe food waste reduction as a win-win situation. They reduce their climate footprint and increase their profitability by reducing waste, as this quote from the Coop informant bears witness to:

> *«We throw away food for approx. 90 million (Norwegian Kroner) every year, and this is ludicrous. Just by reducing shrink to zero, we improve our bottom line by 90 million (Norwegian Kroner). This is a real win-win»-*

The informant from Coop explained that sustainability is currently managed by head-office and that sustainability is an area in which they want to improve.

Size is also an important aspect, as the informant from Kiwi explains: "Our size gives us the opportunity to influence the rest of society as well."

Informants were asked who is responsible for reducing food waste. By "who" we mean which specific link in the value chain.

4.2 Head-office measures

This category includes everything that the chain office controls; purchasing and assortment, shop design as well as store concept, and can mainly be categorized as preventive measures.

> *"The most important thing you do to improve sustainability is assortment planning,"* explained the Coop informant.

All informants agreed that assortment planning is vital, and they use their own data and sophisticated tools to forecast demand for products at any given time. NorgesGruppen was the first to launch its system for forecasting and automatic product replenishment (NG flow), and Coop Øst introduced a similar system in the autumn of 2020. The Kiwi informant Kiwi added that new stores often face greater challenges with wastage, as they do not have enough data to provide accurate forecasts.

"I think we are the chain that has worked most systematically with food waste," said the Kiwi informant, who also explained: "We are the only chain in Norway that does not have quantity discounts."

Several stores operate with quantity discounts in their stores, such as 3 for 2. However, Kiwi claims that they are the only chain in the country that has eliminated quantity discounts; if the need for competitive pricing arises, they reduce the unit price for each product. The goal is to prevent consumers from buying more goods than they need and help reduce household waste.

The Coop informant described a pilot project they carried out at a Coop Mega store in Oslo, where they replaced many items to reduce bulk items in the store. "There has been some success with bulk items, but the rest is a bit of a niche. Shopping for Zalo (dishwasher fluid) by refilling your own bottle would be a big step for the consumer». The Coop informant explained that while the experiment had been well received and that they had worked with several suppliers, Coop has no immediate plans to expand the project to other stores.

The Meny informant described a pilot project called the ‘date bar’ that they are currently working on—where the expiration date is added to the barcode. According to the informant, they are the first chain in Norway to try this out. “Today, store employees themselves must go around checking the shelf life of products manually and move the products with the lowest shelf life, date bar will mean that they are automatically notified when an item is about to reach expiration date, and Meny hopes that this will «revolutionize the industry».

The Coop informant was alone in suggesting that: "The second most important thing is shelf presentation"
The rationale is that all goods should be visible and easy for the customer to pick, such that low turnover items are not hidden away. "The 100 bestsellers are more or less the same across grocery stores in Norway. The challenge is to manage all the other items that do not sell that many every day."

"It is more difficult for Meny to reduce food waste than it is for some of our competitors because we have much greater complexity.” the Meny informant explained. “First and foremost because we have such a large range of fresh products, including prepared meals kept warm in heating cabinets, but also because we have between 10 and 20 thousand SKUs, as opposed to discount stores that are between 3 and 4 thousand. What we call the edge range has low turnover, and this can cause shrinkage."

The challenge is summed up well by the informant from Matvett: «The more SKUs you have in a store, the greater the potential for waste. Let's say you have 30,000 SKUs, so there are maybe 10,000 that turnover quickly, while the remaining 20,000 can be difficult to optimize. "

4.3 In-store measures

Most of the measures are controlled by the head office, and this category is thus more about measures that the stores themselves manage and is as much about saving food as it is about preventing food waste.

"When it comes to measures, markdowns are clearly the most important measure that has been introduced," – the Matvett informant told us and further explained that systematic pricing is the most important tool you have in store. The "date bar" is a solution to the challenge of finding goods before they expire. However, there are currently very few actors that have access to the "date bar" technology.

"It is often said that the store becomes like the store manager," explains the Kiwi informant.

The informant from NorgesGruppen informed us that Kiwi uses markdowns a lot and that Meny has a concept called "yesterday's bread," which is price-reduced bread. Coop has introduced a "food savior" program where they split packages of fruit and vegetables to sell them before the expiration date. The informants all agreed that bread and fresh produce present the biggest food waste challenges.

4.4 Measures from the suppliers

The last category of measures applies to the supplier, which is mainly related to prevention when it comes to date marking, pack size, innovation, and the like.

The informant from Coop Norge says that they work with the entire value chain to reduce food waste. They share the shrink figures with their suppliers so that solutions can be found at the product level. Furthermore, they also collaborate to determine the optimal weight and volume for products based on predictions of consumer needs. Both Norgesgruppen and Coop have introduced more packaging aimed at single-person households, for example, by offering smaller loaves of bread. Another typical challenge is determining the right case-pack size—based on the number of consumer units that stores sell per day. The challenge is to balance the number of consumer units in each case pack to eliminate waste while also minimizing the number of replenishing orders.

In addition to working with package sizes and the like, Coop also works systematically with its suppliers to increase shelf life and has carried out projects with several suppliers, including meat suppliers, where they have increased shelf life by 10 days. NorgesGruppen has also carried out similar projects, and Meny has introduced a consumer-targeted concept called "see, smell, taste," where they encourage customers to use their senses to determine whether a product may still be acceptable even when the item is past its sell-by date.

5. Concluding Discussion

This paper makes three different contributions. First, a review of the CSR literature relevant to waste management. Second, an analysis of the current state of the waste management field using data from an advanced service economy. Third, an example of utilizing paradox theory to analyze the field of waste management.

In terms of theoretical review, the traditional orientation of business for business versus business for society still holds true. However, the institutional pressure to comply with various stakeholders is stronger than ever before and creates higher complexity and seemingly incompatible goals.

For our second contribution, we provide insight into how both managers and directors, as well as industry bodies, reflect and act on waste management challenges. Within this one competitive industry, they have managed to reduce costs, optimize resources—and do good for society.

In terms of our third area for contribution, we utilize paradox theory to shed light on the waste management problem in our society. There are several areas where it is difficult to solve these paradoxes, and there might be opportunities for a more detailed approach to solving these them by navigating, parallel processing, balancing, juxtaposing, resolving, and embracing (De Wit, 2020: 17) to create new solutions to the waste-reduction paradox.

The key question we answer is whether it is possible to do well by doing good. Yes, it is possible, but not without sacrifices to solve this paradox. Retail chains use a lot of resources to handle the waste problem, and in return, they expect reputational gains.

The waste-reduction paradox could be resolved quite easily if chains just stopped selling products, essentially addressing only one side of the waste-reduction paradox. Our data suggest that both reducing the number of products and identifying more efficient ways to handle goods close to the sell-by date will increase the bottom line. Further, suppliers are important stakeholders, and several retail chains have worked with their suppliers to increase product shelf life to reduce waste.

Our study describes different areas where the waste-reduction paradox presents itself. In some areas of waste management, there are clear one-sided solutions. The industry value of waste is around 90 million Norwegian Kroner (approximately 9 million Euros), and by reducing waste, profits will increase. Much of this effort is simply to run the stores more efficiently. But more resources are needed to handle goods that are close to maturity, and this is costly.

Conversely, there are some alternatives that would reduce profitability, such as selling bulk quantities of e.g. soft drinks or limiting product bundling. A lot of products, especially in discount stores, are sold this way. However, there are areas where the paradox of profitability and CSR is much more fine-grained.

Educating consumers to buy less and assuming more healthy lifestyles might provide long-term utility for society but also result in less revenue from typically unhealthy products.

For future studies, there are opportunities for increasing the area of study to other industries, as well as to other countries. Further opportunities may be found in digitalization, altering customer behavior, and finding ways to reduce waste by improving the sales process.

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Systems Thinking and Integrated Thinking for Integrated Reporting

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Abstract: Industries and institutions are under pressure to do no harm in their processes of value creation, capture and delivery whilst actively limiting the harm their operations cause. As a consequence, and in the quest for more accountable, sustainable and humane behaviour, industries and institutions are being increasingly called upon to report on their operations in an integrated manner. Integrated reports combine information on the financial and non-financial aspects of firm performance with the purpose of showing how an organisation creates, preserves or erodes value over time. Such a report is usually of interest to providers of financial capital wishing to understand the wider impacts of the organisation, but are now becoming a document of interest to all types of stakeholders, including community members, customers, potential funders, academic institutions, suppliers and business partners. The integrated report is an outcome of several interrelated activities in a firm, including governance, strategic management, stakeholder engagement and risk management, to name a few. A variety of studies have indicated that whilst the construction of a comprehensive integrated report is a complex undertaking, skills related to systems thinking and integrated thinking can aid in the process. The aim of this paper is to demonstrate this connection between integrated reporting and systems thinking. Through the application of systems thinking it is proposed that the ability to perceive the interconnectedness of an organisation's activities and resources and to be able to employ higher-level reasoning with regard to them, is enhanced. This can contribute to more effective governance and management of organisations, and by extension, to more realistic, comprehensive and informed integrated reports.

Keywords: Integrated Reporting, systems thinking, integrated thinking, holism, sustainability, Sustainable Development Goals

1. Introduction

Organisational sustainability has often been perceived as the ability of the organisation to survive and thrive (Singh and Mthuli, 2021). However, the concept of 'sustainability' is now clearly focused on the organisation's ability to operate and meet its present needs whilst not negatively affecting the needs of future generations (Wilkinson, Hill and Gollan, 2001). The world and its sub-systems have been adversely affected by the consequences of human and industrial actions. Consequently, industries and institutions are under immense pressure not to harm their value creation, capture, and delivery processes whilst actively limiting the harm their operations cause to stakeholders, the communities they are a part of, and the planet. Particularly in the last twenty years or so, the organisational world has become increasingly bombarded by the message of ensuring sustainable operations. Central to this notion is the move away from the organisation as responsible for shareholder rents alone to embrace a greater responsibility towards a more extensive set of stakeholders, including the natural environment. This emphasis on people and the planet does not dull the fact that profit is still crucially important for a business to remain viable.

In the quest for more accountable, sustainable and humane behaviour, industries and institutions are increasingly called to report on their operations in an integrated manner through reports that detail their economic, social, and environmental impacts. The aim of this paper is to demonstrate the connection between integrated reporting and systems thinking. This is a conceptual paper based on a review of the literature, and explores the potential of a systems view of business activity to provide insights into the relevance and importance of integrated reporting.

2. Systems thinking

The idea and rationale for thinking in systems and its foundational concepts of unity, holism and interconnectedness can be found in a myriad of religious texts and ancient philosophies, including those pertaining to Sufi Islam, Hinduism, Buddhism, Taoism, and ancient Greek philosophy (Reynolds and Holwell, 2010). The ancient works of two of the most well-known Greek philosophers - Aristotle and Plato - show systems thinking in their understanding of biology, political science, and even marine science (Jackson, 2016). However, Austrian biologist Karl Ludwig von Bertalanffy is often considered the father of Systems Thinking due to General Systems Theory, which he developed more than fifty years ago. The continued application and success of

Systems Thinking in a wide variety of areas, including those related to public policy, healthcare, education, management, food management and cyber security - to name a few - provides compelling evidence of its relevance even today (Gharajedaghi, 1999; Reynolds and Holwell, 2010; Young and Leveson, 2013; Peters, 2014; Carvalho, 2015; Jackson, 2016; Shaked *et al.*, 2017; Manuele, 2019; York *et al.*, 2019). Monat and Gannon (2015, p. 24) assert that systems thinking can be defined as "1) a perspective that recognises systems as collections of components that are all interrelated and necessary, and whose inter-relationships are at least as important as the components themselves; 2) a language centred on the Iceberg Model, unintended consequences, causal loops, emergence, and system dynamics, and 3) a collection of tools comprising systemigrams, archetypes, causal loops with feedback and delays, stock and flow diagrams, behaviour-over-time graphs, main chain infrastructures, system dynamics/counter modelling, interpretive structural modelling, and systemic root cause analysis."

3. Integrated reporting

Historically, annual reports provide information of material interest, particularly in relation to the financial performance of the organisation. Having analysed the integrated reports of major airlines, hotels and cruise ships and noting the neglect of climate -related and COVID-19-related risks, Abhayawansa and Adams (2021) concluded that the definition of materiality should be revised so that it incorporates financial materiality as only one component of a broader definition focused on long-term value creation and the achievement of the Sustainable Development Goals (SDGs). Furthermore, they recognised the value of a materiality matrix and systems thinking in the proper management and mitigation of COVID-19 related risks. Integrated reports now combine financial and non-financial information of firm performance to detail how an organisation creates, preserves or erodes value over time. Such a report is usually of interest to providers of financial capital wishing to understand the broader impacts of the organisation. However, it is now becoming a document of interest to all groups of stakeholders, including community members, customers, potential funders, academic institutions, suppliers and business partners.

In 2020, the International Integrated Reporting Council (IIRC), reported that "the concept of integrated reporting has been embedded by over 2,500 companies in more than 70 countries. Over 40 stock exchanges refer to it in their guidance". (IIRC, no date) The VRF (Value Reporting Foundation, 2021b, pp. 5–6) basics of integrated reporting are summarised in Table 1.

Table 1: Purpose, Mechanics and System of Integrated Reporting

Why	Through the organisation's activities, relationships and interactions, the value creation, preservation and erosion is: 1. inextricably linked to other stakeholders, society and the natural environment 2. reliant on 6 capitals, which are not all or equally applicable, these being financial, manufactured, intellectual, human, social and relationship, natural 3. influenced by external environment; purpose, mission and/or vision; business model; governance; risks and opportunities; strategy and resource allocation plans; performance; outlook captured in the Content Elements
What	The <IR> Framework sets content expectations through the eight Content Elements, which also include organisational overview and basis of preparation and presentation
How	Seven Guiding Principles inform how the <IR> should be prepared and presented: strategic focus and future orientation; connectivity of information; stakeholder relationships; materiality; conciseness; reliability and completeness; consistency and comparability.

According to Eccles, Krzus, and Ribot (2015), the meaning of Integrated Reporting has undergone four overlapping phases. These are experimentation, expert commentary, codification and institutionalism, commencing in 2002, 2005 and 2011 (the latter two phases). Table 2 presents a timeline of the development of reporting initiatives.

Table 2: A chronology of the development of integrated reporting

Time	Milestones	Trigger Event	Link / Reference
2009	Commencement of International Integrated Reporting Council's (IIRC) journey	Meeting of academics, companies, investors, regulators, standard setters and other stakeholders with HRH The Prince of Wales, to "drive integrated reporting forward".	(IIRC, no date)

Time	Milestones	Trigger Event	Link / Reference
2010	IIRC established	"a response to the global financial crisis"	(IIRC, no date)
2013	<IR> Framework published	Following the publication of the Initial Discussion Paper (September 2011), launching of IIRC pilot programme (October 2011) and the Consultation Draft of <IR> Framework (April 2013) in December 2013. Aims to achieve "IIRC's long term vision is a world in which integrated thinking is embedded within mainstream business practice in the public and private sectors, facilitated by Integrated Reporting (<IR>) as the corporate reporting norm"(p.2). Outlines 'Guiding Principles' and 'Content Elements'.	(IIRC, 2013)
2014	Corporate Reporting Dialogue (CRD) convened	Brought together the CDP, Climate Disclosure Standards Board (CDSB), Financial Accounting Standards Board (FASB), Global Reporting Initiative (GRI), International Accounting Standards Board (IASB), International Integrated Reporting Council (IIRC), International Organization for Standardization (ISO), and Sustainability Accounting Standards Board (SASB), for "efforts to drive a cohesive and holistic reporting system that reflects enterprise value creation".	(IIRC, no date)
2016	IIRC supports development of Task Force for Climate-related Financial Disclosure (TFCD) and works with CDP, CDSB, GRI and SASB through the Better Alignment Project.	IIRC highlights alignment with SDG 12 (sustainable consumption) and supports SDG 17 through collaboration "to demonstrate the alignment between our standards and frameworks".	(IIRC, no date)
2017	IIRC launches a new Integrated Thinking and Strategy Group under the umbrella of the <IR> Business Network	"Traditional business management, based on financial analysis, has not kept pace with the seismic shifts taking place over the last thirty years"	(Value Reporting Foundation, no date)
2020	IIRC introduces the 'spring' model for integrated thinking	'State of play' report published in January sets out new model for implementing integrated thinking, by the interconnectivity of the multiple capitals used and effected, tying strings to form a spring (p. 1). Takes note that the value focus has changed from "Shareholder" in 1970s, to "Shared" in 2000s, to "System" today. (p.13)	(IIRC, 2019)
2020	CDP, CDSB, GRI, IIRC and the SASB formally commit to working together and engage with key actors	A shared vision of the elements necessary for more comprehensive corporate reporting and a joint statement of intent to drive towards this goal, including a commitment to engage with International Organization of Securities Commissions (IOSCO), the IFRS, the European Commission, and the World Economic Forum's International Business Council, is made on 11 September. Sustainability disclosure is more complex than financial reporting due to inter alia multiple users and dynamic materiality, creating confusion. Commitment to "help resolve this confusion and to show a commitment to work together towards a comprehensive corporate reporting system". (2020, p.2).	(Impact Management Project, World Economic Forum and Deloitte, no date)

Time	Milestones	Trigger Event	Link / Reference
2021	Revised International <IR> Framework published to replace 2013 version	January 2021 version supersedes December 2013 version and applies to reporting periods commencing on 1st January 2022. The global coalition that is the IIRC, "shares the view that communication about value creation, preservation or erosion is the next step in the evolution of corporate reporting". (p.1)	(IIRC, 2021)
2021	IIRC and Sustainability Accounting Standards Board (SASB) merge on 9 June, to form Value Reporting Foundation (VRF).	VRF to provide three key resources: Integrated Thinking Principles, Integrated Reporting Framework and SASB Standards "to develop a shared understanding of enterprise value". Also states it is "committed to the delivery of a more coherent corporate reporting system by working closely with the International Financial Reporting Standards (IFRS) Foundation and other leading framework providers and standard-setters around the world".	(Value reporting Foundation, no date)
2021	The business case is presented for multi-capital integration applying integrated thinking via a virtuous loop	"Integrated thinking should be seen as a continuous journey, one that evolves over time, one that continues to promote collaboration across all sections of an organization". (p.2).	(Value Reporting Foundation, 2021a)
2021	IFRS Foundation announces on 3 November, International Sustainability Standards Board (ISSB)	Following COP26 meeting in Glasgow, the IFRS Foundation Trustees announced formation of ISSB, consolidation of CDSB and VRF by June 2022 and publication of prototype climate and general disclosure requirements. Also that ISSB "will sit alongside and work in close cooperation with the IASB, ensuring connectivity and compatibility between IFRS Accounting Standards and the ISSB's standards-IFR Sustainability Disclosure Standards".	(IFRS, 2021)
2022	VRF to be consolidated into the IFRS Foundation on 30 June 2022	To help establish the International Sustainability Standards Board (ISSB). This follows the annoucement on 25th May 2022 by boards of IASB and ISSB to work together to agree on how to build and integrate the Integrated Reporting Framework into their standard setting projects and requirements.	(IFRS, no date)

Given these developments in integrated reporting, research findings are mixed as to whether firms produce integrated reports purely for impression management, reputational or legitimation reasons (Lai, Melloni and Stacchezzini, 2016). However, evidence suggests that if it is done properly, integrated reporting can improve internal communication and erode the silo thinking that often exists between financial and non-financial components of the business, and make explicit how value is created (de Villiers, Hsiao and Maroun, 2017). However, when integrated reporting is not properly integrated with internal processes of the business, it can conflict with the existing processes and culture and lead to resistance and lip-service being paid to integrated reporting, treating it as a tick-box exercise with little stakeholder engagement (Dumay and Dai, 2017; McNally, Cerbone and Maroun, 2017).

A variety of studies have indicated that whilst constructing a comprehensive, integrated report is a complex undertaking, skills related to systems thinking and integrated thinking can aid in the process. Integrated thinking represents a shift from either/or to both/and thinking (Smith and Lewis, 2011). Integrated thinking is a learned skill that reflects the ability to hold two opposing ideas in mind simultaneously and to be able to creatively resolve the tensions between them by generating a new idea/s (Martin, 2007; Riel and Martin, 2017). There has been strong and growing interest in the application of integrated thinking in organisations (Cunha and Putnam, 2019), including to areas such as strategic management (Dameron and Torset, 2014) and integrated reporting (Velte and Stawinoga, 2017). Not only is integrated thinking required to produce an integrated report, but integrated reporting itself has been shown to promote integrated thinking (Esch, Schulze and Wald, 2019), and also facilitates a systems view of the organisation and its activites. Thus, integrative thinking is a central element of systems thinking, and vice versa.

4. Illustrating the connection between a systems view and integrated reporting

The integrated report is an outcome of several interrelated activities in a firm, including governance, strategic management, the business model, stakeholder engagement and risk management, to name a few. For example, Michalak et al. (2017) have argued that the disclosure of the business model in a corporate report can assist stakeholders to make sense of other data included (e.g. financial and risk), as well as to assess the overall sustainability of the business. Whether the issue is sustainability in general, or Integrated Reporting specifically, the organisation, its environment, its internal and external stakeholders, as well as its inputs, business activities and outputs and more importantly, the relationships between all of the above, have to be considered more holistically. Thus, Systems Thinking can be a helpful aid in reconceptualising sustainability efforts and in developing more informed, accurate and valuable Integrated Reports, as it aims to perceive the many components that make up a system, their interrelationships and how they communicate with one another.

Barnabè, Giorgino and Kunc (2019) provide an example of how this can be done. In their pursuit of creating a more holistic picture of the business activities of two leading multi-national organisations, they combined a systems thinking methodology known as System Dynamics with the Resource-Based View of the organisation to emphasise the importance of big picture thinking for integrated reporting and organisational governance. They specifically focused on the six capitals as defined by the International Integrated Reporting Council (IIRC, 2013) and showed how they were interconnected (Barnabè, Giorgino and Kunc, 2019) and continuously influenced one another. This mutual influence creates what Systems Thinking terms 'dynamic feedback loops' (Reynolds and Holwell, 2010; Jackson, 2016; Manuele, 2019). The amalgamation of the Resource-Based View of the Firm with System Dynamics explicated the intricacies of their value creation processes. The authors were able to identify several feedback loops between the elements of the resource map, with the relationships between the elements creating either positive or negative linkages. The total number of positive and negative linkages could then be examined to understand the organisation's strategies in the management of their six resources/capitals. For example, the ratios between positive and negative linkages revealed in the case studies, indicated that these organisations were motivated primarily by growth and strategic reinforcement actions. Furthermore, areas of "density" in terms of the complexity and number of feedback relationships about a particular resource were interpreted as being Key Value Creation Spots (KVCS) for these organisations. Thus, these resources were interpreted as being key leveragers for value creation in the organisation.

The relationships between capitals can be better understood through Systems Thinking-based models of this nature. For instance, one of the organisation's Resource Maps revealed that their investment decisions would reduce the financial capital of the organisation, but would also enhance the possibility of generating new patents and technologies, thus increasing the company's intellectual capital (Barnabè, Giorgino and Kunc, 2019). Models of this nature can assist managers in thinking systemically to develop the ability to see the various business activities and capitals of the organisation as continuously influencing one another and the dynamics these interactions create. In such a case, their integrated thinking skills can be significantly enhanced to generate more holistic and better-informed Integrated Reports, which can lead to more effective policies, decisions, and strategies. Thus, even though the attempts by Barnabè, Giorgino and Kunc (2019) followed the logic of analysing the Integrated Reports of two leading multi-national organisations and then creating a systemic or holistic picture of the data from the reports, so too can the same process in reverse yield benefits, i.e., the use of Systems or holistic thinking to create more comprehensive Integrated Reports.

5. Implications for practice

The application of Systems Thinking to integrated reporting has several implications. Firstly, in its encouragement of involving the widest variety of stakeholders and mental models as possible, Integrated Reporting based on a Systems Thinking approach can aid in overcoming the common critique levelled at Integrated Reporting as an activity done at the top, with little or no engagement with stakeholders at the bottom or from outside the organisation (Monat & Gannon, 2015; Dumay & Dai, 2017; McNally, Cerbone, & Maroun, 2017). However, it is worth remembering that models and maps generated within the context of Systems

Thinking are based on a group of people's (generally executives and senior management's) perceptions of the real world, or their 'mental models' (Ford & Sterman, 1998; Senge, 2006; Jackson, 2016). Therefore, while systems thinking tools or modelling techniques can be valuable in uncovering mental models, such mental models can potentially, and often do contribute to highly subjective and biased decision-making. These decisions are influenced by each person's life experiences, stereotypes, preferences, biases, etc. (Nedopil, Steger and Amann, 2010) and can therefore be incorrect, incomplete or inaccurate. This highlights the importance of including a diverse group of stakeholders in systems thinking based activities for integrated reporting, beyond executives and the senior management team alone.

Secondly, the use of Systems Thinking can promote the integratedness of Integrated Reports. Organisational reporting to stakeholders has seen a transition from brief descriptions of corporate social responsibility initiatives in predominantly financial reports to a growing emphasis on reporting financial, environmental, social and governance-related organisational information. Furthermore, this information has to be presented as a cohesive whole with the connections between the different aspects clearly explicated. Integrated Reports are generally presented as a narrative structured to explain the various actions and policies the organisation has taken with respect to value creation, preservation or erosion in relation to its finance, governance, the environment, and society. However, there is growing debate as to whether such 'Integrated' Reports demonstrate sufficient integratedness and more importantly, whether they effect any real change in, or reduce actual harm to the world. For this reason, there has been growing emphasis on the importance of integrated and systems thinking for Integrated Reporting, examples of which include the Corporate Reporting Dialogue's push for more cohesive and holistic reporting of value creation in 2014, the IIRC's launch of the Integrated Thinking and Strategy group in 2017, the IIRC's 2020 'State of play' report which highlighted the interconnectivity of the multiple capitals and the change in value focus from the 'shareholder' to the 'system' and the Value Reporting Foundation's assertion of the importance of multi-capital integration via virtuous loops and collaboration across all organisational sections in 2021, to name a few (IIRC n.d, 2019; Value Reporting Foundation n.d, 2021a).

Thirdly, systems and integrated thinking are presented here, not as an alternative to the statistical and reductionist thinking commonly employed in financial reporting, but rather as complementary to them (Monat and Gannon, 2015). This is especially needed for constructing a truly Integrated Report in which the synthesis of these ways of thinking and the different types of data they produce are equally critical. Indeed, these different types of thinking skills are both required when trying to understand the organisation as a whole. This is especially relevant since organisations are comprised of 'hard' systems which can be optimised (such as IT systems or financial systems) and 'soft' systems (human/social systems), which are more complex and difficult to deal with (Checkland, 2007).

Fourthly, in viewing organisations as social systems, the importance of stakeholder relations and real world impact is highlighted. Social systems are comprised of various actors and systems joined together through various networks of relationships, or feedback loops, which constantly influence one another in stabilising or reinforcing ways, which can lead to unpredictable and counter-intuitive behaviours (Monat and Gannon, 2015). This is an important consideration when organisations attempt to create and implement policies in the pursuit of sustainability. Integrated reports merely provide a narrative of what the organisation is doing in the pursuit of sustainability, but the complex effects of such initiatives on the systems comprising the organisation (and those outside of it but connected to it, including the natural environment) are not adequately captured in such reports, if at all. Combining integrated reporting with the mapping and modelling techniques proposed by systems thinking can assist in predicting the counterintuitive effects of such sustainability initiatives before any negative impacts are experienced in the real world. Thus, more dynamic and systemic approaches to Integrated Reporting should be encouraged to prevent the creation of reports that read well, but do not create much impact in the real world - or worse, negatively impact the environmental, social and governance systems linked to the organisation – and/or the organisation itself.

6. Conclusion

Producing an Integrated Report is a mammoth and complex task, but one that is becoming increasingly urgent and necessary as stakeholders demand transparency and accountability from organisations and industries the world over. Exemplary Integrated Reporting remains an evolving art open to innovations, both quantitative and qualitative, from a wide variety of fields. It is proposed here that the ability to perceive the interconnectedness of an organisation's activities and resources and to be able to employ higher-level reasoning (i.e systems thinking and by extension, integrated thinking) with regard to them, can contribute to more effective governance and management of organisations and to more realistic, comprehensive, and informed integrated reports. This is becoming a point of departure for many recent studies exploring the significance of systems and integrated thinking to various facets of the sustainability movement, including to the circular economy (Barnabè and Nazir, 2022), to education around the molecular basis of sustainability (Mahaffy *et al.*, 2019), to corporate sustainability (Ahlström, Williams and Vildåsen, 2020), as a paradigm shift for sustainability transformations (Voulvoulis *et al.*, 2022), and as a means of reporting on the SDGs (Beyne, Visser and Allam, 2021), amongst others. Thus, higher-level thinking is pivotal in making sense of complex problems and in facilitating conversation around them. This conceptual paper has primarily highlighted the potential of systems thinking for integrated reporting. However, further research on how systems thinking can inform producing an Integrated Report is needed.

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Management System for Integration of the Disabled on the Labour Market

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Abstract: People with mental disabilities (mental disorders, mild brain dysfunction) face barriers to employment, leading to higher unemployment rates and economic inactivity. Incorporating a workplace technology system may help create a disability-inclusive environment. The paper presents an ICT solution for social enterprises, focusing primarily on cafés or restaurants. It is designed to help reduce the need for supervision of employees with mental disabilities in order to increase their autonomy. The proposed system records activities and provides an employee with information on which action to perform and how. The primary goal of the proposal is the monitoring of activities and the interactive transmission of instructions. The presented system is based on the Internet of Things (IoT) and includes advanced information technologies – cloud messaging, mobile applications, web applications. The employee with a disability will be equipped with a smartphone using a specially designed application. By a notification sent to the mobile phone, the employee will be immediately informed about the task assigned. The mobile application will help an employee carry out the task visually (sequence of instructions expressed in text, pictograms). In order to confirm the completion of the task, a sensor is placed at the desk location, which, when the mobile device is attached, registers the employee's presence at the desk where the task is to be performed. The Unified Process (UP) methodology was used to design an information system. The context diagram describes the relationship between the proposed system and its environment, a data flow diagram shows the dynamics and control information. The system is designed to be universally applicable in other workplaces. It may be used to help people who cannot communicate with other employees due to a lack of knowledge of the local language at the workplace.

Keywords: management system, disability, ICT, social enterprises, employment

1. Introduction

For the majority of people with disabilities, it is challenging to find and sustain steady employment, as they need more supervision and cooperation with assistive staff to manage their work tasks (Manzoor and Vimarlund, 2018). Especially people with psychological and mental disorders find it difficult to interact with their social environment and need help (not only in the work area) to organise and identify their tasks but also to carry them out (Meşhur, Filiz, 2016). Employment of such workers is associated with extensive use of job assistants who help persons with disabilities to perform their designated work tasks efficiently and adequately (Yıldız, 2010). However, considering the potential of this workforce segment, employers need to endeavour to leverage agilities of workers with disabilities (Bonaccio et al., 2020; Lindsay et al., 2018; McKinney, Swartz, 2021).

Currently, in the Czech Republic, there is over 1.1 mil. people with disabilities, 15% of them have mental and psychological disorders. This group of disabilities is defined as *"the people who need mental health services, disability benefits, and/or workplace accommodations for a psychiatric diagnosis or mental/emotional distress that has substantially limited one or more major life activities"* (Ostrow, Nemec and Smith, 2019). According to the Czech Statistical Office (2019), only 15% of people with these disabilities declared to have no problems concentrating and focusing on everyday activities. When asked about thinking and concentration during more demanding activities such as work tasks, respondents reported higher difficulty levels. More than a quarter of people with mental or psychological disabilities could not do such complex thinking. In contrast, only 7% were able to manage them without difficulty.

IT technologies are used in a wide range of everyday activities. Implementing IT technologies can create an effective and efficient application for practical use. This also applies to the use of mobile devices, the features of the mobile operating system and the use of possibilities of the notification system (cloud messaging). Cloud messaging is a messaging solution via the Internet. Mobile technologies are highlighted in other works. Smart mobile phones have seen dynamic development and are a current trend (Musil and Novotny, 2015) and mobile devices are becoming more and more popular in the field of daily activities (Musil, 2017). Notifications and cloud messaging are used in conjunction with a mobile application to implement new event notifications in the following works: (Firdaus et al., 2019) (Heryandi, 2018), (Rocha et al., 2020), (Zhao et al., 2014).

The aim of this paper is to present a design of a system intended to be used in a café operated by a social enterprise. By its technical design, the proposed system will allow higher employability of selected groups of employees from the PWD (people with disabilities) category, namelya group with psychological problems, mild brain dysfunction, etc. The system based on monitoring of activities and interactive transmission of instructions and information will help people from the above-mentioned groups of PWD to reach higher employment potential (expanding the possibilities of employing people with the above-mentioned handicaps) and will reduce their stress about whether they are doing the job correctly, as the proposed system will "advise" them what work activity they should do and how. Technically, the system will use modern communication technologies and elements from areas such as the Internet of Things (IoT), mobile technology and low-power wide-area network (LPWAN). The system is designed to have the broadest possible use and application.

2. Methodology

The UP (Unified Process) methodology is used to design an information system for the Management System for Integration of the Disabled. It is based on the SEP industry standard – Software Engineering Process. The UP is an abbreviated designation of the USDP (Unified Software Development Process) industry standard. It is a generic process for the UML - Unified Modeling Language. It is a basic, generic and open methodology that can be adapted to any project's scope. The UP methodology must be adapted to the goals and conditions of the given development, i.e. used standards, templates, tools, and others. The Unified Process (UP) means controlled requirements and use cases, risk management, an architecture basis, and aniterative and incremental process of SW product development. The UP is divided into individual iterations, each of which goes through five basic work processes: setting requirements, analysis, design, implementation, testing, iteration in UP (Schmuller, 2001).

A context diagram is used to describe the relationship between the system and its environment. A data flow diagram is used to describe the dynamics and control information. The following diagram is already in the UML. The class diagram describes the system's static structure and shows data structures and operations on objects and the relationships between the objects. A Use Case Diagram shows the behaviour of the system as seen by the user. The purpose of the diagram is to describe the functionality of the system.

The IS shows the design of the optimal model of the information system for café staff management. The model describes internal processes together with external processes that cooperate and interact with each other.

The context diagram (Figure 1) describes the relationship between the system and its environment. External objects affect the IS in the form of the manager, operator, customer, bank and cash desk. The action list is linked to the information system.

2.1 List of external context diagram objects:

Manager is a person who manages the operation of the café.
Customer is a guest who calls the staff.
Staff with disabilities includes the disabled workers who serve customers.

The data flow diagram includes control information and describes system dynamics. The model shows the individual activities of the IS in detail. The presented model (Fig. 2) is represented by a data flow diagram that includes control information and describes the system's dynamics. The model shows the individual activities of the IS in detail.

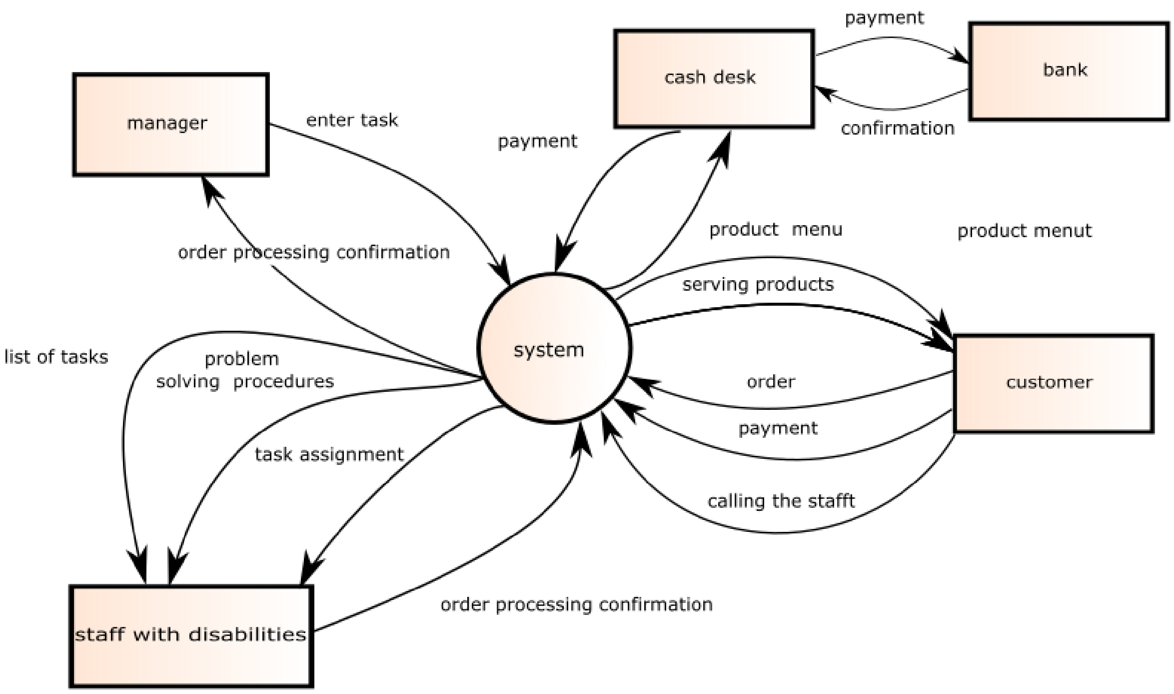

Figure 1 Relationship between the Management System for Integration of the Disabled and its environment

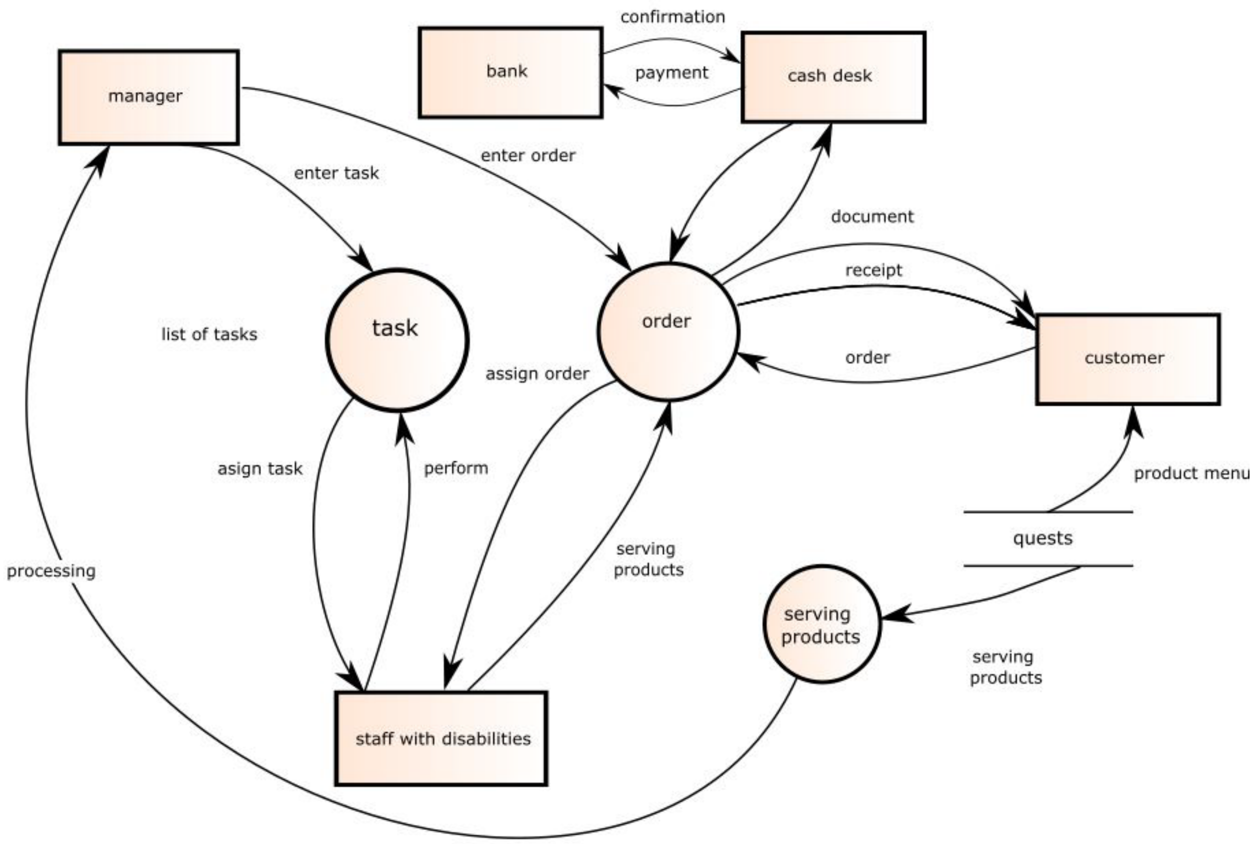

Figure 2 Data flow diagram of the Management System for Integration of the Disabled

3. Design of the Information System

The following chapter describes a system designed for employing people with disabilities. It presents UML diagrams that depict the proposed system.

3.1 System description

The whole system works on the premise that disabled persons work under the management of an operations manager. The manager assigns them certain tasks. The system will allow the worker (disabled person) of the café to navigate in the café to carry out the assigned work tasks. The worker will be equipped with a smartphone with an app. In the form of a notification, the worker will be informed immediately about the task. The mobile application will help the worker to carry out the task in a visual way (sequence of instructions expressed in text, pictograms). The instructions will also include the procedure for preparing the ordered goods. The instructions will contain partial steps leading to a resolution of the entire task (order preparation, dish removal and table cleaning). In order to confirm the completion of the task, a chip will be placed at the table location which, by attaching a mobile device, will record the presence of the worker at the table where the task was to be completed. Alternatively, the task completion will be confirmed directly using the smartphone. The FCM (Firebase Cloud Messaging) system will be used to send notification of a new task to the smartphone. Tasks can be entered by the supervisor via the mobile app or via the desktop app.

As a support tool for recording the tasks performed, sensors will then be placed around the workplace which, when the operator's display unit is approached, will interact with this unit to notify the control centre that the worker has been at that location (distance is measured). The control centre will be manned by an operations manager who will be responsible for the operation – through the control unit, the manager will give instructions to the individual workers and at the same time check the fulfilment of their tasks (both on the basis of the information from the display units of the individual PWD workers and on the basis of the information from the sensors placed at the workplace, as well as by visual inspection).

This system design will be configured for use in café operations that may employ disabled workers.

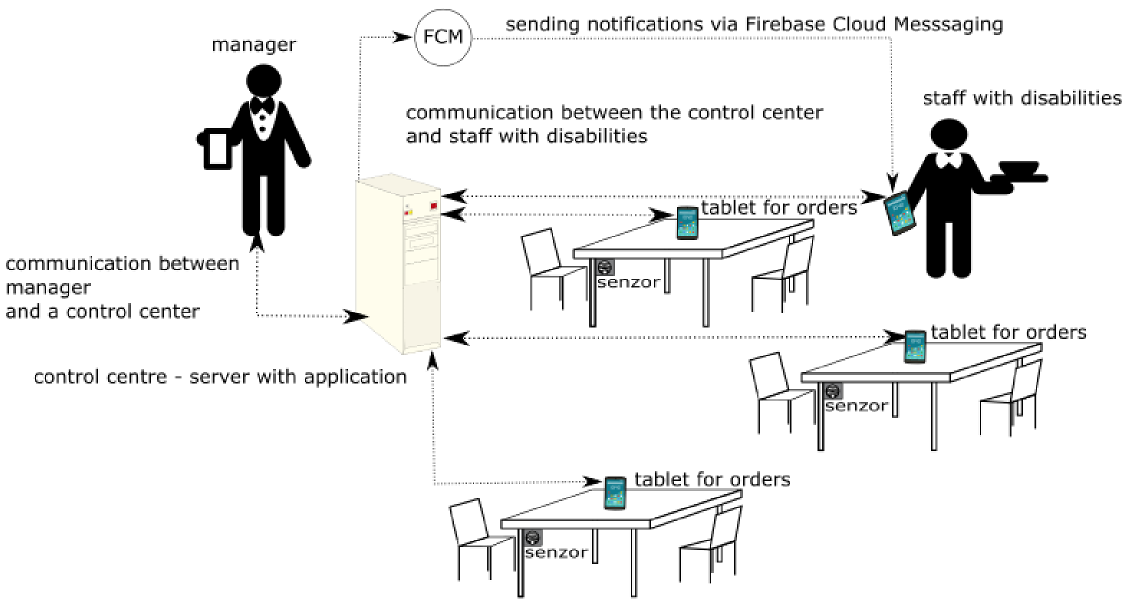

Figure 3 The diagram of the café operations for staff with disabilities.

3.2 Use Case Diagram

The Use Case Diagram shows the behaviour of our system as seen by the user. The diagram aims to describe the system's functionality, i.e. what the client expects from it. The diagram tells what the system should be able to do. The Use Case diagram is shown in Figure 4 and consists of use case, actors and the relationships between them.

In our case, we have three active actors: Guest (customer), Supervisor (manager), and Employee (worker with disability), then two passive actors cooperating with the system: Tablet (for making an order by a guest) and Cloud Messaging System (for notification sending or receiving). A guest is an unregistered customer who can see a menu, make an order (through a café worker or through a tablet without a worker), and pay for an order. The employee (the worker with disability in our proposal) manages orders or other tasks (tasks related to the operation of the café) such as cleaning tables, washing the dishes, preparing orders or their parts. The employee is an actor who handles the actual order (or another task) with the help of the tablet, which provides steps leading to the solution of the task. An employee has to manage assigned orders or other tasks. A supervisor is a manager (since the employment of staff with disabilities requires professional supervisor). The supervisor is another worker that manages tasks. He or she inputs tasks to the system and decides who manages (performs) the task. Through the system, he or she checks the task status (task completion status). Unlike the customer, the staff with disabilities and the supervisor are registered users in the system. A tablet or Cloud Messaging (CM) are passive actors (users). The tablet is connected to the system via a mobile application. Through the application, it enables orders entering, other task entering or calling the staff. The mobile application (installed in the tablet) helps to manage the work. Cloud Messaging mediates notification sending after task entering to the system. The staff with disabilities receive instructions and they manage orders or another task related to the operation of the café. The supervisor reads tasks and he receives confirmation indicating a task is executed.

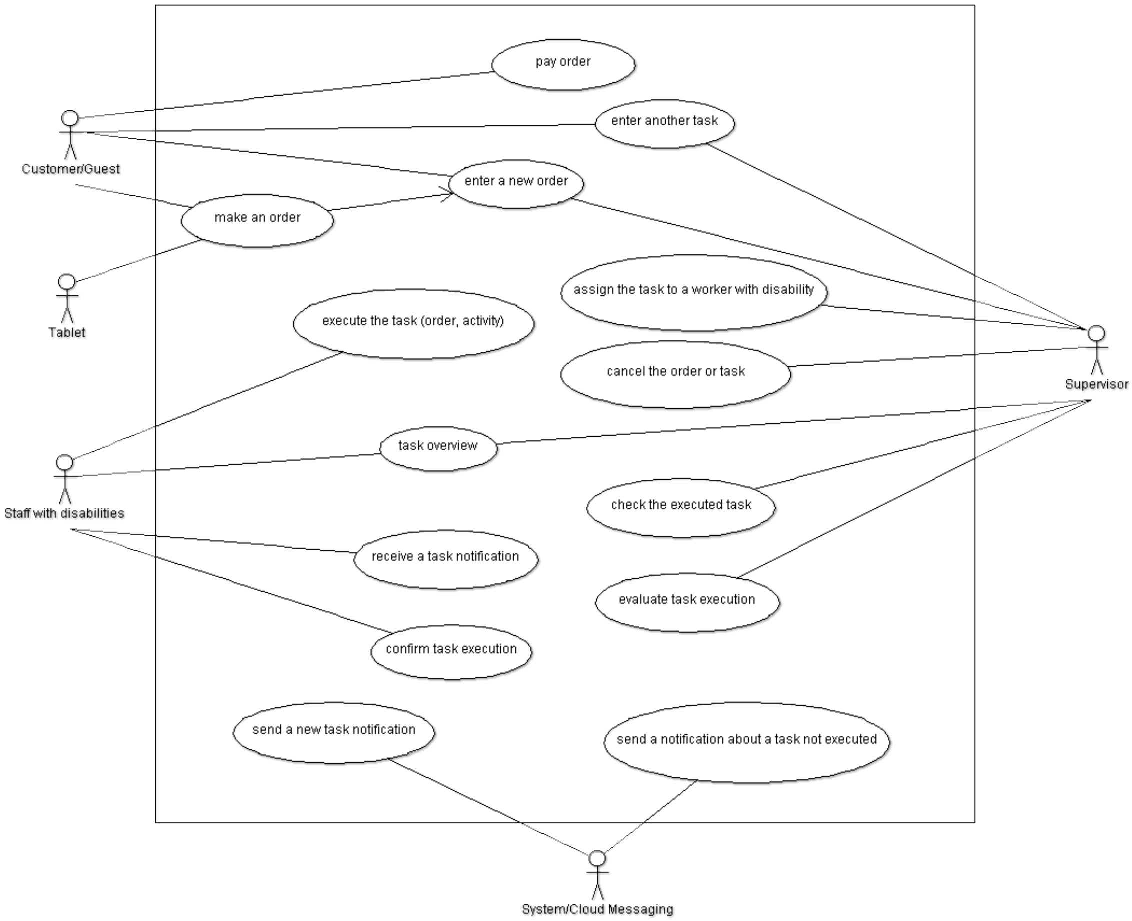

Figure 4 Use case diagram

3.3 Class diagram

The conceptual level for implementation is shown in Figure 5 by a class diagram. The class diagram describes the static structure of the system, shows data structures and operations with objects.

The supervisor (manager) enters a list of menu items in the Restaurant offers. The quest (customer) selects menu items in the menu. The order items are shown in the relation between Order and Menu. The staff (with disabilities) deliver the order to the table. The place of order is a table. A task is both in the Activity (task) and in the Offer (task). The staff with disabilities perform tasks that are entered to the system and assigned to the staff. The customer pays for the orders.

In addition to the relations, the system provides a list of tasks, a list of closed tasks or open tasks. The system is able to provide overview of work activities of a selected worker.

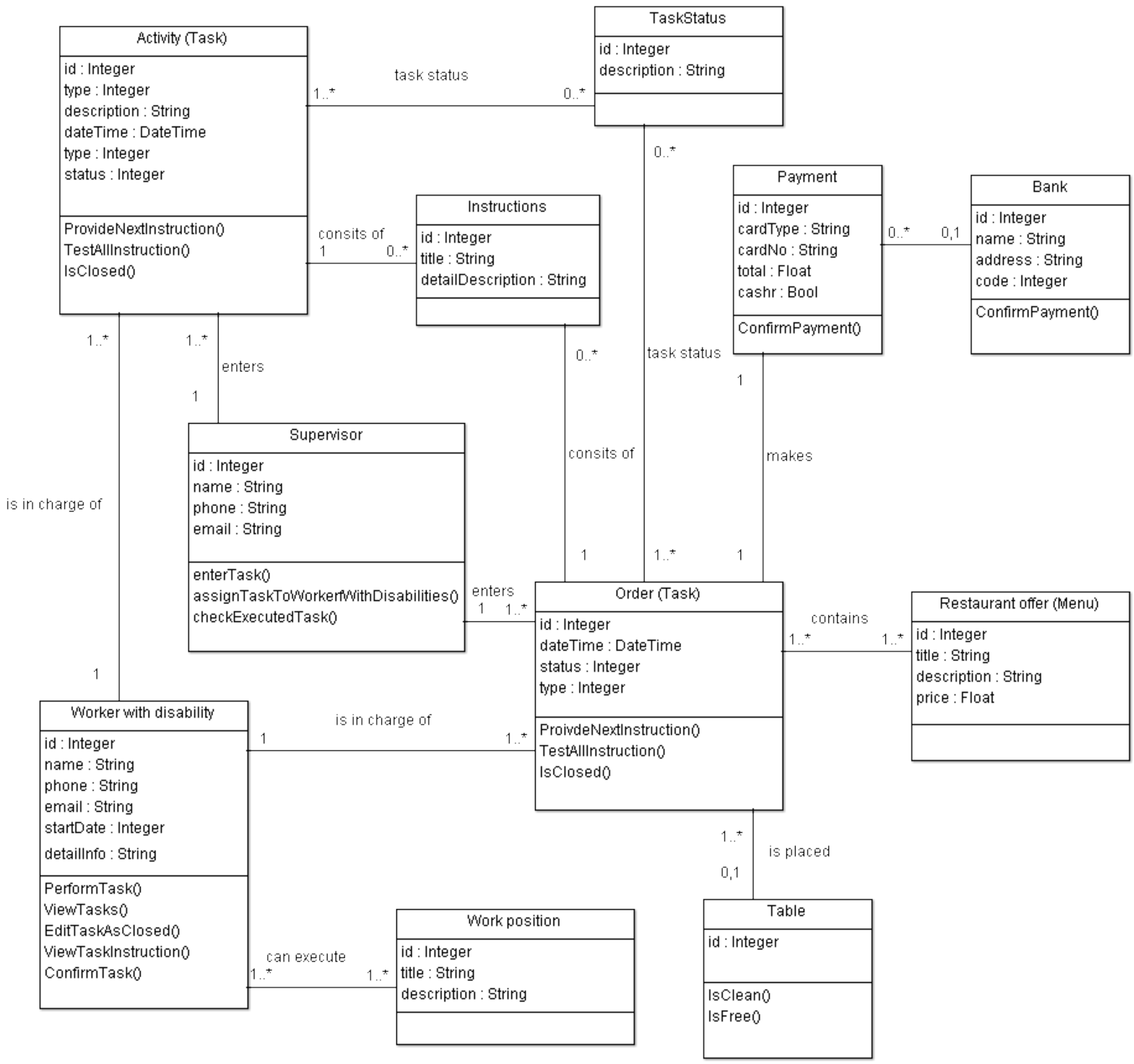

Figure 5: Class diagram for information system

4. Conclusion

The paper presents a proposal for a system for the service of a café operated by a social enterprise, which by the technical solution will enable higher employability of selected groups of employees from the the category of people with disabilities. According to Lindsay et al. (2018), benefits of hiring people with disabilities include improved profitability (e.g., profits and cost efficiency, turnover and retention, reliability and punctuality, employee loyalty, company image), competitive advantage (e.g., diverse customers, customer loyalty and satisfaction, innovation, productivity, work ethic, safety), inclusive work culture, and skills awareness. Secondary benefits for people with disabilities include improved quality of life and income, increased self-esteem, expanded social networks and a sense of belonging.

The main contributions of this paper are as follows:

- The presented use case diagram describes the behaviour of the proposed system as seen by the users. The diagram aims to describe the system's functionality, i.e. what management can expect from it.

- We have proposed an optimal model of an information system for managing the operation of a café staffed by disabled workers. The presented model is a data flow diagram that contains control information and describes the system's dynamics.
- Based on the conceptual model, an information system for optimized procedure management was designed in the form of a class diagram.
- Communication between the staff, information system, manager and customers is illustrated in Figure 1 and Figure 2.

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Economic Aspects of a Resource Sharing Manufacturing Network Under Turbulences

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Abstract: Nowadays, manufacturing companies face more difficulties than ever. Unrest in global supply chains triggered by fluctuating customer demand, raw material shortages and crises (Covid pandemic, global warming, wars) complicate the utilization of production resources necessary for economic success. Also, the rapidly changing environment causes existing production plans to be adapted, which results in order changes, causing additional costs for manufacturers. One solution to cope with these problems is cooperation and sharing resources: requesting capacity from partners when having shortages and offering them temporarily in case of excess capacity. In this paper, a platform-based resource sharing mechanism is investigated from the economic perspective. In the mechanism, requests and offers are matched by a central platform applying a complex matching logic. The platform provides valid alternatives based on the incoming orders that the requesting company can choose from. Companies are rating each other's performance after each interaction based on delivery accuracy; choosing between resource offers is made based on the cumulated rating about the offeror and the price of the offer. Within this paper, the aim is to investigate the resource sharing mechanism from the economic point of view based on an approach to the responsiveness of a supply chain structure to turbulence, to support decision-makers trying to cope with unexpected changes. For this purpose, here the mechanism is briefly introduced, and basic concepts about turbulences in supply chains are also presented. Cost types related to resource sharing manufacturing companies are distinguished, and the model is validated with agent-based simulation. A simulation experiment is performed to investigate the use-case of outsourced jobs having different price levels. Based on the experiment, it can be concluded that there is a price level limit in such a resource sharing federation, under which it is worth it to collaborate with partners by outsourcing certain jobs to them.

Keywords: resource sharing; turbulence, financial impact

1. Introduction

Established, supposedly efficient, global supply chain structures collapsed under the changed environment of COVID-19. Volatile markets continue to complicate manufacturing companies' supply chain structures. In the context of these challenges, easily changeable supply chain structures and cooperation methods are being discussed, promising better performance, especially in uncertain market environments, compare Wiendahl et al. 2007; Wiendahl 2002; Koren et al. 1999; Bauernhansl et al. 2012. However, the financial benefits of the changeability are difficult to assess, and the optimal system setup (required changeability degree) is therefore hard to determine.

The idea of collaboration and sharing resources through an online platform was proposed by the International Electrotechnical Commission 2015. As mentioned in Kaihara et al. 2017, Build-to-Order (BTO) companies often keep extra capacities to be able to meet order deadlines; for these companies, crowdsourcing can be an effective way to reach a high resource utilization level. Collaborating via resource sharing can also be a solution in a highly uncertain environment, as outsourced resources can be considered as a temporary extension of the company. These resources can be used when the company has to change its production plans due to some turbulences, e.g., order change. Similarly, if the changes result in unused resources, through a platform it is also possible to offer the resources to be used by other partners – resulting in a higher resource utilization level.

The above-mentioned concept has already been investigated by the authors. In Szaller et al. 2020a, a direct exchange-based resource sharing concept was introduced and tested with agent-based simulation, in Szaller et al. 2020b the basics of the platform-based mechanism were presented, and in Szaller and Kádár 2021 the two approaches were compared by considering advantages and disadvantages, and performing simulation experiments. In these mechanisms, collaborating partners who are members of a resource sharing federation receive a continuous order stream from customers, and they request or offer resources to each other, depending on the requirements of the jobs they are planning to complete. Requesting companies choose from resource offers based on their price and the rating of the offeror: the basis of this rating is trustfulness, and it is calculated based on delivery accuracy of the offeror. As discussed in the above-mentioned papers, this resource sharing concept could be useful for companies having resources that can be used more generally (e.g. 3D printers, laser cutting machines) and also for ones having expensive, specific resource types, when trying to utilize them as much as possible.

Resource sharing mechanisms, in general, have been investigated from different aspects in the literature: in Scholz-Reiter et al. 2011, the robustness of capacity allocation was studied in order to find an optimal way of outsourcing resources in a production network with the desired robustness. Kádár et al. 2018 proposes a resource sharing algorithm for federated production networks and validate the concept with agent-based simulation. Chida et al. 2020 investigate the strategyproofness of resource matching in crowdsourced manufacturing.

However, *economic aspects* of resource sharing under a turbulent environment were not investigated previously. From this point of view, the structure of this partnership is similar to the supply chains (see Pettersson and Segerstedt 2013, Ustundag and Tanyas 2009, Whicker et al. 2009), but it is also different because the participants are on the same level of value creation; they are collaborating and competing with each other at the same time. This paper applies an approach, where the financial impact is evaluated based on the responsiveness of a supply chain structure to turbulences. To validate the model and investigate the effect of the price of outsourced jobs an agent-based simulation model is introduced in brief, and simulation experiments are also performed.

2. Turbulence within Resource Sharing Networks

Turbulence was first described experimentally by Hagen in 1854 and later by Reynolds in 1883 with the so-called color thread experiment, see Reynolds 1883. Since the middle of the 20th century, a wide variety of authors have endeavoured to analogize the term "turbulence" from physics to the problems of business science, see Mintzberg 1994. This paper uses the concept of turbulence germs from Wiendahl 2007, where five cause groups for turbulence are distinguished: variations, fluctuations, plan adjustments, inconsistencies and deviations. But the mere existence of these turbulence germs is not sufficient to generate turbulence rather the ratio of requirements to capabilities is decisive for the occurrence of turbulence. This highlights the necessity of changeable structures such as resource sharing in turbulent markets.

In order to show the advantages of being a part of a resource sharing network, this paper evaluates the financial impact under different scenarios. Therefore, the responsiveness of this kind of collaboration structure to turbulence is evaluated from the financial aspect. Thus, two cost types are distinguished: laminar and turbulent costs, see Fig.1a. **Laminar costs** are costs to adjust system design and are independent of the occurrence of a turbulence germ. They provide the fundamental ability to avoid turbulence before it occurs. **Turbulence costs** are the costs incurred directly or indirectly by the occurrence of turbulence germ. They are thus dependent on the occurrence of a turbulence germ. Turbulence costs are therefore the costs generated by disturbances in the supply chain processes, see Fries and Bauernhansl 2022a. For example, costs caused by changing order streams, like: inventory devaluations, special runs, overtime, holiday surcharges, underutilization, setup costs, downtime costs, additional costs of the procurement, higher overhead costs by rescheduling, contract penalties, rework, loss of sales, and many more.

Based on this cost differentiation, the system's performance is determined based on the overall total cost (laminar + turbulence costs), as shown in Fig. 1b. Thus, a changeable system has higher laminar costs based on e.g. higher capital and operating costs, but lower turbulence costs in case of unforeseen turbulence (e.g. supply issues). A rigid (non-changeable system), on the other hand, has low laminar costs, but very high turbulence costs in the event of turbulence.

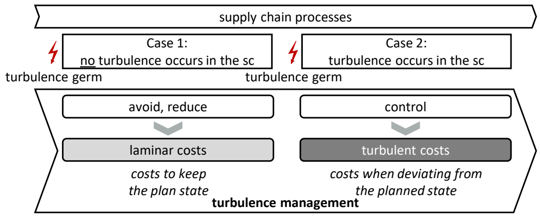

Figure 1a: Difference between laminar and turbulence costs, compare Fries and Bauernhansl 2022b

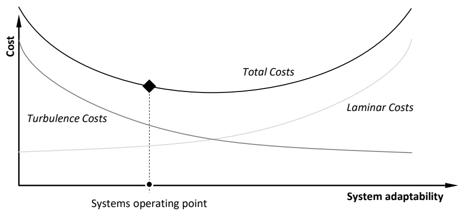

Figure 2b. Trade-off between rigid and flexible systems in terms of turbulence and laminar costs

Within this paper, the responsiveness of the resource sharing network to turbulences is investigated using laminar and turbulence costs. In the following, the individual cost types which are calculated within the simulation model are broken down, and the relationships between the determinant and the cost level are described.

3. Economic Aspects of the Resource Sharing Network

In order to assess the economic effect of the resource sharing network, a quantitative cost break down approach is taken, which determines each process step in the overall production process, including indirect areas and assigns costs to them. As mentioned before, cost structures in connection with supply chains can be found in the literature. However, these structures often are adapted to the specific use cases and also miss important aspects of resource sharing. Thus, a specific cost model for the resource sharing community is developed within this paper. The different cost types applied within this paper represent:

3.1 Manufacturing costs

These include all the costs related to manufacturing the requested number of products. The company has to pay for the materials in case of each manufactured product (unit-level costs), and also for the labour and the machine costs, which are proportional to the manufacturing time. Batch-level and order-level manufacturing costs can arise too (e.g. setup and changeover costs), and facility sustaining costs can also be mentioned here.

3.2 Administration costs

Administration costs can be separated into two main parts in the presented resource sharing model: management costs and order consolidation costs. Management costs in the introduced case mean all the costs that a company pays to the platform: the one-time entrance fee, the regular participation fee, and the cost of sending and accepting requests and offers. The latter is necessary because otherwise, companies would send fake requests to the platform, to try to create a competitive advantage from the answers (e.g. trying to learn rare manufacturing equipment types, free resources of the others). Other administration costs, called order consolidation costs are incurring for the company that is managing all the jobs in an order. This cost type means all the costs in connection with managing the outsourced and insourced jobs, communicating with the customer, etc. In case of turbulences in the original order, administration costs naturally also increase, and cooperation with partners might be needed to satisfy the customer needs.

3.3 Inventory costs

Inventory costs can occur when storing WIP products during production (buffers and supermarkets in the production hall). Warehouse costs can also be considered here: operating with a higher lot size, these costs increase (waiting until the whole lot is ready for delivery). In case of early job completion, the products also have to be stored in the warehouse; thus, this cost is highly dependent on possible deviations from the original production plan.

3.4 Distribution costs

Distribution costs cover transportation costs (between customers and manufacturers) and transportation consolidation costs (between participants, in case of outsourced jobs). In general, distribution costs are dependent on the transportation mode: e.g. the transportation cost of one product could be lower when choosing transportation by train rather than by truck. Possible transportation types are dependent on the size of the lot to be transported: the “per unit” transportation cost is lower when sending, e.g. a full container to the customers. However, cheaper transportation types are usually slower: companies have to consider the delivery deadlines, also. To decrease distribution costs, it is suggested to have a shipment generation system where costs can be calculated, and the above-mentioned aspects could be investigated in order to operate a system that can handle possible disturbances.

4. Simulation Experiments

4.1 Simulation model

To investigate the financial model for the resource sharing federation, some use cases were created using agent-based simulation. The model is implemented in AnyLogic simulation software, where both the companies and the platform are modelled with agents. During model running, the companies are receiving a continuous stream of order changes that triggers performing several pre-defined functions: e.g., checking their capability to complete the affected job, composing and sending offers/requests, matching logic of the platform, etc. The platform stores the received and not matched requests and offers in its database, which is continuously updated during the simulation run.

Table 1. summarizes the main input parameters for the simulation experiments. As the instantiation of the cost functions is not the focus of this paper, not all parameters are shown in detail as the aim is not the introduction of a detailed cost model but to investigate the capability of the resource sharing concept to handle disturbances on a high level. However, for the parameters determined by using a truncated normal distribution, the mean and sigma values are included in the table (for the constant ones, sigma is 0). In these cases, the difference between the lower and upper bounds of the distribution from its mean is sigma/2. Regarding the partner selection, we expect the best results if companies of the same region and with a similar product portfolio take part in a resource sharing cooperation. This way, both transportation and machine setup efforts are minimized and lead to fewer additional costs Becker and Stern 2016. Thus, in the model, 10 companies – located virtually in Hungary – were implemented, and all of them had 16 different resource types out of the required 20 that were used to compose the order changes. One order change included 3 job types that can require different resource types to complete. The resource type for a job was chosen randomly from the 20 possibilities.

As indicated in Table 1, each company received an order change every model time unit that included 3 jobs, consisting of, on average 200 products (with a high sigma value, meaning that a negative change is possible: some of the already booked resources become free) and requiring 4 pcs of resources (e.g. 3D printers) for, in average 12 time units. The platform could combine a maximum of 3 offers to fulfil the requirements of a request in order to reduce administrative and logistics costs. The planning horizon, i.e., the length of the time interval for which the companies could offer their resources in advance, was 40 time units.

Regarding the cost parameters, the entrance fee that had to be paid when entering the federation was 10 monetary units, the regular fee was 5; the latter was paid after every 20 time units. The experiments were run for 1000 time units. In the case of outsourced jobs, it was assumed that the manufacturing cost per product for the outsourced jobs was 90% of the insourced ones, as a baseline – meaning the partner companies work less expensively, as outsourcing in reality often happens towards a company whose core business is the specific job type and thus can operate its resources in a more efficient way.

Table 1. Input parameters for simulation experiments

Parameter	Mean	Sigma	Unit
General simulation parameters			
Order change interarrival time	1	0	tu*
Length of time required to complete order change	12	6	tu
Resource quantity required to complete order change	4	2	pcs.
Number of products in one order	200	300	pcs.
Number of jobs in one order	3	0	pcs.
Max. number of offers to be combined by the Platform	3	0	pcs.
Planning horizon	40	0	tu
Probability of cancelling an order (for all companies)	2	0	%
Simulation time	800	0	tu
Cost parameters			
Entrance fee to join the federation	10	0	mu**
Regular fee for federation members	5	0	mu
Regular fee payment time interval	20	0	tu
Initial capital for companies	100	0	mu

Parameter	Mean	Sigma	Unit
Manufacturing cost per product for the outsourced jobs compared to insourced ones	90	0	%
Profit margin for all companies	10	0	%

*time units, **monetary units

4.2 Experiment – Investigating the price of outsourced jobs

In real industrial environments, companies outsource a job only if the manufacturing cost of the job is that much less expensive to cover the additional management, transportation consolidation and inventory costs. Of course, in some cases, it is reasonable to outsource an order even if the outsourced costs are higher, e.g. if the in-house capacity to fulfil the customer order is not available. But the additional cost of the outsourcing step should not be higher than the contribution margin of the outsourced step.

In the following experiment, a federation member named Company 1 was tested, and the price levels of the outsourced orders were investigated. Here it was assumed that companies outsource a job in any case when they cannot complete an order using their own resources, without regarding the financial balance of doing so. Figure 3 depicts that in the case of a ratio of 90%, it is worth it to be a member of the federation and outsource orders, but as the ratio increases, the company becomes uneconomical. If the partners are using the same unit prices as the resource requester company (100%), depending on the contents of the orders, there are time intervals where the income is positive (higher number of insourced jobs), but in other cases, the income is negative (higher number of outsourced jobs, loss is created). In such a resource sharing federation, depending on the extent of the additional costs, a company could find the specific cost level where it is reasonable to outsource orders, taking the loss of trustfulness towards the customers into consideration.

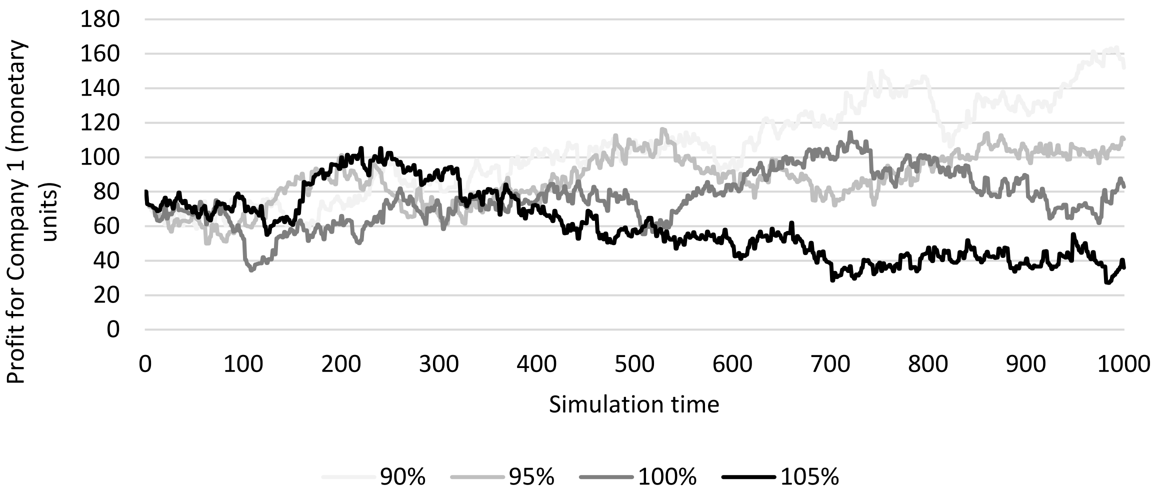

Figure 3: Effect of price of outsourced jobs

5. Conclusion and Outlook

Driven by complex supply networks and reoccurring disruptions like the corona crisis, supply chain resilience and flexibility have gained increasing attention. Nowadays the aim for manufacturing companies is to increase performance in highly uncertain environments and therefore reduce overall total cost of their supply network. As a key enabler, collaboration among the network participants was identified and has since been incorporated into different supply network concepts. One promising concept in terms of a holistic collaboration approach is platform-based resource sharing. Even though this concept has been investigated from a technical standpoint, a financial investigation was yet missing.

Therefore, this paper applies a financial model for the resource sharing network, in order to investigate its financial behavior under turbulence. Within this network, the manufacturing companies are collaborating by sending requests (in case of resource shortage) and offers (in case of resource surplus) to a central platform to match them, this way utilizing their resources and exploiting their business opportunities on a higher level.

The financial model consists of the description of costs related to resource sharing, such as manufacturing, administration, inventory and distribution costs. By using agent-based simulation, the impact of the price of outsourced jobs is investigated to see the performance of resource sharing when having disturbances in customer orders. With simulation experiments, it is shown that the price of outsourced jobs strongly affects the incomes of the participants and there is a limit for the price above which it is not worth outsourcing.

In future works, the model is planned to be extended with dishonest companies who are trying to influence the resource sharing mechanism by sending fake offers, and could learn using artificial intelligence algorithms based on the responses received from the Platform (e.g., what resource types are rare in the federation, and offer them more expensively). Another future direction is to apply a more complex multi-criteria decision-making algorithm in the decision-making and assignment processes.

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The ‘Me-We-All’-Approach for a more Sustainable and Responsible World

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Abstract: It is a fact of life that the world changes. This constant change raises an important question about the role of managers, leaders and organisations in society. Society forms the context for human development. Society, or in a broader sense, the world we live, will always last longer than any individual or organisation. Striving for short-term individual welfare cannot be an objective in the long run. Introducing the ‘Me-We-All’-approach in this opinion paper, we highlight the need to find a balance between individuals and organisations within the ever-changing context of our society. We discuss the role of management and leadership in creating more sustainable organisations and a better world. We analyse the complex relationship between individuals (Me), organisations/communities/networks (We) and society (All). The volatile requirements harm clear objectives/strategies and finding a balance for different perspectives. These stakeholders’ different roles and positions show conflicts of interest, contradicting challenges in a dynamic playing field. Developments within and in the vicinity of organisations demand significantly more attention as they influence organisations with an immense or even disruptive effect on and by individuals. Finally, organisational interactions have emerging impacts on society. Dealing with developments on the three identified levels cannot be elucidated in a single and unified way. We are in the middle of a paradigm shift from a Me-We perspective to a We-All one with attention to sustainability and circularity on a physically finite planet.

Keywords: Management, Leadership, Organisation, Society, Sustainability, Me-We-All, paradigm-shift

1. Introduction

A fundamental assumption in organisational theory is that organisations form the linking pin between individuals and society, putting the individual in the centre of the universe. Our individualistic society does not help us understand the complexity and future orientation necessary to survive. Too easy does striving for individual welfare lead to conflict, antisocial behaviour. The experiences of neo-liberal society showed that the current ‘me-myself-and-I’ attitude is harmful. Natural resources will be exhausted when individual welfare is the only objective.

This awareness exists already since 1972, when the Club of Rome published the ‘Limits to Growth’ report (Meadows et al., 1972), concluding that without substantial changes in consumption “the most probable result will be a sudden and uncontrollable decline in both population and industrial capacity”. It explained the systemic nature of environmental pollution interacting with production and problems interlocking in a global crisis, the necessity to revise the system and shift focus from individual welfare. This knowledge is half a century old. However, subsequent research confirmed that insufficient changes had been made since 1972 to significantly alter nature (Farley, 2008; Meadows & Randers, 2012). Focusing on individual welfare does not automatically lead to sustainable societal developments. Based on this awareness, we must pay attention to how we can align individual behaviour in an organisational context to reach objectives above the personal level.

We aim to contribute to an inclusive and sustainable society in which the world will survive (United Nations, 2018). We must ensure well-being for future generations, shifting the current prevalent focus from individual welfare.

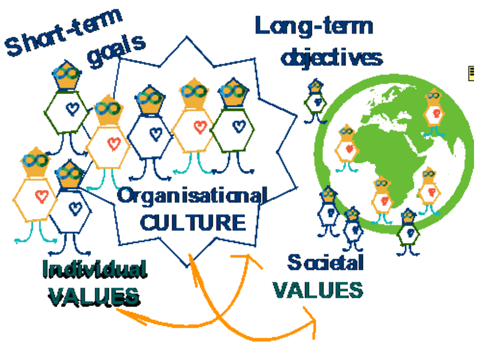

Figure 1: Societal culture and values

In modern literature, we see organisations as mechanisms to tune and balance the differences in individual interests. This viewpoint is interesting when we define what an organisation is. In literature, many definitions exist. They usually show similarities with the one below (Abcouwer et al., 2020)

> *An organisation is a structured composition of people and resources opting for fulfilling a (preferably predefined) objective.*

We assume that we must reach something and fulfil an objective and the organisation facilitates individuals to accomplish theirs. The definition above does not mention individuals or their goals but achieving the organisation's. In this light, the main question relates to the forms we base these objectives on. Most answers focus on growth and development. Such linear thinking makes us want to grow, become better, richer, more innovative, increase welfare. Still, this leads back to individual interest. Already in education: after first grade, the second follows, becoming better, wiser, more prosperous, mainly on an individual basis, assuming that developing and getting further is *better*. We believe we can only be successful - or maybe happy - when we reach the objectives set. In this way, linear thinking leads our behaviour in society. But what does this mean for an organisation? Neither the view of an organisation facilitating the individuals nor the individual subordinating the organisation fit any longer. We must let go of both approaches. We need to focus on different aspects relevant to understanding and step away from believing that 'our view is the truth'. We should be open to other ideas about our complex reality (DeNora, 2014).

2. Individuals, organisations, society – the 'Me-We-All' principles

In management literature, *organisations* are at the centre stage. We measure their success via profitability, continuity, ownership, shareholder value, - terms as efficacious, the mid-point where society and individuals meet.

Looking at organisations from an individual perspective leads to a confusing picture. What are the different roles of individuals in an organisation? The behavioural theory (Cyert & March, 1963) assumes that an organisation is a coalition of participants. The organisation's role is to give the participant an inducement based on what the participant contributes. The contribution can be working hours, knowledge, ideas for improvements. Motivations include monetary payments, dividends, wages, retirement plans, and immaterial inducements like self-achievement or job satisfaction. Participants are the employees, shareholders, suppliers, customers, or other interested parties.

All stakeholders have their interests in participating in an organisation. They contribute differently and they do not automatically line up for specific interactions and interests. It is difficult to identify who benefits from the organisational activities. Ownership, for example, materialises in profit and shareholder value, which flows back to shareholders. If the organisation is performing well, the shareholders take a high advantage. But their gain depends on economic and societal developments. So, shareholders take chances. Employees with labour contracts have guaranteed income and minimalised risk. This distinction also shows the interaction and interdependency between the stakeholders. The Agency theory (as described in Douma & Schreuder, 1998) shows that interdependency does not automatically lead to optimal behaviour. In practice, one partner's behaviour influences the well-being of the others. When an organisation decides to pay the employees more, the profit will decrease, and the shareholder gets less. However, lowering wages may increase profit but demotivate employees, leading to lower performance. Overall, balancing and synchronisation are topics to be considered.

Identifying the beneficiaries of the social and economic developments is often difficult. Generally, organisations are considered artificial constructs (Law Teacher, 2013). Organisational gain and loss are strange topics when taking on artificial constructs, but work out for the different stakeholders, sometimes with contrary interests in the organisational performance. Does excellent performance or bankruptcy harm an organisation? The owners probably gain an advantage or suffer, as well as the employees and other stakeholders. But the organisation as an artefact? Remarkably, organisational benefits play a central role in economic thinking within contemporary settings. The definition we used earlier has limited value in formulating objectives and success. An organisation making profit doesn't say anything. The translation of *profit* as values to the stakeholders makes it a widely used artefact. However, the impact of organisational performance works on the individuals living in a community or societal setting. Here, we emphasise the societal aspect.

In practice, the performance of an organisation depends on finding a balance between the interests of the different stakeholders, partnering in society outside the organisation (Abcouwer et al., 2022). We face a limited understanding of reality where science reasons the organisational performance. We must look at the world as consisting of communicating vessels, where gain leads to loss somewhere else. The assumption that growth can overcome this zero-sum effect is no longer valid in a setting of limited resources. To understand this reality, we can use the behavioural theory of the firm and the agency theory as described above. Organisational behaviour impacts stakeholders, leading quickly to a divide between individuals.

There has been a growing interest in organisational science for societal divide (Piketty, 2013). Terms like *haves* and *have nots*, digital divide, show attention to the societal impact of individual and organisational actions. A growing awareness arises that behaviour influences individual well-being and the well-being of others, now and in the future. Attention appears on inequality. We increasingly consider it unfair that a part of the population works until death to benefit a limited upper class both nationally, where the growing Gini-coefficient shows a divide and internationally, where the wealthy western world takes an ever-growing part of the societal pie. Fair sharing is not yet a guiding principle in our society. Still not enough attention is paid to the concept of sustainability to ensure that our children will find a better world than the one we got. Therefore, in addition to the distinction between *individuals* (Me) and *organisations* (We), we must pay attention to the *societal* (All) interest.

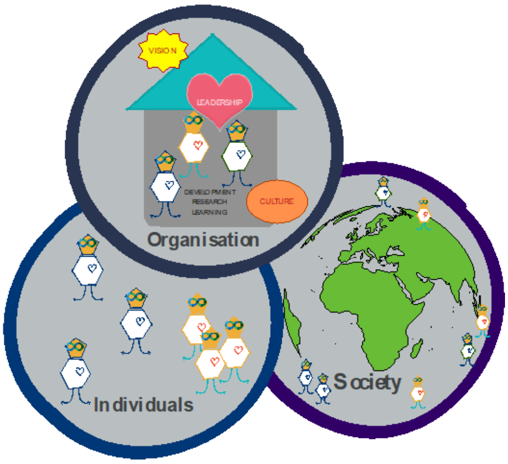

Figure 2: 'Me-We-All' – Individuals-Organisations-Society

Reasoning in terms of society, sustainability, and circularity form the overarching principles for the world to survive. This view requires a different perspective on soft elements like *culture* and *companionship*, concepts that gained too little attention in the past where individualism was leading. Let's see the 'Me-We-All' approach in more detail.

2.1 The individual perspective – 'Me'

We must reconsider our perception of the world. In the West, individual welfare contributed heavily to the well-being of society. The focus on individual performance assumed that the community gains an advantage. However, it carries a risk of imbalance in society. The difference in capabilities and entrepreneurship leads to growing discrepancies, wealth gaps and distinctions between those who have and who don't. In a world where resources are limited, problems arise as they are no longer abundantly present. Competing for owning the limited resources becomes the next challenge. This phenomenon is evident in international geopolitics. Developments lead to contradictions in which political and economic policies are pursued. Many, with cultural differences in values and norms systems espoused by the various power blocs. (Pippin, 2006) The 'mine and thine' concepts enforce us to ensure our 'haves'. People strive for their interests and personal well-being, especially after World War II. The shortcomings start to be apparent. Economic and technological developments divide threat societal outcomes to a great extent. Ownership and wealth, digital and many more divides limit our abilities to overcome problems by fair sharing, cooperation, future orientation, threatening sustainability in the long run. A logical consequence of economic and societal developments is that only a few own a lot. At the same time, the majority has growing problems assuring that they can live a decent life. The difference between the 'haves' and 'have-nots' in the wealthy parts of the world is growing tremendously. Still, this development has a vast and unavoidable effect especially on the international level. Huge geopolitical fights take place for conquering ownership of natural resources anywhere in the world.

In this landscape, organisations are used as impersonal contracts to make a clear divide between the owners/shareholders, who in growing number present themselves as philanthropists for a better world, and the organisations representing the devastating effect of their greediness. This development shows that analysing society and the world based on individual interests does not offer a precise mechanism for identifying stakeholders from a future-oriented perspective.

2.2 The organisational perspective – 'We'

In literature, scholars often formulate the success of an organisation in Critical Success Factors (CSFs). In LeanSixSigma (Snee, 2010), the method fits into operations management to organise quality and efficiency improvements and systematically innovate processes. The following activities are broadly accepted:

Stimulate sales and increase turnover&profit: This CSFs category focuses on realising growth. Big is better is the leading paradigm. It assumes that growth is a necessity for an organisation to survive. But these CSFs do not say how to share the 'wealth' between stakeholders. Does it go to labour or capital?

Optimise and improve customer satisfaction: The main idea behind this CSFs category is that the customer is King. This focus on the customer also holds a risk. Destroying the world for improved customer satisfaction is a well-accepted approach. Taking into consideration the impact on other stakeholders is not important.

Hiring the right employees: The labour factor is crucial for the organisation. The terminology "hiring" shows the basic assumption of 'Master-subordinate' relationship between labour and capital. Agreed-upon wages pay without considering their contribution and profitability of the organisation. Labour is, in this view, assumed to be fully risk-averse; the shareholder/owner takes all the risk and consequently grabs all the revenues. This CSF lacks attention to societal and environmental impact.

> *Responding to changing stakeholder needs: the labour-capital relationship is not equal in many organisations. The normalised Gini-coefficient measures inequality and shows growing divides.*

Successful leadership: We often assume that good management and leadership are critical success factors. But recognising the importance of good management and leadership does not guarantee a fair distribution of revenues within the organisation. In current practice, shareholders as proprietors of the organisation require a maximised payment in a dividend. Managers get strict instructions to maximise the profit, resulting in a high reward. The Agency theory shows clearly why the division of ownership (shareholders) and control (management) does not always work well. Balancing the urge for maximising dividends versus income and bonuses for managers leads to a constant struggle where the production factor labour is often the losing party.

The above success factors make clear that each stakeholder has its interests. Balancing them is an art. The ensuing contradictions manifest in a struggle but do not consider the overarching interests of society. By striving for growth, the parties try to resolve these contradictions. Growth makes it possible for all stakeholders to benefit, but we rarely consider the adverse side effects for society.

Based on the usual factors for success, organisations head for short-term gains. Realising growth is key. The focus is on increasing returns and decreasing costs. However, in current society, the prices of resources organisations usually work with do not reflect the actual costs of the resources. Williamson (1988, 1989) says humans are boundedly rational and sometimes display opportunistic behaviour.

The logic for linear production is based on the full cost of production instead of the total cost of ownership. The negative side-effects are not recognised nor realistically valued. In practice, the interest of one outweighs the interest of the many. (Fiori, 2005). Related to the adage of maximising the prosperity of the individual, a focus on growth is a logical choice. 'More is better' and 'Bigger is more beautiful' are logical consequences of economic development where children in the Western World assume that they will become more prosperous than their parents. After World War II, even doubling that prosperity was more or less common practice. In a world where only 20% of the population consumes 80% of the wealth, it sounds reasonable that the less privileged part of civilians also has the right to enjoy prosperity. That conviction forms the base of the firm belief that growth is necessary. Also, the fast-growing world population requires that development be needed. It makes sense to contrast this logic with David Attenborough opinion: "*Anyone who believes in indefinite growth on a physically finite planet is either mad or an economist*" (Cardwell, 2013). Growing in the traditional sense of using more virgin resources to produce additional products and services to fulfil the growing demands in society has its limits. This approach no longer works to find solutions for realising a just and fair welfare division.

In the light of the above, we need to reconsider the 'me-myself and I' paradigm used in a world of maximising individual prosperity. It will be hard to convince the less privileged that reaching the same level of material wealth is impossible for them. Twenty percent of the world's population consumes 80% of the wealth shows that they are willing to take steps toward a fair share of the limited resources the world can offer. In that respect, thinking about the higher good for society or the world, instead of strictly focusing on individualism, is unavoidable. We must develop new power relations and deal with the existing imbalance. Changes with a comparable speed to deal with the challenges we face nowadays will require a thorough review of our current economic system's paradigms.

To summarise, using only our individual perspectives is not satisfying in our dynamically changing society when the future is sooner than ever.

2.3 The societal perspective – 'All'

As an organisation is an artificial construct, it fulfils objectives - explicitly not for itself. (Law Teacher, 2013). A broadly used assumption is that the wealth generated by optimal performing organisations in contemporary society mainly heads for maximising individual prosperity. This approach raises several questions.

This single-sided approach does not reflect the growing awareness we nowadays see in the actual behaviour of organisations. In a sense, we become increasingly aware that organisations play an intermediary role between individuals (with straightforward identifiable objectives) and society (with more diffuse objectives). Organisations form a mechanism for coordinating activities to reach a balanced result for individuals and society. Formulating objectives in such a setting is more complicated than the individual perspective. When we can identify a crystal-clear objective, for example, maximising personal prosperity, organising relevant activities is relatively simple. When we look from the standpoint of society, we must consider different - often contradicting - objectives. Using the term *objectives*, or broader *strategy*, is confusing (Abcouwer et al., 2020). Culture, justice, other value-and-norm systems, and differences in ethics influence the organisation's behaviour. In a setting like this, many parties work together, network structures are leading, and there is no clear network leader in most cases.

The practical situation of conflicting objectives is even more confusing in our fast-changing context. Dynamics and cultural differences force society to network/cooperate where limited and unclear mutual interests exist. In a setting where higher societal demands are growingly important, irrationality and unpredictability are key issues. (Takács et al., 2019) The problems are so complex that an ongoing process of specialisation guides developments while we do not know where it leads. Mutual interdependencies and changing dominant societal/network problems 'leads' them in varying directions.

The power of individuals, their contribution to the organisation and the intention to fulfil objectives for the world form a complex setting where neither traditional point at the horizon (objectives), nor the way to reach them (strategy), exist.

In such a setting, the current reality is the absence of hierarchical relationships and the constant changing combinations of partners. While depending on the context, striving to realise societal objectives override personal goals is a challenge in the contemporary world. These are all reasons for reconsidering the way how stakeholders work together. (Abcouwer et al., 2022) Constantly changing requirements for all participants enforce a setting where continuous learning should be essential to future adaptability. In such a scene, bureaucracy and a heavy binding to strictly formulated objectives limit the freedom of thoughts and creativity based on a free circulation of knowledge, information and ideas. (Schilstra et al., 2021)

3. Towards a more sustainable and responsible world

Balancing between individuals, organisations, and society is not simple. The Dutch tradespeople's motto for a better future, *Luctor et emergo*: struggle and emerge, helps us define key concepts to understand the different stakeholder perspectives. Without a logical order, here are some:
Culture encompasses social behaviour, values and norms and is present in individuals' knowledge, beliefs, customs, capabilities, and habits. We base our legislation, arts and learning on it. The aboriginals, for example, view learning differently. We must keep in mind that every culture on its own has its value. There is no culture better than the other one.

Future orientation is usually along with purposeful planning via *strategy and identity.* Since the Ancient Greeks, we strive to reach somewhere in the *future*. In contemporary society, such a point at the horizon does not exist. The availability of knowledge, skills, visions, values, norms represents the willingness to strive for the greater good. A strategy usually has a short-term orientation and does not consider the bigger picture important. Long-term thinking often focuses on continuity, surviving under changing circumstances, but still, in most cases aiming at the welfare of the individual or their groups. In current Western culture, that every individual has a task to contribute on a personal basis to the well-being of the whole is far from broadly accepted. However, in a world where resources are limited, we must ensure that we aren't mad or economists, as we quoted Sir David Attenborough earlier. Currently, individuals lack mechanisms to contribute to the needs of the many. Compared to an Inuit society where the elderly leaves the community when they cannot contribute to the well-being of the society anymore, the difference between Western culture is evident.

Structures to attack the future: Dealing with challenges, we develop structures to solve them. Traditional hierarchy and control-based principles founded organisational structures do not form a solid base for the issues at stake. de Geus (1989) thoroughly analysed 2500 years of political philosophy and defined a typology with three approaches to organising organisations. Keidel (1995) came to similar principles. Both authors identified three primary forms of organising structure aiming at *co-creation* for dealing with challenges. *Control* based working leads to hierarchical structures where a leader takes responsibility for the future behaviour of the community. As the second form, *Cooperation* takes advantage of the competencies, abilities, and resources available in the community where everyone contributes to their best abilities. The third basic form is *Autonomy*, where everyone strives to fulfil their objectives to their best. In the practice of an actual organisation, all three need to be present. Based on the organisation's context, only a bias into the direction of one of these ideal forms should be strived for.

Cooperation and synchronisation: success requires cooperation. From a societal point of view, working on one societal objective only works on a very high abstraction level: the needs of the many. Aligning all individuals with the societal objective is extremely hard. Individual needs are different and dependent on that individual's specific context. Striving to align those objectives requires a strict hierarchy with a high level of control or a highly developed way of cooperation. Consultation lead partners agree on their objectives. Autonomous work can also lead to great results. In this case, we assume that everyone can decide what is best for reaching results. This form of working alongside each other may lead to emergent behaviour in the organisation. So, cooperation and synchronisation of the activities may be centrally enforced (control), or working together (cooperation), or the participants' autonomy leads to emerging behaviour. For success, trust is the key principle.

Trust, emergent behaviour and believing in each other: In sociology, trust is supposed to be a social construct. Trust deals with the interaction of people working together. Science distinguishes between a trustor (is trusting someone) and a trustee (is being trusted by someone). Honesty, fairness, or benevolence appear when people cooperate. The more trust there is, the less need is for control. When partners trust each other, strict steering is not necessary. Trust thus forms the base for reaching results. Lencioni (2002) states that it is the basis for effectiveness. When people trust each other, they also have a sound base for disagreeing. Conflicting opinions help exploit creativity within the organisation. And by the commitment, partners show their willingness to make themselves accountable for reaching results effectively.

By letting loose the need for control, another phenomenon appears. Less control leads to unpredictability making room for emergent behaviour. We use the term emergence aiming at an organisational behaviour that depends on the relationship between one another and not on its cooperating parts. The individual behaviour of any participant is not related to the realisation of an overall high-level objective. Here autonomous behaviour of the participants leads to unforeseen and potentially highly appreciated outcomes. These are only possible when there is trust in each other's behaviour. When people work together without having an explicit agreement on the result, individual activities contribute to the emerging development. However, lacking central objectives may lead people run the 100 meters without any sense of direction. Often, a leading high-level principle needs to be inherently available based on cultural backgrounds.

Circularity: A challenge for modern society is the survival of humanity. The global population grows rapidly, increasing demands for (virgin) raw materials while supplies of those resources are decreasing. Sustainability recently became a term to describe principles for actions to avoid the depletion of natural resources, keep an ecological balance, harmony with nature that doesn't allow the quality of life of modern societies to decrease. Sustainability is a reminder of the limitation of natural resources, the need for a balanced and aligned coexistence that humankind has to maintain its existence and commonly acknowledged values. Circularity is a solution to the challenges of sustaining our planet. Many governments are heading for and working with industry to ensure that society runs on reusable materials. In such an economic system, there will be no waste. The community will reuse resources again and again. The term *circularity* identifies this cooperation.

Interaction and dependency: The trinity of *individual-organisation-society* depends on the interaction between the participants. Since Erasmus, we have long passed the times when one person knows everything and can do everything. Being dependent on each other is a reality of the day. Interacting with others is the basis for our current functioning. Even though this interdependency makes us work together to reach individual prosperity, we also fight for the shared objectives. Looking from different perspectives, we must be aware of the stakeholders' different positions, goals, and roles.

To summarise, we need to earn the level of development when we are able to understand and act towards a more sustainable and responsible world. It is only possible to reach this level when we are grown to see and balance the different perspectives of individuals, organisations and the society.

4. The role of management, leadership and governance

Change is a fact of life. There is nothing more consistent than change, which management and leadership must deal with (Takacs & Abcouwer, 2020). The anchor point for interventions is balancing within the 'Me-We-All' approach.

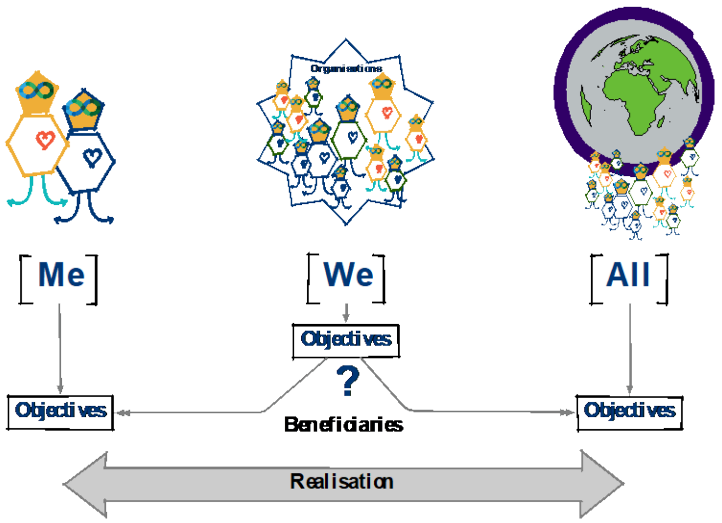

Figure 4: Balancing the objectives

The different levels bare different objectives with a question of who the beneficiaries are. Benefits for 'Me' or 'All' is clear, but for the community, the 'We' level it is more complicated. It is either the individuals or the society who take advantage of the organisations' functioning. We ask attention to balancing the different objectives as a requirement for managers and leaders. When an organisation (meaning its manager or leader along with the staff) chooses to play a societal role, it does not necessarily harm the individuals' well-being. In practice, it is often easy to recognise the general focus (Scharmer & Yukelson, 2015). Many organisations are profit-oriented with social awareness elements. Corporate social responsibility while fulfilling customer needs (Ellis, 2014), caring for the well-being of employees emerge. The skill to analyse the complex relationship between individuals (Me), organisations/communities/networks (We) and society (All) and understand in time the volatile requirements for objectives and strategies is an art of managing the organisational balance between the different perspectives. These stakeholders' different roles and positions show conflicts of interest, contradicting challenges in a dynamic playing field. In this sense, the role of management and leadership in creating more sustainable organisations and a better world is apparent. Developments within and in the vicinity of organisations demand significantly more attention by managers and leaders, as they influence organisations with an immense or even disruptive effect on and by individuals (Takács & Abcouwer, 2020). The role of governance also appears as organisational interactions have emerging impacts on society (Chandler, 2014). Although the highlight to develop the capability in the organisation to deal with challenges on the three identified levels, cannot be elucidated in a single and unified way. We see that we are in the middle of a paradigm shift from a 'Me-We' perspective to a 'We-All' one with attention to sustainability and circularity on a physically finite planet.

We introduce a clear need for initiating research on processes for management and leadership to balance between 'Me-We-All'. This emphasis should also be embedded in a newly developed governance structure to ensure this balance.

5. Conclusion

In our opinion paper, we described the complex relationship between individuals, organisations/ communities/ networks, and society, where stakeholders/participants keep changing. Volatile requirements and unclear objectives make it hard to balance the 'Me- We-All' perspectives, and it asks for attention to the emerging roles of management, leadership and governance.

The different perspectives generate conflicts in interests. The challenges are even more contradicting when we consider dynamics. Developments demand more attention because of their disruptive effect on all levels. Interactions affect our society, which makes managers and leaders take responsibility. Dealing with them on the three identified levels is necessary for a sustainable future. We are in the middle of a paradigm shift where the individual interests should change to a global one with growing attention to sustainability, circularity and responsible management, leadership and governance, which are necessary on a physically finite planet.

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Development of a Change Request Template for ERP Systems to Increase Time-Efficiency

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Abstract: Market environments are changing at an increasingly exponential rate. Technological breakthroughs, the internet, globalization, and the consequential emergence of highly volatile and competitive markets have made managing a company more and more complex. Enterprise resource planning (ERP) systems support the successful management of businesses in such conditions. As the needs and expectations of markets are changing, so are the requirements for ERP systems; new or altered requirements are implemented continuously. This paper explores how companies can become more time-efficient in their specification of change requests and whether methods from requirements engineering can be applied. In the practice of two sizeable German manufacturing companies, we observed that specifying change requests is time-consuming and inefficient. Sophisticated ERP systems are complex; thus, changes require a detailed description of requirements. In practice, the description often lacks information. This leads to reclarifications with the requestor, difficulties when assessing the expected benefits of change requests, and uncertainties concerning prioritization. Moreover, there is a risk of approval and development of changes that are not fully understood. Therefore, unwanted side effects harm the ERP system and require even more costly corrections later. The methods and procedures are taken from the design science research; we intended to develop an artefact that supports companies to become more time-efficient in the process of describing, evaluating and prioritizing change requests. We interviewed experts from a large automotive supplier and analyzed the data through content analysis. The research concluded that some methods from requirements engineering can be applied to this context, such as the usage of requirements specification templates, quality criteria, and categorization of requirements. The primary results of this research are an artefact in the form of a new change request template for the use case of changing ERP systems. This template was applied in the automotive supplier's change request practice, where we also gathered feedback on the artefact. The conclusions from data and results of the involved parties reported that the new template increases transparency on what information is required and serves as a foundation for rejecting change requests lacking descriptions. Implications for further research are to increase transparency and additional guidance that already has successfully brought the intended benefit of saving time in this process.

Keywords: Change management, change requests, enterprise system, ERP system, requirements specification

1. Introduction and research problem

ERP systems are still relatively new IT systems continuously adapting to the company's and its management's needs. Therefore, the excellent support for company management as an advantage becomes the disadvantage of constant adaptations to processes and business models. In other words, in order not to limit the function of ERP systems, highly effective change processes are required.

Two sizeable German manufacturing companies with integrated ERP systems and established change management processes report similar problems in specifying requirements for change requests (CRs); in both companies, the requirements specification is not formally defined. Therefore, the format and quality of described requirements vary a lot. Often, requirements lack necessary information or are not fully understood, which leads to time-consuming rounds of clarification. In some cases, incomplete requirements are approved for development, and missing requirements or errors are only discovered at a later stage during testing or implementation. Overall, the implementation of changes requires multiple rounds of clarification or corrections before they bring value in the productive system. The objective of this paper is to to support companies that are facing these challenges to reduce the time needed to specify and implement CRs for their ERP systems.

2. Research approach

The nature of this paper's research problem is explorative primarily, with some pre-existing insights and hypotheses. Research question 1 (RQ1) explores how companies can save time in specifying CRs. RQ2 explores whether methods from requirements engineering (RE) can be applied to reach that aim. The answers to these RQs cannot be captured numerically; they call for the best practices of experts in the field. Therefore, we followed the design science research (DSR) approach and conducted expert interviews for the data collection and qualitative content analysis for the data analysis according to Bryman (2016) and Saldana (2021) to answer the RQs. We compared the insights from the interviews with the existing literature on RE and developed an artefact which supports these companies in increasing time efficiency when specifying requirements for CRs.

2.1 Literature review

Prior to this study, we analyzed the existing RE literature on specifying and documenting requirements. In RE, the usage of requirements specification templates is common, which prescribe the information that must be provided and ensure that certain quality criteria are enforced (Sommerville, 2011; ISO/IEC/IEEE, 2018; Dick, Hull, and Jackson, 2017; Bühne and Hermann, 2019; Laplante, 2017). However, the templates in RE focus on the specification of requirements for entirely new IT systems, typically within a project scope. These templates focus on ensuring that a multitude of interconnected requirements are specified completely and consistently (Pohl, 2010; Dick, Hull, and Jackson, 2017). They also often aim to document the overall purpose and vision of a new system (ISO/IEC/IEEE, 2018), which is too extensive for the use case of a change to an existing system. Our analysis of the existing RE literature found no templates or guidance targeted specifically to documenting the requirements of CRs.

2.2 Data collection

In the first step, we selected six experts from a german manufacturing company who have been operating and shaping the ERP system's change management process for at least five years. Table 1 introduces the experts with regard to their position and years of experience with the change management process.

Table 1: Selected interviewees

Expert	Position	Years of experience
EXP1	High-ranking manager	> 15
EXP2	Team lead and owner of the change management process for one module of the ERP system	> 10
EXP3	Approver for CRs	> 15
EXP4	Approver for CRs	> 15
EXP5	Approver for CRs in asia	> 5
EXP6	Team lead	5

The analysis of RE served as a foundation for the interview guide. The authors used the theoretical background to create a set of questions and hypotheses about the applicability of RE methods in the specification of requirements for CRs. In the next step, these questions and hypotheses were translated into interview questions as recommended by Saunders, Lewis and Thornhill (2019). The interview questions were designed to encourage the interviewee to talk about their good and bad experiences with CRs, specifically on the reasons why the clarification of some CRs consumes significant time and how to reduce this time investment. The interview guide was not given out to the participants beforehand.The interviews started with the interviewer asking some essential questions about the interviewee's work experience, followed by the questions from the interview guide. The experts were encouraged to also talk about aspects that might not have been part of the initial interview guide.

2.3 Data analysis

Qualitative content analysis was used to analyze the interview transcripts. In the first step, the authors have considered the recommendations from RE literature to derive categories and structure the interview material. The following table contains the definition and justification of the authors' categories. It also contains the rules established for assigning paragraphs of the transcripts to categories.

Table 2: Categories for qualitative content analysis

Category	Definition and coding rules
Categorization	The existing literature on RE provides various proposals for categorizing requirements based on functionality, level of detail, or solution dependency (Glinz et al, 2020; Sommerville, 2011). This category has been assigned to paragraphs where the interviewee discusses different types of requirements and CRs.
Template attributes	One of the core activities in RE is specifying requirements through a predefined template (Pohl, 2010; Glinz et al, 2020; Dick, Hull, and Jackson, 2017). This category has been assigned to paragraphs where the interviewee discusses what content they have found necessary or valuable in order to be able to process CRs in a time-efficient way.

Category	Definition and coding rules
Language	This category has been assigned to paragraphs addressing the interviewee's language usage experiences. This involves narratives about the requestor's primary language and considerations of natural language usage versus more sophisticated modelling languages such as UML (Unified Modeling Language), often discussed in RE literature (Pohl, 2010).
Quality criteria	This category has been assigned to paragraphs where the interviewees discuss their experiences with good and bad requirements specifications. It covers the expert's view on quality criteria for CRs and the criteria commonly suggested in RE literature, such as completeness, consistency, modifiability, and readability (Dick, Hull, and Jackson, 2017; Pohl, 2010).
Technical feasibility	This category encapsulates paragraphs which deal with the technical feasibility of a CR and the experts' narratives on when they involve a developer in the requirements specification process.
System dependencies	In highly integrated global ERP systems, many changes influence various processes or parts of the existing system architecture. This category has been assigned to paragraphs that address the system and process dependencies of a CR, such as interfaces with other systems.

The authors assigned each relevant paragraph to a category based on the rules shown in table 2. After the categories were derived, the authors familiarized themselves with the interview transcripts by reading through them multiple times and extracting critical statements from the experts' narratives. After the first round of assigning the interview material to categories was finalized, the authors read through the interview material in multiple iterations to reassess and update the category assignment. Afterwards, the authors analyzed the critical statements in each category for similarities, contradictions, and trends between the interviewees' statements.

3. Research findings

3.1 General findings

The interviewed experts all confirmed that specifying requirements for CRs often consists of multiple iterations of clarifications with the requestor to get complete and consistent requirements. In practice, the quality of raised CRs do not align with the receiver's expectations. Thus, this research concludes that companies can become more time-efficient by establishing a transparent guideline for the requestor on what is expected in a CR document. The findings also showed that some of the insights from RE – such as the categorization of requirements, the use of requirements specification templates, and enforcing the RE quality criteria – are useful to save time in the specification of CRs. As a solution to these issues and an answer to the research questions, we created an artefact in the form of a CR template with the objective to:

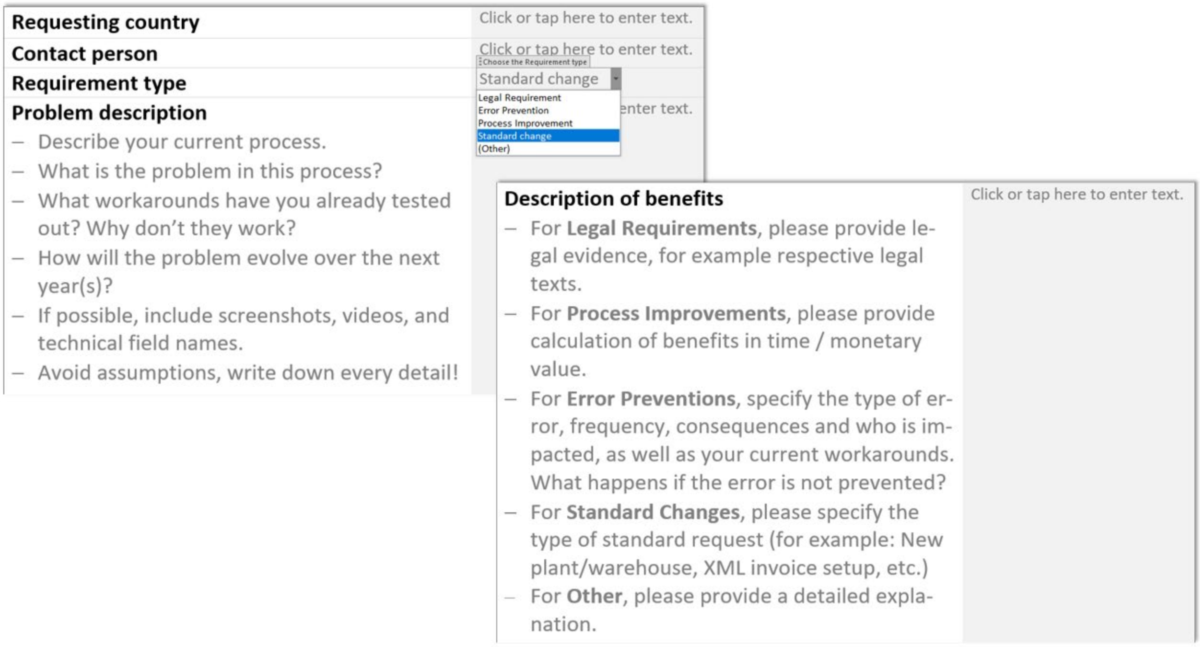
- Reduce iterations in the clarification of requirements
- Increase the quality of requirements in CRs

The structure and content of the template are based on the findings from each category of the content analysis. A fill-in guide was developed to support requestors by specifying their requirements. The following section presents this new CR template.

3.2 Change request template

In figure 1, the first two sections of the fill-in help for the CR template are depicted. The first section is shown on the left-top side, and the second section is on the bottom right. In the following, each attribute of the template will be explained.

The first attribute gathers essential data; at the top left of the template, the requester is asked to provide the country from which they are requesting the change and their name as the contact person.



Requesting country Click or tap here to enter text.
Contact person Click or tap here to enter text.
Requirement type Choose the Requirement type: Standard change
Legal Requirement
Error Prevention
Process Improvement
Standard change
(Other)
Problem description Click or tap here to enter text.
– Describe your current process.
– What is the problem in this process?
– What workarounds have you already tested out? Why don't they work?
– How will the problem evolve over the next year(s)?
– If possible, include screenshots, videos, and technical field names.
– Avoid assumptions, write down every detail!

Description of benefits Click or tap here to enter text.
– For **Legal Requirements**, please provide legal evidence, for example respective legal texts.
– For **Process Improvements**, please provide calculation of benefits in time / monetary value.
– For **Error Preventions**, specify the type of error, frequency, consequences and who is impacted, as well as your current workarounds. What happens if the error is not prevented?
– For **Standard Changes**, please specify the type of standard request (for example: New plant/warehouse, XML invoice setup, etc.)
– For **Other**, please provide a detailed explanation.

Figure 1: Change request template part one

3.2.1 Requirement type

The following attribute asks for the requirement type, where the requestor can select one of the following types through a drop-down:

- Legal requirement
- Error prevention
- Process improvement
- Standard change, or
- Other

All interviewed experts (EXP1-EXP6) mentioned that the categorization of requirements enables the decision board to judge the priority and importance of a CR immediately. A standard change that is low in complexity and follows a defined process does not require further clarification and can be routed through the process efficiently when marked accordingly. The interviewees reported that they must further know whether a CR is raised to improve an internal process, prevent errors, or avoid violating legal regulations. Legal requirements or errors that impact the company's customers are critical and must be prioritized to be solved quickly (EXP1, EXP2, EXP5). However, if the problem is inefficiency, such as a time-consuming process that works but causes internal employees some additional workload, the importance and priority are lower. Thus, an initial categorization by the requestor based on these categories is proper. As suggested by RE literature, any expert did not mention a differentiation between functional and non-functional requirements.

3.2.2 Problem description

The following template attribute in figure 1 is the problem description. All experts frequently mentioned that CRs often describe a solution but do not describe the initial problem sufficiently. For such cases, a time-consuming reclarification of the initial issue that led to the CR is always needed (EXP1, EXP3, EXP4). Therefore, establishing a clear and transparent guideline for what information is expected in the requirements specification document can significantly reduce the time spent on clarification. Such a guideline also serves as a quality standard based on which the receiver of the request can reject or send back any requests which are not complete (EXP4). In our artefact, we realized such a guideline through questions the requestor is expected to answer in their problem description. As a change is done to an existing ERP system, the requestor should start by describing the current process (EXP3). This is especially important in a globally operated and highly sophisticated ERP system, where the receiver of the CR is often not an expert in all existing processes. Next, the requestor is asked to describe the problem within this process, enriched with screenshots and the names of the affected technical fields if possible (EXP4, EXP5). If any workarounds have been tested out or are currently being used, this is also essential information that should be included in the problem description, as it narrows down the options for solutions (EXP2). The guideline also asks the requestor to estimate how the problem will evolve, which is essential to detect potential global trends early on (EXP2); for example, when a requestor raises a CR for a problem that affects customers who receive a PDF invoice via e-mail, then the problem might have been rated as unimportant ten years ago when almost all customers received paper invoices. However, during this time, customers increasingly started requesting to receive their invoices as PDFs attached to e-mails. This is essential information which increases the relevance of the described problem. Lastly, the requestor is reminded to be as detailed as possible and not assume any information to be self-evident.

One interesting proposal for the problem description mentioned by EXP1 was to provide the requestor with a list of options to narrow the problem area within the ERP system. This could support less experienced requestors in putting their CR into context. However, even EXP1, who has over fifteen years of work experience with this system, states that he cannot define a functional structure due to the high system complexity. Other experts have also voiced their concerns about the feasibility of creating such a structure to decrease the overall time needed to specify CRs. Therefore, it is not explored further at this point.

3.2.3 Description of benefits

The next part of the CR template asks for a description of the benefits. EXP4 reported that, in practice, the most common benefit description is basically "This will make my life easier". Such a description is incomplete and too vague to assess if the effort of a requested change is justified by its benefit. To improve the quality of the descriptions, we added another guideline which supports the requestor to provide the expected information for the requirement type they specified. For CRs raised to meet legal requirements, the law or details should be stated in the specification; a quantifiable justification of the benefit is not required, as legal requirements are mandatory for the company. For the categories, standard change and others, the guideline is less specific, as these can capture various changes, which must each be assessed in detail. For error prevention, a description of the error, its frequency and its impact on the company or its customers must be provided. For process improvements, a business case should be provided with a quantifiable calculation, preferably monetary value (EXP1, EXP2, EXP3, EXP6). A quantifiable benefit could also be a calculation of saved time, the sales volume of an affected customer, or the number of affected documents in the system (EXP5). This calculation is the foundation for the approval of the CR.

3.2.4 Giving examples

One of the core findings of the interviews is that incomplete problem and benefit descriptions are common and require significant time for clarification. However, the development of well-designed criteria to judge a good or bad problem and benefit description was a challenge. Most experts have given a vague statement that they must be able to see that the requestors have invested some time into justifying their request. However, this subjective judgment cannot be translated into a clear guideline. It is challenging to pinpoint standardized quality criteria, as CRs for ERP systems vary significantly due to the high system complexity. To conquer this issue, we also added examples of a good problem and benefit description to the CR template, which gives the requestor a reference on the scope and level of detail expected.

3.2.5 System dependencies

The next section of the CR template, pictured in figure 2, deals with the dependencies of a requested change. A change to an integrated ERP system will often impact other parts of the system, like different SAP modules or interfaces with other internal or external systems. To avoid unwanted side effects, it is essential to recognize these dependencies whenever a CR is raised (EXP2, EXP5). In the left column of figure 2, the system dependency checks identified through the interviews of experts in the field are listed as an example. The needed checks in a CR template will vary between organizations, as ERP systems are customized to the individual needs of an organization.

System dependencies

Master data	☐ no impact	Click or tap here to enter text.
Authorization	☐ no impact	Click or tap here to enter text.
Order entry / upload	☐ no impact	Click or tap here to enter text.
Delivery Notes, Shipments	☐ no impact	Click or tap here to enter text.
Billing documents / e-Invoicing / EDI invoicing	☐ no impact	Click or tap here to enter text.
Pricing and Rebates (incl. upload forms)	☐ no impact	Click or tap here to enter text.
Return processes / complaint handling	☐ no impact	Click or tap here to enter text.
Output types	☐ no impact	Click or tap here to enter text.
Reports	☐ no impact	Click or tap here to enter text.
Interfaces to other systems	☐ no impact	Click or tap here to enter text.
Other special processes (please specify in detail)	☐ no impact	Click or tap here to enter text.

Figure 2: Change request template part two

Evaluating all system dependencies requires an excellent understanding of the system. Therefore, judging the impact a change has on the system is a highly complex task that often requires experienced developers' support (EXP4, EXP5). Because the system dependencies are critical yet complex to assess, the authors recommend that this section should be filled in by all involved parties in the change management process: The requestor, receiver of the request, and developer doing the implementation should judge the system dependencies from their perspectives. In practice, the requestor will likely be aware of any other local systems or market-specific processes impacted by the change. The request receivers can use their global experience to judge further the impact on other system processes, such as the invoice layouts, pricing conditions, and output types. Lastly, the developer assesses technical system dependencies, for instance, by checking the program code. The results of each check must be documented in the column on the right. If a check is not relevant to the respective CR, it can be indicated by ticking the "no impact" box in the middle column.

3.2.6 Language

For a globally operated ERP system, a common language must be defined in which requirements are to be documented. Some experts reported that requiring the requestor to write down their requirements in English as a typical secondary language does not pose any problem (EXP4, EXP5); others reported that it had caused some issues with understanding a request in the past (EXP1, EXP3, EXP6). Nevertheless, the use of English as a typical secondary language is unavoidable. English should, therefore, be a prerequisite for a person to assume the role of a requestor of CRs for a globally operated ERP system. Regarding modelling languages, as commonly used in RE, all interviewees reported that they have no experience with using them in the CR process.

Nevertheless, the interviewed team leads and managers reported that they expect modelling languages to be beneficial in reducing language-driven errors and the overall ambiguity of descriptions (EXP1, EXP2, EXP6). EXP1 noted further that establishing the use of modelling languages requires a thorough organization preparation first. Requestors globally must be equipped with the tools, programs, and training to create diagrams in the selected modelling language. EXP2 also noted that asking the requestor to use a particular modelling language could risk good ideas not being submitted because raising a CR is too big of an investment. An organization could lose some good ideas, which may have made processes more efficient for many business users of the system. Overall, implementing the usage of a modelling language requires a well-designed global approach for the whole organization, which is out of scope for this artefact. As a short-term solution to reduce ambiguity in natural language, we ask the requestor to include screenshots and videos in their CR specification (see figure 1), as proposed by some experts (EXP2, EXP3).

3.2.7 Risks of a new template

A general remark was given by EXP2, who noted the concern that an organization must ensure that the process of raising new CRs is not too bureaucratic, as it could lead to a false impression for the requestor that their ideas to improve the system are not welcome. The company relies on good ideas from its users to continually enhance its ERP system. Thus, we focused on keeping the template and its guidelines reasonably simple while also ensuring that the requestor understands which information is essential.

3.3 Evaluation of the template

As a next step, we put the new CR template to a trial in practice and gathered feedback from both parties, the requestors for changes and those who receive and evaluate these CRs.

3.3.1 Requestor feedback

To trial the new CR template regarding its usability, we approached requestors of CRs from five countries worldwide and asked them to fill out the template for one of their current or past CRs. Each requestor has a different level of experience in the CR process of the company, varying from less than one year of experience to more than ten years of experience.

The first requestors from Romania (REQ1) and Korea (REQ2) have less than one year of experience requesting changes for the ERP system. They reported that the template is clear and will not consume more time to raise a CR with it. They also noted that the template requests more information from the beginning, which avoids long e-mails for further clarification. REQ2 added that the template helps them structure their requirements.

A requestor with three years of experience is from the United Arab Emirates (REQ3). REQ3 mentioned that it is unclear what kind of proof is required to describe benefits for a legal requirement. From the authors' perspective, this is a valid point that should be further explained in the guideline. The extent of the template itself does not discourage them from raising new CRs; REQ3 noted that it is more transparent what information must be provided upfront.

A requestor from the UK (REQ4) has more than three years of experience and raised numerous CRs. REQ4 reported that the additional explanations and questions for the descriptions encouraged to think of details that might have been overlooked otherwise and concluded that the quality of the requirements descriptions would "improve massively". Overall, REQ4 expects to spend less time raising CRs, as they will also forward the new template and guideline to the British business end-users of the ERP system to show them what information is required when raising a CR for the UK market.

The Danish requestor (REQ5) with over ten years of experience noted that they especially appreciate the list of system dependencies that can be ticked off because it helps remind them what parts of the system could be affected and should be considered. REQ5 expects that the quality of CR descriptions will remain the same with or without the template. This makes sense from the authors' perspective, as REQ5 has many years of experience in this process to know what information they should provide. REQ5 also noted that they can fit "a very high proportion" of new CRs in this template and do not see the need to add more templates for different use cases.

Generally, the requestors with less experience expressed that they value the guidelines on the problem and benefit descriptions the most. The more experienced requestors expressed that they value the guideline for the level of detail and completeness of information the most. The value-add of the template seems more prominent for the less experienced requestors, which meets the expectations of the authors, as requestors who have raised numerous CRs in the past have naturally obtained a good understanding of how to best specify their requirements.

Overall, the feedback aligns well with the authors' intended benefit of the new template. The template and guideline seem beneficial to the requestors to increase the quality of their descriptions and, for some, also to reduce the time needed to raise CRs.

3.3.2 Receiver feedback

We sent the filled-in CRs from section 3.3.1 to three employees who are the receivers of changes in this process at the interviewed company. We selected employees who were not part of the expert interviews and asked them for their feedback on the new template regarding the quality of descriptions provided by the requestors and whether they see the need for additional clarification. In addition to feedback from the requestors, another critical evaluation is whether the template saves time for the receivers of a CR.

The first receiver (REC1) feedback that the template's content was easily understandable. Regarding the completeness and consistency of the requirements description, REC1 noted that it has improved, but the description of benefits still lacks the needed level of detail from their perspective. In this company, the benefit description of a change was not prioritized in the past; it was common practice that one sentence about how this change will help with sales was accepted. We expect it will take time for the more experienced requestors to get used to this new guideline and quality standard for descriptions. REC1 further mentioned that they appreciate the guideline for the problem and benefit description because it helps them quickly judge whether to send back a CR due to incompletion. In the past, this decision had to be made case by case based on experience and gut feeling; thus, having such a quality standard brings more transparency and efficiency into this process.

The second receiver who asked for feedback (REC2) reported that the provided filled-in CRs all have an evident problem description and proposed solution, but the benefit description is still too generic and would require some reclarification. Overall, REC2 noted that the template helps follow a more structured process to gather the information and question the requestor's requirements. The requestor is encouraged to think about additional aspects like the system dependencies. This receiver believes that the time to specify requirements might increase at first, as the template must be enforced with the experienced requestors who are not used to a guideline in which they must fit their requested changes. Long-term, they assume the template will help save time clarifying requirements.

The last receiver (REC3) gave brief feedback that the quality of the requirements provided in the template was better than without it. Like REC1 and REC2, REC3 also noted that the only aspect that needs reclarification in the provided CRs is the description of the financial benefit.

Overall, the feedback from REC1-REC3 demonstrates a positive effect of the template on the quality of the requirements descriptions and a long-term positive effect on the time it takes to clarify CRs.

4. Conclusion and outlook

This paper has explored how companies can become more time-efficient in their specification of CRs and whether methods from RE can be applied. The outcome of the qualitative content analysis shows that some of the existing methods from RE could be applied to the use case of CRs, such as the categorization of requirements and usage of transparent requirements specification templates. We also found that a complete and consistent description of the problem that originally triggered the CR as well as a description of its benefits led to a significant decrease in the time needed for clarification. Furthermore, the research concluded that every CR should contain a detailed consideration of its dependencies to the existing ERP system. To achieve this, we developed an artefact in form of a CR template which provides the requestors with a transparent guideline on how to properly specify their CRs.

The CR template was tested in the practice of a German automotive supplier. The feedback was promising; the requestors for changes reported that the new template is clear and understandable. The template does not discourage anyone from raising new requests. Both the requestors and receivers have noted positively that the transparency of what information is expected in a requirements description for a CR has improved. Furthermore, the overall time of specifying CRs and the quality of each change description has been judged to have improved or remained the same compared to without the template.

Although the feedback from the trial implementation of the template in the company was positive, this short trial cannot accurately reflect the template's usefulness in day-to-day business. The requestors have likely dedicated more time to completing these CRs than they would regularly. Moreover, the template was developed based on the findings from interviews with experts from the same company where the method has also been trialed. To judge whether the template would be universally applicable and beneficial, more trials at different companies facing similar issues with the specification of CRs should be conducted. A quantitative assertion of how much the overall time efficiency is increased through this new template requires a long-term trial with different participants and companies, which should follow as the next step in this field of research.

Nevertheless, within the company involved in this research, the artefact has been a success; the template has been in use for more than six months, and the employees involved in the CR process have voiced positive feedback regarding time-efficiency and quality of raised requirements.

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Refining Employees' Engagement by incorporating Self-Directedness in Training and Work Environments

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Abstract: Employee engagement constitutes a critical driver of business success in today's competitive marketplace, since it effectuates internal stimuli for action and reaction. Fostering engagement into one's workforce is not a simple, one-dimensional task, but rather entails a multiplicity of factors and a conglomeration of approaches. The term 'Employee Engagement' relates to the level and breadth of an employee's commitment and connection to an organization and is influenced by a variety of factors such as organisational culture and communication schemata, managerial styles and leadership types, general policies and practices within the workplace. To this end, the aim of this paper is to introduce a strong connection between engagement and self-directedness by melding it with psychologically, educationally and strategically elaborated notions of facilitation (Knowles, 1975), self-actualization (Maslow, 1943) and autonomy (Lopes, Calapez and Lopes, 2015) along with operational tactics of learning and training that can address different mentalities and generations (Berkup, 2014). Employees need to be assisted in developing and evolving critical skills such as their self-directedness by means of empowerment. This study considers that empowerment and commitment can be achieved if management integrates self-directedness notions and principles into one's training and work environment. A self-directed employee is a dynamic, self-reflective, mature and autonomous person that chooses to engage and remain engaged. Self-initiation can be displayed, communicated and instructed, since people are the making of social, cultural and discursive constructions (Lopez et al. 2015). Considering that self-directedness leads to improved personal agency and initiative, adaptability and employability in the labour market, and efficiency in terms of organisational performance, instilling it in employees translates to endorsing engagement into one's personnel. That is why a detail literature review approach has been adopted for the research purpose highlighting significant works on self-directedness, empowerment and engagement. The data is collected from various databases, research articles, whitepapers, magazines, project works and the internet. This study contributes to extending literature on the relationship between self-directedness and engagement by addressing key practices and factors that attribute to fortifying their interrelation.

Keywords: Employee Engagement, Self-Directedness, Empowerment, Self-actualization, Generation Mix, Psychological Contract, Motivation

1. Introduction

According to Cloninger's et al. Temperament and Character Inventory (1993), Self-directedness is one of the three aspects of the human character (along with Cooperativeness and Self-transcendence) and consists of five subscales: responsibility vs. blaming; purposefulness vs. lack of goal direction; resourcefulness vs. inertia; self-acceptance vs. self-striving; and congruent second nature vs. incongruent habits. It stands as a bio-psycho-socio-spiritual constituent of personality that is either intrinsically or extrinsically acquired and developed. All the more light is shed on self-directedness for it serves a lot of purposes and empowers the individual to the core. It is not necessarily innate, but can be taught and promoted; thus, incorporating it in training and work environments, could refine employees' engagement, since empowerment leads to engagement and self-directedness leads undoubtedly to empowerment. Self-directedness has the capacity to bring out potential in people. Self-initiated people are people with internal control and self-guidance. They are purposeful, resourceful and self-actualizers. Organizations need now more than ever an engaged workforce throughout the hierarchy, so as to generate valuable business results. After all, this ability to direct our own engagement and growth is now less of an academic theory and more a necessity for success in our field of work.

2. Literature Review

2.1 The Psychology of Engagement

Promoting optimal employee engagement has been an ever-lasting concern in the business world, with perhaps the most common misconception of businesses being not actually identifying its multifaceted nature but trying a one-size-fits-all approach (which will only work for a percentage of the workforce). *Maslow's Hierarchy of Needs* provides a foundation of people's psychological development. It represents a ranked useful framework, linked to organizational theory among other things, because it offers insight on human motivation and engagement. Understanding what people need, how those needs differ from person to person and identifying important drivers of employee satisfaction (or their absence) is important for effective management; that is why generation gaps and subsequent differences in perceptions and actions have also been addressed, so that drivers can help bridge the gap and be applied effectively in any multigenerational workplace.

Maslow (1943) developed a five-stage model pyramid, depicting equivalent stages of needs:

1. *Biological and physiological needs:* are the basis and involve the primary ones for human survival such as air, food, drink, shelter, clothing, warmth, sex, sleep, etc..
2. *Safety needs:* protection from elements, security, order, law, stability, freedom from fear. People want to experience predictability, order and control in their lives.
3. *Love and belongingness needs:* family, friendship, affiliations (interpersonal relationships).
4. *Esteem needs:* consist of two categories: a) esteem for oneself (dignity, achievement, mastery, independence) and b) the desire for reputation or respect from others (status, respect, prestige).
5. *Self-actualization needs:* realization of personal potential, self-fulfillment, seeking personal growth and peak experiences; a desire to become the most that one is capable of becoming.

Even though, an eight-stage model was later on formulated (Maslow, 1970), the five-model stage has the unadorned, but complete adequacy to show how to tap into the potential of employees who are not (actively) engaged. The more engaged one becomes, the more strongly growth needs are detected and sought, since growth needs do not result from a lack in a quality, skill or desire, but rather result in a person's willingness to grow even further and pursue to self-actualize, that is to reach the highest level of fulfillment and potential. *Self-actualization is a continual process of becoming rather than a perfect state one reaches of a 'happy ever after'* (Hoffman, 1988, p.238). This is the final stage, where one perceives his/her engagement as actually yielding desired results.

According to Gallup's State of the Global Workplace Report (2021) only 20% of employees are engaged in the workplace. Following a steady pattern over the last decade, employee engagement decreased globally by two per cent, from 22% in 2019 to 20% in 2020. If leaders seek to address this decrease and its subsequent consequences, they can utilize the Maslow's Hierarchy model taking into consideration the Generation Mix (McIntosh-Elkins, McRitchie and Scoones, 2007), otherwise this decrease will have an even worsening business impact on workplace culture, employee retention and performance. Prioritizing and aligning responses in accordance with employee needs and work habits is imperative for boosting and strengthening engagement and commitment. These kinds of responses need to also consider the active multigenerational workforce, consisting of four existing generations (Dimock, 2019), whose boundaries and cutoff points are rough estimates (Chronological Generation Classification ± 1-5 years): a) Baby boomers; b) Generation Xers; c) Generation Y or the Millennials; and d) Generation Z or the Post-Millennials. Technological, political, economic, social and environmental factors define each generation's formative and developmental years. This fact alone presents challenges for today's employers, since employees' traits, beliefs, outlook and life experiences from different generations influence the way they behave, work, communicate, learn and respond to change. Each preceding or succeeding generation varies in many respects, that is why a table with their main characteristics has been formed.

Reinforcing engagement translates to responding to and impacting on employees' multifaceted needs by applying Newton's law of action and reaction; a bidirectional process. Businesses need to *pay* employees sufficiently so as to satisfy their basic needs; *provide* for them and take care of them so as to secure their wellbeing; *include* them so as to offer them a sense of association and belonging; *recognize* their effort and achievements so as to boost their self-direction, and lastly; *empower* them by any means necessary (e.g.

autonomy in decision-making, training opportunities for advancement) so as to help them reach their full potential, according to their generational traits.

Table 1: Active workforce's generational traits

	Baby Boomers (1946–1964)	Generation X (1965–1980)	Generation Y (1981–1996)	Generation Z (1997–2012)
Characterization:	Optimistic, competitive, workaholic, team-oriented, in control, valuers of simplicity, risk-takers, aggressive in their pursuits, willing to make sacrifices for success	Flexible, adaptable, informal, critical, skeptical, cynical, independent, self-reliant, pragmatic, entrepreneurial,, survivors, used to uncertainty, favour diversity, resistant to change	Competitive, civic-minded, open-minded on diversity, team-oriented, achievement/ goal-oriented, dreamers, self-reliant/confident, independent, take uncertainty and challenge in stride	Global-thinkers, entrepreneurial, progressive, less focused, realists technology-driven and savvy, individualistic, realistic, competitive, leaders, financially conscious
Motivated by:	Company loyalty, teamwork, duty, quest for self-gratification/ achievements	Diverse and dynamic environments, work-life balance, their personal-professional interests rather than the company's, offering of tools to succeed	Responsibility, their manager's quality, favourable change, meaningful work experiences, loyalty, reward and work/life balance, cutting edge ventures	Diversity, personalization, individuality, creativity, skills advancements, challenging work-experience, independence, new technologies
Employers should:	Provide them with specific goals and deadlines; put them in mentor roles; offer coaching-style feedback	Give them immediate feedback; provide flexible work arrangements and work-life balance; extend options for personal growth	Get to know them personally; manage by results; be flexible on their schedule and work assignments; provide instant feedback	Offer chances to work on multiple projects at the same time; provide work-life balance; allow them to be self-directed

Source (modified from): Sladek & Grabinger, n.d.; P.G.U., n.d.; McIntosh-Elkins et al., 2007)

Employees' Reactions - Organization's Actions

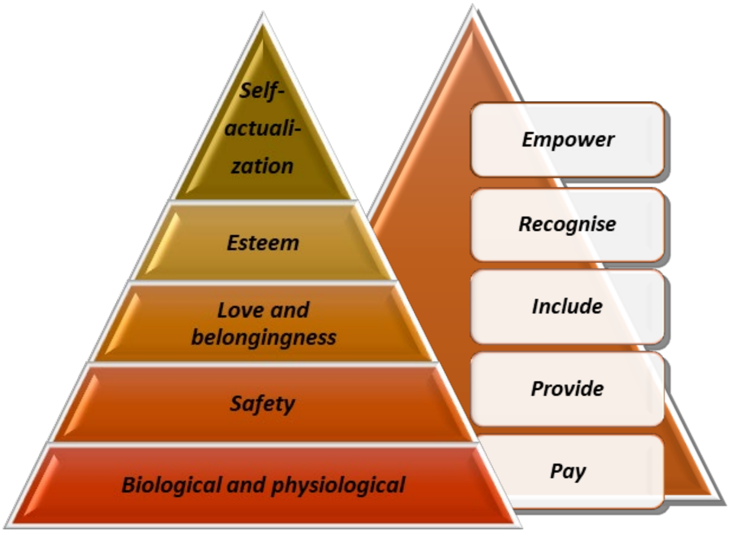


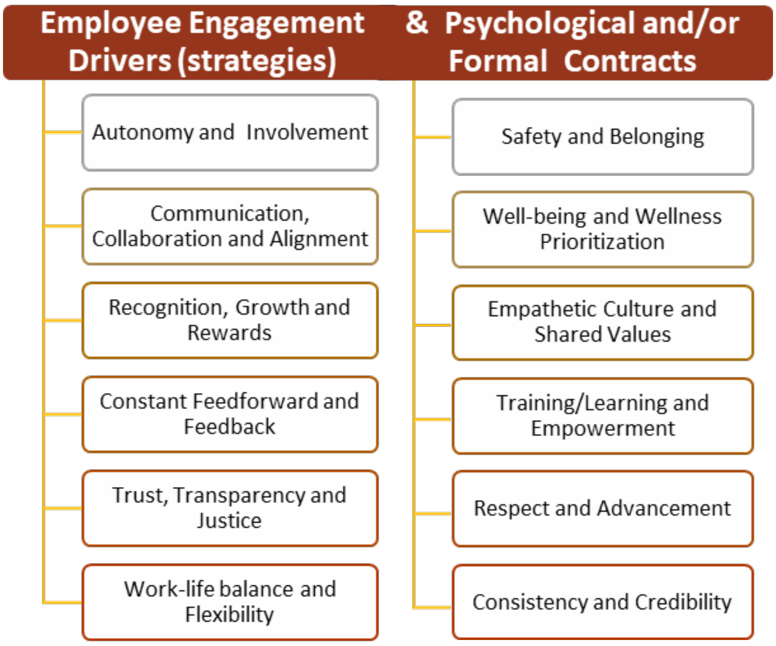
Figure 1: Feedback (needs) - Feedforward (expectations)

Source: Maslow (1943)

'Providing for', though, can be a proactive measure. Leaders should be able to offer feedforward, i.e. provide their employees of the context they want to communicate prior to their interaction, and then take feedback from the needs of their employees, and if and how these were met and satisfied, accordingly. Generational diversity demands for different approaches and adaptations. Thus, rather than receiving or providing feedback, employers should feed forward, that is provide future-oriented options, solutions or rewards to their employees. Hence, when employees are offered a good health insurance, it means that companies aid them in being healthy; being healthy means no absenteeism; employees reliably come to work (feedforward control). Likewise, a company empowers an employee because it sees potential in empowerment; potential that can lead to self-actualization and efficient performance in the workplace. This 'reverse process' (first the feedforward and then the feedback for reconfirmation) could lead to stronger engagement and a better understanding of the mutual obligations, expectations, beliefs and ambitions (Rousseau, 2008) employees and employers have towards one another (the Psychological Contract formed, preceding the formal), since the company 'offers' before it 'receives'; when employees feel valued they are more likely to reciprocate (Soares and Mosquera, 2019) and 'compensate' the company by being more productive and engaged, no matter their generational mentality differences.

2.2 The Venture of Employee Engagement

Increasing complexity, demands and crises in the business world and the need for resilience and sustainability have driven companies and organizations to reinvent and develop engaging practices (Sulkowski, Edwards, & Freeman, 2018). According to a Gallup study conducted by Harter et al. (2020), employee engagement reflects the involvement and enthusiasm of employees in their work and workplace. Given that engagement is important to organizational success, the identification of motivators, drivers and strategies that foster work engagement has become an important research stream (Shahid, 2019). To this end, companies have introduced a variety of metrics to measure, analyze and track employee engagement, and, accordingly, take measures, where necessary, to design interventions and implement different practices to improve it. Especially in an era where work has become more complex (remote or hybrid) and the employee-employer work agreement and model have been modified (McIntosh-Elkins et al.,2007), a deeper understanding of factors that drive work motivation and engagement of all four pre-mentioned generations is necessitated.



Source (modified from): Berkup, 2014; Lopes et al.,2015; McIntosh-Elkins et al, 2007; Sladek and Grabinger., n.d.; Shahid, 2019; Soares and Mosquera, 2019

Figure 2: Most Prevalent Engagement Drivers and Parties' Contracts

Thus, to the best of our knowledge, we aimed to gather and list drivers that employees from different generations associate with and promote self-directedness, and though the majority of these factors has already been mentioned in research, their indispensability is perpetual. Berkup (2014) has spoken of recognition, feedback, work-life balance, positive environment and skills development that advances engagement, stimuli and performance; Lopes et al. (2015) have spoken of autonomy and involvement that drives people to exceed themselves, the sense of belonging, respect, employee's well-being; McIntosh-Elkins et al (2007) have addressed matters of communication and collaboration, rewards and recognition, trust and transparency, feedforward necessity along with training opportunities; Sladek and Grabinger (n.d) have analyzed the importance of consistency in actions and directions along with flexibility; Shahid (2019) has spoken of shared values and the structure of leadership; Soares and Mosquera (2019) have addressed, among other things, the role of the psychological contract and meaningful work. Keeping those in mind, a new employee engagement framework of drivers is presented where drivers are in accordance not only with the formal, but also with the psychological contract formed and acknowledged by both parties. The results of these drivers do not occur by default, but progressively (Shahid, 2019).

The need for better-designed employee engagement programs has been acknowledged, along with offering a holistic employee experience by various researchers and theorists (Robinson, Perryman and Hayday, 2004; Maltese, 2021). Engaged employees can result in 23% higher profitability and 10% higher customer loyalty/engagement (Gallup study, 2021). Giving employees the sense of belonging, of feeling valued, and more autonomy and ownership over their tasks, behaviour and training can lead to improved results, such as self-direction and empowerment. All the drivers mentioned above make allowances for the well-being of the employee so that, conclusively, the well-being of the company/organisation is cherished too; the more positive the impact on the workforce, the better the impact on the company as a whole. Once a company has managed to connect its goals with the goals of its personnel (and vice versa) engagement can be improved. According to the Achievers Culture Report (2020) those who feel connected to their organization's values and vision are five times more likely to feel engaged at work and contribute to its goals.

3. Engagement through Self-Directedness and Empowerment

"Wisdom begins in admitting your own ignorance."

Socrates

"Over the years, the concept of 'self-directedness' has been studied in a variety of domains and disciplines" (Raemdonck, Thijssen and De Greef, 2017, p. 402). This widespread interest in self-directedness is explained by the underlying assumption that self-directedness leads to self-determination, self-confidence, initiative, perseverance and life satisfaction. In learning schemata, self-direction, mainly, represents a four-stage process that entails: being ready to learn, setting learning goals, engaging in the learning process, and evaluating learning. Self-directed learning (SDL) has always been within the human nature. The ancestry and roots of self-directed learning goes way back in the antiquity (Socrates, Aristotle). However, it has been popularized and scrutinized by scholars in comparatively recent years.

Although, not commonly known, Cyril O. Houle (1961) was the first to identify self-directed learning of adults in his study '*The Inquiring Mind'* (Candy, 1991; Merriam, Caffarella and Baumgartner, 2007; Brockett & Donaghy, 2005). Houle recognized three different types of adult learners: the *goal-oriented* learners; the *activity-oriented* learners; and the *learning-oriented* learners. Allen Tough (1971), a doctoral student of Houle, pinpointed the reasons why adults engage in learning processes and showed that they, themselves, planned their learning projects, i.e. resources, content, method, schedule and pace of learning (self-planning), so as to combat problems and challenges, and/or to bring about change and improvement in themselves by gaining more knowledge and acquiring new skills. Following the above studies, the most disseminated and widely known theory linked to self-directedness in learning environments is *Andragogy*, by Malcolm Knowles (1968, 1975), the art and science of helping adults learn (Adult Education principle). Knowles argued that adults possess self-management skills and can undertake the initiative in their own learning (motivation). He viewed adults as autonomous and self-driven beings that can identify their learning needs, formulate their learning goals, determine the respective needed resources for learning, and, finally, select and implement the appropriate learning strategies. Naturally, other definitions were later formulated too, which also show that in order to self-direct, one needs to be engaged and vice versa.

Garrison (1997), accordingly, pinpointed learners' self-direction in a learning environment. He formed a three-dimensional model which integrates self-management, self-monitoring and motivation, and is based on cognition and context. Taking primary charge of planning, continuing and evaluating learning experiences is also how Merriam et al. (2007) defined self-initiation in learning. Likewise, Merriam and Bierema (2013) claimed that initiative, active involvement and control of the learner over the learning process is imperative and an integral part of autonomy and self-directedness. In this sense, SDL includes the conceptualization, design, implementation and evaluation of learning by learners themselves according to their needs and preferences (Brookfield, 2009) and is viewed as a natural form of learning where adults pursue learning to face their daily problems (Brockett and Hiemstra, 1991).

Taylor (1995) defined self-directed learners as demonstrating greater awareness and motivation to take responsibility in making learning meaningful and confronting problems as challenges. Similarly, Candy (1991) formed a four-dimensional model of self-directedness in learning, and presented us with attributes such as: personal autonomy (deciding and taking action); self-management (willingness and ability to manage one's own learning); learner's-control of instruction; and autodidacticism (self-education), which aid the individual become empowered. Evidently, self-directedness leads to empowerment and empowerment can lead to a greater sense of engagement.

4. Measuring Self-Directedness' Influence

Following the theorists, Guglielmino (1977) formed one of the first quantitative instruments to measure self-direction; the Self-Directed Learning Readiness Scale (SDLRS), which was one of the first quantitative instruments to measure SDL. Even if his instrument received a lot of criticism, it still remains the most widely used tool to measure it (Merriam et al., 2007). Since the 1980s, SDL has been widely researched, scrutinized and regarded as a core aspect of Adult Education principles. Brookfield (2009), for instance, argued that studies lacked in variety and methodological approaches, targeting specific groups of learners. He also noted that self-directed learning represented mostly means of self-instructional methods and techniques and not necessarily an internal drive to intellectual pursuit and advancement.

Sharing the same concerns, Brockett and Hiemstra (1991) pinpointed the confusion that the term, concept and construct of 'self-directed learning' pose to different theorists and researchers. To clarify misunderstandings from past attempts and constructs, they created their own model of self-directedness in learning, the Personal Responsibility Orientation (PRO) model. The PRO Model makes a distinction between the external, process-oriented concept of self-directed learning and the internal, individually-oriented concept of learner self-direction. They both comprise Self-Direction in Learning, and entail personal responsibility and social context. Stockdale and Brockett (2011), operationalising the PRO model, developed an instrument, the PRO-SDLS model (Personal Responsibility Orientation to Self-Direction in Learning), which has two components: the Teaching Learning Transaction and Learner Characteristic. The former refers to the process of self-directed learning and elaborates on two factors: initiative and control. The latter refers to autonomy, self-assertiveness, stimulus and self-regulation and accordingly elaborates on self-efficacy and motivation.

More recently, Raemdonck, Thijssen and De Greef (2017) have developed an instrument to measure self-directedness in work-related learning processes (SDL-scale) used for employees that have different qualification levels. They have focused on the notion of self-directedness as a coherent network of cognitive (beliefs), affective (attitudes), volitional (intentions) and behavioural patterns. Any individual is required to evoke this network of patterns so as to actually self-direct the learning process, namely: goal setting, choosing strategies, executing the strategy, monitoring and evaluation. This shows that the 'pattern' is more or less the same whether learning or work environment is involved.

5. Discussion on the Importance of the Research

All things considered, it is obvious that the above instruments, along with others, can be used to measure self-directedness of the employees in any environment, and alongside give us clues and hints on how to foster and enhance their engagement (Chakravarthi & Vijayan, 2010). A high level of self-directedness can empower employees respond to challenges and cope with demands, as well as enrich their knowledge, skills and capabilities in order to fortify their career status and enhance their wellbeing. Thereby, a lot of organisations have turned to training schemata that are no longer 'sage on the stage', but learner centred. Moreover, companies have changed their structures from hierarchical and managerial-oriented to the empowerment of employees through autonomy and self-directedness (Belias, Rossidis, Papademetriou and Mantas, 2021). That is why the responsibility for learning has been shifted to the individuals and teams themselves (self-driven teams) in the workplace. An intense interest in transferring power from institutions to individuals has been also noted (Rigby and Ryan. 2018). Steve Jobs (2019) once said: "*It doesn't make sense to hire smart people and tell them what to do. We hire smart people so they can tell us what to do*." Accordingly, organizations should teach and guide employees towards self-directedness and self-empowerment, and simply 'get out of their way'. Incorporating self-directedness in training and work environments can help an organisation do exactly that, since there are sources of untapped potential within every organisation. That is why recent research has intensified on showing the means that can bear fruits.

Lemmetty and Collin (2020) addressed the challenges employees have to continually encounter and the need for employees autonomy and self-directedness, especially in low hierarchies. They found that the multidimensional concept of self-directed learning at work is essential to the workforces' engagement and performance. The workers of their study talked about self-directed learning as 'an obliged, creativity-enhanced as well as flexible and fast-paced practice' (p. 62) that grew their competency. The employees emphasized the responsibility of individuals and groups concerning their own learning, and realized that typical workplace activities, such as learning from mistakes, self-managed observation, training others and learning through interaction, were actually SDL activities, intertwined with work practices, that helped them improve and get a better grasp of their contribution to the organization. However, they also found that learning can become problematic, stressful, burdensome and alienating, if support and tools are not provided by the organisation and peers to monitor, restrain or alter learning processes. Critical thinking and understanding is needed, and SDL should not be inflicted on employee, but rather progressively cultivated and elaborated upon. For this reason, they concluded that further research should be conducted considering the collective practices and nature of SDL on the level of teams and organisations.

Vithayaporn, Yong and Chai (2021) performed a study in order to investigate the key role of SDL in enhancing employee competencies that fulfil up-to-date skills requirements. They found that employees are challenged to assume more responsibility for their learning to remain skillful, knowledgeable, and of competitive qualifications and, thus, SDL can prove to be a critical tool for leverage. Unity, mutual learning, support, willingness and collaboration in the workplace culture is important so as to implement SDL and empower employees via new competencies acquirements. Evaluation by superiors and peers, effective communication and interaction, personalized coaching and instructions, accessibility to sources and resources of knowledge and skills can facilitate learning and boost one's assertiveness and self-directedness. After all, bearing in mind that all people are to some degree intrinsically motivated and seek meaning making in their work, it is quite engaging when one puts to use one's competencies and skills. "All other things being equal, when people have the opportunity to do work in a way that a) effectively uses their skills; b) fits their values; and c) provides the freedom to exercise choice, they will be fully motivated to engage in their work" (Macey et al., 2011, p.130).

Interventions that serve confidence and resilience are also those that help enhance the motivation to engage, not just the capacity for doing so. Piotrowski (2020) studied the relationship between SLD and employees' resilience; resilience being an individual's ability to manage adverse circumstances and, thus, a constituent and a counterpart of engagement. She found that the more self-directedness empowers people to grow in their roles, the more they will adapt and remain productive during times of change and crisis. Dealing with healthcare middle managers, she identified that both SDL and resilience reflect an internal control by the individual; and concluded that the managers could be benefited if they could be encouraged to develop SLD so as to improve their work for themselves and others. Thus, the foundation of self-directedness is an interactive and dynamic network of psychological and cognitive schemata one needs to understand and address in order to exteriorize its qualities.

6. Conclusion

This paper has examined the linkage between self-directedness and engagement. Self-directedness is complex and hard, as is engagement, since it is a construct with interrelated parts and of multidimensional nature; it requires a deep understanding and acceptance of the corporate mission, values and culture and is strongly affected by power and control. Comprehending people's potential, enhancing their skills and competencies by alongside giving them more power (tasks/responsibilities) and freedom (autonomy/control) to self-direct their actions, can create empowered people who seek to self-actualize for themselves and the organisation itself. As is deducted, companies can incorporate SDL with the appropriate culture and systems, and measure it with the right tools (SDLRS; PRO model; SDLS model; SDL-scale mentioned before), so as to strengthen their status in the market in a turbulent era such as this we are living in. This paper strongly suggests future research on tools and means for self-directedness, such as the SDL-Scale (Raemdonck et al., 2017) that accounts for SDL in work-related processes, along with the elaboration of the drivers pre-mentioned that facilitate it, so as to boost engagement. After all, SDL presents a new digital normal and can be considered as the future of workplace training.

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Developing Business Model Competences in the Enterprise

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Abstract: Despite the COVID-19 pandemic, 2021 saw a growing interest in starting own business: as per the Census Bureau's Business Formation Statistics, the number of applications to form new businesses filed in the U.S. was the highest compared to any other year on record, reaching the total of 5.4 million (Economic Innovation Group, 2022), while in the EU, after an initial downward trend recorded in the first and second quarters of 2020, the number of new business registrations grew again in the third quarter of that year, and this upward trend continued throughout 2021 (Eurostat, 2022). Of course, as a result of Russia's invasion on Ukraine and related economic crisis, a downward tendency could be observed, but business registration levels in the EU in the first quarter of 2022 were still higher than during the pre-COVID 19 pandemic period (2015–2019) (Eurostat, 2022) and online searches indicating and intent to open a business spiked by 76% from 2018 to 2022 (Search Engine Journal, 2022). This shows that despite many external impediments, people are still tempted to start their own business, and many influencers, motivational speakers and coaches, as well as various popular TV shows broadcast worldwide (like the Apprentice, Dragons' Den, Shark Tank or Planet of the Apps) encourage them to do so. Becoming an entrepreneur has become a goal many people, especially 20-, 30- and 40-year-olds, strive to achieve. However, many of those people fail to realise that the very entry in the business register does not automatically make them entrepreneurs or their business successful. Neither does a good (or even excellent and innovative) business idea that attracts customers, as it was in Kodak's, Blockbuster's, or Ask Jeeves' case. What is required, is the ability to stay attractive to existing and prospective customers, i.e., the ability to win and retain customers, and to adapt to the changing demands, trends and economic conditions. All this can be achieved thanks to a meticulously designed and regularly reviewed and updated business model. The aim of this paper is to present and analyse the learning process of acquiring and building competences in the area of business models with the use of different innovative tools. The results presented and discussed in this article come from surveys as well as face-to-face and on-line meetings conducted in the ProBM 2 ERASMUS+ project *(Understanding and Developing Business Models in the Era of Globalisation)*, in which the total of 261 respondents from seven (7) European countries, i.e. Poland, Italy, Greece, Romania, Portugal, Malta, and Switzerland, took part between 2019 and 2022. From the meetings and surveys it follows that much more awareness of business models needs to be encouraged and developed, particularly as regards improving competences helping future business owners and their employees assess profitability and efficiency of their operations and ensure that the business will be a going concern.

Keywords: business models, competences, enterprise management

1. Introduction – Business model — what is it and why is it important in today's economy?

Even though the first interest in the topic can be traced back to the 1950s, the concept truly developed in the 1990s, as a result of the sudden explosion of e-commerce (Lewis, 1999; Afuah and Tucci, 2000; Magretta, 2002; Afuah, 2003; Zott, Amit and Massa, 2011; Rogoda, 2011; Onetti *et al.*, 2012). The interest in the topic of business models is still growing, particularly due to the success of such technological companies as Xerox, IBM, Apple, Google or Facebook achieved with the help of their unique and effectively implemented business models. The ever-growing interest in the topic of business models also stems from the fact that in the era of globalisation, digitalisation, and dynamic technological progress, the environment in which companies operate has radically changed, forcing them to intensify their customer-oriented activities and to regularly review the value they deliver. The market globalisation and internationalisation also changed the perception of the company's value creation and management processes, which should be organised and supervised in cooperation with related entities and not solely within the company (Nenonen and Storbacka, 2009). The growing popularity of the business model concept and the spread of the business model as an economic keyword seen in the late 1990s is confirmed by, among others, the results of literature analyses carried out in 2005 by Ghazani and Ventresca.

The literature on business models is fragmented and heterogeneous and it does not provide a clear and uniform definition of what a business model is. Shafer, Smith and Linder (2005) notice that even though many authors offer different definitions of a business model, none of them appear to be generally accepted, and that this lack of consensus is partly attributable to the fact that this concept is frequently analysed from the perspective of a wide range of disciplines (e.g., management, economics, social sciences, or even psychology), and by scholars and professionals alike.

The term 'business model' was first used in the article by Bellman et al. published in 1957. The simplest definition of the business model is offered by Lewis (1999) according to which the business model is simply the business owner's plan to make money. According to Alt and Zimmerman (2001), the first structured definition of the business model was provided by Timmers (1998) according to whom the business model is 'an architecture for the product, service and information flows, including a description of the various business actors and their roles; a description of the potential benefits for the various business actors; and a description of the sources of revenues.'

In the literature, the business model modules are described as interlinked components that, when combined, form a logically connected whole. Such a way of presenting business models may be found, among others, in the works by Osterwalder, Pigneur and Tucci (2005), according to whom the business model is a conceptual tool that contains specific elements and defines relationships between them, with which a company's business logic can be expressed. To summarise, it can be stated that *the business model is a set of specific components, attributes, and relationships, which present the processes of a company's value acquisition, creation, and delivery*.

Business modelling is the managerial equivalent of the scientific method – you start with a hypothesis, which you then test in action and revise when necessary (Magretta, 2002). A business model is a great tool that helps managers focus on the business as a whole and closely look at how all its elements interlink and fit together into a bigger picture.

The focus of the competences in business modelling was inspired by the findings of the World Bank Group Report 2019: The Changing Nature of Work and by the results of the research conducted by the World Bank in Togo in 2017, which both prove that what a business needs, is the combination of hard and soft skills. The first of the above-mentioned documents states that many jobs today, and many more in the near future, will require specific skills – a combination of technological know-how, business skills, problem-solving, and critical thinking, and these findings are supported by the results of the Togolese study, which show that entrepreneurs who attended training courses aimed at developing business models skills had an average of 30% increase in their profits, while those who attended general business training courses had an increase of only 11%.

2. Research methodology

The overarching aim was to present the learning process of acquiring competences related to business modelling. Competences are relevant to increasing the human capital of an organisation. If the staff are well-qualified, they will do their tasks efficiently. According to Sagi-Vela (2004), a competence is *'the knowledge, skills and attitudes that applying to carry out certain responsibility or professional contribution ensures their success*.' The author performed the research according to the three-step methodology indicated in Table 1.

Table 1: Research path — overview

	Poland	**Greece**	**Italy**	**Romania**	**Portugal**	**Malta**	**Switzerland**	**TOTAL**
Step 1 — Managers and employees' consultations								
Number of respondents	8	9	6	8	8	11	5	55
Step 2 — Development of the competence map and education materials (peer-review)								
Number of people from each partner organisation	6	4	4	2	2	3	2	23
Step 3 — Learning phases (March 2020–January 2021)								
Alpha testing	15	5	5	4	5	4	5	43
Beta testing	56	15	10	21	10	15	13	140
Total testing participants								183

Source: own study.

In Step 1, personnel from selected enterprises in the 7 countries (n=55), including managers and employees, were consulted to identify key competences associated with topics (modules) related to business models that are considered necessary to ensure work effectiveness. The research was done between 2019 and 2020. Based on the topics identified, the competence map was developed.

In Step 2 an open online training course consisting of different educational resources was developed. The resources were iteratively developed, tested, and refined by project partner organisations (n=23). The learning process how to gain competences was designed.

In Step 3 the learning phases were performed (April 2021–March 2022) — altogether 183 participants from the 7 countries took part in the learning phase.

The long period of the performance of the research was caused by the COVID-19 restrictions.

3. Findings

3.1 Step 1 — Topic and the competence map

The first research phase involved in-depth consultations with the representatives of enterprises intended to collect the data about the knowledge, understanding, and use of business models in practice. The results were used for the development of the training course in business models addressed to entrepreneurs and other people interested in the topic of business models. Those eligible to participate included, among others, entrepreneurs, business owners, business managers, and heads of business involved in managing enterprises operating for at least 5 years. The consultations were conducted electronically (via e-mail, Skype, Google Drive) or face to face.

Based on the obtained results, it can be stated that the entrepreneurs from the selected countries have some basic knowledge about what business models are (94.55% of respondents answered that they know what a business model is), but only 43.64% of the entrepreneurs surveyed have heard of the Business Model Canvas before. Almost 100% of the respondents admitted that the development of a business model in the company might be an important aspect, as it can contribute to the success of the company on the market. They also stated that a business model is crucial when it comes to reducing barriers or improving the overall business activity. Additionally, they listed a series of benefits stemming from the good use of business models, including: the plan for growth; the improved operations; the increased profitability and efficiency; the financial sustainability; or the unique corporate image.

Even though the entrepreneurs surveyed understood the role of business models, only slightly above half of them (50.91%) implemented a business model containing all necessary elements in their companies. The rest of them (49.09%) admitted that they did not implement business models because they did not know how to use them, or they indicated other reasons, such as: the early stage of business development and its specifics; the lack of knowledge of the management about this topic; the main focus of the company is on revenue streams and as a result not much emphasis has been placed on other elements of the business model.

Once the responses were collected, the participants received the list with the examples of competences in the area of business models. The competences were linked to the areas of business model canvas developed by Osterwalder et al. (2010), and which are listed as modules in Table 2. The respondents were asked to indicate which competences are crucial in those areas. The final competences are listed in Table 2.

Table 2: Business model competences – ability to:

Module	Competences
1. Introduction	interpret the definition of the business model
	rate the use and benefits of business model
	apply the elements of the Business Model Canvas
2. Customer Segments	interpret what a customer segment is
	employ the importance of customer segments in a business model
	analyse different customer segment models
	outline the impact of different customer segments on other parts of the business model
3. Value Proposition	apply the concept of value proposition
	interpret the elements of value proposition
	use the types of value proposition
	employ the most popular value propositions on the market
	select the most suitable value proposition to satisfy the clients
4. Channels	interpret each of the distinct various phases of communication, related to channels and their aims
	distinguish between the communication channels related to promotion and those phases related to place
	appraise different channels to communicate the organisation's value proposition

Module	Competences
	examine and critique current channels to improve communication with all customer segments and customer relationships
	consolidate and align the communication avenues listed under channels with customer segments, customer relations and value creation
	apply creative thinking to design cost-effective future strategies and innovative channels
5.Customer Relationships	interpret the definition of the customer relationship
	rate the importance of customer relationships in a business model
	employ different customer relationship models
	assess how different customer relationships are capable of impacting other components of an organisation's business model and vice-versa
6. Revenue Streams	apply the revenue streams block and its relation to other blocks
	evaluate current revenue streams to assess their strengths and weaknesses
	appraise the value of revenue streams and their relevance for organisational strategy
	examine and critique current revenue streams in order to improve communication with all customer segments and to improve customer relationships
	appraise and evaluate the current revenue streams segment in order to apply creative thinking to design future strategy and to list alternative possibilities and potential innovative revenue streams
7. Key Resources	interpret the definition of the key resources
	rate the importance of key resources in a business model
	employ the different types of key resources
	evaluate which key resources create the value proposition
8. Key Activities	interpret the concept of key activities within the Business Model Canvas
	inspect the main key activities within an enterprise
	use the relevant key activities required to reach the objectives and purposes of an enterprise
	assess the importance of key activities in the definition of the value proposition
	distinguish the relationship between key activities and the value proposition of an enterprise
	focus only on certain key activities, in line with the value proposition
9. Key Partners	interpret the concept of key partners
	apprise the main partnership agreements with respective advantages and disadvantages
	rate the support of key partners in own company/enterprise operations
	analyse the importance of key partners to satisfy customer needs
	verify the relationship between partners to create joint value
	analyse the role of key partners
	choose the most suitable partner(s) to reduce their own inefficiencies
	set the conditions for an agreement from which the company would benefit
10. Cost Structure	interpret the definition and examples of variable costs
	interpret the definition and examples of fixed costs
	examine the difference between variable and fixed costs
	calculate the variable costs
	calculate the fixed costs
	optimise costs in the company
11. Citizenship and Professional Values	examine the meaning of citizenship and professional values
	distinguish that a business is not only an economic, but also a social and political commitment
	assess the importance of citizenship and professional values in a business model
	implement the benefits of adopting citizenship and professional values in other parts of the business model

Source: own study.

The competences presented in Table 2 were then used for the creation of a comprehensive training programme (www.businessmodels.eu).

3.2 Step 2 – How to gain the competences and why are they important?

The didactic principles to be used while implementing the learning process dedicated to business modelling were proposed. The key basics were established:

- *The core of the training model should be a Learner-Centred Approach* – the focus of the learning process should be the learners and their background, interests and questions. They should be able, to a certain extent, to decide what and how they want to learn.
- *The didactic approach should be based on Autonomy/Active Learning/Experiential Learning* – learners benefit from a more self-directed approach, rather than an instructor-led approach. This means the need to create a learning path that can be self-managed by the learners. Encouraging curiosity, problem-solving, engaging in situations, discussions and discovery are all actions that must be undertaken to stimulate people's natural tendency to learn through exploration.
- *The target group motivation is a key factor for the success of the learning* – learners' motivation is mainly driven by internal motives. Each person has their own motivation, for example, professional development or personal growth.
- *Digital Technologies and ICT tools should be considered as fundamental resources for learning process* – e.g. multisensory environments, stimulate learning. People remember more when they see and hear information at the same time, as in multisensory presentations that stimulate creativity and problem-solving skills.

As for the form of learning, the learners were offered to use a comprehensive on-line educational course. Depending on the individual needs, they were able to use the materials from the 'Teach' section, which include online interactive presentations for each module prepared for trainers. On the other hand, the learners could choose the materials from the 'Learn' section which, step by step and in a text format, guides new entrepreneurs and learners through business model topics and materials.

Finally, as for the quizzes and exercises, they could use:

- Open questions to be used as self-assessment or peer learning within a group;
- Online questions with possible multiple choice or true/false answers, or open-ended questions to answer.
- The financial calculator for the estimation of the financial profitability of a business idea in order to calculate if the business activity is profitable, and after how many years costs of investments will be recovered**.**
- The Business Model Canvas Editor — an open digital tool that can be used to create own business model. It can be filled in with all the information by the user directly through the platform and, once completed, the document can be easily downloaded.

The learners gained competences through the application of the methodology based on the Deming Cycle. The Deming cycle, also known as the PDCA cycle (Plan, Do, Check and Act), is an approach of quality managers that helps implement a continuous improvement strategy in the company — in this case — the improvement of competences in the area of business models, which in turn helps solve problems in an orderly and systematic manner.

The Deming Cycle includes: planning an action to eliminate a recurring problem; controlling the performance of the business activity; performing analyses to identify the discrepancy between the plan and its implementation, and, finally, systematising the corrective change to consolidate a new, optimised process in the company's operations.

The first step in this research was to indicate learners' problems in the area of business models which need to be eliminated. The learners selected the contents built in the form of modules which were crucial for them. Each participant had the possibility to choose different modules, as the course is modularised, which means that the learners do not have to learn in a linear way — module after module. The number of the learners and selected modules is presented in Figure 1.

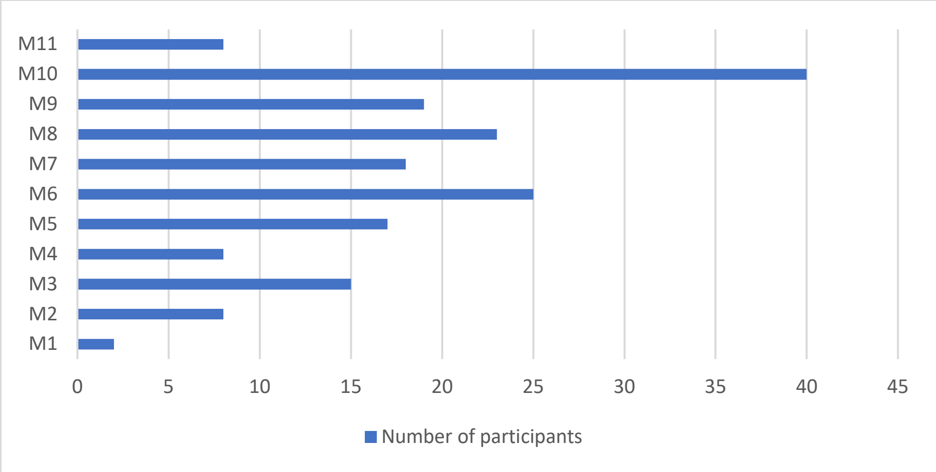

Figure 1: Number of learners vs. modules selected

Source: own study.

As it can be seen in Figure 1, the learners most frequently selected the topic related to finances (module 10 — cost structure, module 6 — revenue streams), and key activities (module 6). It was stated that finances are always the most difficult aspect in the company and the more knowledge you have, the better.

The second step was to learn the content of the module. It was done in the form of self-learning. The participants received all the materials and they were able to learn at time and place of their choice. However, they were asked to learn for approx. 4–6 hours per module, as planned in the course. The respondents found this lack of necessity to come to the classroom or participate in organised on-line meetings very convenient. On the other hand, they admitted that such courses are for people who are systematic and know exactly what they want to achieve. Fortunately, all of them managed to complete the selected modules.

The learners found the third step, i.e., the verification of the acquired competences through completing exercises and quizzes the most important. If the participants failed to complete any exercise or quiz, they were redirected back to the second phase. The failed attempts in each module are presented in Figure 2.

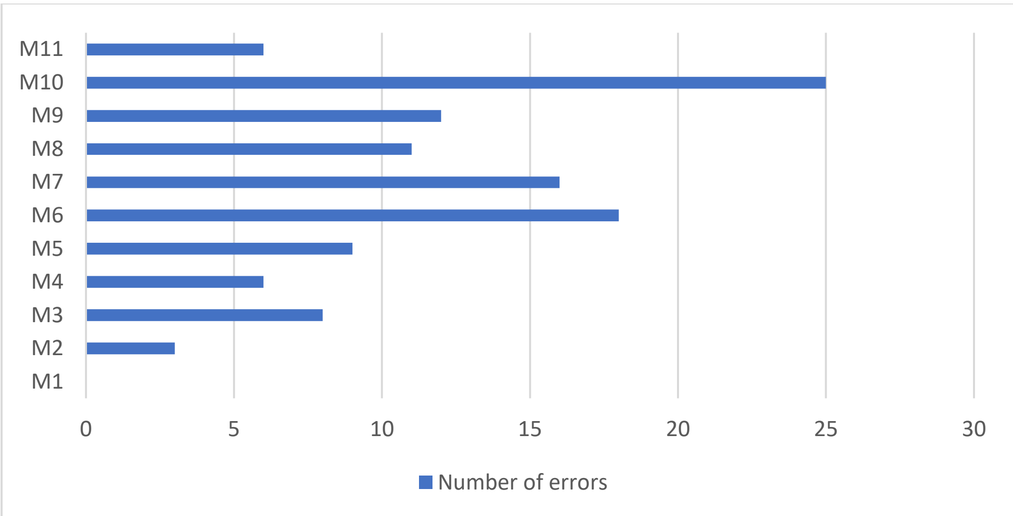

Figure 2: Failed attempts to verify competences

Source: own study.

As it can be seen in Figure 2, module 10 — cost structure — proved the most problematic, as participants tried to use the financial calculator to estimate investments, which was quite complicated. In the end they were able to use this tool correctly, but first they had to try several times.

The last step of the learning process concerned making a decision in which area of the business activity the competences will be used. This step was especially important for the current and prospective entrepreneurs in need of instant access to knowledge of business modelling.

The Deming Cycle was applied in the learning process because of its several advantages, i.e.:

- It provided a uniform methodology that can be applied in any area of the company to solve recurring problems.
- It saved time at the stage of searching for the most effective solution.
- It contained a set of comprehensive instructions necessary to ensure the full implementation of knowledge and competences.
- It guaranteed a detailed analysis of the most common errors in order to eliminate them.

3.3 Step 3 – Testing the educational resources

Participants from selected countries (n=183; Poland, Italy, Greece, Romania, Malta, Switzerland, and Portugal), who included entrepreneurs, trainers, adult educators, and students, tested the educational materials and completed the surveys to assess the various elements of the platform. The materials were evaluated positively with the grand mean of 85% in the alpha testing and 89% in the beta testing, where they were rated as excellent or good. Moreover, 71 respondents from Poland answered the following questions:

- How engaging are the proposed educational resources?
- Do they support the learning objectives and topics?
- Which are the top three educational resources that are both engaging and educational?

Out of the 71 respondents, 63 of them stated that the resources are highly engaging, 67 respondents thought that the resources are connected to the learning objectives, and 53 respondents stated that only case studies can be used separately as stand-alone learning resources. The respondents were also asked to rank the resources. The combined frequency is summarised in Table 3.

Table 3: Combined frequency of times resources is collectively ranked in top 3

Resource type	Frequency (number of times)		Relative Frequency [%]	
	Alpha testing	**Beta testing**	**Alpha testing**	**Beta testing**
True-false	49	54	23	25
Drag-and-drop Quiz	55	62	26	29
Crosswords	70	72	33	34
MCQ Quiz	24	18	11	9
Video-based	15	7	7	3

Source: own study.

It can be seen that the participants chose true-false exercises, drag-and-drop quizzes and crosswords as the most interesting. True-false exercises are very quick to do. Drag-and-drop quizzes make the learning process more interactive. The learners do not feel bored and even while learning such difficult topics they can relax and play. Finally, crosswords are a common pastime activities and even if they are linked to the topic of business models, the learners still perceive them as something relaxing.

The video materials were perceived as the least interesting. The rate was even lower between Alpha and Beta testing. It could come from the fact that video materials were Internet-based. On the other hand, people prefer acting to listening. Some of them stated that, nowadays, video materials are widespread and that they are not as interesting as they used to be some years ago.

4. Conclusions

Business model competences are indispensable for correct management of all areas of enterprises and there still is a strong need to improve business model competences of business owners and managers.

The main focus of this article was to discuss the potential of the application of learning contents aimed to develop business model competences in the workplace. In the presented investigations, the author echoes and further emphasises the need for such competences for enterprise employees in order to increase understanding of the different business models areas, and in doing so — to increase work effectiveness and wellbeing.

This article discusses and presents an approach to designing and developing educational resources supporting the development of competences in the area of business models. Moreover, in the article the author presents how to acquire the competences with the use of Deming Cycle approach. Although the Deming Cycle is commonly used in the production management, it turned out that it can be successfully used also in 'soft' management, as the steps of the Deming Cycle are universal. The Deming Cycle can be used by two target groups: by the owners of the enterprise in the verification of the competences of the employees, and by the employees to verify their own competences.

On the other hand, the proposed training materials can be successfully implemented in the enterprise and they can be used when amending the business strategy. Compared to the materials offered at the tertiary level, the language of the proposed educational materials is quite easy and the materials refer to both theoretical and practical business model-related aspects.

The research significantly contributes to expanding knowledge and development in this area, specifically the design approach for the corresponding educational resources. The potential impact of the educational materials designed and developed could be extended to consider a more international dimension as the outcomes can be further adapted by organisations globally.

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Compulsory Citizenship Behavior and Deviant Behavior: A Mediated Moderation Model

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Abstract: This study examined how and when compulsory citizenship behaviors (CCB) lead to employees' workplace deviant behavior (WDB) through psychological entitlement. In addition, this study integrates moral licensing and equity demand perspectives to further understand the psychological entitlement raising process. More specifically, this study verifies the moderating role of leader-member exchange (LMX) on the relationship between CCB and WDB and see if the strong supervisor-subordinate relationship facilitates CCB-workers to increase their entitlement and enhance their willingness to engage in WDB. Based on a sample of 299 elementary school teachers, the results provided supports for the hypotheses. This study found that CCB was directly positive related to WDB. Psychological entitlement was been verified the mediator role of the relationship between CCB and WDB. Moreover, the results also indicated that LMX moderated the mediating effect of psychological entitlement on the relationship between CCB and WDB such that the effect is stronger when LMX is high than when it is low. The effect of CCB on WDB found in this research supports the anticipation that CCB may bring about WDB. Furthermore, by confirming the mediating role of psychological entitlement in the linkage between CCB and WDB, such a finding substantially widens the scope of subordinate behavioral outcomes caused by CCB to include an important but neglected aspect of psychological mechanism, and thus is helpful for us to gain a more complete picture of the negative consequences of CCB. By applying moral licensing theory and focusing on a negative psychological configuration, this research also highlights the self-value inflation and vindictive mentality for explaining the transition process of CCB to WDB. By empirically testing LMX as one moderated mediating mechanism that underlies the influence of CCB on WDB, this research establishes an important theoretical perspective for explaining why high LMX employees are more likely to exhibit WDB, thereby contributing to understanding the "black box" of the transforming processes from CCB to WDB.

Keywords: Compulsory citizenship behaviors; psychological entitlement; leader-member exchange; deviant behavior

1. Introduction

Compulsory citizenship behaviors (CCB) refers to the extra-role behaviors that employees engage in because of the enforcement of supervisors or organizations (Vigoda-Gadot, 2006). Even though CCB has been a new construct and has been investigated in organizational behaviors research during the past few years (Liu, Zhao & Sheard, 2017; Liu et al, 2018; Zhao, 2014; Zhao, Peng & Chen, 2014), it is rarely used to illustrate the psychological process of deviant behavior engagement and even to testify the interactive effect with leader-member exchange (LMX). Follow the prior works, this study will explore the dark side of organizational citizenship behaviors (OCB) and claims that CCB would enhance psychological entitlement and lead to workplace deviant behavior.

This study involves relationship theory to understand how the relationship between supervisors and subordinates influences the effect of enforced extra-role behaviors on employees' psychological entitlement. According to LMX theory, each employee establishes a unique social exchange relationship with his or her supervisor. For example, the quality of the leader-member exchange relationship is positively related to organizational commitment (Duchon, Green & Taber, 1986), and satisfaction with supervision (Schriesheim & Gardiner, 1992). Given that LMX appears to be positive and beneficial to employees' attitude and behavior, the current study aims to investigate whether LMX may become the driving force for employees to engage in deviant behaviors at some specific time?

LMX has been investigated to link to individual positive outcomes, however, little is known about its negative impact on individual behaviors. This study integrates moral licensing and equity demand perspectives to further understand the psychological entitlement raising process. More specifically, this study verifies the moderating role of LMX on the relationship between CCB and deviant behavior and see if the strong supervisor-subordinate relationship facilitates CCB-workers to increase their entitlement and enhance their willingness to engage in deviant behavior.

The current study argues that highly CCB may result in employees' deviant behavior via psychological entitlement raising. Entitlement is viewed in terms of perceived deservingness, with an emphasis on interpersonal relations, justification for demands, social justice, and fairness (De Cremer, 2006; Tomlinson, 2013). According to moral licensing theory, individuals may worry less about the consequences of engaging in immoral behaviors by increasing confidence in their self-image or self-concept when they have done something good for organizations. Consequently, the main purpose of this study is to toward an integrated model for understanding the process of psychological change of CCB-involved employees as well as the consequences of psychological entitlement. More specifically, this study determines the moderating role of LMX in the relationships between CCB, psychological entitlement, and individuals' deviant behavior.

There are two significant expected contributions to the literature arising from this study. First, this study contributes to the understanding of the dark side of extra-role behaviors on personal perception and behaviors. This research can help us understand why and how highly CCB-involved people engage in deviant behavior. Second, this study integrated moral licensing and equity theories to investigate whether LMX raises psychological entitlement of CCB-involved employees and leads to undesirable deviant behavior.

2. Theoretical background and hypotheses development

From an economic perspective, people will choose activities maximizing their rewards from time invested (Larrick, Morgan & Nisbett, 1990). Thus, citizenship behavior reflects a social dilemma and is welcome for the management but is not necessarily unwelcome for the employees. CCB is a kind of pressure for employees. Employees will feel dissatisfaction if they are forced to involuntarily engage in tasks beyond their job scope (Yam et al, 2017). When the employees perceived high social pressure from their supervisors to engage in involuntary-OCB, they will feel exploited and abused and increase their motivation to produce negligent behaviors to their organizations (Vigoda-Gadot, 2007).

Workplace deviant behavior (WDB) is a kind of negative behaviors may cause harm to an organization. For instance, say something hurtful to someone at work, take an additional or longer break than is acceptable at your workplace, etc. (Bennett & Robinson, 2000). This study climes that higher perceptions of being enforced to engage CCB the more likely counterproductive behaviors would happen. Prior research has argued that employees engaging in OCB do not receive formal rewards, but may garner positive, informal outcomes such as social recognition and respect from others (Podsakoff et al, 2000). CCB, which is totally different from OCB, represents the coercions and oppression of individuals' psychology and behaviors. Therefore, if employees are unwilling and obtain no rewards, they will be prone to negative behaviors as a form of abreaction or psychological compensation. He et al (2019) indicated that CCB leads to employee silence and increased counterproductive work behavior. Thus, this study posits

Hypothesis 1: CCB is positively related to WDB.

2.1 The mediating role of psychological entitlement

Psychological entitlement refers to an individual's judgments and expectations concerning rewards and compensation that are not necessarily related to individual performance (Harvey & Martinko, 2009). In other words, entitlement perceptions are based on unbalanced assessments of reciprocity (Harvey & Martinko, 2009; Naumann, Minsky & Sturman, 2002). These assessments may stem from perceived psychological contracts between employers and employees, which influence work attitudes and behaviors (Naumann et al, 2002).

Although entitlement is not always viewed as pathological, psychological entitlement continues to be conceptualized as an undesirable psychological state (Campbell et al, 2004; Harvey & Martinko, 2009; Twenge & Campbell, 2009), or at least related to the constellation of negative personality traits defined as the Dark Triad, that is, narcissism, psychopathy, and Machiavellianism (Jonason & Webster, 2010). Harvey and Martinko (2009) suggest that the cognitive processes by which entitlement affects attitudes and behaviors has not been explicitly considered in existing research, making it difficult to understand how the negative effects of entitlement can be prevented.

When the consequences of one's actions are deemed consistent with the intentions behind it (i.e., good things happen to good people) they are considered deserving; when inconsistent (e.g., those who contribute little get ahead), they are said to be undeserving (Feather, 2003). Therefore, this study argues that employees engaged CCB may think they are deserving. From an equity perspective, employees easily feel nonequivalence between input and outcome, because CCB is a kind of work input from which employees may not obtain rewards. Therefore, CCB makes a person more likely to think that they are entitled and deserve to gain more and more from the organization.

This study adopts moral licensing theory to illustrate that psychological entitlement mediates the relationship between CCB and WDB. Moral licensing theory indicates that past good deeds will serve as a license for individuals to engage in future bad deeds. Prior works have proven that individuals will feel comfortable engaging in actions that could be seen as socially undesirable or morally questionable after engaging in good deeds (Miller & Effron, 2010; Yam et al, 2017). In the workplace, employees' moral license will result from good deeds, such as extra-role citizenship behavior engagement. Following this logic, when employees are highly enforced to engage some jobs beyond their duties, they will feel entitled. Ultimately, higher CCB-enforced employees are more likely to engage in negative actions than those with lower CCB-enforced employees.

High levels of psychological entitlement are almost universally linked with negative outcomes in the existing research (Harvey & Martinko, 2009). For instance, some studies provided evidence to support the notion that inflated entitlement perceptions would cause unethical behavior in employees (Hamilton, 2003) and leaders (Levine, 2005). Psychological entitlement promotes an inaccurate view of the world and of oneself, and motivates people to turn away from anything that challenges this view (Snow, Kern & Curlette, 2001). Harvey and Martinko (2009) have established a positive association existing between psychological entitlement and conflict with supervisors, which is mediated by self-serving attribution.

When people have an opportunity to engage in WDB, the negative behavior is heavily influenced by negative emotional states such as guilt, fear, or anxiety, which prevents people from behaving unethically or illegally (Kacmar & Carlson, 1997). However, when individuals with a higher level of psychological entitlement, they are encouraged to seek a reciprocal psychological reward by engaging in deviant behaviors.

Thus, this study posits that psychological entitlement mediates the relationship between CCB and WDB, such that higher CCB-enforced individuals are more likely to experience heightened psychological entitlement, which in turn increases the likelihood of engaging in counterproductive workplace behaviors.

Hypothesis 2: Psychological entitlement mediates the relationship between CCB and WDB.

2.2 The moderating role of LMX

According to social exchange theory (Homans, 1958), employees with high-quality relationships with their supervisors are more willing to make efforts in their jobs (Janssen & van Yperen, 2004). To employees who are in high-quality LMX relationships, working hard and OCB engagement are rewards for the good relationships their supervisors have established with them. However, if they feel that their supervisors push them into a situation in which they have to do more than their formal job obligations and requirements, they will interpret these extra-role behavior requirements as emotional extortion. Under the pressure of such relationships, employees have to engage in CCB in order to not damage their good relationships with supervisors, psychologically making them feel more entitled. This is because employees in high-quality LMX relationships will show stronger negative emotions upon compulsory requests than those in low-quality LMX relationships.

Equity theory can also help to explain the moderating effect of LMX on the relationship between CCB and WDB through psychological entitlement. People often have difficulty coping with and recovering from workplace injustices, even when these negative experiences are unintentional (Barclay & Saldanha, 2015). Injustice often results in negative emotions, which occur as part of an automatic, reactive process (Colquitt et al, 2013; van den Bos, 2007). Equity theory focuses on determining whether the distribution of resources is fair to both relational partners. When employees in high-quality relationships with supervisors are requested to engage in extra-role behaviors, they will find it unfair because those in low-quality relationships with supervisors do not need to do too much. Therefore, this study argued that the interaction of LMX and CCB may reinforce the feeling of unfairness.

Given that injustice can cause negative moods and emotions (Colquitt et al, 2013; van den Bos, 2007), it may inflate employees' entitlement (King & Miles, 1994). Thus, this study posits that LMX plays the moderator role between CCB and WDB through psychological entitlement, such that CCB-involved individuals are more likely to experience heightened psychological entitlement when having greater relationships with their supervisors than those have common relationships with their supervisors. Thus,

Hypothesis 3. LMX moderates the mediating effect of psychological entitlement on the relationship between CCB and WDB such that the effect is stronger when LMX is high than when it is low.

3. Methods

3.1 Sample and data collection

This study used two wave survey to collect data. In total, this study surveyed 310 teachers working in ten elementary schools in Taiwan. The teachers received a survey that assessed independent variable and moderator. After three months, I delivered the second-round survey to collect mediator and dependent variable. Among them, 299 returned and valid questionnaires in both waves, and successful matched.

3.2 Measurement

The questionnaire was pre-tested by 5 teachers, independent of the final sample, to ensure that the questionnaire items reflected the respondents' working situation.

WDB was measured using 19 items from Bennett and Robinson (2000). An ample item was "publicly embarrassed someone at work." Respondents were asked to report the frequency with which they engaged in deviant behavior at work from never (code=1) to always (code=7). The reliability of the scale was 0.83.

Psychological entitlement was measured using a 4-item scale of Yam et al (2017) adapted from Campbell et al (2004). A sample item was "Great things should come to me." Respondents indicated how they agree with the statements by using a 5-point Likert scale (1=strongly disagree, 5=strongly agree). The reliability was 0.88.

Vigoda-Gadot's (2007) five-item scale was adopted to measure CCB. An example item was ''the management in this school put pressure on teachers to engage in extra-role work activities beyond our formal job tasks.'' Respondents were asked to report the frequency with which they experienced CCB at work from never (code=1) to always (code=5). The reliability of the scale was 0.88.

I measured LMX with 7 items adopted from Gerstner and Day (1997). A sample item was "How well does your supervisor understand your job problems and needs?" Items were anchored on a 5-point Likert scale from not at all (code=1) to very good (code=1). The reliability of the scale was 0.88. Finally, gender, age and moral identity were also involved as the control variables.

3.3 Data analysis

Before testing the hypotheses, confirmatory factor analysis was used to test the model fit. Compared a four-factor model with one-factor model in which items of WDB, psychological entitlement, CCB, and LMX were combined to load on single-factor. The model fit of four-factor model as follows: X2/df=1.91, GFI=0.90, IFI=0.87, NFI=0.91, RMSEA=.02. It indicated an ideal model structure validity. Moreover, the variables were mean-centered before computing the hypothesized interaction terms. Collinearity among any variables was also tested by calculating the variance inflation factor (VIF) for each regression coefficient. The VIF ranged from 1.02 to 1.79, representing an acceptable result.

4. Results

Table 1 summarizes the means, standard deviations, and correlations for all the study variables. Table 2 shows the results of multiple regression analysis for Hypotheses 1 and 2 testing. To confirm the Hypothesis 1, model 3 was tested and found that CCB has a significantly positive effect on WDB (β=0.31, p<0.001). Thus, Hypothesis 1 was supported.

Table 1: Descriptive statistics and bivariate correlations (n=299) a, b

	variables	mean	SD	1	2	3	4	5	6	7
1	Gender	--	--	--						
2	Age	5.7	2.23	.10	--					
3	Moral identity	4.34	0.54	-.05	-.08	(.83)				
4	CCB	2.73	0.88	-.02	-.11	-.04	(.88)			
5	Psychological entitlement	3.49	0.67	-.08	-.15**	.21**	.41**	(.88)		
6	LMX	3.06	0.77	.09	.05	.04	.38**	.24**	(.88)	
7	WDB	1.56	0.36	.07	-.14*	.06	.32**	.39**	.25**	(.83)

[a] * p < .05, ** p < .01

[b] Coefficient alphas for those measures that could be computed are located on the diagonal.

Table 2: Regression results for testing mediation

	DV: Psychological entitlement	DV: WDB			
Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Controls					
Gender	-.05	.08	.09	.10	.10
Age	-.09	-.14	-.10	-.09	-.08
Moral identity	.21***	.05	.07	-.12	.00
Independent variable					
CCB	.41***		.31***		.19**
Mediator					
Psychological entitlement				.39***	.31***
Adjust R^2		.02	.11	.16	.19
F		2.77*	10.47***	15.12***	14.55***
ΔR^2		--	.10	.14	.07
ΔF		--	32.66***	50.78***	27.15***

Standardized coefficients are reported. n = 299.
* p < .05, ** p < .01, *** p < .001

To test hypothesis 2, firstly this study verified the positive relationship between CCB and psychological entitlement (β=0.41, p<0.001; model 1). It also found that psychological entitlement positively related to WDB (β=0.39, p<.001; model 4). In model 5, CCB and psychological entitlement were both included in the equation, psychological entitlement had a significant positive effect on WDB (β=0.31, p <0.001), whereas CCB revealed a significant relationship with WDB but has reduce effect, which indicates that the psychological entitlement plays a partial mediating role in the relationship between CCB and WDB, and the Hypothesis 2 was proved.

Table 3 shows the interactions between CCB and LMX as well as between psychological entitlement and LMX were significant in predicting WDB (β=0.12, p <0.05, model 7; β=0.12, p <0.05, model 8). Figures 1 and 2 display the patterns of these interactions. The relations of CCB and psychological entitlement to WDB were stronger when individuals were high rather than low in LMX. These results supported Hypothesis 3.

Table 3: Regression results for testing moderation

Variables	Model 6	Model 7	Model 8
Controls			
Gender	.05	.06	.08
Age	.01	-.11	-.09
Moral identity	.04	.04	-.01
Independent variable			
CCB		.26***	.13*
Moderator			
LMX		.16**	.16**
Interaction			
CCB x LMX		.12*	
Mediator			
Psychological entitlement			.30***
Interaction			
Psychological entitlement × LMX			.12*
Adjust R^2	.02	.14	.21
F	2.77*	9.17***	11.96***
ΔR^2	--	.13	.20
ΔF	--	15.18***	18.41***

Standardized coefficients are reported. n = 299.
* p < .05, ** p < .01, *** p < .001

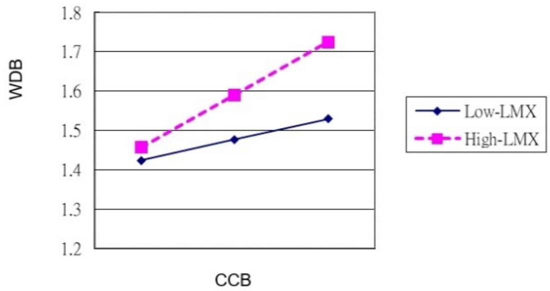

Figure 1: Interaction effect of CCB and LMX on WDB

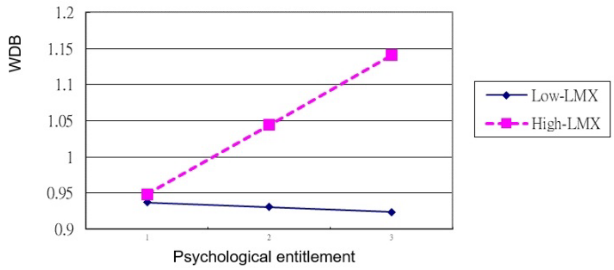

Figure 2: Interaction effect of psychological entitlement and LMX on WDB

5. Discussion

This study developed a model explicating why and when CCB promoted WDB. The results revealed that CCB positively influenced subordinate WDB, and psychological entitlement functioned as a mediator for this relationship. Moreover, LMX moderated both the relationship between CCB and WDB and the mediating effect of psychological entitlement for this relationship. When LMX was higher, the relationship and its mediating mechanism were stronger.

5.1 Theoretical implications

First, by adopting moral licensing theory and social exchange theory as the theoretical foundations, this study has built and tested a conceptual model that focuses on the potential influence of CCB on unexpected negative behavior, WDB. The focus of past research on CCB was primarily upon the relationship between CCB and negative attitudes and behaviors such as burnout (Ahmadian, Sesen & Soran, 2017), reducing organizational commitment and creativity (He et al, 2020). The effect of CCB on WDB found in this research supports the anticipation that CCB may bring about WDB. Furthermore, by confirming the mediating role of psychological entitlement in the linkage between CCB and WDB, such a finding substantially widens the scope of subordinate behavioral outcomes caused by CCB to include an important but neglected aspect of psychological mechanism, and thus is helpful for us to gain a more complete picture of the negative consequences of CCB.

Second, the negative impact caused by negative emotion increase is much more severe than that caused by positive emotion reduction. More specifically, no research has linked CCB and psychological entitlement to WDB. By applying moral licensing theory and focusing on a negative psychological configuration, this research highlights the self-value inflation and vindictive mentality for explaining the transition process of CCB to WDB.

This study is also unique in identifying the leader-follower relationship conditions for the relation between CCB and WDB and for the mediating mechanism of this relation. The moderator (i.e., LMX) in this research is intimately related to individuals' reactions to or perceptions of extra-role efforts in the workplace. The strengthening roles of LMX in both the association of CCB with WDB and the mediating effect of psychological entitlement indicate that, for employees who are explicitly or implicitly asked to engage in CCB, even though they have a good relationship with their managers, their psychological entitlement will increase, leading to engagement in WDB. By empirically testing LMX as one moderated mediating mechanism that underlies the influence of CCB on WDB, this research establishes an important theoretical perspective for explaining why high

LMX employees are more likely to exhibit WDB, thereby contributing to understanding the "black box" of the transforming processes from CCB to WDB.

5.2 Managerial implications

The findings of this study can provide the management some insights into how CCB may be used to foster subordinates' WDB partially through the raising of psychological entitlement. This is important because today's organizations are more concerned about employees' feeling of perceived equity, and are increasingly dependent on the psychological satisfaction of their employees to generate better productivity. The finding demonstrates that CCB is a hidden danger to organizations. If employees engage in CCB often, it implies that their organizations are pressurizing them, which is not conducive to shaping a fair working environment. Therefore, for managers who want to reduce employees' negative behaviors, eliminating employees' psychological stress of implying CCB could be an initiating strategy, and for organizations that with a culture pushing employees engage in CCB, it will benefit them to set up clear and obvious regulations for prohibiting supervisors from requiring employees to engage in CCB. Through leadership training and development programs, an organization can assist its managers in learning the potential influence of inappropriate leadership, and also train managers to be more effective in communicating the in-role goals they wish their subordinates accomplish.

In addition, the finding indicates that under the premise that CCB might induce negative behaviors of employees, LMX is more likely to act as a catalyst of the influence of CCB and psychological entitlement. The accelerating effect of LMX reveals that CCB would motivate subordinates to display WDB because of their close relationship with their supervisors. As subordinates high in LMX are more sensitive to CCB, managers can view the typical reactions of these subordinates as useful information to improve the supervisory methods and the management of mental state.

5.3 Limitations

The current research has some limitations. First, the measures for all variables makes common method variance a concern in this study. Following the suggestions by Podsakoff, MacKenzie and Podsakoff (2012), I measured variables at two time points, and controlled for moral identity and demographic variables. In addition, results of Harman one-factor test indicated the fits were unacceptable. Thus, I believe that this study does not have serious common method variance bias threat.

Second, participants in this research were all from Taiwan, and such a single cultural context might limit the generalizability of the findings. Eastern society has a similar culture that accepts a large power distance; it has become a norm in the workplace for employees to accept unexpected tasks from their managers and complete them outside their working hours. Therefore, employees in Eastern cultural context are supposed to be more responsive to CCB. Although this study presents interesting findings, more research needs to be investigated in different cultural context in the future for generalizing cross-validate the findings.

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Universities of Applied Sciences' Leadership Role in Regional Innovation Ecosystems

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Abstract: The 2030 Agenda for Sustainable Development contains 17 Goals. Goal 9 concerns building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation. Hence, the development of innovation ecosystems in the European community plays an important role. This development is carried out at all levels of governance with an emphasis on the regional governance. The innovation ecosystem approach considers innovation a process that emerges from interaction among different types of companies and other organizations. One of the common success factors and actors in the innovation ecosystem consists of educational organizations that provide access to knowledge and creating knowledge infrastructure. However, the role of universities of applied sciences is not clear in empowering regional innovation ecosystems. In this conceptual paper, the role of universities of applied sciences in regional innovation ecosystems, is discussed. The research has been carried out by conducting an integrative literature review to identify themes, debates and gaps about the role of educational organizations using the Regional Innovation System model (RIS-model) and the system elements for diagnosing ecosystems. The outline of the paper shows that there is a great potential for universities of applied sciences in taking a leadership role in the regional innovation ecosystem due to their neutrality, practical-oriented accumulated knowledge, and expertise in relation to different stakeholder groups. This paper provides an overview of the key findings regarding the potential leadership role of universities of applied sciences in the regional innovation ecosystem for the management board of universities of applied sciences and regional policy makers. Thus, contributes to the formulation of regional innovation policies by including universities of applied sciences more clearly as active partners.

Keywords: educational organizations; universities of applied sciences; UAS; regional innovation ecosystem; leadership

1. Introduction

The United Nations (2015) masterminded the 2030 Agenda for Sustainable Development by categorizing 17 Sustainable Development Goals. Building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation is captured by goal 9. According to Pidorycheva et al. (2020) regional innovation ecosystems play an important role in the framework of European integration processes to amplify innovative and developed nations. Moreover, as reported by the World Economic Forum (2019), Europe acknowledges an ambitious goal: "to compete for global innovation leadership". The EU policy focuses on improving innovative competitiveness and hereby illustrates the strategic relevance of innovation in ensuring economic growth and improving welfare.

The innovation system at national or regional level is understood as a network of organizations and institutions in the public and private sectors of the economy (companies, educational and research organizations, financial and advisory institutions, public authorities, etc.), whose activities and relationships lead to innovation (Stam and van de Ven, 2021; Pidorycheva et al., 2020). The development of innovation ecosystems in the European community is carried out at all levels of governance, particularly regional governance has a priority role. The regional level is considered to be the most suitable for innovation, because the process of creating new knowledge is concentrated in the regions. In addition, regions consist of appropriate infrastructure in order to further disseminate, apply and transfer knowledge. Thus, the regional level has an stimulating role in the development of national economies (Andersson and Karlsson, 2004; United Nations, 2011; OECD, 2013; Pidorycheva et al., 2020). There is a tremendous growth in the number of publications and citations in the research area 'regional innovation ecosystems' (Alvedalen and Boschma, 2017; López-Rubio, Roig-Tierno and Mas-Tur, 2020). This has several reasons, such as the increased intensity of international competition in the globalized economy, traditional regional development models and policies which have shortcomings, and the rise of successful clusters of companies and industries in many regions around the world. As a result, the topic has received a lot of attention from the scientific community, government departments and (international) organizations (Stam, 2015; Stam and Spigel, 2016; Isenberg, 2010; 2011; Mack and Qian, 2016).

The innovation ecosystem concept represents the actors and the interrelationships between the different parts that drive innovation (Alvedalen and Boschma, 2017). However, little is known on the innovation contribution of universities of applied sciences (Mäkimattila, Junell and Rantala, 2015; Schlegel et al., 2022). Therefore, in this conceptual paper the following question is discussed: 'What is the role of universities of applied sciences in regional innovation ecosystems?'.

2. Theoretical background

2.1 Innovation ecosystem concept

The innovation ecosystem concept evolved from the concept of business ecosystem in which a company is seen as part of a system instead of a single industry (Moore, 1993). In a similar manner, Forrest (1991) defines companies as open systems that are connected to the external context. The innovation process in a firm or an organization, or in terms of higher level of abstraction, within the country or region is not only related to internal factors such as human capital, but also external factors such as institutions. Therefore, innovation ecosystems consist of interdependencies between firms, organizations, institutions and networks. However, Alvedalen and Boschma (2017) and Oh et al. (2016) emphasizes several points of attention about the innovation ecosystem concept. Firstly, a clear analytical framework which is able to distinguish cause and effect in an innovation ecosystem is missing (Stam and Spigel, 2016). Secondly, there is uncertainty on how the proposed elements are connected in an innovation ecosystem. It is also unclear which interactions and which institutions matter most. Lastly, it is not clear which institutions, and at what spatial scale, impacts the structure and performance of an innovation ecosystem (Motoyama and Knowlton, 2017). As a consequence, the role of educational organizations in empowering regional ecosystems and boosting the broader economic development is unclear (Wakkee et al., 2019; Clauss et al., 2018). Moreover, there is an overlap in the literature between a modern understanding of Porter's cluster concept, innovation systems and regional ecosystems for entrepreneurship and innovation. Thus, the terms ecosystem, innovation ecosystem, innovation system, ecosystem for entrepreneurship and innovation and entrepreneurial ecosystem are used interchangeably in the literature (van Bree et al., 2021; Oh et al., 2016). In this paper 'innovation ecosystem' is used.

2.2 Broader role for educational organizations

An ecosystem describes the evolutionary characteristics of interactions among actors, their relationship to innovative activities, and their relationships with the environment (Adner, 2017; Adner and Kapoor, 2016; Frenkel and Maital, 2014). Societal environment is becoming increasingly knowledge-based and therefore the relevance of the role of educational organizations in societal engagement, especially in the regional context, is becoming a shared understanding (Etzkowitz et al., 2000; Pinheiro, Langa and Pausits, 2015). The main role of educational organizations is related to education and research. However, several authors point out the broader role for educational organizations, because they are involved in regional governance, linked to national and regional policy makers, and engage with local industry and community in order to play a development role for economic objectives (Charles, Kitagawa and Uyarra, 2014; Gunasekara, 2006; Pugh et al., 2016; Brennan et al., 2018).

2.3 Differences between universities and universities of applied sciences

Education systems differ among countries. This paper focuses on the Dutch education system in which there are two types of higher education. On the one hand, there are research-oriented universities which are focused on doing fundamental research and are highly academic. On the other, there are profession-oriented universities of applied sciences (UAS) which are practice-based. The core mission of UAS is providing higher professional education and applied research with a strong orientation towards professional practice (Vereniging Hogescholen, n.d.). Research at UAS has a high societal impact, is demand-driven and conducted in cooperation with various stakeholders, such as SMEs, businesses and the public sector. This makes UAS distinctive compared to research-oriented universities. However, the potential of applied research is not yet fully exploited in the research landscape of the Netherlands (Mulder et al., 2021). The role of UAS as an actor in the regional innovation ecosystem will be explored using the Regional Innovation System model (RIS-model).

2.4 Regional Innovation Systems

The system approach to innovation emerged in the context of industrial policy debates in Europe in the late 1980s and gave way to the National Innovation System (NIS). Cooke (1992) elaborated the regional approach as Regional Innovation System (RIS). In the RIS-approach localized innovation networks are embedded in specific socio-cultural settings (Isaksen, Martin and Trippl, 2018). These innovation networks, consist of a triple helix constellation of industry, educational organizations and regional government, along with agencies and institutions, forming the core elements of a RIS consisting systematic interdependency (Asheim, Isaksen and Trippl, 2019).

Autio (1998) provides a schematic representation of the structuring of regional innovation systems (Figure 1). A RIS consists of two subsystems embedded in a common regional socio-economic and cultural environment. Firstly, the knowledge application and exploitation subsystem includes the companies, their customers, suppliers, competitors and their industrial cooperation partners. Secondly, the knowledge generation and dissemination subsystem consists of various institutions involved in the production and dissemination of knowledge and skills.

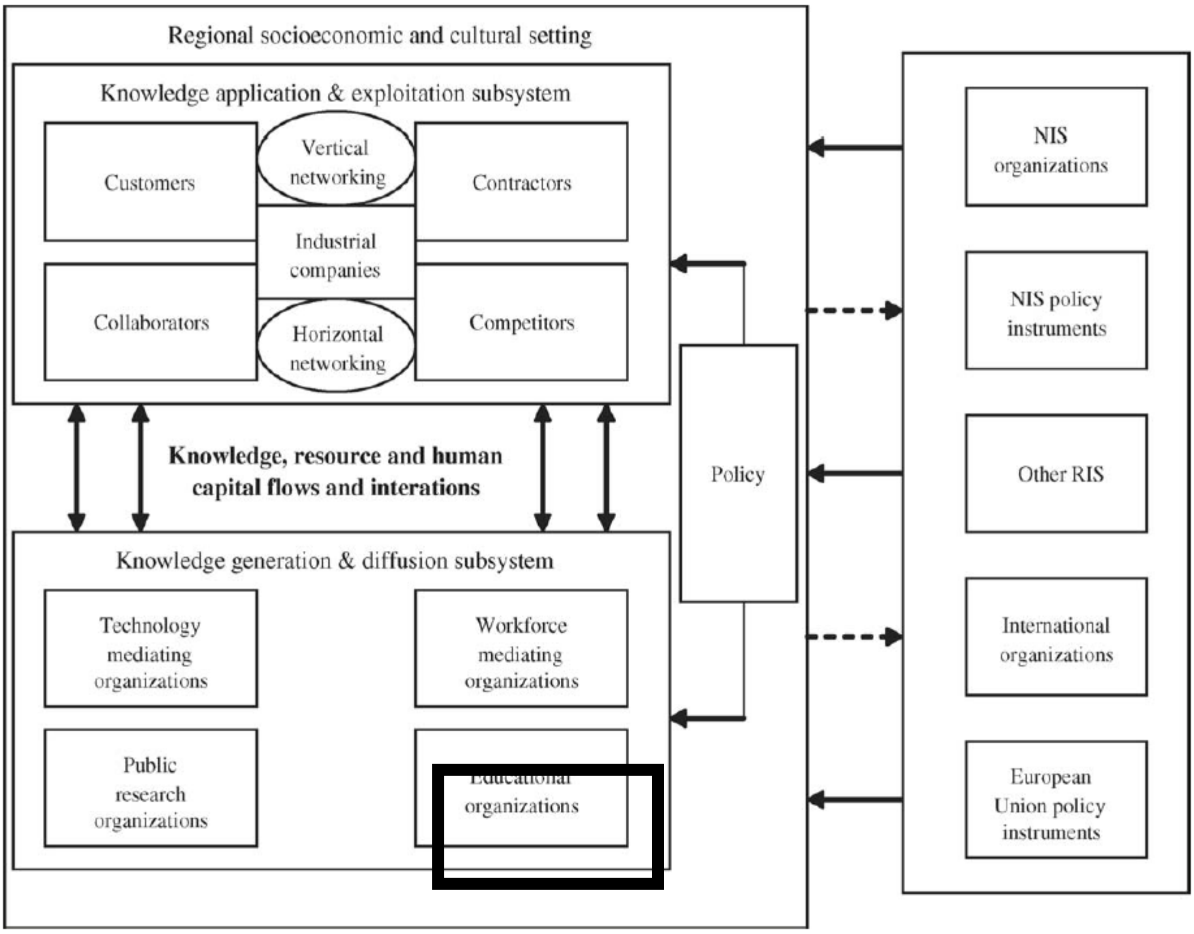

Figure 1: Main structure of regional innovation systems (RIS)

Source: Modification of Autio (1998) by Tödtling and Trippl (2005)

The ideal situation of a RIS maintains intensive interactive relationships within and between the subsystems facilitating a continuous flow or exchange of knowledge, resources and human capital. However, there are several types of RIS problems and failures such as lack of relationships within and between the subsystems. According to Tödtling and Trippl (2005) and Alvedalen and Boschma (2017), the lack of organizations in the field of research, education, and technology transfer as well as a too strong orientation of existing institutions on traditional economic and technological structures may lead to serious innovation problems. Moreover, Pidorycheva et al. (2020) and Tödtling and Trippl (2005) argue that based on differences among regions, marked as the socioeconomic and cultural setting, it is impossible to create an unified model of innovation management. To conclude, even though differentiated innovation policy is needed for the different types of regions, knowledge generation and diffusion as the subsystem in RIS remains of great importance (Tödtling and Trippl, 2005). This process of knowledge circulation is essential for a learning economy and promotes dialogue between research and society. The 36 Dutch UAS are spread throughout the Netherlands and strongly embedded in the region. UAS are well placed to provide profession and practical-oriented knowledge generation and diffusion because they connect different parties and disciplines with education and research (Mulder et al., 2021). By taking on the practical role as the knowledge facilitator and driver of the innovation ecosystem, UAS can contribute positively to regional innovation ecosystems.

2.5 The roles and functions of universities of applied sciences

One of the common success factors and actors in the innovation ecosystem consists of educational organizations that provide access to knowledge and creating knowledge infrastructure for business and industry (Markkula and Kune, 2015; Leendertse, Schrijvers and Stam, 2021; Pugh et al., 2021; Thomas, Faccin and Asheim, 2021; Tödtling and Trippl, 2005). The European University Association specified four roles of universities in regional innovation systems which are applicable to UAS as well (Reichert, 2019). Firstly, education: providing human capital for innovation. UAS ensure innovation, knowledge and talent development in their regions (Mulder et al., 2021). Secondly, doing research: knowledge (co-)production for private and public value creation. Applied research at UAS has developed rapidly and the knowledge function has become increasingly important in the Dutch knowledge landscape. For example in the Netherlands, the 36 UAS in their regions have often taken the lead in public-private partnerships aimed at knowledge development. Moreover, applied research at UAS is directly fed by contemporary questions from society (Mulder et al., 2021). Thirdly, knowledge exchange for innovation systems: from technology transfer to multi-actor co-creation. The interaction between education, research and professional practice characterizes applied research of UAS which is multidisciplinary in nature and takes place in networks (Mulder et al., 2021). Lastly, strategic transformation: embedding innovation within the organization and region. According to Pugh et al. (2021) UAS have the potential to initiate a strategic transformation within the internal organization in order to contribute more to innovation ecosystems.

Moreover, Goldstein, Maier, and Luger (1995) identify eight different functions for modern research universities that may potentially impact economic development. The eight functions are creation of knowledge, human-capital creation, transfer of existing know-how, technological innovation, capital investment, regional leadership, knowledge infrastructure production, and influence on regional milieu. Little research has been conducted regarding the impacts of regional leadership of UAS (Drucker and Goldstein, 2007). Overall, UAS can have a number of different roles and functions in regional development. The Triple Helix (Etzkowitz and Leydesdorff, 2000) or Quadruple Helix model (Miller, McAdam and McAdam, 2018; Carayannis and Campbell, 2009) and the System of Innovation approaches (Edquist, 2005) not only regard UAS as suppliers of human capital, but also value the direct contribution of (practical) applied research in collaboration with business and industry (Asheim, Isaksen and Trippl, 2019; Reichert, 2019). According to Mulder et al. (2021), the UAS are functioning as the accelerators of knowledge, the missing link between fundamental research and professional practice, where knowledge is obtainable to apply. At any rate, UAS are becoming active players in their communities, contributing to the quality of life and regional wellbeing, to regional development, and ensure the importance of knowledge in the regional innovation ecosystem (Markkula and Kune, 2015).

3. System elements for diagnosing ecosystems

The broader role of UAS is also explored according to the system elements for diagnosing ecosystems. Leendertse, Schrijvers and Stam (2021) defined ten preconditions and system elements as a tool, that is used in several regions of the Netherlands, for diagnosing the ecosystem (Figure 2). Based on the presence and functioning of the ten preconditions and system elements, the underlying regional-economic structure can be explored, so that strengths and weaknesses in the ecosystem can be identified. The preconditions for interaction in the ecosystem are social conditions, consisting of formal institutions and culture, physical conditions (infrastructure and facilities) and market demand. The six system elements are networks, leadership, finance, talent, knowledge, and intermediaries. These form the core and engine of the ecosystem. As a results of the interaction between these system elements, innovation activity by and between actors takes place. This ecosystem model will indicate in which system elements the broader role of UAS can be utilized.

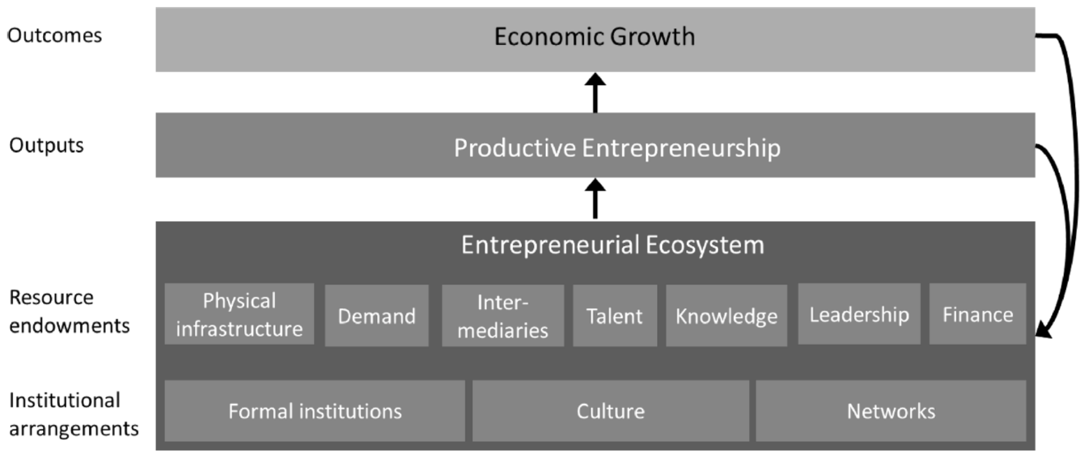

Figure 2: Elements, outputs and outcomes of an entrepreneurial ecosystem

(adapted from Stam, 2015; Stam & Van de Ven, 2021)

3.1 System elements: knowledge and talent

Educational organizations, such as UAS, cover mainly the system elements 'knowledge' and 'talent'. Pugh et al. (2021) and Sorama (2020) encourage UAS to fulfill functions in society by engaging in learning and knowledge transfer activities that connect UAS with businesses in their locality and regions. UAS' designed and delivered programs can contribute to regional learning in order to realize better social and economic outputs and outcomes for people, businesses and places.

3.2 Covering other system elements

Taylor (2016) provides several recommendations for creating innovative regions through the role of universities. UAS are important hubs and key partners of networks serving as an institutional arrangement (Reichert, 2019). UAS can also contribute and channel some of the (financial) resources needed for innovation, by supporting businesses by identifying sources of funding or acting as intermediaries for funding opportunities. Furthermore, UAS can operate as delivery partners for national government-funded products and provide advice and guidance to businesses. UAS make significant investments in (physical) infrastructure by increasingly developing their estates to provide environments for businesses, researchers and graduates to innovate together, because of the vital importance which infrastructural development can play in fostering innovation dynamics (Reichert, 2019). UAS are often involved in the management and running of incubators, and science and innovation parks, as an active partner in activities. UAS, which educate their students to develop entrepreneurial attitudes, make a significant talent contribution to innovative businesses and local start up environments. The foundation of ecosystem thinking can be characterized as expanding an actor's capabilities beyond its own limits and transferring knowledge for the purpose of innovating in collaboration with others (Adner, 2006). This also applies to UAS. Hence, UAS have a great potential to cover more aspects in the preconditions and system elements of the entrepreneurial ecosystem conceptualized by Leendertse, Schrijvers and Stam (2021). The UAS is able to take on a new role for trust-building between actors in innovation ecosystems, in which interactions among actors can be understood as social relations with knowledge exchange as an output (Cai, Ma and Chen, 2020). To conclude, UAS can provide innovation ecosystems - besides knowledge and talent - also networks, physical infrastructure, intermediary services and finance. Furthermore, Reichert (2019) argues that connective leadership by a small number of people and a few small networks is seen as the mobilizing force for the region's development. Therefore, as a final point, UAS can make a difference by providing leadership in regional innovation ecosystems (Taylor, 2016). These findings have been supported by conversations with expert practitioners during the conference Research and Innovation Ecosystems organized by Rijksdienst voor Ondernemend Nederland (RVO, 2022).

4. Leadership role of universities of applied sciences

According to Sorama (2020) regional innovation ecosystems almost have the same actors, but not every actor may have the same role. The role and status of the actor may vary according to the objective of the ecosystem. Reichert (2019) mentions that the university finds itself in a new and challenging central position with multiple roles. Firstly, as a central regional actor in terms of knowledge generation and diffusion (Drucker and Goldstein, 2007). Secondly, as a cultural actor that facilitates regional interaction (Reichert, 2019). Educational organizations strive for more interaction in various forms with their environment. According to Thomas, Faccin and Asheim (2021), they are expected to fulfill their traditional missions of education and research as well as undertaking new activities that focus on economic, social and cultural contributions to regional development. Leadership and coordination determines to a large extent how actors in the innovation ecosystem embrace new possibilities and choose strategic direction (Van Bree et al., 2021). The relevance of developing strategic leadership capabilities becomes of great importance for UAS in order to explore new activities. UAS wants to collaborate more frequently and more sustainably with the region (Mulder et al., 2021). In achieving this intention, UAS can play a leading role in regional ecosystems because of their neutrality, accumulated knowledge and expertise with regard to different groups of stakeholders (Clauss et al., 2018). Furthermore, businesses and governments see UAS as ideally suited to bring together the actors in the regional innovation ecosystem, because they are impartial, and long-term oriented, rather than driven by commercial interests and short-term goals (Thomas, Faccin and Asheim, 2021; Sorama, 2020; Reichert, 2019) and provide a practice-oriented education approach by work placements and internships in (inter)national companies (Vereniging Hogescholen, n.d.; Mulder et al., 2021).

Moreover, current societal challenges are demanding broader roles for UAS as well, which requires changes within the internal organization. In order to tackle societal challenges, new knowledge should be quickly converted into new solutions. Thus, making applied research at UAS a key link between fundamental research and the society (Mulder et al., 2021). Cai, Ma and Chen (2020) justly emphasize the call for a renewed understanding of UAS in regional innovation ecosystems. The transformation of UAS should be addressed more in innovation models and policies (Vetoshkina et al., 2022). UAS can influence regional policy through their own strategy development (Reichert, 2019). For example, the engagement with other actors in the innovation ecosystem could be formalized more clearly in UAS mission statements (Smith, 2007). UAS rectors, presidents or vice-presidents can act as key transformative leaders for the region, whilst mobilizing partnership with other leaders from the city or region, and joining forces to develop and realize an innovation vision together (Reichert, 2019). Therefore, strategic transformation within the internal organization of UAS should be utilized by developing leadership capabilities in order to contribute more to innovation ecosystems development (Pugh et al., 2021).

5. Conclusion

There is a strategic relevance of innovation in ensuring economic growth and improving welfare within the EU. Regional innovation ecosystems play an important role in the framework of European integration processes to amplify innovative nations. However, the role of universities of applied sciences (UAS) in regional innovation ecosystems is unclear. This paper outlines the role of UAS in regional innovation ecosystems as significant. The relevance of the role of UAS is emphasized based on the Regional Innovation System model (RIS-model). Knowledge generation and diffusion are crucial to both fostering innovation as a part of the Sustainable Development Goal, as well as to Europe's ambitious goal to compete for global innovation leadership. Thus, UAS can take the practical role as the knowledge facilitator and driver of the innovation ecosystem. Furthermore, the various roles of UAS is explored according to the preconditions and system elements for diagnosing ecosystems. Next to knowledge and talent, UAS can provide regional innovation ecosystems, networks, physical infrastructure, intermediary services and finance. Eventually, UAS are able to take a new role in innovation ecosystems by developing strategic leadership capabilities. This strategic transformation will lead to embedding innovation by interacting with remaining actors in the regional ecosystem. The strategic leadership role of UAS in the regional innovation ecosystem can be substantiated because of their neutrality, long-term commitment, practical-oriented accumulated knowledge, applied research, involvement in regional governance, engagement with local industry and community, and expertise with regard to different groups of stakeholders. UAS will become active players in their communities, contributing to the quality of life and regional wellbeing, and adding value to regional development processes.

In this paper, key findings for UAS' leadership role in the regional innovation ecosystem is described. Thus, contributing to the formulation of regional innovation policies. Local authorities and government institutions at both the national and regional levels can benefit from existing best practices and should include UAS as active partners more clearly in the creation of strategic regional innovation policy planning. Although there has been elaborated a lot about regional innovation ecosystems, practical substantiation of the role of UAS within this system is still lacking. Further in-depth studies related to UAS' leadership capabilities and the impact on the structure, performance and interaction with other actors of a regional innovation ecosystem, will offer valuable new insights regarding fostering innovation.

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Generation Z's Expectations of Their Leaders: A Cross-cultural, Multi-dimensional Investigation of Leadership Styles

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Abstract: Gen Z representatives from one Western and one Eastern European country were the subjects of an empirical study investigating leadership style preferences and effects of motivation and performance on leader preferences. Data from 131 Ukrainian and 157 Austrian Gen Z representatives were analyzed. Different dimensions of leadership were examined, including transactional/transformational leadership and production/employee/change orientation of leaders. The results show significant differences in expectations between cultures, and within different leadership styles. Generation Z representatives from collectivist cultures with high power distance, long-term orientation, and high uncertainty avoidance have higher expectations of their future leaders than those from individualistic countries with lower power distance, less long-term orientation, and low uncertainty avoidance. A higher level of work motivation leads to a higher relevance of transformational, transactional pecuniary, and transactional non-pecuniary leadership styles in a collectivist, uncertainty-avoiding country with high power distance (Ukraine), while there is no effect in an individualistic country with low uncertainty avoidance and low power distance (Austria). Also, higher levels of work motivation lead to more appreciation of employee / production / change orientation in Ukraine, but only to higher levels of employee orientation in Austria. High performers in Austria tend to accept transactional sanction-based leadership, while this is not the case in Ukraine. In general, generations that may be described as universally similar have different perceptions depending on the culture they grew up in. For business leaders, the study provides insights into Gen Z employees and their leadership expectations. Managers from different business sectors working with employees from different cultural backgrounds should be aware of their employees' different expectations. Recruiters will eventually have a better understanding of which arguments regarding leadership their future employees prefer and can adjust their recruitment messages accordingly.

Keywords: Transformational leadership, transactional leadership, Generation Z, cross-cultural leadership, HR Management, global workforce

1. Introduction

Leadership scholars have long advocated for greater consideration of cross-cultural issues in leadership, including the need to better understand how cultural factors influence leadership expectations, styles, and outcomes. (Dickson, Den Hartog & Mitchelson 2003; Hanges et al. 2016). The globalization of the world of work has increased the mobility of the workforce. This leads to challenges in management and leadership, as people from different cultures need to collaborate and work together. Leadership today means more than control, delegation, and budgeting. With increasing competition for the best talent in many countries and industries, the main task of modern leaders is to create a work environment in which people will want to work - not simply have to work (Hinkelmann & Enzweiler 2018). A new generation, the so-called "Gen Z", is starting to enter the world of work (Gabrielova & Buchko 2021). For companies to remain competitive in their global markets, they need good and motivated young employees from this generation. These employees are increasingly part of a global workforce, which adds another dimension of change. Finding talent willing to adapt to a different cultural environment is not easy. Therefore, managers need to redesign their leadership strategies and concepts and try to adapt to the needs and expectations of employees and create conditions that are also conducive to a global workforce (Chillakuri & Mahanandia 2018).

2. Generation Z

It is a social necessity and an inevitable development that generations change over time. Generational theory, popularized by Strauss and Howe (1991), defined generational cohorts as groups of people who were born during the same time period and had similar life experiences during their formative years. Each generation has its own specifics, demands and requirements (Wilson & Gerber 2008). Generation Z with birth dates between 1996 and 2010 (Black, Asadorian & Dunnett 2017) is now on the threshold of or already in the work process. Generational changes and global developments also imply the evolution of the concept of leadership. Leaders can expect that their leadership skills and style will be judged in different ways by different generations and representatives of different cultures. Youth studies show that generational patterns develop differently in each culture and that the way in which a generation develops its specific characteristics is influenced by the culture in which the representatives of that generation grew up (Woodman & Bennett 2015).

3. Leadership as a critical variable for businesses

With globally evolving markets and new groups of potential employees entering the markets, human resource management must anticipate new requirements and evolve accordingly in order to be competitive in the fight for talent. Akbari et al. (2017) found that leadership style is particularly important for attracting and retaining motivated employees who deliver company and brand-related messages to potential business partners and customers. Lindgreen et al. (2009) found that employees who tend to have a transformational leadership style are positively associated with interactional and network marketing. Transactional leadership style, in contrast, is positively related to database and network marketing. Yueh and colleagues (2010) examined transformational and transactional leadership styles in relation to the implementation of knowledge-based customer relationship management. They found that transformational (but not transactional) leadership styles are effective when implementing knowledge-based customer relationship systems.

3.1 Leadership styles

Since Bass (1985) introduced the terms transformational and transactional leadership styles into the scientific discussion, the distinction between relationship-oriented and task-oriented leadership has assumed an almost paradigmatic status in the leadership literature (Den Hartog, van Muijen & Koopman 1997). Other styles have been developed and tested, but in principle they share many similarities with Bass's broad classification of whether leadership is focused on people or on tasks. Transformational leaders are characterized by being proactive and raising the consciousness of their followers so that they understand and support the collective interests of the organization. The leader aligns with the overall goals of the organization and motivates employees by emphasizing common, overarching goals, projecting an idealized vision, and communicating to employees that the vision is achievable. In transactional leadership, the focus is on concrete exchange processes between leaders and followers (Podsakoff et al. 2006). It is based on the fulfilment of agreed obligations determined by specified goals and their monitoring as well as the control of results. Transactional leadership is based on contingent (material or psychological/social) rewards, and sanctions for non-fulfilment of contractual obligations (Antonakis, Avolio & Sivasubramaniam 2003). Jensen et al. (2019) conceptualized three subtypes of transactional leadership: leadership by "contingent pecuniary rewards", "contingent non-pecuniary rewards" and "sanctions". Pecuniary rewards refer to material benefits in various forms that become due upon fulfilment of the contractual agreement or are withheld in the event of non-fulfilment. Non-pecuniary rewards refer to non-material recognition, such as praise, positive feedback and appreciation for achievements. Sanctioning is about the specific punishment of mistakes, negative efforts, and performance deviations, or even the threat of negative consequences if poor performance does not improve. Transformational and transactional leadership styles are understood as distinct but not mutually exclusive concepts (Park & Rainey 2008). In another approach to categorize and systematize leadership styles, Ekvall and Arvonen (1994) distinguish between a production, task, and outcome oriented style, a change or transformation oriented style, and an employee or attention, dedication oriented leadership style. Both Bass's and Ekvall &Arvonen's categorizations are utilized in this research.

3.2 Culture and leadership in Austria and Ukraine

With respect to the two countries under study here, it is important to note that there are intensive business relationships between Austria and Eastern European countries, Ukraine specifically. The Austrian Federal Ministry for European and International Affairs (2022) reports that more than 250 Austrian companies operate in Ukraine and that Austria is among the top ten foreign investors in Ukraine[1]. Knowledge about leadership styles can play a key role in recruiting as well as in training employees to work at the interface between companies and customers. According to the UN International Office for migration (2021), Ukraine is a migration (out) as well as immigration (in) country. There is an active exchange of students, graduates and workers between Austria and Ukraine. Therefore, it is interesting to understand young people's expectations of leadership and to analyze possible differences in these perceptions. Historically, Austria and (at least the western part of nowadays) Ukraine had some commonalities, but the societies have developed very differently since that time. Ukraine as a post-Soviet culture is characterized by collectivism and a low level of self-organization (Blyznyuk &

[1] The study was conducted in late 2021.

Lepeyko, 2016). Groups are important, they care for each other and receive loyalty in return. Relationships have priority over the accomplishment of tasks. Ozaralli and Rivenburgh (2016) note that in more collectivist cultures, the interests of the group take precedence over personal needs. Group loyalty and group decisions are rewarded, while individual decisions and dissenting opinions or behaviors are not encouraged. Austria, on the other hand, has a moderately high score for individualism. In such cultures, individuals are expected to take care of themselves and hiring and promotion decisions are made on the basis of merit (Hofstede Insights 2021). In Ukraine, the degree of power distance is high. Power distance reflects the extent of unequal distribution of power in social structures (family, organizations, institutions, or society as a whole) and tolerance of inequality. Ukrainian culture has a higher perception of internal inequality and more pronounced hierarchical structures (Wackowski & Blyznyuk 2017). Austria ranks among the lowest in the world for the dimension of power distance. Unequal distribution of power is less tolerated, hierarchies are seen as less important (Hofstede Insights 2021). There are a few studies examining the relationship of power distance and marketing. Uncertainty avoidance reflects the extent to which members of a society minimize the risk of making wrong decisions. Ukraine has a very high score on uncertainty avoidance. Ukrainians feel threatened by ambiguous situations. To minimize anxiety, people resort to traditional social patterns and place great value on the basic components of their occupations, such as job security, benefits, and permanence. (Aydin & McIsaac, 2004). Austria ranks lower in uncertainty avoidance, but still has a certain preference for avoiding uncertain situations. Long-term orientation refers to a society's inclination towards maintaining a connection to its past when facing the challenges of the present and the future (Hofstede Insights 2021). With respect to leadership, Jung and Avolio (1999) found that long-term oriented individuals perform better under a transformational leadership style. Ukraine scores very high in long-term orientation. It is difficult for them to understand the complexity of the present because it is very much tied to the past. Austria is also oriented toward the long term, albeit to a lesser extent than Ukraine.

4. Hypotheses development

Based on the cultural and economic differences between the countries in the previous section, several hypotheses will be tested to shed light on the different expectations of Ukrainian and Austrian Gen Z representatives of their future leaders.

4.1 Main differences in leadership preferences

As a collectivist country with high levels of power distance and uncertainty avoidance it is expected that expectations from leaders are higher in Ukraine than in Austria. The authors assume that this holds for transformational as well as for transactional leadership styles. When considering the different economic situation of the countries, transactional leadership styles that are based on pecuniary (monetary) rewards may show the largest difference between the countries. *H1: Transformational and transactional leadership styles (pecuniary, non-pecuniary, sanctions based) are all more important in Ukraine than in Austria. For transactional leadership with pecuniary rewards, the differences are the largest.*

Considering employee/production/change orientated leadership styles, it is assumed that employee oriented leadership styles are higher valued in Austria than in Ukraine, because individualistic and low power-distant cultures expect managers to be more attentive to them as individuals. For production oriented leadership, which is related to giving clear tasks and applying a hierarchical structure higher levels are expected for Ukrainian respondents, because this leadership style tends to decrease uncertainty through a higher assessability of results and task fulfilment. Change oriented leadership includes dimensions of transformation, motivation, and intellectual stimulation and adaptation to changing conditions. Ukraine as a European country is increasingly influenced by Western attitudes and behaviour. As such, change is an ambivalent construct. On the one hand, change is related with uncertainty, on the other hand it includes opportunities for improvement and personal development. Regarding the Gen Z as the subject of this study, the authors weigh the attraction of change higher and assume that change oriented leadership is more attractive in Ukraine than in Austria. *H2: Ukrainian respondents weigh production orientated leadership and change oriented leadership higher than Austrian respondents, while Austrian respondents put more emphasis on employee orientated leadership styles.*

4.2 Effects of work motivation and performance on preferred leadership styles

Whilst in literature mostly causal relationships of leadership and motivation/performance are analyzed, where leadership styles serve as predictors, and motivation and performance are considered as outcome variables, this study reverses the cause-effect direction. We consider work motivation and actual performance as predictors of the appreciation of various leadership styles. Work motivation is an important determinant of personal and organizational accomplishments (Kanfer, Chen & Pritchard 2008). Although being disputed (Reiss 2012), dualistic theories distinguish between intrinsic and extrinsic motivation. With respect to expected leadership styles, intrinsic motivation might be more related to transformational, employee, or change oriented styles, while extrinsic motivation is rather connected to transactional (reward and punishment) oriented styles of leadership. With respect to transformational leadership-, change-, and employee-oriented leadership, we expect that higher levels of motivation lead to higher expectations regarding these leadership styles, independent of the country, because intrinsically motivated people expect from their leaders inspiration, willingness to adapt and commitment to their employees. With respect to transactional leadership styles, especially monetary and non-monetary rewarded ones, we expect that for Ukrainian respondents, higher levels of work motivation lead to higher acceptance and appreciation. Ukraine has lower income levels and weaker economic conditions. Gen Z representatives, however, with unlimited access to information, so higher motivated people respond to leadership styles which promise any kind of material reward on good performance. Lastly, we assume that higher levels of work motivation do not increase the attractiveness of a transactional sanctions based leadership style, because literature suggests that the alternating effect of punishment and motivation is rather negative than positive (Ahmad, Said & Khan 2013). *H3: Higher work motivation leads to higher appreciation of (a) transformational, (b) employee oriented, (c) change oriented leadership styles, independent of the country. H4: Higher work motivation leads to higher appreciation of (a) transacational pecuniary, (b) transactional non-pecuniary leadership styles, with a stronger effect in Ukraine than in Austria. H5: Higher work motivation does not have an effect on the appreciation of a transactional sanctions-based leadership style in both countries investigated.*

With respect to the effect of work performance and expected leadership styles we argue that in high power-distant cultures high-performers appreciate leadership styles that reduce power distance, give them room for unfolding capacities and do not supress their willingness to deliver output. As such, we hypothesize that in Ukraine transformational leadership, change oriented and employee oriented leadership styles are more expected and appreciated. Additionally, owed to the weaker economic situation in Ukraine, Gen Z members might strive for economic improvement, which is especially true for people who have the ability to perform. This might lead to a higher willingness to accept transactional, monetary or non-monetary rewarded leadership styles. In individualistic cultures and in well-settled economic conditions like Austria, high-performers might perceive themselves independent, hierarchically as well as economically, and as such the effect of performance on expected and appreciated leadership styles is lower for all types of leadership styles. *H6: Ukrainian respondents with higher levels of performance have an increased appreciation of (a) transformational, (b) change oriented, (c) employee oriented, (d) transactional pecuniary, (e) transactional non-pecuniary leadership styles. H7: For Austrian respondents, there is no effect of performance on one or more preferred leadership styles*.

5. Methodology

A cross-cultural quantitative survey was conducted in Austria and Ukraine to find out Gen Z representatives' expectations of their preferred leadership style. 157 Austrian and 131 Ukrainian students were asked about their expectations of transformational and transactional elements of leadership. 71% of the sample were female, 29% were male. Respondents were between 17 and 25 years old. 26% of the sample had no job experience, 26% up to one year, and 30% had an experience of one to five years. 18% had more than five years of job experience. To measure transformational and transactional leadership, a scale developed by Jensen and Andersen (2019) was used. The instrument contains 13 items, measuring four factors, (a) transformational leadership (4 items, α=.894), (b) contingent nonpecuniary rewards (3 items, α=.786), (c) contingent pecuniary rewards (3 items, α=.804, and (d) contingent sanctions (3 items, α=.799). Factors (b) to (d) are dimensions of transactional leadership. Change/Production/Employee orientation (CPE) was measured by Ekvall and Arvonen's (1991) instrument. Employee orientation (6 items, α=.630), production orientation (5 items, α=.701), change orientation (4 items, α=.625). Work motivation was measured by using Gagné et al.'s (2010) work motivation scale (12 items, α=.829). Performance was measured using a 10 item scale (α=.835) (Azevedo Andrade, Queiroga & Valentini 2020). Age, gender, and work experience were measured categorically. A multivariate analysis of variance was conducted to examine differences between the Ukrainian and Austrian subsamples. MANOVA is a commonly used statistical technique for examining groups for mean differences between several dependent variables that are related to each other (Huberty & Olejnik 2006). Since it can be assumed that there is some relationship between the leadership dimensions measured in this study, MANOVA offers an advantage over separate analysis of variance (ANOVA) tests because it takes into account the relationships between the dependent variables (Bray & Maxwell 1985).

6. Analysis

At first, bivariate correlations of all leadership factors were calculated. As expected, the seven factors of leadership style had moderate correlations in both subsamples. Correlations of factors was not higher than .621; p=.000 and not lower than .152; p=.000, thus the condition of a moderate correlation of variables was met. To test H1 and H2, a multivariate analysis of variance was performed with the seven styles of leadership style as dependent variables, country as the main factor, and gender and work experience as covariates.

Table 1: Multivariate Analysis of Variance for country Ukraine / Austria

Leadership style		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Transformational	Contrast	16.564	1	16.564	21.319	.000	.070
	Error	219.882	283	.777			
Transactional pecuniary reward	Contrast	41.124	1	41.124	64.760	.000	.186
	Error	179.711	283	.635			
Transactional non-pecuniary reward	Contrast	4.788	1	4.788	4.932	.027	.017
	Error	274.737	283	.971			
Transactional sanctions-based	Contrast	21.790	1	21.790	25.050	.000	.081
	Error	246.166	283	.870			
Employee oriented	Contrast	3.959	1	3.959	4.204	.041	.015
	Error	266.524	283	.942			
Producation oriented	Contrast	2.077	1	2.077	2.099	.149	.007
	Error	280.013	283	.989			
Change oriented	Contrast	1.069	1	1.069	1.051	.306	.004
	Error	287.768	283	1.017			

The F tests the effect of Country. This test is based on the linearly independent pairwise comparisons among the estimated marginal means. a. Computed using alpha = .05

The univariate F tests (Table 1) present a significant difference between Ukrainian and Austrian respondents for Transformational Leadership, Transactional Leadership (Pecuniary), Transactional Leadership (Non-Pecuniary), Transactional Leadership (Sanctions), and Employee Oriented Leadership, with respect to how they prefer the different leadership styles. For Production Orientation Leadership and Change Orientation Leadership, no significant country differences were found.

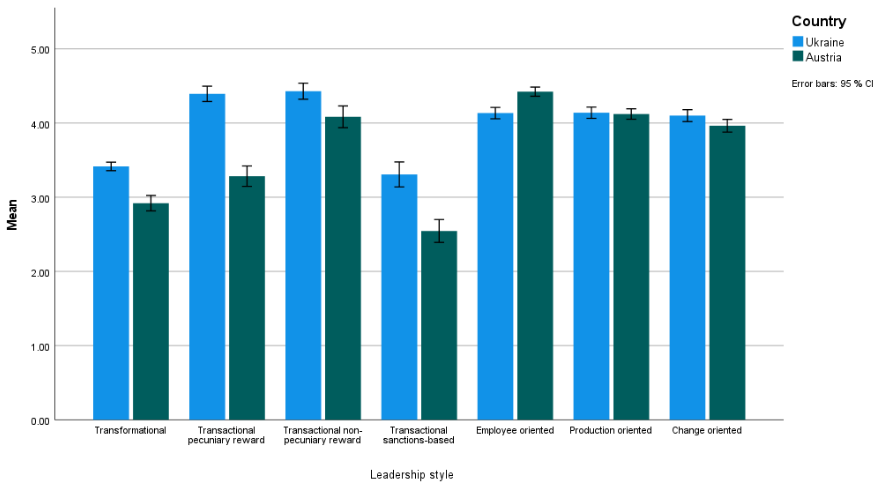

Figure 1: Preferred leadership styles in Austria and Ukraine

To test effects of motivation and performance on the preference of leadership styles, another multivariate analysis of variance was calculated, with high/low levels of performance/motivation as factors, and for each country separately.

Table 2: Multivariate analysis of variance for different levels of performance

Country	Leadership style		Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Ukraine	Transformational	Contrast	1.402	1	1.402	4.885	.029	.037
		Error	36.166	126	.287			
	Transactional pecuniary reward	Contrast	2.404	1	2.404	6.164	.014	.047
		Error	49.131	126	.390			
	Transactional non-pecuniary reward	Contrast	3.237	1	3.237	5.683	.019	.043
		Error	71.779	126	.570			
	Transactional sanctions based	Contrast	.050	1	.050	.057	.811	.000
		Error	110.640	126	.878			
	Employee oriented	Contrast	5.648	1	5.648	5.649	.019	.043
		Error	125.966	126	1.000			
	Production oriented	Contrast	10.655	1	10.655	11.751	.001	.085
		Error	114.252	126	.907			
	Change oriented	Contrast	7.280	1	7.280	9.334	.003	.069
		Error	98.273	126	.780			
Austria	Transformational	Contrast	.486	1	.486	.416	.520	.003
		Error	178.737	153	1.168			
	Transactional pecuniary reward	Contrast	.090	1	.090	.110	.741	.001
		Error	126.053	153	.824			
	Transactional non-pecuniary reward	Contrast	.672	1	.672	.520	.472	.003
		Error	197.683	153	1.292			
	Transactional sanctions based	Contrast	3.666	1	3.666	4.294	.040	.027
		Error	130.642	153	.854			
	Employee oriented	Contrast	1.432	1	1.432	1.689	.196	.011
		Error	129.741	153	.848			
	Production oriented	Contrast	1.906	1	1.906	1.907	.169	.012
		Error	152.978	153	1.000			
	Change oriented	Contrast	4.542	1	4.542	4.091	.045	.026
		Error	169.848	153	1.110			

The F tests the effect of Performance. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

MANOVA results indicate significant effects of performance on preferred leadership styles for transformational, transactional pecuniary and transactional non-pecuniary leadership, employee oriented, production oriented, and change oriented leadership of Ukrainian respondents, whilst there was no significant effect of performance on transactional sanctions leadership style. For Austrians, transactional sanctions leadership style and change orientation leadership react significantly to changes in the performance level.

To test effects of work motivation on preferred leadership styles, another multivariate analysis of variance was computed, with high/low motivation levels as factors, and gender and job experience as covariates. Results indicate a significant effect of work motivation on transactional leadership pecuniary, production, employee, and change orientation leadership styles for Ukrainian respondents, whilst for Austrian respondents motivation levels had a significant effect on a preference for an employee oriented leadership style only.

Table 3: Multivariate analysis of variance for different levels of motivation

Country	Dependent Variable		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Ukraine	Transformational	Contrast	1.125	1	1.125	3.889	.051	.030
		Error	36.443	126	.289			
	Transactional pecuniary reward	Contrast	3.784	1	3.784	9.984	.002	.073
		Error	47.751	126	.379			
	Transactional non-pecuniary reward	Contrast	2.177	1	2.177	3.767	.055	.029
		Error	72.839	126	.578			
	Transactional sanctions based	Contrast	.275	1	.275	.313	.577	.002
		Error	110.415	126	.876			
	Employee oriented	Contrast	5.116	1	5.116	5.096	.026	.039
		Error	126.498	126	1.004			
	Production oriented	Contrast	9.224	1	9.224	10.046	.002	.074
		Error	115.683	126	.918			
	Change oriented	Contrast	3.554	1	3.554	4.391	.038	.034
		Error	101.998	126	.810			
Austria	Transformational	Contrast	.001	1	.001	.000	.982	.000
		Error	179.222	153	1.171			
	Transactional pecuniary reward	Contrast	1.253	1	1.253	1.535	.217	.010
		Error	124.891	153	.816			
	Transactional non-pecuniary reward	Contrast	1.523	1	1.523	1.184	.278	.008
		Error	196.832	153	1.286			
	Transactional sanctions based	Contrast	2.725	1	2.725	3.168	.077	.020
		Error	131.583	153	.860			
	Employee oriented	Contrast	4.530	1	4.530	5.473	.021	.035
		Error	126.643	153	.828			
	Production oriented	Contrast	3.075	1	3.075	3.099	.080	.020
		Error	151.809	153	.992			
	Change oriented	Contrast	.418	1	.418	.368	.545	.002
		Error	173.972	153	1.137			

The F tests the effect of Work motivation. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

7. Discussion

From a cross-cultural perspective, the results show interesting associations with the cultural characteristics of the countries studied. First, Ukrainian respondents generally attach higher importance to all factors of leadership styles than Austrian interviewees. Research suggests that some cultures might perceive and evaluate leadership and its effects more important than others (Campion & Wang 2019; Wendt, Euwema & van Emmerik 2009). In collectivist cultures, leaders are assumed to place social interests above their personal interests. Leadership is a group phenomenon in that it involves leaders and followers who are connected by the organizational framework. In this study, Gen Z representatives, consequently, also allocated more importance to the various dimensions of leadership. For both countries, the transactional leadership style with contingent non-pecuniary rewards ranked highest of all. This might lead to the conclusion that Gen Z in both investigated countries acknowledges the relevance of contractual relationships between leaders and followers. However, non-pecuniary rewards like feedback, appreciation, praise etc. are the most expected characteristics of a future leader, ranking even higher than transformational leader characteristics.

Since financial rewards are associated with concrete material benefits, this result can also be explained by the different economic conditions in the two countries studied. In Ukraine, where the economic situation is less favorable for young people in many areas, the desire for monetary benefits in return for performance is stronger.

The leadership style based on contingent sanctions was ranked lowest in both countries. However, the difference between Ukraine and Austria was very strong, with Austrian respondents ranking this style even much lower than Ukrainian respondents. From a cultural perspective, these results can be explained through the dimensions of power distance which is much higher in Ukraine than in Austria. Wang and Guan (2018) reported that in authoritarian leadership structures (which often use sanctions to punish deviant conduct), employees from high power distance cultures are more likely to accept authoritarian behavior than employees from low power distance cultures.

Regarding work motivation and work performance as antecedents of preferred leadership styles, the results show significant differences in Austria and Ukraine. While all measured leadership styles were positively related to performance (i.e. high performers show a greater appreciation for the respective leadership style), the largest effect was found for production orientation leadership. High performers in Ukraine appreciate this style, which tends to place a stronger emphasis on getting the work done that on the welfare and motivation of the employees. For Austrian respondents, in contrast, performance levels only affected the transactional, sanctions-based leadership style in a way, that high-performers appreciate this style more than low performers.

Moderating effects of work motivation were found in all leadership styles except transactional, sanctions-based ones in Ukraine, with the strongest effect of motivation for production-oriented leadership. In Austria, the only significant effect of different levels of motivation was found in the employee-oriented leadership style.

8. Conclusions and Implications

The results of this cross-cultural study provide conclusions and implications for both academia and business leaders. For the scientific community, further empirical evidence is presented on the different expectations of Generation Z members towards their future leaders depending on the cultural context. For cross-cultural theory, the relationship between expectations of leaders under the condition of cultural dimensions such as collectivism, uncertainty avoidance, long-term orientation, and power distance is examined in more detail. Generational theory is supported by evidence that generations labelled as similar are not the same but have different perceptions and expectations depending on the culture in which they grew up.

Managers and leaders of different functions can infer from the findings that Generation Z has different expectations of their future leaders and prefers transactional leadership with non-monetary rewards and transformational leadership over transactional, pecuniary, and sanctions-based leadership. However, these expectations differ among representatives of different cultures. Members of Generational Z from Ukraine have higher overall expectations of their future leaders. Managers who will be working with employees from different cultural backgrounds should be aware of the different expectations of their employees.

9. Limitations

Of course, this examination is also subject to certain limitations. Although Austria and Ukraine were chosen as two countries with very different characteristics of cultural dimensions, a generalization to cultures with similar dimensional structures should be treated with caution. Moreover, Ukraine itself is a large country, and different mentalities might prevail in the eastern and western parts of the country. Replications of this study in other countries with a comparable setting could support the results even more clearly. Secondly, the study surveyed students who still had little professional experience. Future studies could also include young employees in companies with somewhat more work experience and thus possibly obtain even more meaningful results. Thirdly, the expectations placed on a future manager are naturally shaped by various factors. Future studies could include variables such as motivation, work atmosphere, etc. and thus better understand the contribution of culture to explaining expectations of managers. Finally, the COVID crisis during which this study was conducted may have had an impact on respondents' expectations for their future in general and for leadership in particular.

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Sustainability Leadership and Boards: A Conceptual Framework

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Abstract: Sustainability demands boards to be intrinsically motivated. Translating the sustainability agenda into measurable social and environmental outcomes implies a behavioral transformation on the individual, group, and organizational levels. Focusing only on regulatory requirements, ESG metrics, and corporate reputation does not lead to the genuine commitment of board members to enhance the organization's sustainability. Embedding sustainability into the organization's business model and strategy calls for the board's commitment and impactful actions. Therefore, this study attempts to provide new insights on how boards could enhance their sustainability engagement and performance by developing and demonstrating specific leadership behaviors. For this purpose, a literature review has been conducted. To draw on the premises of stakeholder theory and selected leadership constructs, the method of theory synthesis was used. This study builds on and extends the existing leadership and corporate governance literature by providing a conceptual framework that links sustainability leadership and board dimensions: purpose and authenticity, power and responsibility, and process and transformation. It proposes the initial assessment questions for each dimension. The proposed conceptual and assessment frameworks offer practical implications for various stakeholders. Board members can use them as self-assessment and development tools that can enhance their sustainability engagement and leadership behaviors. Based on these frameworks, human resources management could define sustainability competencies to be considered in board recruitment, assessment, development, and succession. Leadership and organizational development specialists could also use these guidelines to design and implement sustainability leadership development programs. By offering a novel perspective that links sustainability efforts and leadership behaviors of boards, these research contributions could inspire organizations to move beyond compliance-oriented sustainability toward genuine sustainability. Future research could be directed at validating the proposed conceptual framework by conducting qualitative and quantitative studies to explore the board members' perceptions and views on specific leadership behaviors in the context of the sustainability agenda.

Keywords: sustainability, leadership, sustainability leadership, boards, conceptual framework

1. Introduction

Sustainability requirements are increasingly impacting the corporate world. The shift in the consciousness of consumers, investors, employees, governments, and communities about social and environmental issues resulted in redesigning the missions, strategies, and practices of many organizations (Chams and Garcia-Blandon, 2019; Galpin and Whittington, 2012). Requirements of various stakeholders are putting pressure on boards to act on the sustainability agenda more effectively (Breeden and Skinner, 2021). To maintain legitimacy and create a competitive advantage, organizational leadership needs to ensure effective resource allocation and promotion of social welfare (Chams and AlSagheer, 2017; Galbreath, 2018; Poddar, Narula and Zutshi, 2019). Organizations are increasingly becoming aware of the growing link between sustainable practices and corporate effectiveness (Fernando, Jabbour and Wah, 2019). Therefore, the concept of sustainability has broadened its boundaries from being mostly related to environmental issues to now being embedded into the organization's overall business model (Naciti, Cesaroni and Pulejo, 2021).

Several terminologies are applied in the literature to reflect sustainable practices, such as environmental, social, and governance (ESG), corporate social responsibility (CSR), triple bottom line (TBL), and corporate or business sustainability (Armstrong, 2020; Chams and Garcia-Blandon, 2019; Lokuwaduge and Heenetigala, 2017). The United Nations 2030 Agenda for Sustainable Development includes 17 Sustainable Development Goals (SDGs) aimed at prosperity for people and the planet. The Global Reporting Initiative (GRI), the UN Global Compact (UNGC), and the World Business Council for Sustainable Development (WBCSD) developed the SDG Compass to guide businesses in measuring and managing their contribution to the realization of the SDGs. As sustainability is a broad term, understanding of what it entails can differ widely between directors on the same board as well as between different organizations (Smith and Soonieus, 2021). However, it should be emphasized that sustainability is not an organizational objective but rather a framework that guides the fulfillment of purpose and the creation of long-term value for all stakeholders. Translating the sustainability agenda into measurable social and environmental outcomes implies a behavioral transformation on the individual, group, and organizational levels.

Balancing simultaneous and sometimes contradictory social, environmental, and economic requirements presents a leadership opportunity (Ferdig, 2007). The need to differentiate sustainability leadership from leadership, in general, may be necessary but a temporary phenomenon (Visser and Courtice, 2011). Sustainability leaders take conscious actions, individually and collectively, leading to outcomes that support and sustain healthy economic, environmental, and social systems (Ferdig, 2007). These leaders can engage in dialogue and partnerships with different members of society, deal with complex problems, respond flexibly to change, and have the emotional intelligence to adaptively engage with their own emotions associated with complexity (Bendell and Little, 2015; Metcalf and Benn, 2013; Szekely and Knirsch, 2005). Fry and Egel (2021) emphasize the importance of cultivating a global mindset for sustainability, which incorporates an ethic of remote moral responsibility and an ethic of care and compassion. Leaders' ability to instill sustainability into people, places, products, processes, and profits enables them to use their power of influence for a positive social and environmental impact (Weybrecht, 2014, as cited in Amankwa, 2018). To be at the heart of the organization's strategy, sustainability needs to be an integral part of the board's agenda (Smith and Soonieus, 2021).

Embedding sustainability into the organization's business model and strategy calls for the board's commitment and impactful actions. Nowadays, one of the key board's roles is to increase awareness of sustainability implementation, by adopting a systematic balancing between shareholders' and stakeholders' interests (Chams and Garcia-Blandon, 2019). Thus, social and environmental concerns imposed more complex and broader responsibilities on boards. To address the interests and needs of various stakeholders, greater emphasis is put on sustainability behaviors, disclosure, and performance. As the board of directors is the most important governance mechanism within the organization, its composition, especially in terms of gender, age, and specific competencies, is considered a crucial determinant of the performance of the organization (Rao and Tilt, 2016) in general, and of sustainability performance, in particular (Lawrence, Collins and Roper, 2013; Naciti, Cesaroni and Pulejo, 2021). While many organizations have progressed in designing and implementing their sustainability strategies, many boards and executive teams are still lagging in improving their environmental, social, and governance performance (Breeden and Skinner, 2021). The reasons for insufficient engagement of boards are related to the lack of necessary information, expertise, and processes, and especially to beliefs and attitudes that are not aligned with the values of sustainability (Smith and Soonieus, 2021).

Sustainability demands boards to be intrinsically motivated. Focus only on regulatory requirements, ESG metrics and corporate reputation does not lead to genuine commitment of board members to enhance the organization' sustainability engagement and performance. Therefore, this study attempts to answer the following research question: How boards can view the sustainability agenda as an opportunity to develop and demonstrate specific leadership behaviors? For this purpose, a literature review has been conducted. To draw on multiple concepts and theories that play differing roles, in this conceptual paper the method of theory synthesis was used (Jaakkola, 2020). Papers of this type contribute by integrating extant knowledge and enabling scholars to see a concept in a new way by transforming previous findings and theory into a novel perspective that links phenomena previously considered distinct (MacInnis, 2011).

In this study, the selected board dimensions related to sustainability are examined in line with the premises of stakeholder theory. Freeman (1984) states that the foundation of this theory is the organization's acknowledgment of its responsibilities not only toward shareholders but also toward wider groups of stakeholders. Based on this theoretical framework, boards and management must ensure that the organization can create value for all stakeholders (De Graaf and Stoelhorst, 2013; Tipurić et al, 2008). While stakeholder theory is helpful in addressing issues related to the functioning of corporate governance mechanisms and their effects on sustainability as a whole (Naciti, Cesaroni and Pulejo, 2021), sustainability efforts have not been as effective as they could be, partially as boards and management often do not connect sustainability with leadership behaviors. The emphasis on values that underlies most conceptions of sustainability also requires a consideration of leadership constructs, such as authenticity, responsibility, and transformation (Hallinger and Suriyankietkaew, 2018). Therefore, this study links stakeholder theory with selected constructs that set a frame for sustainability leadership. This paper proposes a conceptual framework that links sustainability leadership and board dimensions (Figure 1), with the purpose to inspire boards to enhance their sustainability engagement and performance by developing and demonstrating specific leadership behaviors.

This paper is structured as follows. After the introduction, the next three sections describe leadership and board dimensions selected as the most relevant from the sustainability perspective. Section 2 links purpose and authenticity, Section 3 power and responsibility, while Section 4 is related to process and transformation. Finally, the conclusion highlights the paper's main contributions and provides future research recommendations.

Figure 1: Conceptual framework linking sustainability leadership and board dimensions

Source: Author's work

2. Purpose and authenticity

Purpose connects to authenticity. The alignment of individual and organizational purposes can be considered as a reflection of board members' authenticity. A search for purpose is something that appears as an intrinsic element of the human condition (Frankl, 1959). A challenge for boards is to ensure the purpose of an organization is one most stakeholders can relate to and that engages them (Coulson-Thomas, 2016). The purpose is often based on values. Values provide a source of inspiration and commitment among organizational stakeholders (Morsing and Oswald, 2009). Therefore, it is important to create a culture that promotes the alignment of values between the organization, its employees, and other stakeholders. As many businesses redefine their purpose to embed sustainability, board members need to incorporate these changes into a shared purpose and prioritize the long-term in decision-making (Breeden and Skinner, 2021). The view that board decisions should be aligned to organizational purpose is increasingly emphasized in the corporate world. A recent study indicated that most European board members believe that embedding a purpose-driven culture will significantly increase in importance on board agendas within five years (Page, 2020). In addition, previous research by Breeden, Gailey and Wardley (2020) found that purpose energizes leaders and, at the same time, energizing leadership has a positive impact on organizational performance. To fulfill the organization's purpose, boards need to embrace the perspectives of various stakeholder groups and lead by example by genuinely caring for social and environmental issues.

Sustainability offers an opportunity for authentic leadership of board members (Breeden and Skinner, 2021). Authenticity involves being self-aware of one's thoughts, feelings, and values, acting based on one's true preferences, values, and needs, and valuing openness in one's close relationships (Gardner et al, 2011). Several theories of authentic leadership are based on this conceptualization of authenticity (Gardner et al, 2005; Spitzmuller and Ilies, 2010; Walumbwa et al, 2008). Whitehead (2009, p. 850) provided a definition of authentic leadership that includes three components: (i) self-awareness, awareness of those being led, a caring attitude, and a focus on development; (ii) creation of high levels of trust by building an ethical and moral framework; and (iii) commitment to organizational effectiveness grounded in social values. Boards can contribute to the sustainability performance of their companies by raising awareness first about their own purpose (Breeden and Skinner, 2021). Self-awareness, together with a moral perspective, is a basis of authentic leadership that is recognized as a sustainable orientation (Avolio and Gardner, 2005; Walumbwa et al, 2008). Authentic leadership is key to going beyond compliance-oriented sustainability to achieve genuine sustainability (Lombard, April and Peters, 2012).

Figure 2 provides initial assessment questions related to purpose and authenticity as interrelated sustainability leadership and board dimensions.

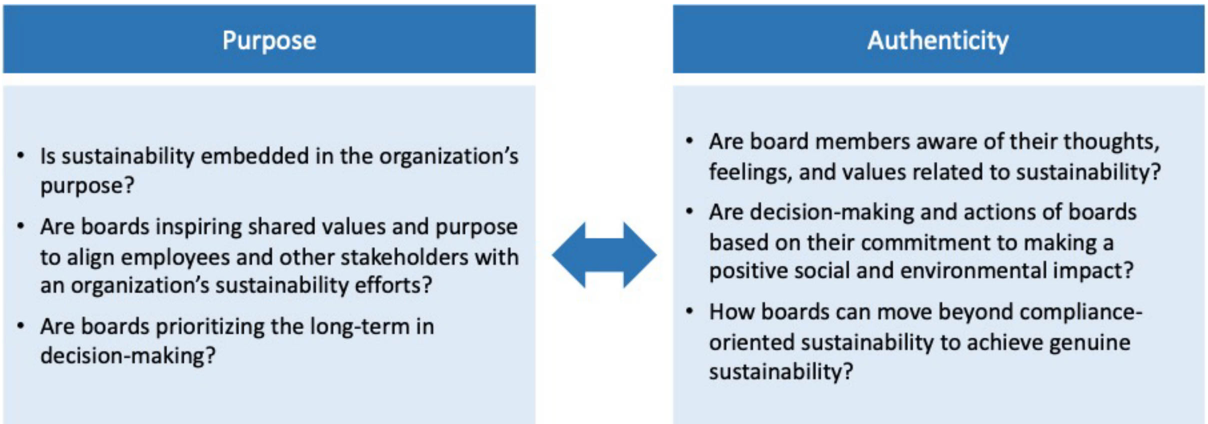

Figure 2: Purpose and authenticity assessment

3. Power and responsibility

Power implies responsibility. Involving and empowering various stakeholders is where boards can use their power for the greatest social and environmental impact. Board members' greater awareness of how collective understanding and action can lead to optimal outcomes provides insight for working with shifting power relationships (Ferdig, 2007). Therefore, the corporate governance structure should allow mechanisms to improve the organization's sustainability performance by supporting broader stakeholder participation (Naciti 2019; Rao and Tilt 2016). The influence of such a structure on ESG responsibility significantly depends on the observed national or transnational context (Romano et al, 2020). As chairs set the board agenda, they can demonstrate their leadership by ensuring that sustainability is part of each critical conversation the board has with the organizational stakeholders including shareholders, impact investors, community leaders, and employee groups (Breeden and Skinner, 2021). To fulfill the organizational purpose and contribute to SDGs, boards should support a shift in power relations by giving more accountability to executive management. In addition, the board of directors' composition needs to be diverse. Prior studies indicate that the presence of female and outside directors on boards is positively associated with sustainability performance (Galletta et al, 2022; Provasi and Harasheh, 2021; Zhang, Zhu and Ding, 2013). Furthermore, the chairs need to foster an inclusive culture in their boardroom, where all directors and other stakeholders feel they can express what may be differing views on the sustainability agenda (Breeden and Skinner, 2021). Boards' clear communication and transparency of sustainability targets, processes, and results are also important in enhancing the engagement of key organizational stakeholders, thereby distributing the power to create a change.

The more power boards have, the more they are responsible for the effective implementation of the sustainability agenda. In addition to embedding sustainability into purpose and prioritizing the long-term, the implementation of the sustainability agenda requires responsible leadership. The concept of responsible leadership puts leader-stakeholder relationships at the center of attention and provides a convincing perspective on how to connect leadership to stakeholder theory (Pless and Maak, 2011). Maak and Pless (2006, p. 101) argue that "building and cultivating ethically sound relationships with different stakeholders is an important responsibility of leaders in an interconnected stakeholder society". These relationships are based on a sense of justice and care, as well as on a commitment to accomplishing a positive social and environmental impact (Pless, 2007). To develop responsible leadership, it is important to clarify what the leader is responsible for and what is the nature of her or his responsibility (Foldoy et al, 2021). Voegtlin et al (2020) found in their research that responsible leadership behavior, facilitated by leader empathy, positive affect, and universal value orientation, is positively related to the leader's perceived effectiveness, favorable stakeholder evaluations, and employee engagement with the organization and society. As organizations try to address new economic, social, and environmental challenges, their leaders are beginning to recognize their responsibility to transform the organizational culture into one that supports sustainable development (Paraschiv et al, 2012).

The initial assessment questions related to power and responsibility as interrelated sustainability leadership and board dimensions are presented in Figure 3.

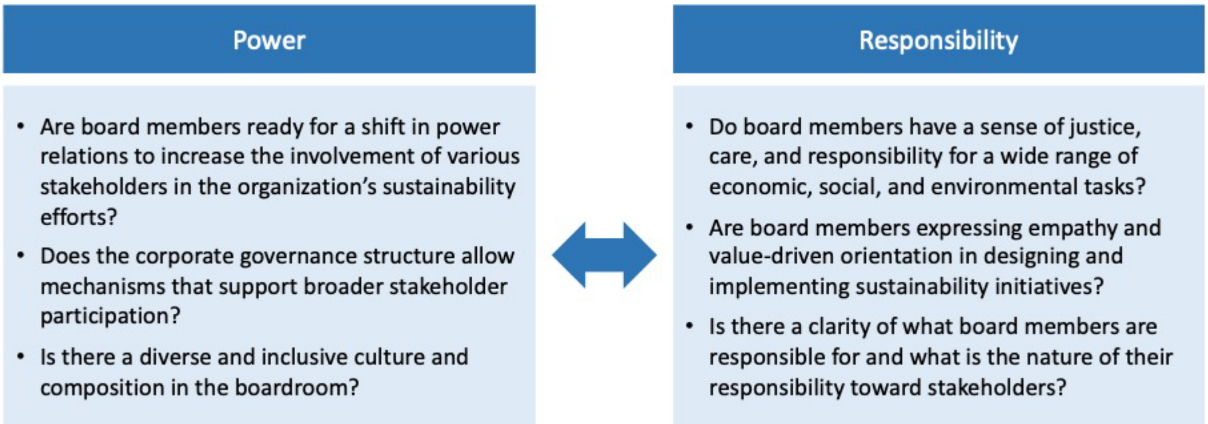

Figure 3: Power and responsibility assessment

4. Process and transformation

Process results in transformation. An understanding of not only what the organization aims to accomplish but also what is the current state is key for embedding sustainability into the board's processes. Therefore, boards need to have an insight into the perceptions and expectations of employees, investors, and other stakeholders regarding the organization's current and potential impact on society and the environment. In addition, they have to continuously monitor the processes related to the implementation of the sustainability agenda. Boards should have frameworks, tools, and metrics to understand the organization's impact and assess how their executives are leading progress toward sustainability targets (Breeden and Skinner, 2021). These frameworks need to provide coherent direction, clear accountability, and flexibility to allow mid-course corrections (Ferdig, 2007). In ensuring effective boardroom decision-making, the role of the board chair is especially important (Tipurić and Cindrić, 2021). When sustainability becomes embedded into the organization's strategy and processes, competencies needed for its effective implementation should also be considered in board recruitment, assessment, development, and succession. All board directors should have foundational sustainability competencies and sector-specific insights that will allow them to make informed ESG-related decisions and inspire organizational transformation toward genuine sustainable development (Breeden and Skinner, 2021). While expertise in compliance policies, impact investing, product and service innovation, as well as other technical aspects of sustainability is important, the ability of boards to engage organizational stakeholders can be considered essential for the effective implementation of the sustainability agenda.

Moving beyond compliance-oriented sustainability toward the citizenship stage that integrates a focus on social and environmental impact (Galpin and Whittington, 2012; Logsdon and Wood, 2002; Mirvis and Googins, 2006) requires a transformation of human resource development practices within the organization. This transformation should originate from boards. They need to provide role-modeling and mentoring to the executive management aimed at increasing their engagement in sustainability efforts. This need to empower the executive management is an opportunity for board members to demonstrate transformational leadership behaviors that include: idealized influence; inspirational motivation; intellectual stimulation; and individualized consideration (Bass and Avolio, 1994; Bass and Riggio, 2006). When these behaviors are authentic, transformational leadership results in improved trust, organizational citizenship behavior, and organizational commitment (Islam, Furuoka and Idris, 2021; Pattnaik and Sahoo, 2021; Udin, 2020). As employees are increasingly valuing sustainability, the empowered executive management should commit to increasing employee engagement which is key to transforming an organization's sustainability mission and strategy into measurable outcomes (Galpin and Whittington, 2012; Temminck, Mearns and Fruhen, 2015).

Figure 4 provides initial assessment questions related to process and transformation as interrelated sustainability leadership and board dimensions.

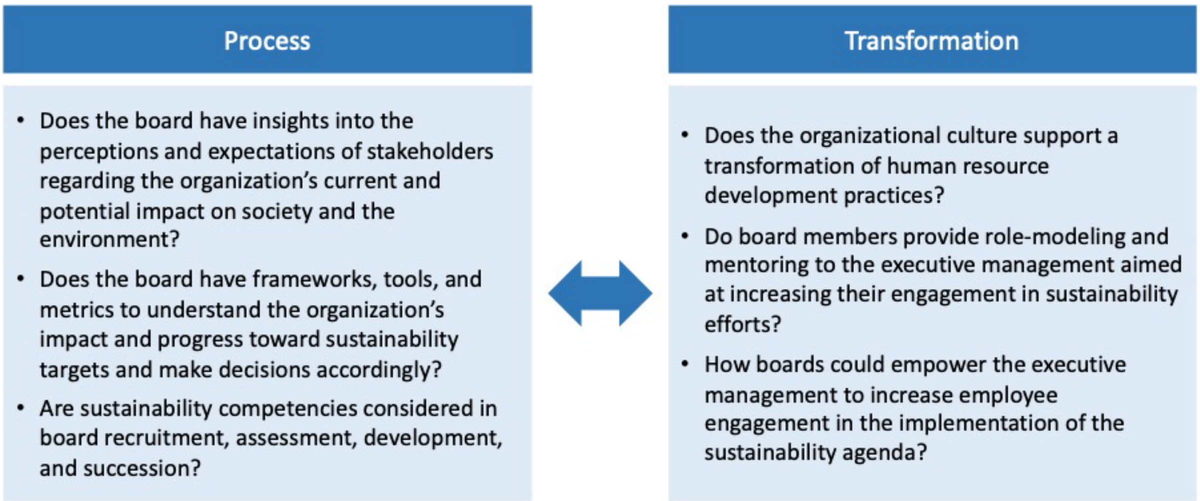

Figure 4: Process and transformation assessment

5. Conclusion

This study builds on and extends the existing leadership and corporate governance literature by providing a conceptual framework that links sustainability leadership and board dimensions: purpose and authenticity, power and responsibility, and process and transformation. It proposes the initial assessment questions for each dimension that can be further used and refined by other researchers. These research contributions advance the understanding of how boards can view the sustainability agenda as an opportunity to develop and demonstrate specific leadership behaviors. Furthermore, the proposed conceptual and assessment frameworks offer practical implications for various stakeholders. Board members can use them as self-assessment and development tools that can enhance their sustainability engagement and leadership behaviors. Based on these frameworks, human resources management could define sustainability competencies to be considered in board recruitment, assessment, development, and succession. Leadership and organizational development specialists could also use these guidelines to design and implement sustainability leadership development programs. Regarding the limitations of this study, it is important to emphasize that the proposed conceptual framework is not based on an exhaustive literature review, and further study of examined phenomena also requires consideration of organizational behavior theories. Additionally, multiple leadership constructs could be relevant for the selected board dimensions; however, in this study, only one construct is assigned to each dimension to enable focus in the initial phases of leadership assessment and development. Future research could be directed at validating the proposed conceptual framework by conducting qualitative and quantitative studies to explore the board members' perceptions and views on specific leadership behaviors in the context of the sustainability agenda. By offering a novel perspective that links sustainability efforts and leadership behaviors of boards, this conceptual paper could inspire organizations to move beyond compliance-oriented sustainability toward genuine sustainability.

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PhD Research Papers

Exploration of Corporate Governance Challenges in Public Sector Information Systems: An Auditor General Perspective

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Abstract: The aim of this article is to explore the obstacles that are within the South African public sector, preventing information systems from operating as efficiently as they could. The significance of the research lies in the fact that the accomplishment of the objectives outlined in the South African national development plan 2030 and the medium-term strategy framework is dependent on the performance of the public sector. In the course of the research, annual and general reports from the website maintained by the Auditor General of South Africa from 2017 through 2021 were used. This study made use of the qualitative analysis software, Atlas.ti 7 which was employed to analyse textual data in annual reports. The investigation of the difficulties posed by corporate governance in the South African public sector were unveiled from themes emerging form the use of thematic analysis. The research uncovered issues with both the macro and the micro levels of corporate governance in the South African public sector. The macro concerns that were brought to light were difficulties in the structure of information systems, an economic downturn, changes in the leadership of the government, and a lack of credible information offered to people. Poor leadership accountability, inadequate information technology capabilities, poor project management, poor information management, inadequate and ineffective disaster recovery, regression in information technology governance, and delay in filling information technology vacancies were some of the micro-obstacles of corporate governance that affected information systems. According to the findings of the research, a transformational approach should be used to solve the issues by first gaining an awareness of how users view the role that information technologies play in the running of public bodies. In addition, instruments of corporate governance that relate to information systems in the public sector should be assessed to gauge their effectiveness in the South African environment.

Keywords: Governance, South Africa, Challenges, Public sector, Information Systems, Auditor General

1. Introduction

The relationship set up in corporate governance is composed of the principal that is shareholders of an organisation who are not involved in day to day running of the business and have certain objectives. The principal assigns responsibilities to the agent who are managers directly involved with the business activities to achieve the objectives of the principal. The problem of corporate governance emanates from the principal-agent relationship. Divergence of principal and agent interests provide a basis for instituting corporate governance mechanisms (Lazarides and Drimpetas, 2008; Lazarides, Argyropoulou and Koufopoulos, 2012; Papazafeiropoulou and Spanaki, 2016). Information asymmetry makes it difficult for the principal to monitor the activities of the agent who possess information advantage as compared to their principal (Lazarides and Drimpetas, 2008). Information systems (IS) play a crucial role in facilitating collection, processing and flow of information within and outside an organisation for example government entities. Corporate governance tools should ensure that IS delivers information to the controlling shareholders who are the citizens for public entities. The transmission of information should be timeously in line with their objectives to avoid abuse and misuse of information (Lazarides and Drimpetas, 2008; Chen, Dai and Na, 2019). Corporate governance offers a system of protection in the form of codes, best practices, legislation and regulation so that the goals of the principals and the constituent they represent are achieved (Lazarides and Drimpetas, 2008; Lazarides, Argyropoulou and Koufopoulos, 2012). Corporate governance mechanisms have a cost implication of the functionality and performance of organisations (Lazarides and Drimpetas, 2008). An effective corporate governance mechanism ensures the performance of IS, which provides stability and , as a result, reduces potential conflicts between principals and agents, thereby achieving the organization's goals (Lazarides and Drimpetas, 2008; Ali and Green, 2012; Papazafeiropoulou and Spanaki, 2016). The functionality of IS can be viewed in terms of how it provides control, communication and dissemination efficiency, flexibility, information storage and quality, trailing and security (Lazarides and Drimpetas, 2008; Chen, Dai and Na, 2019). The demise of information and technology (IT) departments, suboptimal operational IT costs, and incorrect information all contribute to an organisation's poor functionality, resulting in an inefficient corporate governance scenario (Ali and Green, 2012). Effective corporate governance plays a crucial role in ensuring that an organisation is sustainable (Achim and Borlea, 2014; Jarboui, Forget and Boujelbene, 2014). Corporate governance tools seek to align organisational management to shareholders interests (Achim and Borlea, 2014; Locke and Duppati, 2014).

Government control public sectors and as such performance of public sector organisations is hinged upon their active involvement in ensuring that they operates under the ambits of their strategic and national objectives (Locke and Duppati, 2014). When corporate governance system are effective, they will be efficient allocation of resources in an organisation in such a way that they will be increased firm performance (Locke and Duppati, 2014; Yapa, 2014). It is also argued that corporate governance system can curb fraud, misuse of power and increase citizen's trust on management of economic resources (Matei and Drumaşu, 2014). The need for accountability in the public sector has given rise to corporate governance mechanisms in an effort to organise and control organisations in such a way that they perform in line with government objectives (Papazafeiropoulou and Spanaki, 2016).

The emergence of corporate governance concept emanated from continued embezzlement of corporate funds and abuse of finance in developed economies that include the United States of America (USA) and United Kingdom (UK) (Ali and Green, 2012; Matei and Drumasu, 2015). In USA there was the Watergate in the 1970s, where private firms directed funds to illegally sponsor political parties and in UK between 1980 and 1990, there was sudden bankruptcy of firms listed on the stock exchange (Matei and Drumasu, 2015). Corporate failures necessitated a need to separate the powers of shareholders and managers (Matei and Drumasu, 2015). The key codes which were established in the UK includes Cadbury, Greenbury, Hampel and Combined (Matei and Drumasu, 2015). Corporate governance is founded on the crucial elements of relationship of principal and agent, performance and accountability, laws and regulations, and external audit among others (Matei and Drumasu, 2015).

IS connect accounting and finance, human resources, supply chain management, and manufacturing (Chen, Dai and Na, 2019). Units generate information that's stored in a database to support decisions (Chen, Dai and Na, 2019). IS and corporate governance improve firm performance and information processing (Chen, Dai and Na, 2019). Despite the value of IS and corporate governance, it's unclear how public sector organisations perform (Chen, Dai and Na, 2019). Information processing theory says good IS should ensure business function convergence (Chen, Dai and Na, 2019). IS outcome depends on system and implementation characteristics, environment, and organisation (Chen, Dai and Na, 2019). Agency and decision information costs and principal-agent conflicts help fuse corporate governance and IS (Chen, Dai and Na, 2019). IS should provide detailed, real-time, transparent information to reduce agency costs (Chen, Dai and Na, 2019). Ease and availability of information impact decision making in an organisation and help reconcile and assess individual decisions from different business units, ensuring quickness in making decisions that affect an organization's operations (Chen, Dai and Na, 2019). Public sector organisation functionality is based on principal decisions, which depend on IS information quality (Chen, Dai and Na, 2019). When information is hard to get or inaccurate, it delays decisions and leads to bad ones (Chen, Dai and Na, 2019). In public sector, political decisions and influence are prevalent, and principal-agent conflicts may exist in the form of government and the managers appointed on political grounds, who may not maximise the value of citizens, who are the financiers of public sector organisations (Chen, Dai and Na, 2019).

Corporate governance implementation should be guided to ensure proper operation (Masegare and Ngoepe, 2018). South Africa's inefficient corporate governance system fails to satisfy public interest (Masegare and Ngoepe, 2018). Failure in public sector performance attracts investigations, strikes, and leadership changes (Masegare and Ngoepe, 2018). Effective corporate governance requires legal, political, and social dialogue (Masegare and Ngoepe, 2018). Public sector organisations will perform better with continued review, monitoring, and evaluation of corporate governance procedures and rules (Masegare and Ngoepe, 2018). Lack of public sector corporate governance evaluation poses management challenges, preventing the government from achieving its strategic goals (Masegare and Ngoepe, 2018). King III code of South Africa mentions stakeholder engagement as a catalyst for good public sector governance, and Batho Pele guidelines require feedback on service delivery (Masegare and Ngoepe, 2018). IS should provide timely and accurate reports to stakeholders (Masegare and Ngoepe, 2018). Risk-based auditing systems help public sector organisations address sustainability and strategic issues (Masegare and Ngoepe, 2018).

South Africa's public and government entities follow a unique set of mandatory corporate governance systems and frameworks to ensure they fulfil their mandate in a fair and equitable manner. Public sector governance faces many challenges and despite obstacles, the public sector accounts for 10% of world output and is a major economic priority (Daiser, Ysa and Schmitt, 2017). South Africa government enacted corporate governance mechanisms to improve transparency in public sector organisations (Daiser, Ysa and Schmitt, 2017). South

African public sector has witnessed the implementation of various governance tools that include the public service corporate governance of information and communication technology policy framework herein referred as PSCGICTPF (DPSA, 2012). The corporate governance instruments that affect the operations of IS in South African public sector include Public Finance Management Act (PFMA), King Code, Control Objectives for Information Technology (COBIT) and ISO 38500. The benefits of having corporate governance in place for a public sector manifest in the form of reduced costs, improvement in quality and service delivery, agility in information and technology systems, protection of information and management of risks.

The Auditor General of South Africa (AGSA) is a is an independent body that promotes constitutional democracy and governance. AGSA is a mandatory public sector entity which act as a watchdog to audit public sector organisations and is defined by Section 239(b)(i) of the Constitution (AGSA, 2021). The AGSA is South Africa's audit oversight institution, whose obligation is derived from Chapter 9 of the Republic of South Africa's Constitution of 1996 (AGSA, 2021). Section 188 of the South African Constitution describes the responsibilities of AGSA and Chapter 2 and 3 of the Public Audit Act governs how they should be carried out (AGSA, 2021). Government entities are audited by the AGSA to monitor how public finance has been spend so as to build citizens' confidence (AGSA, 2021). Material irregularity is the main emphasis of audit outcomes carried by AGSA (AGSA, 2021). AGSA submits material irregularity to public agencies for inquiry, suggestions and remedial actions and in event of non-compliance, enforceable corrective action is taken such as issuance of debt certificate to ensure recovery of lost money (AGSA, 2021).

A misalignment of effectiveness of corporate governance that influence delivery of IS may result in inefficient, uncompetitive and unresponsive economic infrastructure network and hence failure to meet government's strategic outcomes. Failure of corporate governance systems and IS in South African public sector entities may hinder the achievement of national development plan 2030 (NDP) and medium-term strategic framework (MTSF) goals.

2. Literature review

IS performance is an integral part of key public sector reforms initiated by the government (Trotta *et al.*, 2011). IS supports transparency in public sector entities as it facilitate monitoring of resources and allowing optimal decisions to be made (Trotta *et al.*, 2011). IS operations are affected by tensions that arises from standardisation of processes that speak to governance of public entities (Trotta *et al.*, 2011). In implementation of public sector reforms, it is essential that IS influence organisational functions toward achieving strategic goals (Trotta *et al.*, 2011). IS increases citizen participation and accountability in public entities operations and hence reducing bureaucratic processes in key decision making (Trotta *et al.*, 2011). Riihim and Pekkola (2021) highlighted problems of IS procurement as a hinderance to achieve expected outcomes that are inline with established practices. The challenge emanate from IS being procured in a way that makes it difficult for realisation of its intended short and long-term benefits (Riihim and Pekkola, 2021). Understanding vendors and procurement agencies can assist in performance improvement of IS procurement (Riihim and Pekkola, 2021).

IS are hubs for value-creation and innovation amongst stakeholders in public sector organisations (Senyo, Effah and Osabutey, 2021). The transformative effect of IS is articulated in private sector and there is limited research for public sector in developing nations (Senyo, Effah and Osabutey, 2021). Public sector governance reforms that exclude IS create misalignment with effect being failure to me set objectives (Senyo, Effah and Osabutey, 2021).

Increasing interest towards having IS that supports public sector reforms which in turn should result in better and efficient service delivery (Kassen, 2021). The role of IS in public sector goes beyond capturing, storing, processing and distributing of incorruptible information to citizens, government and their respective agencies (Kassen, 2021). Apart from transparency and efficiency, IS provides flexibility in dealing and handling public sector information (Kassen, 2021). Maximisation of IS value is dependent on correct application and right environment for performance (Kassen, 2021). Corporate governance in government owned organisations are viewed as catalyst for overall economic governance (Mahadeo and Soobaroyen, 2012). There is scarcity of literature that focus on corporate governance challenges that are confronted by IS and how they improve the functionality of public sector in the face of reforms (Kassen, 2021). The goal of this study was to explore the main issues linked to operational barriers affecting IS in South African public sector. This study's research inquiry is: What are the challenges that affect IS in South African public sector?

3. Data and methodology

This study brings an auditor's perspective on the challenges faced by IS in South African public sector. A constructivism philosophical assumption was taken since we sought to understand the governance problems in the South African public sector context. In the context of constructivism, a comprehension of realities of the world is sought by forming subjective understanding based on experiences and emphasis is on the perspectives provided by participants (Cresswell and Poth, 2016). A qualitative research method is employed in this study. A qualitative research approach is motivated by the fact that phenomena under study is analysed by looking at existing and historically events that occurred in a real-world setting (Leedy and Ormrod, 2015). We explore the Auditor General of South Africa (AGSA) as a case study to have an in-depth insight into barriers faced by IS function within the public sector. The study concentrate because its peculiar characteristics that aid comprehension and inform challenges hindering functionality of IS in South African public sector (Leedy and Ormrod, 2015). Documentary data from AGSA annual integrated and general reports for the period 2016 to 2020 are used as unit of analysis. The annual integrated and general reports were obtained from AGSA website. Documents provide data or proof of how people represent and account for themselves in society. Documents serve as a technique and medium for comprehending and perceiving societal and organizational activities (Flick, 2014). The information that addresses the research question is of qualitative nature. Thematic analysis of the texts in the documents is performed to come up with corporate governance obstacles in IS. In thematic analysis, data is reduced by categorising it into key concepts that explains the underlying phenomena within a dataset (Flick, 2014). Analysis of textual data is done in the Atlas.ti 7 software.

4. Findings and discussion

The findings on the challenges affecting IS emanate from 27 codes and 60 quotations from analysing annual and general reports for a 5-year period ending in 2021. Figure 1 highlights the holistic view of the challenges as perceived by the AGSA.

4.1 Macro challenges affecting functioning of IS

At a macro level, functioning of public sector entities' information systems are affected by the corporate governance framework, economic recession, changes in political leadership and lack of reliable information to citizens which it can make use of to demand accountability and transparency. Leadership changes at a government level makes it difficult to implement and address issues emanating for adverse audit outcomes. Apart from changes in leadership, economic recession makes it difficult for IS to function effectively as alluded by the AGSA:

- Weakening economy and downgraded credit ratings typified the year 2017-2018, exerting fiscal limits on the delivery of public services as well as income creation.

Public sector entities must account to the taxpayers, which are the citizens and the information they provide in the public domain form the basis for this checks and balances. According to the AGSA comments:

- It is alarming that government institutions do not provide accurate progress updates to citizens in order to put pressure on public authorities to meet strategic goals.

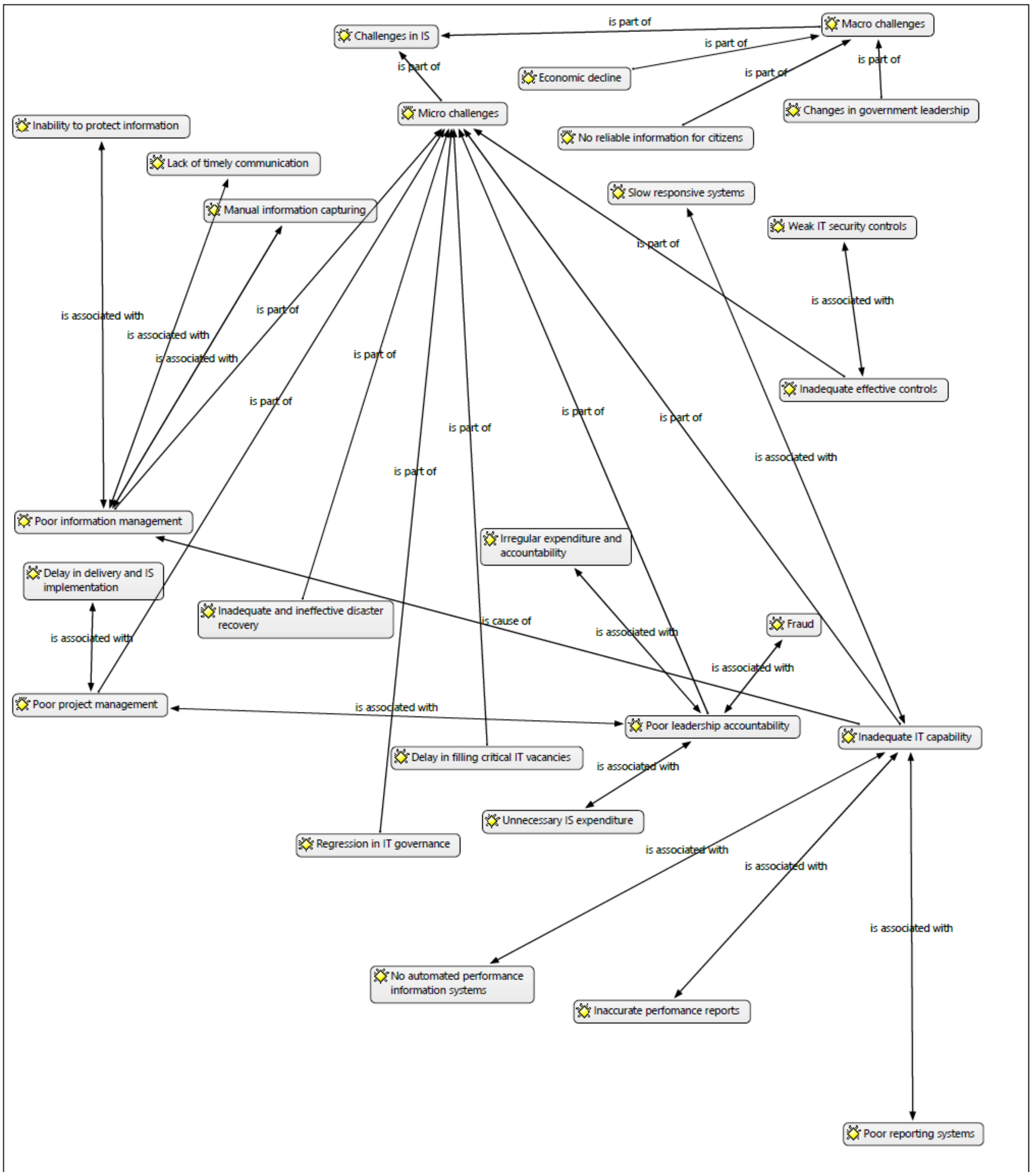

Figure 1: Challenges in functioning of IS

Source: Authors' analysis

4.2 Micro challenges affecting functioning of IS

The micro issues hindering the operation of IS in public sector entities include weak information technology security controls, inadequate information technology capabilities, poor leadership accountability, poor project management, poor information management, inadequate and ineffective disaster recovery, regression in information technology governance and delay in filling information technology vacancies. Weak information technology controls are associated with inadequate effective controls thereby undermining the functionality of IS and this is expressed from AGSA views as follows:

- There has long been a shortage of IT security competence, as well as enough financing.
- Insufficient financing for defence measures and aged IT technology have plagued the public sector.
- Despite the government's large investment in modern systems to ease operations, data collected by these systems is untrustworthy, opening the door to fraud and abuse.

- Weak system security in government entities was impacted by hacking, resulting in the inability to provide critical services, and in some instances, hackers demanded money to restore systems.
- Due to a lack of support from service providers for old systems, security fixes remained unpatched, resulting in breaches in IT security.

In addition to the weak IT controls, there is inadequate effective controls to address the IS functionality. The AGSA highlighted critical comments as follows:

- The IT environment in government organisations is a source of worry, with institutions failing to implement sufficient security and user management policies. Priority should be given to the adoption of automated control systems that ensure organisational continuity.
- IT security remained unaltered since management were unable to get important IT people with vital capabilities to maintain the present IT infrastructure.
- Lack of insufficient controls to oversee safe information processing resulted in IT control degradation.
- Control issues persisted particularly in security and user management owing to restrictive capability of systems.
- IT managers and those entrusted with ensuring compliance and implementation of governance structures and systems are reluctant to monitor and address weakness in IT controls.
- Contracts with IT service providers are not monitored to ensure alignment with agreed performance.
- Public sector managers were focussing on addressing the symptoms instead of strengthening IS for better operation.
- Inadequate financing to fund purchase of new IT equipment and improved internet connectivity.

The public sector entities were found to have poor recovery systems which affects revenue generation and service delivery. Inadequate information technology capabilities were observed by the AGSA and these manifest in form of slow responsive systems, poor reporting systems, inaccurate performance reports, no automated performance information system. The slow responsive system derails the functionality of IS as indicated by the comments from AGSA:

- Management of public sector organisations were found to be slack in dealing with IT control gaps that were identified in audit outcomes.
- The sluggish response intensity is increased by lack of priority by leaders to hold management in public sector to account and solve the root drivers of functionality of IS.

Public entities from South African provinces experienced some poor reporting systems and this was emphasised in the following view:

- There is lack of guidance at a national level to address challenges related to reporting systems. Robust reporting systems assist public organisations to allocate resources efficiently during planning and budgeting phases.

Absence of monitoring systems have an effect on the quality of information produced for decision purposes and blame has been put on accounting personnel and IT as indicated by the AGSA:

- Lack of accountability in monitoring and evaluation departments as well as unstable IS makes it difficult to have credible information that support quality and informed decision making in public sector organisations.

The use of manual systems was also a major concern in some public sector entities which affects the timely execution of decisions. The AGSA noted that:

- Public sector organisations were found to have no automated systems to track performance and they relied on Microsoft Excel which is prone to manipulation. Monitoring performance in public sector is critical for evaluating service delivery to citizens. Therefore, inaccurate reports undermine the efforts of governments to deliver on their promises to citizens.

IT is essential for the accuracy and accessibility of data recorded, which is required for accurate reporting. However, there were insufficient information systems to follow the strategic plan's ambitions and major objectives, which was a duty that the leadership was neglecting. Lack of an accountable leadership is a barrier to strategic performance of IS. Poor leadership accountability is exhibited in the form of irregular expenditure and accountability, unnecessary IS expenditure and fraud. Irregular expenditure and accountability issues provide detrimental effects on IS performance. The following was noted:

- Failure in accountability of leadership hindered service delivery in strategic sectors namely infrastructure, education and health.
- Public officials and leaders were found to part of decisions process that resulted in irregular expenditure and were reluctant to deal with such matters and resorted to writing off expenditure.

Poor allocation of resources demonstrated by unnecessary IS expenditure disrupts the operation of IS. This was revealed by AGSA who gave the following expression:

- Misallocation of IT resources were displayed in purchase of software which was not needed by public sector organisations.

Trends of fraud has been reported by the AGSA in the supply chain contracts which has effect on the IS functionality as follows:

- 259 audit outcomes in public sector organisations revealed investigations in areas of fraud risk engagements, fraud risk detection analysis, and high-risk supply chain contracts.

The major setback for IS as a result of poor project management is delay in delivery and IS implementation. The AGSA alluded the following project management challenges:

- IT projects were being poorly implemented resulting in spending resources on avoidable costs. Moreover, systems that support IT projects fall short of expectations.

Poor information management was associated with inability to protect information, lack of timely communication and manual information capturing. Inability to protect information was expressed as follows:

- Information is not readily available and as a result public sector organisations in some cases delay in providing useful data for compliance and governance.
- Leadership in public sector lacks accountability and it was observed that they would pressure the AGSA not to disclose their malpractices without providing solid proof.
- Weak information security was found. Decisions are driven by information and it is critical that information generated be reliable, trustworthy and of high quality. In addition, information must be secured so that it is not prone to manipulation.

Late communication was attributed to weaknesses such as completeness of working papers; lack of documentation particularly at meetings; lack of timely communication; and acceptance of additional documentation late in the audit process.

Manual information hindered the performance of IS as follows:

- Manual data carries risk that it may have errors and as such makes it difficult to be used for decision purposes. Apart from that, manual information poise serious challenges in planning and monitoring business activities.

Inadequate and ineffective disaster recovery put pressure on IS efficiency through the following:

- More than 60% of audited public sector organisations were disaster-prone and had no recovery mechanism that would support the continuation of business in the event of technological incidents.
- Management of risks in IT environment was not being given attention making the current practices ineffective.
- The typical disaster affecting operation of IS included failure of recovery link and systems which meant services were unavailable thereby adversely impacting on public sector operations.

Regression in information technology governance is of paramount concern in fuelling IS failure in public sector as expressed from AGSA views:

- IT governance required attention as it highlighted as major challenge in operation of government entities. In some cases, governance structures were not implemented at all.
- Investment in IT lacked monitoring so as to ascertain the dividends realised from IT related expenditure.
- IT committees lack the necessary tools to monitor performance in relationship to strategic objectives and mandates.

- Effective delivery of strategic objectives becomes difficult in the short and long run as the current IT is unable to provide a conducive environment for public sector growth.

Delay in filling information technology vacancies derailed progress in implementing IT controls. The position is expressed in following AGSA opinions:

- There was failure to recruit key IT personnel that could drive the monitoring of IT controls and addressing matters arising from auditing.
- The freezing on recruiting IT staff meant some key aspects of IS were not attended for extended time periods thereby compounding IT control problems.
- IT is a dynamic environment and it was observed that current management skills could not match the evolving challenges and hence IT problems remained unsolved.

5. Conclusion and recommendations

A well-functioning information system has the potential to simplify crucial choices in the public sector, government, and individuals. The study's findings, such as a lack of trustworthy information for citizens, weak information technology security controls, poor leadership and disaster recovery systems, a shortage of critical staff, and failure in IT governance, highlight key areas for potential improvement in the public sector's use of IS. The findings of this study have a variety of implications for people, government, and the public sector. Although it may not be possible to eliminate the constraints that prevent IS from functioning in the public sector, stakeholders raise critical concerns to further investigate these barriers, such as:

- How can IS be harnessed to provide quality and timely information for key decisions?
- How can IT security controls be reinforce to avoid security breaches?
- How leadership performance can be assessed to ensure IS processes operate without hinderance?
- How can governance process relating to IS be improved?

The fact that only the AGSA perspective on challenges affecting functionality of IS in public sector was the study's principal drawback. There is scarcity of literature on corporate governance challenges, pertaining to operation and performance of IS in South African government entities. The study proposes further studies to be conducted for emerging economies having similar challenges.

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Board Membership Changes and Financial Performance: The Moderating Role of Family Firms

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Abstract: The aim of this study is to examine a possible relationship of corporate financial performance and board membership changes. As a consequence, whether too little or too much board membership changes would produce a detrimental impact to financial performance. Furthermore, this study investigated whether this effect is more pronounced in family firms over non-family firms. Based on the agency theory and stewardship perspective, the results indicate that board membership changes are significant for family firms towards short-term financial performance indicators, with positive effect above a certain interval, though it signaling to the market may not be relevant. Also provides insightful examination of a specific corporate governance issue that is valuable both for academics and practitioners.

Keywords: Board Membership Changes, Financial Performance, Family Firms, Corporate Governance

1. Introduction

The board of directors represents a crucial internal corporate governance mechanism to validate and monitor managerial decisions in order to protect shareholders (Fama and Jensen, 1983). The incidence of large family ownership, and the incentives that the family attain to benefit from control, raises the question of whether the effectiveness of the board of directors might act as a mechanism to keep the family from expropriating minority shareholders' wealth (Anderson & Reeb, 2004). The tension among board, family and minority shareholders lead to a agency problems, that usually is more prevalent in family firms with Chief Executive Officer (CEO) and Chairperson of the Board (COB) duality (Palanissamy, 2015). That is, when the same individual holds both positions in the company, and under entrenchment circumstances (Randolph et al., 2018), and family-related managers are granted protection against monitoring by the board, dismissal, or punishment for unsatisfactory performance results.

Board membership turnover should be one form of mitigation of such agency problems, in addition to reducing family-specific governance failures (Li and Zuo, 2020). Family owners, when controlling shareholder, should remove board members that fail to fulfill their responsibility and to protect their interests. Notwithstanding, just as CEOs might become entrenched in their positions (Shleifer and Vishny, 1989), directors in family firms can also become entrenched simply because of their family connection (Gonzalez, 2019), even when they are not family members. Apart from other mechanisms to prevent agency problems that are overly costly and time-consuming, such as executive monitoring committees, controlling systems, balance scorecard, compliance and audit departments, this study will concentrate on board's membership change and examine its relation to financial performance.

Empirical literature defends positive and negative effects of board turnover on financial performance and theorical literature explain higher and lower board turnover on family firms, however limited studies examine a non-linear relationship between these factors and explore the effect of family business moderation on this equation. The aim of this study is to investigate whether there is a significant relationship between board membership modifications and financial performance, furthermore, to understand if this effect is different between family firms versus non-family firms. We contribute to agency theory and stewardship perspective by showing the effects of board mechanism changes and the impacts on family firm performance. Using an emerging market, in which most of firms are owned by families and represent more than half of the local GDP (Gross Domestic Product), according to World Bank data, there are few studies that explore this perspective. It was found empirical evidence that family firms perform fewer changes on the board, in proportion to its board size, compared to non-family firms and there is an association between board membership change and financial performance of family firms towards short-term financial performance indicators.

2. Board membership changes and financial performance

According to agency theory in family firms, Chairperson of the Board/Chief Executive Officer (COB/CEO) duality reduces the effectiveness of monitoring activities and could lead to expropriation of firm resources by controlling family members (Liu & Chen, 2016). Generally, without appropriate monitoring, CEOs may abuse their power, put their own interests first and make decisions that are detrimental to the firm (or to the firm's owners), such as hiring incompetent, but with close personal relations, individuals (Combs et al., 2011). Although the segregation or the unification of chair and CEO positions does not impact firm's performance when moderated by family's high ownership, the separation of the two roles is more effective when the family is not entrenched (Braun & Sharma, 2017), indicating that both situations (COB/CEO duality and entrenchment) could negatively affect firm performance (Garcia-Castro & Aguilera, 2014).

Board turnover has been argued to bring both positive and negative impacts to companies. On the one hand, board turnover is believed to lead to more skillful and impartial contributions of the members (Wong and Koh, 2019). Additionally, more shared information increases efficiency in making decisions because members are better able to anticipate and coordinate with each other's actions (Mathieu et al., 2000). Wong and Koh (2019) defend the effectiveness in decision-making that is influenced by any pre-existing bias toward shared task information remains unchanged after director removal. Accordingly, incoming directors may improve effectiveness of information-processing by reducing bias toward shared information in decision-making. Newcomers' inputs should strengthen advisory and monitoring decisions, in cases of prior high percentage of independent directors, because the board has developed better information-processing capacity to embrace new perspectives. Additionally, new directors may possibly be included in respond to pressures for change (Dalton et al., 2006). Anderson and Chun (2014) found that companies that changed three or four directors over a three-year period surpassed their industry peers, suggesting this number as an optimal amount of turnover, across firms in the S&P 500 index. Conversely, the poorest performers were companies with either no director changes at all in three years or else five or more changes. This suggests an inverted U-shaped curve of the impact of board membership turnover on financial performance.

On the other hand, membership changes interrupt the flow of shared information in the company, such as beliefs and about situation of the firm, in a way that may inhibit the board's ability to provide effective advice on complex issues or lead to suboptimal decisions, subsequently linked to poorer firm performance (Wong and Koh, 2019). Another important aspect of elevated board turnover is that incoming directors tend to be downgraded by the longer-tenured directors, for neither possessing in-depth information about the firm nor being employees of the firm. This attitude may reject opinions from the newcomers, favor responses that are familiar, or impede the board to come to a consensus (Rink et al., 2013).

To sum up, literature suggests that few changes on the board could lead to less ideas, preserving the business knowledge of most participants, whereas more changes promote more ideas conceding diminution of depth knowledge about that specific business. Thus, the mechanism through which the changes in board composition might affect the performance is the participants knowledge. Therefore, an optimal point of knowledge exchange should be obtained, so that board membership's change and financial performance is enhanced. Therefore, the following hypothesis is proposed:

Hypothesis 1: The composition of the board of directors positively affects the firm's financial performance following an inverted-U-shaped pattern

3. Board membership change in family firms

Shleifer and Vishny (1997) propose that when the family's control is greater than its property rights, then the potential for expropriation of minority shareholders by the company's controllers is elevated. González et al. (2015) demonstrate that boards dominated by families are more lenient with the CEO in terms of financial performance, particularly when the CEO is from the family nucleus. In this sense, family firms may adopt better corporate governance practices to substitute for the absence or inefficiency of a regulatory system and to mitigate the agency problem between majority and minority shareholders (Turrent, 2017). To mitigate agency problems, family firms have a strong incentive to increase compliance with corporate governance recommendations and promote board structures that limit the expropriation of firms' wealth (Brunello et al., 2003). It is common that family members are involved in the management and board positions, and therefore, board structure might promote or limit corporate governance compliance of family firms (Turrent, 2017). In contrast, the greater presence of independent directors, external audit (Bebchuk and Cohen, 2005) and high reputation of the board members increase the board turnover in family businesses. In Addition, the existence of business groups and necessity to exchange information with affiliated companies, generate greater turnover (Khanna Palepu, 2000a, 2000b).

Together, this suggests that family ownership and control, represented by CEO and Chairperson within the same family nucleus, could be distinctively associated with board turnover and financial performance, which leads to the following hypothesis:

Hypothesis 2. The inverted-U shape of the relationship between board turnover and firm performance is more pronounced in family vs. non-family firms.

In contrast with non-family firms, the family firms show positive performance with the board turnover, following an inverted-U-shaped pattern

4. Method

We mapped a detailed examination on the turnover of the board of directors to discuss possible alternatives that sustain the propositions above and differentiate changes in the board of directors that may have been ignored or underestimated by scholars. Brazilian companies were sampled as the country is the leading economy in Latin America, where family businesses develop a crucial role in the region as they account for more than 85% of the companies, 60% of the GDP and 70% of the workforce (Lazzarini et al., 2020).

The database consists in 190 publicly traded companies, among large and small representation, on the Brazilian stock exchange (B3) that remained active from 2010 to 2019, without interposition of initial public offerings or companies delisted from the stock market. In terms of comparison, the Brazilian stock market is not very numerous regarding the quantity of companies listed; and there were only 353 firms listed at the end of 2012.

This period was selected due to the disclosure of the data only since 2010, when the Brazilian Securities Commission (CVM) obligatorily required the publication of information regarding the board of directors of publicly traded companies in Brazil. Furthermore, the chosen period was distinctive to Brazil since it has undergone major political, social and economic changes that appealed to more corporate governance policies for the companies that operate in the country.

Companies in the financial sector, including banks, were not considered in this study due to the particularities of the financial services that, unlike other sectors of the economy, present higher leverage as banks may exceed 90% of the equity (Adams, 2003). For statistical robustness, we performed 5% winsorization on the database to reduce the effect extreme values.

The family business representation considered only companies with family ownership above 15% of ordinary stocks, CEO and Chairperson within the same family nucleus, which represent a high degree of family interference consenting the literature (Newbert & Craig, 2017; Berrone et. al., 2012; Miller et. al, 2011; Miller & Le Breton-Miller, 2006). Board membership data were obtained from CVM (Brazilian Securities Commission) and accounting or financial indicators were extracted from the Economatica software. The board analysis procedure consisted in listing all the members of the board and managing the turnover, considering new hiring and dismissals. In other words, was considered as board membership changes a particular director in year Y-1 and not present in year Y0 or a new director that joined the board within the same period, accordingly to Gonzalez (2019). After that, it was adjusted the firm's annual turnover by the board size, the total quantity of members, in the same year. The same procedure was employed in the multivariate analyses found in the literature (Wong and Koh, 2019).

Correspondingly to the proposition of Anderson and Chun (2014) that there should be an optimal effect of board turnover on financial performance should not be linear, but resultant of a quadratic function, also was considered the quadratic form for the variables Board Membership Change. To discern the moderation effect of the Family Businesses in the econometric models, it was inserted a cross-variable (Board Membership Change and Family Business) in each regression. The financial performance construct used in this research was carefully developed using internal and external validity criteria, in addition to convergent and nomological validity, according to the following literature.

The methodology and response variables for financial performance used in this study are accordingly to Gonzalez (2019), Wong (2019), Turrent (2017), Garcia-Castro & Aguilera (2014) and Arosa (2010). The methodology applied was fixed effects panel regression, considering the firm's annual board turnover and lagged (Y+1) financial indicators to address the problem of double causality in the turnover-performance relationship.

5. Variables

The response variables in the regressions were *ROE, ROA, Tobin's Q*.
The explanatory variables used in the regressions were Board Membership Change (Total number of hirings and dismissals of board members adjusted by the board size on annual basis)
Squared Board Membership Change variable (Quadratic function of the total number of hirings and dismissals of board members adjusted by the board size on annual basis),
Family Firms (Companies with controlling ownership above 15%, chairperson and CEO within the same family),
Cross-variable Board Membership Change X Family Business, Cross-variable Squared Board Membership Change X Family Business.

The control variables were Board Size (Total number of board members on annual basis), Total assets in natural logarithm, Net Revenue Growth, Net Debt to Total Assets Ratio and Ebit to Total Assets Ratio. The econometric regressions performed are described below and both softwares, R and Eviews 11, were used to run the econometric models and validate the accuracy of the results.

6. Main Findings

It is notable through the descriptive statistics that the family firm's cluster demonstrated lower standard deviations for all variables, except ROE that performed a superior level in average over non-family firms. Amid the essential reasons for the reduced changes on the family firms, the literature indicates the dominant recurrence of the same individual as CEO and Chairperson (Faleye, 2007; Ryan and Wiggins, 2004). Moreover, the greater presence of blockholders (Maury and Pajuste, 2005) and greater age of the members reduce the board turnover, mainly interrelated to the preservation of expertise and respect among the members (González et al., 2015). Therefore, family firms have more CEO/COB duality than in non-family firms (0.34 vs. 0.17), in the Latin America context (Turrent, 2017). The lower board membership change in family firms should be associated with the smaller size of the board, empirically evidenced in the sample. For non-family firms, the larger board of directors is justified by the additional knowledge, to increase certain firm's expertise not directly related to its core, usually in conditions less likely to be dominated by the actual management (Hussainey & Al-Najjar, 2012). The afore mentioned phenomenon seems to be different in family firms, since this cohort is comparatively more profitable than non-family firms as mentioned in the literature review, therefore the resource use for the board of directors should be more restrained.

Table 1: Descriptive statistics of the complete sample, non-family and family firms' clusters

	Complete Sample (N = 190)					Non-Family Firms (N = 142)					Family Firms (N = 48)				
	Average	Median	SD	Min	Max	Average	Median	SD	Min	Max	Average	Median	SD	Min	Max
Dependent Variables															
Revenue Growth	0,2646	0,3125	0,6707	-2,7084	13,3265	0,2655	0,3125	0,7841	-2,7084	13,3265	0,2629	0,3133	0,3779	-0,6797	5,3933
Total Assets (Ln)	14,1999	14,7868	3,7934	0,0000	20,6464	14,1166	14,7897	4,1780	0,0000	20,6464	14,3554	14,7702	2,9448	0,0000	18,6545
Debts/Assets Ratio	1,8205	0,2170	8,6563	0,0000	111,7225	2,1376	0,2147	9,8778	0,0000	111,7225	1,2289	0,2290	5,6868	0,0000	45,3004
Ebit/Assets Ratio	0,0804	0,0679	0,1544	-0,6643	2,2119	0,0872	0,0679	0,1864	-0,6643	2,2119	0,0676	0,0663	0,0576	-0,2002	0,3118
Response variables															
ROE	0,1698	0,0847	0,9858	-12,1932	20,8132	0,1679	0,0800	0,8184	-12,1932	6,6173	0,1735	0,0887	1,2407	-3,9490	20,8132
ROA	0,0510	0,0206	0,1539	-0,9834	2,2177	0,0594	0,0214	0,1867	- 0,9834	2,2177	0,0352	0,0184	0,0502	-0,1527	0,4134
TOBIN'S Q	0,9724	0,7065	1,2011	0,0000	24,2358	1,0226	0,7554	1,3632	-	24,2358	0,8786	0,6333	0,8104	0,0000	5,2960

Descriptive statistics of the dependent and independent variables used in the study. The variables definitions are provided in the section Database and methodology; Family Firms: Companies with controlling ownership above 15%, chairperson and CEO within the same family; Total assets in natural logarithm; Net Revenue Growth; Net Debt to Total Assets Ratio; Ebit to Total Assets Ratio; ROE (Return on Equity); ROA (Return on Assets) and Tobin's Q.

Source: Developed by the author.

Regarding board membership changes, we argue that the turnover should vary between FB and NFB depending on key features favoring or constraining the variances of the decision-making contexts, besides corporate governance mechanisms and idiosyncrasies of each cluster or company. Among the 48 family firms on the sample, the average annual membership change (2.32 members) was lower than non-family firms (3.47 members) and the board size was reduced (9.66 members vs. 11,19 members) as expected, since the presence of family members in the board is frequently relevant and constant.

The univariate analysis demonstrates that board size and board membership changes present a positive correlation for the complete sample, but negative correlation regarding only family firms. Concerning the response variables ROE and ROA, the correlation matrix shows that board membership changes are positive correlated, whilst the quadratic function of the variables Board Membership Changes and Board Change X Family Firm revealed negative correlated to Tobin's Q. Following, the correlation matrix of all variables analyzed is presented.

Table 2: Correlation Matrix

Correlation Matrix	Board Membership Change	(Board Membership Change)²	Board Change X Family Firm	(Board Change X Family Firm)²	Board Size	Family Firm	Revenue Growth	Total Assets (Ln)	Debts/ Assets Ratio	Ebit/Assets Ratio	ROE	ROA	Tobins'Q
Board Membership Change	1												
(Board Membership Change)²	0.8169	1											
Board Change X Family Firm	0.4325	0.2689	1										
(Board Change X Family Firm)²	0.4067	0.3197	0.8914	1									
Board Size	0.1938	0.1214	-0.0165	-0.0243	1								
Family Firm	-0.1017	-0.0544	0.3035	0.1879	-0.2086	1							
Revenue Growth	-0.0455	-0.0275	-0.0273	-0.0387	0.0295	-0.0018	1						
Total Assets (Ln)	0.1296	0.0874	0.1061	0.0556	0.2882	0.0300	0.0663	1					
Debts/Assets Ratio	-0.0168	-0.0178	-0.0403	-0.0253	-0.1306	-0.0500	-0.0690	0.0376	1				
Ebit/Assets Ratio	-0.0007	-0.0114	-0.0120	-0.0275	0.0623	-0.06072	0.0127	0.1075	-0.0768	1			
ROE	0.1759	0.1896	0.2742	0.4841	0.0478	0.0027	-0.1107	0.0232	-0.0315	0.1878	1		
ROA	0.0025	0.0116	0.0108	0.0427	0.0512	-0.0748	0.0333	0.0139	-0.1088	0.8314	0.2860	1	
Tobins'Q	0.026	-0.0025	0.0069	-0.0135	0.0344	-0.0572	-0.0044	0.1811	0.1737	0.1390	0.01559	0.0360	1

Source: Developed by the author.

The multivariate analyses (Model 1, 2 and 3) or which table? appointed both Board Membership Change variable and its quadratic function were not statistically significant in the three equations tested (b= xxx, p= xxx), therefore the results do not support H1 that the relationship between board membership changes and financial performance presents an approximation of a quadratic function.

Contrarily, both cross-variables Board Membership Change and Family Firm and its quadratic function demonstrated to be statistically significant for ROE (b= xxxxx, $p<0.001$) (0.0000 and 0.0000, respectively) and ROA (b= xxxxx, $p<0.001$) (0.0026 and 0.0000, respectively). That appoints to the association between board turnover and the short-term internal financial performance indicators to this cohort. The results reveal that H2 is not rejected, as the relationship of the moderating impact of family-controlled firms over the effect of board membership changes and the financial performance is statistically significant. The opposite coefficients signals of the variables Board Membership Change and Family Firm for ROE and ROA (-5.1901 and -0.1375, respectively) and its quadratic form (6.1666 and 0.1649, respectively), demonstrates positive impact of board membership changes for family firms, above a certain interval. The CEO duality, that is more predominantly in family firms, can be effective during financial crisis or when the organization is at its early stage as it ought to promote fast decision making and united decisions (Palanissamy, 2015). Another curious perspective is that the cross-variable (Board Turnover and Family Firm) reiterated the stewardship theory, that a centralized authority leadership could lead to management's domination of the board and result in poor performance (Dalton, 2006).

The Family Firm variable was statistically significant only for the ROE response variable regression model, corroborating with the literature that this specific group uses its resources more efficiently (Goel & Jones, 2016, Anderson et al 2012; Chrisman & Patel, 2012; Allouche et al, 2008) and even more when family members serve as CEO (Anderson, 2003). Amid reasons that support these arguments, the family's wealth is intricately linked to the company's well-being, hence families may have strong incentives to monitor managers and minimize the free rider problem inherent in small shareholders (Anderson, 2003). Anderson et al. (2004) suggests that the sustained presence of the family in the company also creates powerful reputation effects that provide incentives for family managers to improve the company's performance. Consequently, the active participation of the family in the management of the company can lead to a performance differential performance compared to non-family companies. Conversely, family firms may respond to institutional pressures in a more substantive manner to maintain a good reputation and project a positive family image (Liu, Valenti, & Chen, 2016). In addition, family firms have reputational concerns to attract external equity investment (Turrent, 2017). Hence, the low family power resulting from the presence of non-family owners and managers, would increase the conflict of interests due to the separation of ownership and control (Corbetta & Salvato, 2004).

The regression model for Tobin's Q do not demonstrate statistically significant relation between the variables tested, hence no inference can be obtained regarding the expected financial performance with this financial indicator that contains the firm's market capitalization on it.

Table 3: Regressions summary for ROE, ROA and Tobin's Q

Variables	ROE	ROA	Tobin's Q
BOARD MEMBERSHIP CHANGE	0,3226	0,3424	0,6389
	0,1664	-0,0175	0,1202
	0,9896	-0,9498	0,4694
(BOARD MEMBERSHIP CHANGE)²	0,7037	0,4494	0,5499
	-0,0003	0,0001	-0,0007
	-0,4804	0,7568	-0,5981
FAMILY FIRM	**0,0598***	0,4002	0,1378
	0,1180	-0,0057	-0,1417
	1,8849	-0,8417	-1,4853
BOARD CHANGE X FAMILY FIRM	**0,0000********	**0,0026********	0,3430
	-5,1901	-0,1375	0,6011
	-12,4819	-3,0116	0,9488
(BOARD CHANGE X FAMILY FIRM)²	**0,0000********	**0,0000********	0,3237
	6,1666	0,1649	-0,4755
	19,5085	4,7589	0,9874
REVENUE GROWTH	**0,0007********	0,1390	0,8832
	-0,1332	0,0063	-0,0087
	-3,4115	1,4809	-0,1469
TOTAL ASSETS (LN)	0,8139	**0,0002********	**0,0000********
	0,0017	-0,0030	0,0588
	0,2354	-3,7899	4,5516
DEBT/ASSET RATIO	0,5844	**0,0399*******	**0,0000********
	-0,0016	-0,0006	0,0241
	-0,5471	-2,0583	5,1668
EBIT/ASSET RATIO	**0,0000********	**0,0000********	**0,0001********
	1,3424	0,8353	1,0181
	7,8743	44,6921	3,9199
BOARD SIZE	**0,0680***	0,3929	0,7605
	0,0091	0,0004	-0,0023
	1,8274	0,8548	-0,3049
C	0,7574	**0,0163********	0,2686
	-0,0321	0,0275	0,1757
	-0,3090	2,4077	1,1070
SAMPLE SIZE		1330	
ADJUSTED R²	0,4066	0,7073	0,0829

Summary table of the regression results with control variables: Board Membership Change, Family Firm, Board Change*Family Firm, Total Assets (ln), Revenue Growth, Debt / Asset Ratio, Ebit / Asset Ratio, Board Size. Response variables are: Tobin's ROE, ROA, and Tobin's Q. The regressions presented are panel least squares with fixed effects. Results for P-Value are in bold when corresponding to ≤ 10% and indicating *, ** and *** to represent statistical significance at the 10%, 5% and 1% levels respectively.
The results presented are in order: P-Value, Coefficient and T-Statistics.

Source: Developed by the author.

The results demonstrated a strong connection with the literature and incremented the proposition that family firms with strong influence and control could capture beneficial effects associated with board turnover and short-term financial performance indicators. The none statistically significance of the Board Membership Change X Family Firm variable in the Tobin's Q response regression, rejected the probability of financial gains regarding the signaling to the capital market that the company is continually addressing generational issues or improving the professionalization of family firms.

7. Conclusions and new directions

The regression models demonstrated that family firms may obtain beneficial effects over non-family firms related to board membership changes on short-term financial performance indicators (ROE and ROA), by reason of the cross-variable (Board Turnover and Family Firm) be statistically significant and with positive coefficient in the quadratic form. Above a certain level of board membership variations, these gains could be related to high rate of family members exchange that preserve the essence of the company as well as bringing complementary points of view, whilst few board membership changes in non-family firms may be more attributed to the self-preservation of its members. Additionally, financial performance contribution generated by board membership changes in family firms could be related to the integration of new directors with weaker biases regarding the use of the company's assets once previous members of the board might have been favorable to acquire or preserve underperforming assets. In this sense, it is proposed a peculiar approach on board membership turnover and financial performance that can foster the discussion concerning aspects that differentiate one group from another. The limitations of this study include data accessibility and available variables, along with the risk of endogeneity. Future studies could collect data from privately held companies to compare the results.

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External Governance, Corporate Governance, Firm Performance and Economic Growth in the UK and India

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Abstract: This research investigates the connection between corporate governance and firm performance, corporate governance, and economic growth, the moderating effect of external governance on corporate governance and firm performance, and economic growth by using a sample of one hundred companies listed on the National Stock Exchange of India (NSEI), and one hundred companies listed on the London Stock Exchange (LSE) between 2011 and 2020. We construct three governance indices –the Internal Corporate Governance Index (ICGI) based on 100 elements of governance, and the External Governance index (X-GI) based on World Bank Institutional Quality measures. The study uses GMM Dynamic Panel Data to test the hypotheses. Results show that our newly constructed indexes (the ICGI and CCGI) have significant relationships with firm performance (ROE, Tobin's Q,) and economic growth (growth in GDP) in both the UK and India. Findings also show that external governance negatively moderates the relationship between corporate governance and firm performance, and the relationship between corporate governance and economic growth for India. The case for the UK is different as external governance positively moderates the relationship between corporate governance and firm performance. However, no significant moderating effect is seen between corporate governance and economic growth.

Keywords: Corporate governance, Institutional quality, Firm performance, Economic growth

1. Introduction

Undoubtedly, a firm's external governance environment is more significant than the internal governance systems that the company observes. This is because the quality of the country's legal system reflects its ongoing commitment to good governance (Gupta et al., 2018). More often than not, a firm's internal governance preferences mirror self-seeking interest rather than a commitment to good governance. Jensen & Murphy (1990) and La Porta et al., 1998 also added that both firm and country-level corporate governance systems enhance corporate performance. Such mechanisms include independent and watchful boards, separation of the control and decision-making roles, alignment of management incentives with owners' goals, and legal protection of providers of funds, and minority shareholders (Essen et al., 2013).

Despite researchers going to a great extent to narrow the knowledge gap between corporate governance and firm performance, there are still gaps that need to be investigated. This is regarding how both internal corporate governance mechanisms affect firm performance, and economic growth, how the external governance (institutional quality) moderates the relationship between corporate governance and firm performance; and corporate governance and economic growth in the United Kingdom (UK) and India). This study contributes to the body of knowledge by directly evaluating the impact of both external and internal governance on firm performance and economic growth.

The remaining sections of this paper are the study context, problem statement, and objectives of the study in section 2, theoretical underpinning in section 3, section 4 is the literature review, section 5 covers the methodology and data, and section 6 presents the findings and discussion, while section 7 gives the conclusion.

2. Study Context, Problem Statement, Objectives, and Significance of the Study

2.1 Study context

The benefits that accrue from having an effective corporate governance system include improvement of the confidence of local investors, lowering the cost of capital, which leads to efficient use of resources by firms, and thus promoting growth at firm and economy levels (Khan et al., 2020; Zhu, 2014). Krafft, Qu, Quatraro, & Ravix, (2013) and Mishra & Mohanty, (2014) add that good corporate governance is important for the functioning of financial markets, and the promotion of economic growth. This is because good governance encompasses improved monitoring, better transparency, minimized agency problems, and public disclosure. This in the long run results in improved investor trust and a reduction in management preferences to steal rents (Gupta et al., 2018).

Corporate governance in the UK is birthed from several legislations, regulations by different bodies, and other sources (Boyle & Rose, 2019). The key legitimation is outlined in the Companies Act 2006. In addition, the Financial Conduct Authority (FCA) has developed listing rules, and the disclosure guidance and transparency rules are referred to as DTRs. Other regulations include The UK government lens on corporate governance, the UK Corporate Governance Code, in addition to the UK Stewardship Code that applies to institutional investors. The last two are issued by the Financial Reporting Council (Boyle & Rose, 2019).

The evolution of the corporate governance framework in India mirrors the American and Anglo-Saxon systems and is mostly supported by the agency theory (the relationship between owners/shareholders and managers), while the board of directors supposedly mediates the two groups (Kaur, Kaur & Singh, 2018). Kaur et al. (2018) posited that India's firms have a dominant shareholder who is not always considerate to the minority shareholders, and most of the firms are controlled by families. India's corporate governance scene is driven by the Securities and Exchange Board of India (SEBI) and the Ministry of Corporate Affairs (Shroff & Katragadda, 2019).

We contribute to the body of knowledge by jointly evaluating the impact of external governance and internal corporate governance systems on firm performance and economic growth. Whereas prior studies have looked at firm-level governance as an explanatory variable for firm performance, they do not condition their analysis based on the quality of external governance. Our sample is based on country-level governance. This enables us to directly test the comparative importance of this important variable in explaining the governance, firm performance, and economic growth in the two economies.

We believe that the outcome of our study will inform the discussion about corporate governance, external governance, firm performance, and economic growth. It will also shade more light on the debate of how external governance moderates firm-level in the relationship between firm performance and corporate governance, and economic growth. Therefore, the empirical findings of this study are important to policymakers, investors, firm managers, and governments, especially in economies with low-quality country-level governance. Our findings show that both systems of governance must work together to bring about positive firm performance and economic growth. This calls for policymakers to provide an external environment (legal systems and related frameworks) that is conducive to improved firm performance, and economic growth. On the other hand, managers and business owners should put in place good corporate governance bearing in mind that such mechanisms have an impact on both firm and economic performance.

2.2 Problem statement

Previous literature (e.g., Aduda et al., 2013a; Ammann et al., 2011; Azeez, 2015; Bhagat & Bolton, 2008, 2019; Jackling & Johl, 2009; Kapil & Mishra, 2019; Li & Singal, 2017) experienced problems when examining the association between corporate governance and firm performance. These problems include, how to isolate the effect of each governance mechanism. Two, how to isolate the effect of all endogenous factors. Three, how to isolate the effect of exogenous factors. Four, how to isolate the combinations of both endogenous and exogenous factors, and lastly how to establish the overall causal effect of corporate governance systems on firm performance (Bhagat & Bolton, 2008). It is this dilemma that led Misangyi & Acharya (2014) to advocate for change in the approach to governance studies. The current study addresses the points outlined by Misangyi & Acharya (2014) by developing a governance index that incorporates internal and external corporate governance measures.

To address the above problem, this paper has developed three governance indexes. These are i) the internal corporate governance index (ICGI), ii) the external governance index (X-GI), and iii) the contextualized composite governance index (CCGI) which is the product of the ICGI and X-GI for the sample of companies listed in the National Stock Exchange of India (NSEI), and the London Stock Exchange (LSE). The governance indexes are used to measure the effect of corporate governance on firm performance, and economic growth.

2.3 Objectives

Based on the above problem statement, this study had three objectives. First, it set out to develop an internal corporate governance index for sampled companies in India and the UK. Secondly, it examined the impact of the corporate governance measures on firm performance as measured by ROE and Tobin's Q in India and the UK, and lastly, it analyzed the impact of the corporate governance measures on economic growth in India and the UK.

3. Theoretical underpinning of this study

Several theories are used to link corporate governance systems to firm performance. However, this study considers the agency theory (AT). Jensen & Meckling, (1976) defined AT as a relationship that exists between two or more parties, where one party (known as the principal) engages another party (called the agent) to act on his behalf. If the two parties in the relationship seek to maximize utility, it is expected that the agent's actions will not be in the best interest of the principle but rather his own. Such actions lead to a divergence of interest between owners (principals) and non-owner managers (agents) which may lead to the inclination that the agent may siphon perquisites from the firm and in addition, may not be keen on pursuing profitable investments (Linder & Foss, 2015; Shogren et al., 2017). To mitigate principal-agency conflicts, the principal must incur agency costs such as monitoring costs, budgeting, and budgetary control costs, bonding costs, and setup of compensation structures costs, and should be ready to bear residual losses arising from divergent interests of the agent (Kyereboah-Coleman 2007). (Linder & Foss, 2015; Shogren et al., 2017)

4. Empirical evidence

Several studies have looked at the relationship between firm financial performance and corporate governance nexus from different angles. Studies that have used governance indexes to measure the impact of corporate governance on firm performance in India in the recent past include Ahuja, (2015); Arora & Bodhanwala, (2018); Balasubramanian et al., (2010); Ben, (2014); Kaur & Vij, (2018); Mishra & Mohanty, (2014); Varshney et al., (2012) and Raithatha & Haldar, (2021) among others. Recently, Abdoush et al., (2016) developed a governance index for manufacturing firms in the UK. The index was used to measure the effect of corporate governance on the firm performance of Insurance companies. Other studies that have used corporate governance indexes to measure the impact of corporate governance on firm performance in developed countries include Bebchuk & Weisbach, (2010); Brown & Caylor, (2006); Core et al., (1999); Dahya & McConnell, (2007), and Gompers et al., (2003). Likewise, Bhatt & Bhatt, (2017); Azeem & Kouser, (2013) & Javaid & Saboor, 2015; Da Silva & Leal, 2005; and Ntim (2009) among other used corporate governance indexes to measure the relationship between firm performance and corporate governance in Malaysia, Pakistan, Brazil, and South Africa which are developing economies. All these studies have arrived at one conclusion; good corporate governance enhances firm performance.

Various scholars have posited that there is value in good corporate governance. For instance, (Xiaoyue & Xiaodong, 2001) found that shares of companies that lacked governance systems that protected outside investors had lower returns. Firms with effective mechanisms of corporate governance are appealing to investors, and their cost of capital is low (Chen et al., 2009; Gillan & Starks, 2003; La Porta et al., 2002; Morck et al., 1988). In a study covering 25 emergent markets, (Klapper & Love, 2004) established that improvement in corporate governance leads to positive market valuation. Additionally, (Klapper & Love, 2004) noted that the association was stronger in economies with weaker legal infrastructure. Good governance in organizations influences economies and several aspects of society (Yusoff & Alhaji, 2012). As the world becomes a global village and more de-territorialized, governmental control has become less, which has resulted in the need for increased accountability (Crane & Matten, 2008).

Despite the rigorous effort and resources invested in constructing commercial indices, studies that have used them report inconclusive findings on the quality of corporate governance and firm performance. For instance, Brown and Caylor (2006) constructed a governance score measuring 51 firm-specific items of both external and internal governance, the study findings showed that the governance score had a positive relationship with firm value. On the contrary, Epps and Cereola (2008) found that the index CGQ had no significant relationship between ROA and ROE, hence concluding that the ISS governance rating has no relationship with operating performance (Epps & Cereola, 2008). Based on the above discourse, the first hypothesis of this study is stated below.

H_1: The internal corporate governance index (ICGI) has a significant positive relationship with ROE and Tobin's Q in India and the UK.

Approaching corporate governance through the institutional theoretical lens acknowledges the fact that governance mechanisms emerge from the bigger institutional and legal structures (Aguilera & Jackson, 2010). To acknowledge the role played by the institutional environment in which firms operate, the study introduces the institutional quality measures by constructing a country-level governance index (XGI). The XGI is developed using the World Bank to country-level governance indicators (Kraay et al., 2010; Masron & Nor, 2013). This index is used to moderate the internal corporate governance index (ICGI). The product of the ICGI and XGI resulted in a new index called the composite corporate governance index (CCGI). The XGI is constructed from the annual average percentiles of six measures (*Voice and accountability, Political stability and absence of violence, Government Effectiveness,* Regulatory *Quality, Rule of law*, and *Control of corruption)* of institutional quality. As a result, the second hypothesis of this study is:
H_2: The composite corporate governance index has a significant positive relationship with ROE and Tobin's Q in India and the UK.

Good corporate governance systems must provide accurate and timely information disclosure to shareholders so that they can exercise control over their investments, and allocate their funds optimally i.e. investing in projects that yield the highest returns possible. It also allows government authorities to monitor markets and identify weaknesses and ways of resolving such weaknesses. Having corporate governance systems and corporate structures that are accountable and effective in restoring investor confidence is essential in promoting economic growth. This leads us to the third hypothesis of this study which is:
H_3: There is a positive relationship between corporate governance and economic growth.

5. Method and Data

To test the relationship between corporate governance, firm performance, and economic growth, the generalized method of moments/dynamic panel data. The panel data method of analysis was adopted because of its ability to combine time-series and cross-section data. This combination yields more information, more variability, more degrees of freedom, and minimal collinearity among instruments (Gujarati, 2004). An important consideration for the legitimacy of the Generalized Method of Moments /Dynamic Panel Data (GMM/DPD) is that instruments are exogenous. If the model is identified accurately, the finding of invalid instruments is not possible, but if the model is over-identified, statistics to assess the combined suitability of temporary conditions (identification limits) come naturally from the GMM/DPD framework (Roodman, 2009). The statistic that is used to assess the combined suitability of temporary conditions (identification limits) is the Hansen J- Statistic.

Equation 1 tests the impact of governance (ICGI and CCGI) on firm performance while controlling for firm age, firm size, growth in GDP, Inflation, and population growth. We add firm-level control variables due to their ability to affect firm performance (Adeyemi & Fagbemi, 2010; Lee & Lee, 2012; Niresh & Velnampy, 2014). Equation 2 teats the impact of governance (ICGI and CCGI) on economic growth. Below are the two equations:

$$\mathrm{Firm\_Perf_i} = \alpha_0 + \alpha_1(ICGI_\mathrm{i}) + \alpha_2(CCGI) + +\alpha_3(\mathrm{Control_i}) + \mathrm{e_i} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 1$$

$$Growth\ in\ GDP_j = \alpha_0 + \alpha_1(ICGI_i) + \alpha_2(CCGI_i) + +\alpha_3\left(Control_j\right) + e_j \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

Where
where: $Firm\_Perf_i$ is ROE and Tobin's Q for the i^{th} firm while αi for all i= 1, …,4 are the unknown coefficients. While i and j denote the firm and country prefixes in equation (2).

$ICGI_i$ denotes the internal corporate governance index for firm i, while CCGI is the product of ICGI and X-GI. Growth in GDP is the proxy for economic growth

6. Findings and Discussion

6.1 Descriptive statistics

Table 1 (see appendix 2) presents in comparative form the descriptive statistics of the study. Results show that companies in India had an average compliance rate of 72% with a standard deviation of 0.06 as far as the internal corporate governance index is concerned. Results show that the composite corporate governance index was 42% on average while the country-level governance index (X_GI) averaged 32% is concerned. However, the UK companies had an average compliance rate of 89% with a standard deviation of 0.03 as far as the internal corporate governance index is concerned. The average compliance rate of the composite corporate governance index was 78%, while the country-level governance index (X_GI) averaged 88%. In this case, the UK firms performed better in both internal and external governance. Firm performance measured by TQ and ROE averaged 2.04 and 0.20 for India, and 1.14 and 0.27 for the UK respectively. In this case, firms in India had higher firm value than their counterparts in the UK, while the UK firms were more profitable. Further, firms in India had an average listing age of 24.58 years, firm size of USD 3,632.54 million, GDP growth rate of 0.06, an inflation rate of 0.06, FDI amounting to 38.89 billion, and an average population growth rate of 0.01. Likewise, results show that the UK firms had an average firm age of 28.32 years, firm size of USD 347.12 million, average GDP growth rate of 0.25, an average inflation rate of 0.02, average foreign direct investment (FDI) of USD 2.04 Trillion, and an average population growth rate of 0.01. These results show that the UK's performance was higher than that of India in firm age, GDP growth rate, and FDI.

Panels A and B in Table 2 *(See Appendix 3)* show correlations between the measures of firm performance (ROE, Tobin's Q), and the measure of economic growth (growth in GDP). For instance, a significant correlation exists between the ICGI and ROE at 10%, Tobin's Q at 5%, and growth in GDP at 1% levels of significance for firms in India. Similarly, the CCGI is significantly correlated with growth in GDP at 5%. For the UK firms, both the ICGI and the CCGI are significantly correlated with growth in GDP at 1% and 10% respectively. However, even though there seems to be a high correlation, the variance inflation factor score was within the acceptable range of 2.35 (Myers, 1990). Consequently, due to the presence of correlations between the governance measures and the dependent variables, there is a need to introduce control variables in the model to evaluate the predictive potential of governance measures (Black et al., 2017).

6.2 Empirical statistics:

6.2.1 Corporate governance, firm performance, and Economic growth

GMM/DPD results in Panel 1 of Table 3 below show that the ICGI is positively significant in influencing ROE (coefficient = 0.92) and Tobin's Q (coefficient = 1.17) which are the proxies for firm performance in India. The positive coefficients indicate that ROE increased by 0.92%, while Tobin's Q increased by 1.17 when the internal corporate governance index increased by 1% under cateris paribus. Similarly, results show that the ICGI is positively significant in influencing both ROE (coefficient = 0.34) and Tobin's Q (coefficient = 0.42) in the UK. These findings corroborate those of several studies (Arora & Bodhanwala, 2018; Kaur & Vij, 2018; Varshney et al., 2012; Abdoush et al., 2016; Acharya et al., 2011; Gompers et al., 2003) whose governance index exhibited a positive relationship with the ROE and Al-Malkawi et al., (2014) and Haat et al., (2008) whose governance index exhibited a positive relationship with Tobin's Q. These results support the agency theory proposition that good corporate governance improves firm performance. Based on these findings, we fail to reject the first hypothesis which stated that the internal corporate governance index (ICGI) has a significant positive relationship with ROE and Tobin's Q in India and the UK.

Table 3: The relationship between corporate governance, firm performance, and economic growth in India and the United Kingdom

Variables	***ROE***		***Tobin's Q***		***Growth in GDP***	
	India **Observations = 800**	***UK*** **Observations = 800**	***India*** **Observations = 800**	***UK*** ***Observations***	***India*** ***Observations*** **= 800**	***UK*** ***Observations = 800***
ICGI	*0.92[b]*	*0.34[c]*	*1.17[b]*	*0.42[b]*	0.15[a]	0.22a
	(0.04)	*(0.08)*	*(0.03)*	*(0.02)*	*(0.00)*	(0.00)
CCGI	*-0.93[b]*	*0.94[b]*	*-1.03[c]*	*0.82[b]*	-0.19[c]	0.13
	(0.01)	*(0.01)*	*(0.06)*	*(0.01)*	*(0.08)*	(0.69)
Firm age	*-1.17*	*-0.08*	*-1.17[a]*	*0.29*	0.08[a]	0.32[b]
	(0.12)	*(0.49)*	*(0.00)*	*(0.21)*	*(0.00)*	(0.02)
Firm size (Log of Total Ass ets)	*0.05* *(0.86)*	0.26[b] *(0.02)*	*-0.80[a]* *(0.03)*	0.33[b] *(0.02)*	0.19 *(0.63)*	(0.65) 0.49
Inflation	*-0.76*	-0.01	*-0.61*	(0.01)	0.38[a]	(0.02)

	(0.15)	*(0.62)*	*(0.69)*	*0.72*	*(0.00)*	0.97
FDI	*0.13*	-0.37	*0.20*	0.23	0.14[b]	0.03[c]
	(0.16)	*(0.22)*	*(0.19)*	*(0.50)*	*(0.02)*	(0.09)
Population growth rate	*2.34[b]*	0.26	*0.31*	(0.69)	0.08[b]	0.08
	(0.04)	*(0.87)*	*(0.26)*	*0.28*	*(0.01)*	(0.29)
J Statistic	*0.21*	*0.20*	*0.16*	*0.15*	*0.22*	0.16

Note: a=1%, b = 5%, c = 10% denote level of significance

On the contrary, the Composite Corporate Governance Index (CCGI) is significantly negative in influencing both ROE (coefficient = -0.93) and Tobin's Q (coefficient = -1.03) in India, but positively significant in influencing ROE (coefficient = 0.94) and Tobin's Q (0.82) in the UK. This finding suggests that the benefits accruing from strong internal corporate governance measures in an emerging economy such as India are wiped out by weak country-level governance. However, where external governance is strong as it is in the UK, the impact of governance is even greater as shown by the high coefficients attached to the CCGI. These findings point out the complementary role played by external governance in the relationship between corporate governance and firm performance. The results lead to the rejection of the second hypothesis in the case of India, while we fail to reject the same for the UK.

Lastly, results relating to the relationship between governance and economic growth show a positive relationship between the ICGI and growth in GDP in both India (coefficient = 0.15) and the UK (coefficient = 0.22). This positive impact could be due to the trickle-down effect of improved firm performance resulting from good corporate governance. This result confirms the third hypothesis that good corporate governance affects economic growth. However, the CCGI affected growth in GDP negatively in India (coefficient = -0.19). No significant relationship is seen in the results for the UK. This underscores the need for good governance at both firm and country-level or else, the gains of strong firm governance cannot trickle down into the economy.

The J-statistics in all panels show that the models are well specified as in all models the J statistics is between 0.10 and 0.25 (Roodman, 2009). The Hansen (1982) J statistic is automatically reported in GMM results and it shows the joint validity of all the instruments used in the model (Hansen, 1982).

6.2.2 Robustness checks

GMM/DPD contains a built-in check for first and second autocorrelation first-order difference, which further tests the suitability of the instruments. This is done through GMM/DPD's "system" rating (Roodman, 2009). Diagnosis of selected models should indicate that the first order of integration exists, but the second order does not exist. The GMM/DPD estimator is based on the assumption that a standard deviation exists unrelated to a set of flexible instruments. Therefore, the system GMM/DPD estimator selects parameter values so that the correlation between the instruments and the disturbances is close to zero as far as possible, as defined in the function of the condition. By selecting a weighted matrix in the panel options window, GMM/DPD can be robust in eliminating any unknown heteroscedasticity and/or autocorrelation. We also rely on the J- Statistics to reject the null hypothesis that the instruments specified in the models are not sufficient in explaining governance, firm performance, and economic growth nexus (Arellano & Bond, 1991; Roodman, 2009).

7. Conclusion

We conclude this study by pointing out some of its limitations. Although many studies have used corporate governance indexes to evaluate the relationship between corporate governance and firm performance, their prominence is undermined by the fact that they are regarded as backward-looking, hence, incapable of predicting future firm performance as compared to single governance measures (Daines, Gow and Larcker, 2010). Also constructed indexes such as the ones used in this study may have measurement errors, which may be a major limitation of this study (Bhagat & Bolton, 2008, Bozec & Bozec, 2012). These are some of the limitations of this study.

Further, this study has shown that good corporate governance affects firm performance and economic growth. However, weak country-level governance erodes the benefits accruing from good firm-level governance in a country such as India where country-level governance is substandard. On the contrary, when country-level governance is strong as is the case of the UK, the combined effect on firm performance is even higher. Lastly, we extended the corporate governance and performance nexus to the macro level. Our results show that firm-level governance has a trickle-down effect on growth in GDP in both countries. However, the benefits of good corporate governance on the economy in form of GDP growth are eroded in an environment with poor country-level governance. Our findings do provide strong apparent indication that the issue of external governance and how it impacts firm and economic performance requires closer investigation, particularly in the context of strategic decisions about required level and direction of action.

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Appendix 1: Definition of terms

ICGI represents the Internal Corporate Governance Index
XGI represents the External Governance Index
CCGI represents the Composite Corporate Governance Index (a governance score that is a product of ICGI of the ICGI and XGI)
TQ represents Tobin's Q
ROE is the return on equity and measures firm performance,
Total assets which is the proxy for firm size, and firm age represents the number of years of listing on the stock exchange.
FDI stands for Foreign Direct Investment (FDI).
G-GDP stands for growth in GDP

Appendix 2: TABLES

Table 1: Descriptive statistics Panel A: India n=100; The UK = 100

Variable	Mean		Median		Maximum		Minimum		Standard Deviation	
	India	UK	India	UK	India	UK	India	UK	India	UK
ICGI	72%	89%	73%	88%	87%	97%	42%	81%	0.06	0.03
XGI	44%	88%	46%	88%	48%	89%	41%	85%	0.03	0.01
CCGI	32%	78%	32%	78%	42%	84%	17%	69%	0.04	0.03
TQ	2.04	1.14	0.54	0.75	21.23	11.86	-1.01	0	3.12	1.44
ROE	0.20	0.27	0.18	0.18	1.9	290.01	0.39	-66.15	0.2	0.33
Firm age	24.58	28.32	19	19	119	218	1	1	19.47	27.22
Total Assets in Millions	3,632	347	1,339	1426	12,278	10,839	3.27	0.31	109	1,213
Growth in GDP	0.06	0.25	0.06	0.28	0.08	0.42	0.04	0.01	0.01	0.10
Inflation	0.06	0.02	0.05	0.03	0.10	0.05	0.03	-	0.03	0.01
FDI USD Billions	38.89	2.04	42.12	2.21	50.61	2.75	23.99	1.10	1.23	1.31
Population growth rate	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.00	0.00

Appendix 2: Table 2 Correlation matrix

Variables	AGE	CCGI	FDI	G_GDP	G_POP	ICGI	INFLATION	ROE	TA	TQ	XGI
PANEL A: Correlation matrix for all the variables for INDIA											
AGE	1										

CCGI	0.25a	1									
	(0.00)	-----									
FDI	0.15a	0.49a	1								
	(0.00)	(0.00)	-----								
G_GDP	0.03	0.09b	0.09b	1							
	(0.31)	(0.01)	0.01	-----							
G_POP	-0.14a	-0.28a	-0.29a	-0.29a	1						
	(0.00)	(0.00)	(0.00)	(0.00)	-----						
ICGI	0.20a	0.80a	0.21a	0.12a	-0.17a	1					
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	-----					
INFLATION	-0.22a	-0.71a	-0.51a	-0.38a	0.45a	-0.34a	1				
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	-----				
ROE	-0.06	-0.04	-0.03	-0.02	0.09B	0.06c	0.07b	1			
	(0.11)	(0.25)	(0.44)	(0.53)	(0.01)	(0.08)	(0.03)	-----			

TA	-0.14a	0.00	0.01	-0.02	0.00	0.04	-0.02	0.07c	1		
	(0.00)	(0.98)	(0.84)	(0.58)	(0.91)	(0.26)	(0.55)	(0.05)	-----		
TQ	0.05	0.10a	0.02	0.01	0.00	0.09b	-0.02	-0.05	-0.14a	1	
	(0.17)	(0.00)	(0.46)	(0.87)	(0.90)	(0.01)	(0.64)	(0.17)	(0.00)	-----	
XGI	0.21a	0.75a	0.63a	0.03	-0.28a	0.3a	-0.87a	0.06c	0.03	0.02	1
	(0.00)	(0.00)	(0.00)	(0.42)	(0.00)	(0.00)	(0.00)	(0.08)	(0.34)	(0.58)	-----

PANEL B: Correlation matrix for all the variables for the UK

Variables	AGE	CCGI	FDI	G_POP	G_GDP	ICGI	INFLATION	ROE	TA	TQ	XGI
AGE	1.00										

CCGI	0.05	1.00									
	(0.13)	-----									
FDI	-0.09[b]	-0.26[a]	1.00								
	(0.01)	(0.00)	-----								
G_POP	-0.11[a]	-0.30[a]	0.75[a]	1.00							
	(0.00)	(0.00)	(0.00)	-----							
G_GDP	-0.03	0.06[c]	0.46[a]	0.58[a]	1.00						
	0.45	0.09	(0.00)	(0.00)	-----						
ICGI	0.10[a]	0.76[a]	-0.55[a]	-0.53[a]	0.30[a]	1.00					
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	-----					
INFLATION	-0.10[a]	-0.35[a]	-0.21[a]	-0.19[a]	-0.55[a]	-0.26[a]	1.00				
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	-----				
ROE	0.03	-0.04	0.03	0.06[c]	0.03	-0.04	0.02	1.00			
	(0.40)	(0.30)	(0.31)	(0.07)	(0.43)	(0.19)	(0.58)	-----			
TA	0.06[c]	0.09[b]	-0.05	-0.05	-0.03	0.12[a]	-0.03	-0.19[a]	1.00		
	(0.06)	(0.01)	(0.18)	(0.13)	(0.42)	(0.00)	(0.43)	(0.00)	-----		
TQ	-0.13[a]	0.03	-0.01	0.00	0.04	0.01	-0.04	0.38[a]	-0.39[a]	1.00	
	(0.00)	(0.46)	(0.77)	(0.92)	(0.30)	(0.67)	(0.20)	(0.00)	(0.00)	-----	
XGI	-0.05	-0.08[b]	0.76[a]	0.54[a]	0.70[a]	-0.43[a]	-0.49[a]	0.01	-0.03	0.00	1.00
	(0.13)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	0.72	0.45	0.93	-----

Note: a=1%, b = 5%, c = 10% denote level of significance

Enhancing Employer Branding Through Corporate Innovation and Web Communication

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Abstract: The primary purpose of this empirical research is to show how a company's attractiveness can be influenced by its corporate innovative culture, high-quality standards attitude, and web-based communication and interaction with candidates. The research hypotheses were investigated in senior students and young graduates of Greek universities in order to propose an effective pre-recruitment employer branding strategy which causes positive effects in a company's talent pool. The Structural Equation Modeling (PLS-SEM) software was used on a convenient sample of 737 individuals from Greek universities. Overall, the study's findings point to a company's innovative nature and orientation, which are reflected across the full range of its business activity, as a crucial factor for candidates who are interested in learning more about employment opportunities there. This is accomplished through communication media that are popular among young job seekers, such as the corporate website and social media. In this way, based on web info, candidates are able to obtain not only detailed information, but also signs with a strong symbolic effect, thus shaping positive perceptions of the company as a potential employer. Especially in a university setting, at the initial stage of candidate recruitment our results highlight the importance of the dual dimension of relevant communication, i.e. the information about jobs as presented on the corporate website and social media of the company, and the way these media communicate with job seekers. Furthermore, the findings of our study have significant implications of how a company's HR departments should plan and organize their presence in Greek Universities in order to improve corporate positive image and attractiveness among passive and active candidates. Despite methodological and contextual limitations, this paper aims to enrich the pre-recruitment literature by presenting significant theoretical and managerial implications.

Keywords: innovation, employment web-information, web approach, employer attractiveness

1. Introduction

The Recruiters' War for new talent is evolving today within universities where battles are being fought to enhance corporate reputation and attractiveness (Collins and Han, 2004). To achieve those desirable outcomes, companies design and implement their unique Employer Brand strategy with certain and different instrumental and symbolic corporate values (Lievens, 2007). Research has shown that encouraging corporate innovation and high quality standards in every business function influences candidate perception, particularly when the target population is the passive and active candidates for entry-level employment vacancies. (Berthon *et al*., 2005; Bellou *et al.,* 2015; Arachchige and Robertson, 2011). Furthermore, the adoption of web communication channels, where online information and web interaction influence the thoughts and attitudes of job seekers, could become crucial factors of a company's attractiveness (Allen *et al*., 2007).

2. Conceptual framework

In today's labor market, where employers compete to attract and retain high quality human capital, the need for a company to differentiate itself as a deliverable employment choice is a one-way street (Eger *et al*., 2019). This could be accomplished through the formulation of the employer value proposition (E.V.P.), which contains all the characteristics that potential and existing employees assess in a company in order to seek career opportunities and to remain in its workforce (Backhaus and Tikoo, 2004).

It was in 2005 that Berthon *et al*. (2005) developed the scale measuring the attractiveness of a company as an employer of choice, enriching the corresponding Ambler and Barrow's (1996) original scale of 3 dimensions-criteria for employer selection. This new scale, known by the abbreviation "EmpAt" was adopted in the following years by a large number of researchers worldwide and applied to both student and employee populations, investigating the factors of attractiveness of a company in both groups (Arachchige and Robertson, 2013; Sivertzen *et al.*, 2013; Eger *et al.,* 2019). According to Berthon *et al*. (2005), there are five factors that shape the Employer Brand of a company, as namely the identity of an organization as an employer of choice is called: interest value, social value, economic value, development value and application value.

In particular, interest value, which focuses on innovation, is a key attractiveness factor especially for the "Z" generation of prospective employees (Sommer *et al.*, 2016; Pandita, 2021). In addition, the high quality of products and services is another component that arouses interest among both the active and passive candidates of younger generations (Eger *et al.,* 2019).

Given the above, we attempt to investigate the following hypothesis:
H1. Interest value that reflects both corporate innovativeness and high quality of product/services, as a company's Employer Brand dimension, relates positively to company's Attractiveness.

In the formulation of the company's Employer Brand identity, instrumental and symbolic attributes coexist to shape its positive image and its reputation in society as an excellent working environment (Lievens and Highhouse, 2003; Melin, 2005). According to Signaling Theory, as candidates do not have access to information about the daily working life in a company, they look for information and insight from various sources to evaluate the company as an employer (Breaugh, 2008). The "employment" section in the company's website and the advertisements of career opportunities on its own social media provide signals with both practical and symbolic dimensions, which contribute to enhancing attraction to the company (Carpentier *et al.*, 2019).

In addition, detailed information about job offers, the display of images from the employee experience and the way the company addresses the candidate through its web communication tools, enhance the positive image of the company as a good working environment (Sivertzen *et al.*, 2013). Collis and Stevens (2002) demonstrated in their research the positive relationship between the advertisements (ads) of a company's available job vacancies and the enhancement of its attractiveness to the student population. The detailed information included in job ads helps to gain the necessary knowledge about the company so that people can assess whether they would like to work there in the future. Nowadays, when the information process has moved from bulletin boards to online corporate settings, the company's website and social media are an important area of information and awareness of the company's image as an attractive employer (Cable and Turban, 2003).

In light of the above, we can draw the following four research hypotheses:
H2. Interest value that reflects both corporate innovativeness and high quality of product/services, as a company's Employer Brand dimension**,** relates positively with searching information about employment vacancies (job site ads) in a company's career site.

H3. Interest value that reflects both corporate innovativeness and high quality of product/services, as a company's Employer Brand dimension, relates positively with the approach of the candidate in the company's web environments.

H4. Information about employment vacancies (job site ads) in a company's career site relates positively with the approach of the candidate in the company's web environments.

H5. The approach of the candidate in the company's web environments, relates positively to its attractiveness, in potential candidate population.

3. Methodology

3.1 Sample and Procedure

In the present survey, conducted in spring 2021, 737 electronic questionnaires were collected from students and young graduates of Greek universities. The snowball sampling technique was used to collect the responses, through which the questionnaire was promoted, and data from a wide range of studies and specializations were collected.

3.2 Measures

All survey data measured using a five-point Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree. Additionally, an "Exploratory Factor Analysis (EFA) was conducted via SPSS v.22 ("maximum likelihood extraction method"; "promax rotation"; "cutoff value=0.50").

3.2.1 "Interest Value"

Interest value was assessed by three items, based on the five item scale originally developed by Berthon *et al.*, (2005). These items focused on company's innovativeness and high quality standards. Samples include "The organization produces innovative products and services" and "The organization produces high-quality products and services". Cronbach's alpha was 0.729.

3.2.2 "Job Site Ads"

The information concerning the job vacancies presented in a company's website (career section) was assessed using a three - item scale developed by Carpentier *et al.,* (2019). Sample items include: "I would like to work in a company whose website provided useful information to evaluate a potential employer" and "I would like to work in a company who gives me an accurate view of the organization". Cronbach's alpha was 0.865.

3.2.3 "Web approach"

Candidate "Web approach" is the way that a company chooses to interact on its web channels, namely the website and social media. This approach was measured with the three items of "Social presence" in the Carpentier *et al.,* (2019) measurement model. Sample items include: "I would like to work in a company whose social media pages addressed me in personal manner" and "I would like to work in a company whose website approaches me in a warmly/friendly way". Cronbach's alpha was 0.864.

3.2.4 "Company Attractiveness"

The company's attractiveness as an employer was assessed by two items remained after the EFA analysis, based on the five item scale originally developed by Highhouse *et al.*, (2003). Those two items were: "I am interested in learning more about this company" and "A job in this company is very appealing to me". Cronbach's alpha was 0.789.

3.3 Statistical Analysis and analytical procedures

In assessing our model, we used Structural Equation Modeling (SEM) with the use of SmartPLS 3.0 software (Ringle *et al.*, 2015). In the Figure 1 we present the conceptual framework of the proposed model.

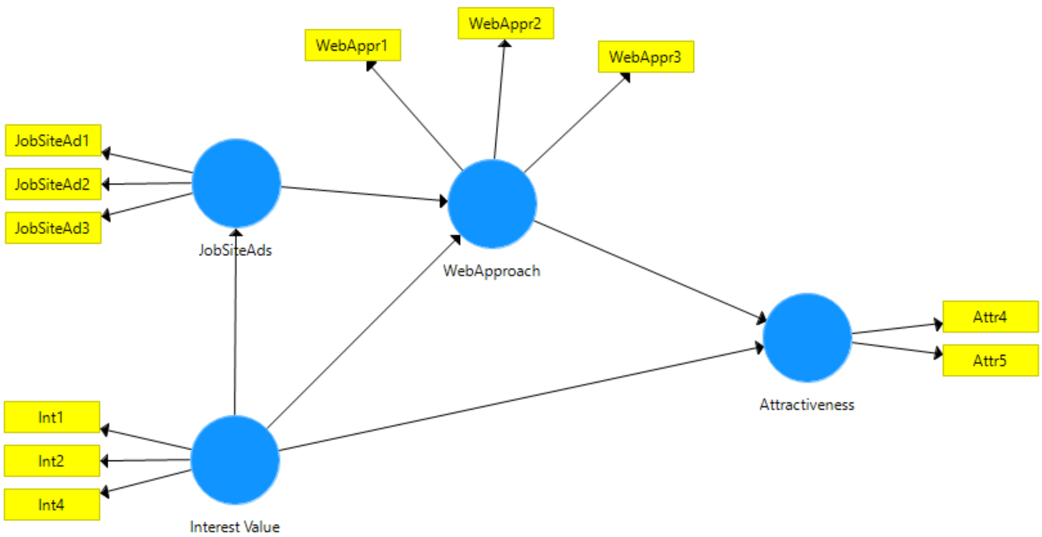

Figure 1: The conceptual framework

4. Results

All factor loadings were above the 0.5 threshold whereas Composite Reliability (CR) scores above the threshold of 0.50 and Average Variance Extracted (AVE) scores above the threshold of 0.70 in three of the four variables (one scores at 0.649). Hence, convergent validity was established. Regarding discriminant validity, we use two criteria available in SmartPLS (Henceler et al, 2015), namely the "Fornell-Lacker criterion" and the "Heterotrait-Monotrait ratio" (HTMT<0.85). According all the results, discriminant validity was also achieved.

In analyzing the structural model, we apply the bootstrapping procedure (2000 randomly drawn samples with replacement). The path coefficients with their significance level and the P-values of the inner model structure are depicted in Figure 2.

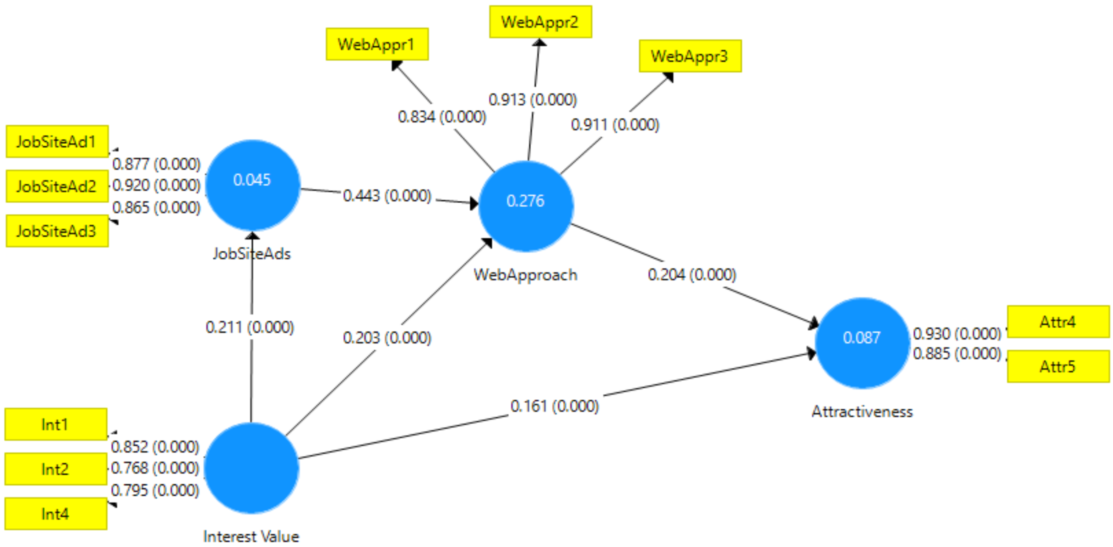

Figure 2: The Structural Model

Furthermore, Table I presents the "means", "standard deviations", "reliabilities" (in parentheses) and "bivariate correlations" among the study variables. As demonstrated in Table I, all the Cronbach's alpha coefficients were greater than 0.70, while two were greater than 0.80 confirming that internal consistency reliability of the proposed model was excellent.

Table I: Means, SDs and correlations (Cronbach's α is in parentheses).

	Mean	SD	1	2	3	4
Attractiveness	4.44	0.62	(0.789)			
Interest Value	4.27	0.60	0.222**	(0.729)		
JobSite Ads	4.20	0.66	0.292**	0.211**	(0.865)	
Web Approach	3.63	0.78	0.252**	0.297**	0.486**	(0.864)

Note: N=737, SD: standard deviation
*indicates significant paths: *p<0.05, **p<0.01, ***p<0.001, ns= not significant

Table II presents the model's path coefficients along with their levels of significance. Overall, Table II shows that Interest value which reflects the company's innovativeness and high quality standards is positively related to both company's attractiveness as an employment destination (β= 0.161, p<0.000), JobSite Ads (β= 0.211, p<0.000) and the candidate's Web Approach (β= 0.203, p<0.000) and thus supporting Hypotheses 1, 2 and 3. Similarly, JobSite Ads is significantly related to candidate's Web Approach (β= 0.443, p<0.000) supporting hypothesis 4. Finally, hypothesis 5 suggests that candidate's Web Approach positively related to the company's Attractiveness as an employer (β= 0.204, p<0.000) thus supporting the hypothesis 5.

Table II: Summary of Path Coefficients and Significance levels

Direct Hypotheses and Corresponding Paths	Path Coefficient	T-Statistics	Hypothesis Support
Interest Value -> Attractiveness	0.161	3.901***	H1 supported
Interest Value. -> JobSite Ads	0.211	4.391***	H2 supported
Interest Value -> WebApproach	0.203	5.483***	H3 supported
JobSite Ads -> WebApproach	0.443	12.421***	H4 supported
WebApproach -> Attractiveness	0.204	4.864***	H5 supported

*indicates significant paths: *p<0.05, **p<0.01, ***p<0.001, ns= not significant

Additionally, from the model's analysis we extract some interest findings that we take into consideration in our result interpretation although we had not included them in our hypotheses. First of all, Jobsite Ads mediate partially and positively to the relationship between Interest value as a factor of the company's Employer Brand mixture and its web approach as communication strategy concerning the applicant audience. Similarly, it was indicated that web approach of candidates partially and positively mediates the relationship between Interest value and corporate attractiveness as an employer of choice.

In the following section we further discuss aforementioned findings.

5. Discussion and Conclusions

This study looked at how a company's distinctive Employer Brand attributes, such as Interest value and, more specifically, the innovation culture and functionality, affect its ability to attract entry-level candidates as employees. Our findings support the conclusions of previous researches regarding the importance of the Interest value as a dimension of a company's Employer Brand (Lievens and Highhouse, 2003; Berthon *et al*.,2005; Arachchige and Robertson, 2011; Alnıaçık and Alnıaçık, 2012; Bellou *et al.*, 2015). Indeed, this feature of innovation and high quality is directly related to the attractiveness of the company as an employer of choice (Roy, 2008; Reis and Braga, 2016) and can be positively or negatively influenced by the candidate's approach to the company's online environments (Sivertzen *et al.*, 2013). Moreover, corporate websites and social media posts focused on career vacancies also influence corporate attraction by presenting instrumental and symbolic characteristics of the employment status in this particular employer (Allen *et al.*, 2007; Carpentier *et al.*, 2019; Carpentier *et al.*, 2017). Thus, they inform students and young graduates about the available positions, promoting details and signals about what it is like to work in this company (Wazed and Ng, 2015; Mičík and Mičudová, 2018). Hence, we conclude that when a candidate considers the criteria of innovation and high quality standards important for the selection of a company as a potential employer, then (if the company has this characteristic) he/she will search on the corporate site for job opportunities in this company. Consequently, if the web approach is friendly and personal, then a positive perception i.e. attractiveness for the company is enhanced (Carpentier *et al.*, *2019*). It is also important to notice that this study was conducted in Greece and the target population of passive and active candidates was approached through the career office~~s~~ networks and the university pages in social media (Facebook, LinkedIn). This means that these respondents, because of their age and academic background, are already familiar with web interaction conditions and prefer this means to identify and evaluate their future employers.

In summary, we believe that our research findings confirm the fact that the attractiveness of a company as an employer of choice is achieved through a targeted corporate employer branding strategy where innovation emerges, as confirmed by many studies and practitioner researches, as a key attraction factor for students and young graduates. Furthermore, the image of a company, which differentiates it from other potential employers and enhances its profile as a desirable work destination, is important to meet the expectations of the new generation of candidates in relation to the work environment they wish to work in. It is equally important that this image should be promoted through the appropriate communication channels, such as the website and social media, which the company uses as a means of informing and interacting with the young job seekers (Woźniak, 2016). On these online environments, the quality and quantity of information about jobs and the way in which these candidates are approached, contribute to building the company's reputation and, ultimately, to enhancing its attractiveness.

Overall, considering all of the above, our research adds to the broader Employer Branding literature and specifically to its external strategy in the pre-recruiting phase when companies are struggling to attract young talent and persuade them to join their pool of candidates. Thus, although we make no attempt to generalize our findings, it is reasonable to argue that innovation and high quality triggers interest and provokes attraction to the young generations of job seekers. In addition, our findings prove the power of web communication tools where information and approach are equally interdependent components when a company aims to attract candidates.

6. Practical Implications

The strategy of each company, is formulated to enhance its reputation and create attraction among the talented workforce of the younger generations, and it should include those special and unique characteristics that shape its employer value proposition. The innovative mindset and high quality standards in products and services are among the values that young people seek in their working environment. Furthermore, these characteristics should be communicated through appropriate channels, where interaction and personalized communication with job seekers is encouraged. Such channels, of high communication intensity, are the company's corporate website and social media pages.

7. Limitations

Although we achieved the goal of our research to contribute to the research field of employee recruitment, there are some limitations that do not allow us to generalize the results. In detail, the survey was conducted among senior students and recent graduates from Greek universities. It is possible that extending the survey to all student years and to graduates with some significant work experience, e.g. 3+ years, would reveal different values in the relationships and interactions between the controlled variables.

Another limiting factor, with regard to the extent to which the conclusions can be generalized, is that only 'Interest value' was tested as a factor of the employer value proposition. From the literature review, we do know that there are other factors that contribute to the formation of the employer value proposition. In subsequent research, we believe that it would be of particular interest to investigate other factors in the formation of the employer value proposition.

Finally, our own assessment, as a result of HR practices in the population of potential candidates, was only about enhancing the attractiveness of the company to this audience. We think it would be quite interesting to investigate in the future how these practices affect applicants' intentions to apply and actual applications for jobs with the organization**.**

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Success Factors to Promote Innovative Behavior in Organizations

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Abstract: Innovative behavior in organizations have been practiced in many countries but the success factors are not well established in Thailand. The primary objective of this study was to identify and confirm the success factors in Thailand. The sample included 500 peoples who were observed in automotive industry. Confirmatory factor analysis (CFA) indicates a good fit of a eight-factor model to the observed data. The CFA construct revealed eight success factors to promote organization's innovative behavior in Thailand, including Knowledge sharing (KS), Self-efficacy (SE), Problem-solving capacity (PS), Collaborative skill (CS), Innovation culture (IC), Organizational supportiveness (OS), Learning culture (LC), and Executive leadership (EL). The results show that Knowledge sharing, Organizational supportiveness, Innovation culture and Self-efficacy are statistically important as influencer to promote innovative behavior in organizations. This paper proposes guidelines for the promotion of organization's innovative behavior in relation to the Thailand context.

Keywords Knowledge sharing, Self-efficacy, Problem-solving capacity, Collaborative skill, Innovation culture, Organizational supportiveness, Learning culture, and Executive leadership

1. Introduction

At present, the most sustainable strategy to build organizational success is to develop people, nurture creativity, and foster innovation related to organizational capability, which is an important factor in organizational operation outcome (Porter, 1990). Particularly industries in Thailand, where the government has implemented the Thailand 4.0 policy, which has elevated the country to a 'value-based' and 'innovation-driven' economy. This change includes the process of 1) transitioning from producing commodities to inventive products, 2) transforming the country from an industry-led to technology, creativity, and innovation-driven economy, and 3) shifting the emphasis from the manufacturing sector to the service sector (Suvit Maesincee, 2016).

As previously discussed, it can be seen that the critical factor of implementing innovation begins with people who have knowledge, skills, and intellect (Chompukum, 2008) because the innovation implementation was initiated by humans. Innovative behavior is characterized by the use of creativity in the development of new products, services, and processes (Shankar, Acharia, & Baveja, 2009). Thus, innovative behavior is a procedure that will assist in the development of people's knowledge, abilities, comprehension, and positive mindset, resulting in improved individual work performance, as well as, professional and skill development. This innovative work behavior is constantly being studied in the manufacturing, service, and industrial sector, the majority of which are private overseas sectors. The study covers the topics of personal's innovation performance evaluation, innovative work behavior development, and so on. However, no studies have been conducted in Thailand to investigate this model for developing a personal's innovation performance evaluation system based on the human resources approach. This approach excels at developing people to be innovators in order to create new products that can potentially support advanced manufacturing technology, thereby propelling the country's economic development.

The above-mentioned importance of the innovative work behavior prompts the idea of managing human resources, which will impact organizational operation and performance efficiency development, by conducting a confirmatory factor analysis of innovative behavior in organizations. The analysis will demonstrate the degree of importance of the factor, which will be used as a tool to improve employee work performances, thereby stimulating effective innovation for organizations.

2. Aims of the study

This study aimed to identify success factors of innovative behavior in organizations. The results from the empirical study can be used to promote organization's innovative behavior in Thailand.

3. Literature Review

This review focuses on articles that report the success factors of innovative behavior (IB). The selected studies were relevant to promote innovative behavior in organizations. The reviewed articles reveal eight major factors to promote innovative behavior in organizations in Thailand: (1) Knowledge sharing (KS); (2) Self-efficacy (SE) (3) Problem-solving capacity (PS) (4) Collaborative skill (CS) (5) Innovation culture (IC) (6) Organizational supportiveness (OS) (7) Learning culture (LC) and (8) Executive leadership (EL). To begin, the author also perform factor synthesis and confirm the important points of each factor (see Table 1).

Table 1: Success factors of innovative behavior in organizations

Author	Internal factor				External factor			
	Knowledge sharing (KS)	Self-efficacy (SE)	Problem solving ability (PS)	Collaborative skill (CS)	Innovation culture (IC)	Organizational supportiveness (OS)	Learning culture (LC)	Executive leadership (EL)
Abukhait, Bani-Melhem, and Zeffane (2019)	●							
Aghdasi and Tehrani (2011)				●				
Bani-Melhem, Zeffane, and Albaity (2018b)				●				
Bednall, E. Rafferty, Shipton, Sanders, and J. Jackson (2018)	●							●
Birkinshaw (2001)	●			●	●	●	●	
Chatti, Klamma, Jarke, and Naeve (2007)	●						●	
Chen, Lee, Wang, and Tong (2008)				●		●	●	
Duradoni and Di Fabio (2019)		●						
Eppler and Sukowski (2000)	●	●				●	●	
Gavrilova and Andreeva (2012)	●			●				
Hoegl and Schulze (2005a)						●	●	
J., Yli-Luoma, and Naeve (2006)	●	●		●				
Kim, Choi, Sung, and Park (2018)			●					
Lee, Chen, and Tong (2008)			●				●	
Lindlof, Soderberg, and Persson (2012)							●	
Liu and Liu (2012)	●				●	●	●	
Nazir, Qun, Hui, and Shafi (2018)				●			●	●
Nimmolrat, Chakpitak, and Savino (2011)						●		
Park, Song, Yoon, and Kim (2014)				●			●	●
Purc and Laguna (2019)		●						
Reychav, Stein, Weisberg, and Glezer (2012)	●							
Roffeei, Kamarulzaman, and Yusop (2017)		●			●		●	
Schulze (2005)	●	●	●		●	●	●	
Shang, Li, Wu, and Hou (2011)	●			●			●	
Shankar et al. (2009)	●		●			●	●	
Shouxian and Peng (2011)		●	●	●				
Sofianti, Suryadi, Govindaraju, and Prihartono (2010)			●					
Uotila, Melkas, and Harmaakorpi (2005)	●	●			●	●	●	
Vaccaroa, Velosoa, and Brusonic (2009)	●		●	●		●		
Wu and Wang (2008)	●			●				
Zhang and Hou (2011)	●			●				●
Total	16	8	7	13	5	10	15	4

Note: Selection was influenced by the most frequent factors, while similar statements were considered important.

3.1 Knowledge sharing (KS),

Knowledge sharing focuses on the transfer of data between individuals or groups to create mutual understanding and new wisdom. the findings from pervious study indicate that empowering employees and promoting knowledge sharing are important to their enacting innovative behavior (Abukhait et al., 2019).

3.2 Self-efficacy (SE)

Self-efficacy is an individual's confidence in freely expressing oneself, taking one's own approach to dealing with problems, and not being easily manipulated by other people's opinions. The results from pervious sutudy suggested that self-efficacy (SE) is a major determinant of innovation if thre is empowerment (Roffeei et al., 2017).

3.3 Problem-solving capacity (PS)

The ability to solve immediate problems while considering multiple methods for adjusting and improving solutions. This includes the ability to analyze the limitations of assigned tasks in order to avoid future problems and to plan necessary backup plans ahead of time. The results of provious study showed that problem solving ability positively influenced innovation behavior (Kim et al., 2018).

3.4 Collaborative skill (CS)

Individuals' participation in working processes, such as participating in a brainstorming session, is essential for achieving ultimate goals. Innovative behavior can be encouraged the organization from an effective collaborative environment among employees which innovative ideas can be discussed freely and openly (Bani-Melhem, Zeffane, & Albaity, 2018a).

3.5 Innovation culture (IC)

Innovation culture refers to an inclusive working environment in which all constructive opinions and criticisms are welcomed to encourage employees to take initiative, as well as to foster trust and freedom in the workplace. The results from previous study found that innovation culture positively and significantly influences innovative behaviour (Roffeei et al., 2017).

3.6 Organizational supportiveness (OS)

The organizational design provides a supportive working operation and environment to encourage new ideas and promote the importance and recognition of creative thinking and innovation in the workplace (Hoegl & Schulze, 2005b).

3.7 Learning culture (LC)

Learning culture is a culture that encourages the exchange of knowledge in order to constantly improve the skills and intellects of individuals at all levels, as well as to support the development of organizational training. Nazir et al. (2018) said that learning culture influences employee innovative behavior. However it has no impact on affective commitment.

3.8 Executive leadership (EL)

Executive leadership is the ability to build trust and support from individuals involved in the achievement of the organization's goals through management, transformation, and creativity. Previous results of reveal that there is relationship between transformational leadership and innovative behaviour (Nazir et al., 2018).

3.9 Innovative behavior

The behaviors that exhibit individual's attempts to generate new ideas, whether to create new products, services, or working procedures. The behaviors include solving problems, improving, developing, and adding value or practicality to existing materials.

4. Methodology

4.1 Participants

Participants were selected by using multistage sampling method. A sample of 500 people in automotive industry was selected. Multistage sampling method was selected as the hierarchical structure from business units. A different level was randomly sampled from a name list of companies based on department of specific business units. Hair, Black, Babin, and Anderson (2014) suggested the use of confirmatory analysis (CFA) to determine sample size. The heuristic requires ten times the construct with the number of structural paths. This method indicated 10*28 = 280 as an adequate sample size. In this study using CFA, the first heuristic was considered. The usable sample size of 500 exceeded the suggested sample size of 280, so was determined to be adequate by the power calculations.

4.2 Procedure

The method research with quantitative approaches was selected. Quantitative survey were proceeded to examine the success factors relating to innovative behavior in organizations in Thailand. A literature review was conducted to explore the success factors relating to innovative behavior in organizations by selecting systematic reviews. A survey questionnaire was then created, containing 28 questions concerning the perceived importance level of the success factors. The questionnaire items were rated using a five-point Likert scale, ranging from 1 for the least important to 5 for the most important factors relating to: (1) Knowledge sharing (KS); (2) Self-efficacy (SE) (3) Problem-solving capacity (PS) (4) Collaborative skill (CS) (5) Innovation culture (IC) (6) Organizational supportiveness (OS) (7) Learning culture (LC) and (8) Executive leadership (EL). Confirmatory factor analysis was conducted using LISREL to examine the structure of the contextual factors (CFA model). Finally, a guideline for the promotion of innovative behavior in organizations was developed and proposed.

5. Results

5.1 Confirmatory Factor Analysis

Confirmatory factor analysis following the maximum-likelihood estimation method was conducted using LISREL (linear structural relations) to confirm the factor structure. Good model fit was evaluated by the Chi-square statistic which compared the tested model and the independent model with the saturated model (χ^2/df), comparative fit indexes (CFI), goodness of fit index (GFI), adjusted goodness of fit index (AGFI) root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) . According to Hair, Black, Babin, Anderson, and Tatham (2014) and Jöreskog and Sörbom (1996), χ^2/df values less than 2.00, CFI values more than 0.95, GFI values more than 0.95, AFGI values more than 0.90, RMSEA values less than 0.05 and SRMR values less than 0.05 indicate a good-fitting model. Results of fit indexes are provided in Table 2. The study model showed acceptable values (χ^2/df = 1.140, CFI = 1.000, GFI = 0.960, AGFI = 0.940, RMSEA = 0.017, SRMR =0.082) which indicated good fit to the observed data.

Table 2: Fit indexes for the model.

Fit indexes	Level of acceptable fit	Model	Result
χ^2/df	< 2.00	1.140	Pass
CFI	> 0.95	1.000	Pass
GFI	> 0.95	0.960	Pass
AGFI	> 0.90	0.940	Pass
RMSEA	< 0.05	0.017	Pass
SRMR	< 0.05	0.082	Pass

The CFA results confirm that the four-factor model was appropriate to promote innovative behavior in organizations in Thailand.

Figure 1 presents the CFA model with a eight-factor structure. Factor loadings ranged from 0.16 (Collaborative skill (CS) and Learning culture (LC)) to 0.99 (Knowledge sharing (KS)). The "Knowledge sharing (KS)" factor was the best indicator to promote innovative behavior in organizations, with "Organizational supportiveness (OS)" as the second most influential factor. Innovation culture (IC) was the third indicator while Collaborative skill (CS) and Learning culture (LC) showed less ability to promote innovative behavior in organizations.

The data confirmed the eight-factor model as a good fit to explain the observed data collected from survey. Among the factors, Knowledge sharing (KS) was more influential than other factors, while Collaborative skill (CS) and Learning culture (LC) showed less ability to promote innovative behavior in organizations.

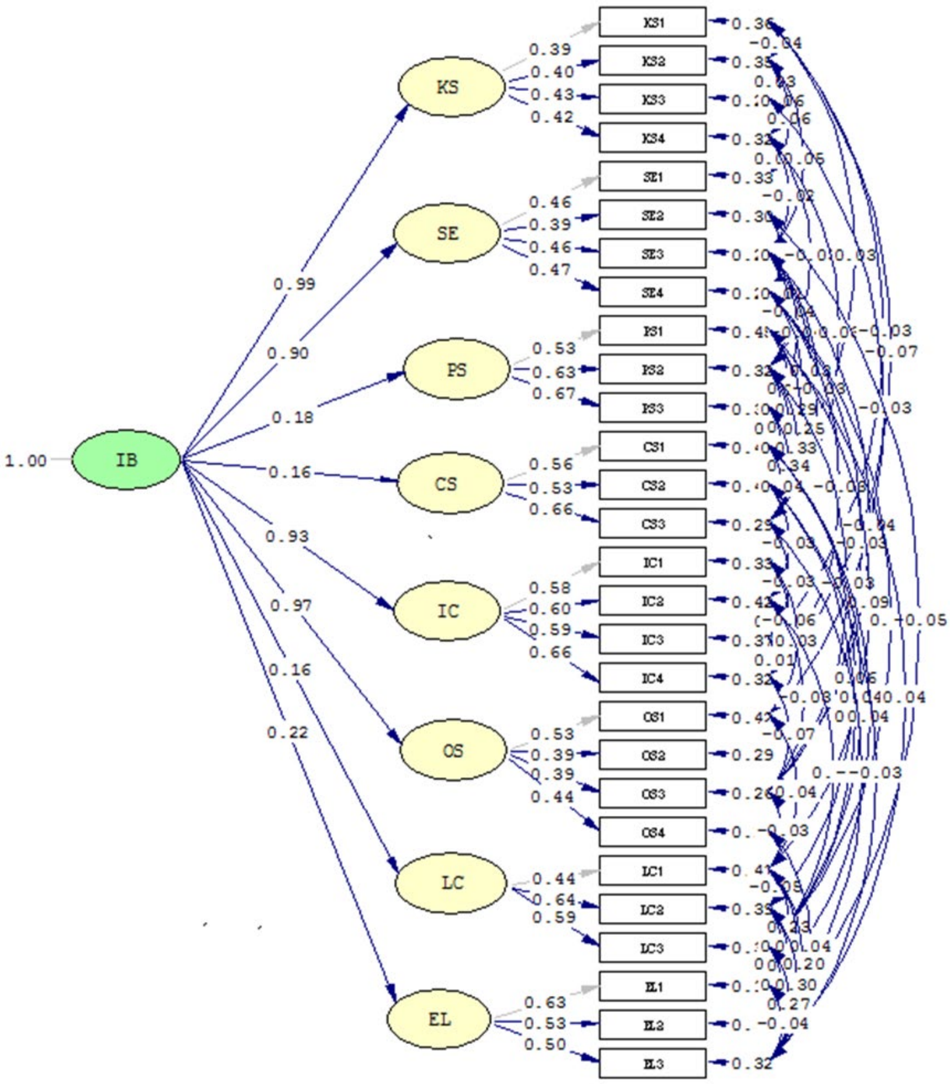

Figure 1: CFA model showing how the eight factors to promote innovative behavior in organizations

Chi-Square =313.45, df = 275, P-value = 0.05513, RMSEA = 0.017

6. Discussion and conclusion

The findings of this research can be adopted and practiced in Thai company to promote innovative behavior in organizations. This study confirmed that all proposed factors of innovative behavior are important in Thailand context and the results of this research are consistent with prior researches conducted in other countries (Collin, Lemmetty, & Riivari, 2020; Walker & Derbyshire, 2020) as well as mentioned in table 1. The internal factors contain knowledge sharing (KS), self-efficacy (SE), problem-solving capacity (PS), collaborative skill (CS) and the external factors contain innovation culture (IC), organizational supportiveness (OS), learning culture (LC), and executive leadership (EL). With these, the finding is realted to literature review with innovative behaviour need to have internal and external factors for people development (Shi & Wu, 2017). The key emerging issues identified in this paper are that some factors which impact on innovative behaviour are more important than others. This paper has also drawn attention to the need to understand the size effects on the inter-factor relationships to innovative behaviour on an organisations in order to manage innovation properly.

Knowledge sharing (β=0.99), Organizational supportiveness (β=0.97), Innovation culture (β=0.93) and Self-efficacy (β=0.90) are found statistically important as influencer of innovative behavior. Therefore, both of internal factors named knowledge sharing with self-efficacy and external factors named organizational supportiveness with innovation culture can shape innovative behavior for people which are influent to them on how to promote their innovative behavior in organization. In practice, company can leverage the benefits of research finding by developing the employee assessment system for innovative behavior. The assessment system can provide opportunities of staff recruitment and staff development.

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Achieving Governance Disclosure: The Surprising Case of an Emerging Market Family Business

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Abstract: Since 1961, when the first paper to clearly recognize and study family firms was published, the business literature has seen an increasing trend in the number of articles relating to family firms. One reason why interest in this field has grown may be because family-owned firms do not behave as expected by the predominant theoretical framework. Family-ownership has been shown to be unique in its effect on the firm when compared to other firm ownership structures. Such divergent behavior is disconcerting, knowing that, globally, family firms may be the most common firm structure. Governance is one of the largest streams of research within the family business literature. Regrettably, most research on family businesses is focused on Western developed economies suggesting that theory building when it comes to family business governance has been largely driven by the Anglo-Saxon corporate governance model. This is unfortunate because we know that context plays a vital role in governance outcomes and in family firm behavior. One of the important challenges faced by developing countries is governance disclosure, with potentially grave repercussions for their economic futures. The aim of this research is to help understand the motivations behind the decision of a family, non-listed firm, in a developing country context, to disclose governance information on its board members. We propose a larger role for institutional isomorphism at the intersection of the family, governance, disclosure, and developing country literatures. To this end, we identified a family business in the emerging market of Lebanon that has demonstrated this phenomenon. Despite the odds, this firm was able to overcome multiple challenges - family firm structure, secretive culture, no legal requirements, information sensitivity - to ultimately share this information with the public. Our case study helps us suggest a context-specific governance disclosure model based on the institutional theoretical framework.

Keywords: corporate governance, developing countries, institutional isomorphism, corporate disclosure, case study, family firms

1. Introduction and background

The family business literature has grown and developed, mainly in its attempts to resolve central questions of "How do family businesses change and survive? How and why do family businesses differ from other businesses and each other?" (Payne, 2018, p. 167). Such questions have been found to be relevant for a wide range of topics, including governance, the third largest research stream within the family business literature (Benavides-Velasco, Quintana-Garcia and Guzman-Parra, 2013). Governance, or corporate governance, may be described as "the study of power and influence over decision making within the corporation" (Aguilera and Jackson, 2010, p. 487). Outside the US, the use of the term corporate governance gained traction in the 1990's, especially after the publication of the 1992 Cadbury report, that helped delineate the major areas covered by the term corporate governance. These areas included board structure and procedures, director independence, board responsibilities and standards of conduct, internal controls, committees, auditing procedures, reporting procedures, and shareholder communications.

Family business governance, can be understood as a form of corporate governance, that integrates elements of family businesses, such as a long term vision, non-economic goals, and altruistic behavior (Pindado and Requejo, 2015), to produce governance structures that include "(1) the family and its institutions [such as the] family meeting, family assembly, and family council, (2) the board of directors, (3) the chief executive officer and the top management team" (Pieper, 2003, p. 7). Such governance structures are aimed at clarifying the responsibilities of, and rewards for, family members involved in the firm, while maintaining clear and accurate family communications (Cortés and Botero, 2016).

Regrettably, most empirical and theoretical research on family business governance, has been focused on Western developed economies (Benavides-Velasco, Quintana-Garcia and Guzman-Parra, 2013). This Western-dominated locus of research together with the fact that more than 40% of all articles published were theoretical studies suggests that theory building when it comes to family businesses has been largely driven by the Anglo-Saxon corporate governance model and related Western-based theories, such as agency theory. Moreover, Western-based theories can be seen as a by-product of Western-based historical events (Bendickson et al, 2016). Such developments may be disadvantageous since Western contexts vary greatly from non-Western contexts with regards to legal systems (Van Hoecke, 2016), firm ownership structures (La Porta, Lopez-De-Silanes and

Shleifer, 1999) and culture (Gray, 1988), and we know that national or institutional context plays a vital role in governance outcomes (Judge, 2012), and in family firm behavior (Amit et al, 2015).

Different empirical contexts can help contribute to the development of extant Western-based theories (Whetten, 2009). As it is, the current status of research bodes poorly for building a more global understanding of family businesses and how they are governed (Cortés and Botero, 2016; Samara, 2021). Without this knowledge, practical applications of research, such as supporting business development and suggesting appropriate government regulations, may remain limited to Western economies. This is worrisome because the businesses and governments that need help the most are in developing countries, such as those in the Middle East (as per the World Trade Organization's development threshold, all Arab countries are categorized as developing).

With family involvement making businesses more secretive (Ali, Chen, Radhakrishnan, 2006) and with the preponderance of family businesses in Middle East countries (Abdallah and Ismail, 2017; Eulaiwi et al, 2016), it may come as no surprise that one of the important family business governance challenges faced by firms in the Middle East is governance disclosure (Shehata, 2016; Shehata, 2017). The term governance disclosure has been defined as "the evaluation of corporate governance practices" (Nerantzidis and Tsamis, 2017, p. 370). This evaluation of governance practices has often taken the form of governance disclosure indexes (Shrivastav and Kalsie, 2017). These indexes are based on governance codes that may be formed at the transnational level, such as the UNCTAD ISAR benchmark (Cuomo, Mallin and Zattoni, 2016). Thus, governance disclosure is a term that covers the disclosure of the firm's ownership structure and the exercise of control rights, the firm's financial performance and objectives, its auditing procedures, the structure and processes of its board and management, and its corporate social responsibility code. Illustrating the challenge faced by businesses in the Middle East with regards to governance disclosure, the Gulf Cooperation Council (GCC) countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE, scored an average of only 26% on the ISAR governance disclosure index (Shehata, 2016). Such poor results are alarming for the GCC countries and for the rest of the Middle East region, considering that the GCC countries are known to be regional leaders when it comes to development, and development has been associated with improved governance disclosure (Baldini et al, 2018). In other words, weak governance disclosure results demonstrated by businesses in Gulf Arab countries may imply even weaker governance disclosure levels across the Middle East. Considering that these were listed firms raises even greater concerns about the disclosure practices of non-listed firms (Loderer and Waelchli, 2010), which are noted for their aversion to disclosure (Meluzín et al, 2018).

One particular type of governance disclosure item that firms find challenging to disclose (Shehata 2016), that may require further theoretical support (Masli, Sherwood and Srivastava, 2018), and that has been found to be important to information users (Rossignoli, Lionzo and Buchetti, 2021), is the information of the individuals who sit on the board of directors, which may include board members' personal details, education, work experience and gender. Shehata (2016) observed that fewer than 10% of the Middle East GCC firms disclosed qualification and biographical information on their board members. A governance disclosure survey in Lebanon, found that 0% of surveyed firms shared biographical information on their board members (Elgammal, 2014). We note that non-listed firms in Lebanon are not legally required to share governance information with the public.

While studying governance disclosure in the Middle East, Shehata (2017) demonstrated the importance of context in affecting governance disclosure, concluding that GCC country markets were incompatible with the Western Anglo-American corporate governance system and agency theory. GCC country businesses displayed poor disclosure results even though agency theory suggests strong motives to improve disclosure quality, such as reducing a firm's cost of equity (Setiany, 2017), as well as increasing stock liquidity (Utami, Wahyuni and Nugroho, 2020).

Different institutional settings have been blamed for inconsistent findings regarding family firm disclosure practices (Vural, 2018). For instance, weaker institutions may increase the likelihood of firm disclosed information being abused by 'rent-seeking bureaucrats' (Liu et al, 2021, p. 2). Moreover, when examining governance disclosure in different countries we need to consider the influence of local culture, which may be inherently secretive in the case of Arab countries (Gray, 1988). Benavides-Velasco, Quintana-Garcia and Guzman-Parra (2013, p.52) called for more research on governance disclosure practices by family firms to help develop the topic of family firm governance noting the "many institutional differences across countries that need to be examined in relation to this issue". Salvato and Moores (2010) called for further exploration of family businesses disclosure practices in diverse institutional settings, to help reconcile contradictory findings in the literature. All this implies that governance disclosure studies within the legal, cultural, and ownership structure contexts of developing countries, may require different lenses. The relevance of institutional setting for family firm disclosure suggests the merits of deploying an institutional theoretical lens to better understand family firm decisions (Soleimanof, Rutherford and Webb, 2018). Institutional theory "can shed light on contingencies and boundary conditions in which other theoretical frameworks [such as agency theory] failed to offer conclusive interpretations about family firms' behaviours and further clarify long-lasting contradictory views on family firms" (Soleimanof, Rutherford and Webb, 2018, p. 33). For example, scholars have used the institutional theory lens to investigate firm behavior consequences of different laws (Lee, Peng and Barney, 2007), different cultures (Li and Parboteeah, 2015), different markets (Haveman, 1993), and different ownership structures (Ilhan-Nas et al, 2018).

The literature has presented challenges that family, non-listed, firms face in developing country contexts when deciding to disclose governance information on their board members. If such a firm discloses this governance information, then it means it has been motivated to do so despite these challenges. Accordingly, beginning with a general research question – why do firms disclose information? – we thus articulate the following more precise research question: Why do family, non-listed, firms disclose governance information on their board members within a developing country context? The theory of institutional isomorphism (Dimaggio and Powell, 1983) explains that firms may adopt certain structures or practices as a result of particular pressures or actors. The purpose of this article is to understand potential causal linkages and therefore test a theory (Institutional isomorphism) with regards to a specific category of firm practices (disclosure of board member information), for a specific subset of firm structure (a family non-listed business), within an often-overlooked developing country context (Lebanon). Thus, we suggest the following propositions:
P1. Relationships with supply chain actors, as well as cultural and government expectations, influence a family non-listed firm's decision to disclose governance information on its board members.

P2. Foreign consultants, and foreign-raised employees, influence a family non-listed firm's decision to disclose governance information on its board members.

2. Methodology

2.1 Empirical context

For an indicator of the distribution of firms in Lebanon we gained access to the Lebanon 2019 Enterprise Survey dataset, sampling 532 firms. Using SPSS software, we generated descriptive statistics for the legal status of firms, their industrial sectors and the percentage of family ownership. The majority of firms in the sample (314 out of 532 firms) were fully family-owned.

2.2 Research design

Interpretivism is our philosophical paradigm of research and we consider knowledge as the outcome of individual interpretation. Thus, we aim only for a more developed construction (Guba and Lincoln, 1994). Our selection of qualitative inquiry techniques is informed by this philosophical stance. Our units of observation are the people involved in the organization's decision to disclose governance information on board members. We used Yin's (2009) different stages of case study research as our guide. The form of case study we are attempting is of the explanatory type intended to understand potential causal linkages and therefore test a theory with regards to a specific category of firm practices, for a specific subset of firm structure, within an often-overlooked developing country context.

The reasons we chose Family firm A for our case study, is that it is an unusual case of our investigated phenomenon under such contextual conditions (Flyvbjerg, 2006). As explained by Yin (2009), the case study "does not represent a 'sample', and in doing a case study, your goal will be to expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization)" (p. 15). After some debate on definitions (Steiger, Duller and Hiebl, 2015), we settled on defining a family business as one that satisfies the following conditions: there exists at least one family member in a senior management role, and there exists at least one family member on the board of directors, and the cumulative family voting share ownership exceeds 5%. What makes this firm more noteworthy is that it is a firm where women make up a third of top management positions, including the CEO role, in the midst of a patriarchal national context.

2.3 Data collection and analysis

We relied on both public information and study participants in building our case study. Since we define governance disclosure as the free sharing of governance information with the public, we chose to search for Family Firm A's governance information on the internet, concluding that the most detailed internet source of governance information on Family Firm A's board members was their corporate website. We used an online tool, the Wayback Machine (Arora et al, 2016), to collect historical web-based data. With our study participants we used a narrative interview format, whereby they were invited to share their story. To corroborate stories among participants and with different data sources, we performed interviews with key senior personnel at the firm (family and non-family members), as well as with external participants. Using Atlas.ti software, we practiced an iterative coding process that began with general topics, moving from descriptive coding related to general topics of investigation to analytical coding that attempts to organize data on a more abstract level. Our coding was mainly derived from the three different mechanisms of institutional isomorphism, coercive, mimetic, and normative isomorphism.

3. Results

This section is divided into four parts, each contributing to answering our research question. The first part examines the early governance journey of Family Firm A during the period of 2006 – 2009. The second part examines Family Firm A's accelerated governance reforms during the period of 2013 – 2017. The third section explores Family Firm A's aspirations for an initial public offering. Finally, the fourth section explores the importance and impact on Family Firm A of cultural expectations.

3.1 Family firm A's governance journey begins (2006 – 2009)

Established before World War II, Family Firm A grew rapidly from its humble beginnings as a single store in Lebanon. Developing from distributor to manufacturer and exporter, this multinational now manages more than twenty corporate entities. The governance journey of Family Firm A begins in the period 2006 to 2009, that saw the birth of Lebanon's first corporate governance code. The Lebanese Transparency Association (LTA), the national chapter of NGO Transparency International, achieved the feat of drafting and launching Lebanon's first corporate governance code in 2006. That same year, The Lebanese Transparency Association also began an awareness campaign with events to promote the corporate governance code to Lebanese business leaders. The awareness events presented Western developed family firm models to demonstrate the sustainable benefits of corporate governance.

During this period, Family Firm A decided to reach out to the LTA Director, for practical advice on implementing corporate governance. According to the LTA Director, "…it was after we did these efforts [awareness events] that, in effect, we started discussing with Family Firm A". This was followed by Family Firm A's involvement in LTA's governance awareness campaign, when the Chairperson CEO of Family Firm A presented his firm's governance updates at an awareness event in 2008. We note here the involvement of banks in these events, as exemplified in the below commentary:

> *And one of the ways we were promoting the code of corporate governance that we had launched was to organize events with banks and corporations. For example, we organized with Bank Byblos, where they invited their corporate clients to the event, some of whom had loans with the bank, to learn about governance* (LTA Director, Interview).

3.2 Family firm A's governance reforms accelerate (2013 – 2017)

After several years of little contact, the LTA Director was contacted directly by the Chairperson CEO of Family Firm A and made aware that, during 2013, Family Firm A had begun discussions with the Western-based International Organization, headquartered in Washington, DC, regarding a major investment in the Middle East (Country X), that was tied to a governance audit. This information was corroborated through separate disclosures made by the Western-based International Organization. This experience may have led Family Firm A to work harder on its governance. Indeed, Family Firm A implemented major governance reforms between the years 2013 and 2015. Apart from its large size, this investment deal was important because it was for the Country X market, which, today, makes up the largest source of revenue for the firm. In 2014, Family Firm A sought the governance advisory services of a prominent UAE-based governance consultancy. Family Firm A's Legal Affairs Manager and Corporate Secretary recounts what happened, "…in 2014, we asked a specialized firm in [the UAE], the firm of Amir Saleh and Associates to draft and submit the [governance] frameworks and policies for us to apply."

The results of the governance reforms became more evident in the years 2015 to 2017 with the establishment of a new policy framework, a new board of directors, a board charter, two committees, and the splitting of the Chairperson CEO role. In September, 2017, members of the public who had signed up for a newsletter on the Family Firm A corporate website, received the firm's first newsletter, displaying board member details, including their education, work experience, and gender. This information was published on the corporate website in December, 2017.

We observe other elements that also seem to have supported Family Firm A's governance reforms, noting in our discussion with the CEO, that her family prides itself on its unity, explaining that, "We are proud of our unity with regards to our value system, that we spent nearly a year and twelve meetings to carefully document through our own family constitution." There seems to be family agreement on fundamental values, as described by Family Firm A's Corporate Secretary, "The firm is a family, even with its members, we're all a family and we know that we can rely on each other". During his experience with other Lebanese family businesses, the LTA Director observed that most firms' major challenge for disclosure is their internal family disputes, "…issues grow over time, eventually leading to mistrust, fear and serious conflict." In other words, Family Firm A's apparent alignment of values among the family and the firm may have supported governance reforms.

3.3 Family firm A's aspirations for an Initial Public Offering

Revealed intentions, by Family Firm A's CEO and Corporate Secretary, for an IPO, offers an additional motive for these governance reforms. We note that over the years, Lebanon's Capital Markets Authority has attempted to make it easier for firms to issue their shares publicly. The LTA Director discusses the topic, "Through the Capital Markets Authority, they [Lebanon's Government] were going to create an electronic trading platform … one of the requirements would be to disclose specific items of information". Since at least 2009, Family Firm A has explicitly stated their intentions of listing their shares publicly, even specifying an IPO date on one of their archived webpages. Family Firm A's Corporate Secretary narrates, "It [the IPO] was delayed for several reasons, until 2012 and 2013, when we thought it was now the right time to prepare the firm for maybe a future potential IPO. And to reach this goal, we had to put in place an appropriate governance framework for the firm".

3.4 The importance and potential impact of cultural expectations on Family Firm A

Developing from distributor to manufacturer and exporter, Family Firm A has sought to make a name for itself in new markets. The firm senior leadership's concerns with presenting the firm in a positive light across different cultures may be evident by some of the below statements. The CEO and Corporate Secretary state, "The shareholders decided to disclose information on board members as it's a best practice that highlights the [board] directors' capabilities and improves the reputation of the firm", adding that, "The firm's culture has been greatly influenced by our international principals, American, European, and Japanese." There also exists local cultural expectations. When the leaders from Lebanon's non-listed business, government and academic sectors joined together to form a task force to guide governance reform through the preparation of Lebanon's first corporate governance code, they seemed to represent Lebanon's cultural expectations related to desired governance practices. It is notable, then, that Family Firm A reached out for governance advice from the person who happened to be in charge of this task force, the LTA Director.

4. Discussion

Lebanon's historically volatile economic and political environment has been a constant source of uncertainty (Hermez, 2017). For firms with ambitious goals, such as Family Firm A, operating in an uncertain environment may prompt them to reach out externally for advisory services, such as those offered by consulting firms and non-governmental organizations (NGOs). In the case of governance advisory services, this is expected to lead to the spread of a limited number of governance models. In other words, NGOs, such as the Lebanese Transparency Association can put pressure on firms to conform to a certain governance model. This mechanism is known in institutional theory as mimetic isomorphism. Mimetic isomorphism is when a firm implements changes due to uncertainty about its goals, or uncertainty about its environment where "models may be diffused…by…consulting firms or industry trade associations" (Dimaggio and Powell, 1983, p. 151). Institutional isomorphism attempts to explain why some firms develop to resemble one another. In our case, Family Firm A developed to resemble a Western-based firm in terms of its governance model. Isomorphism was used by Ali and Frynas (2018) to explain the role of NGOs in motivating governance disclosure behavior, especially in developing countries. See Figure 1 for another possible form of mimetic isomorphism.

Figure 1: Cumulative Number of Agreements Signed with Firms from Developed Countries

Note: We prepared this graph using timeline data on Family Firm A's agreements with firms from developed countries. We know that some of these firms operate in similar industries as Family Firm A. If such firms are seen by Family Firm A to be more successful, then Family Firm A may have attempted to model its governance practices after those more successful firms in developed countries, thus exhibiting another form of mimetic isomorphism.

We are mindful of Family Firm A's participation in LTA's governance awareness campaign. Banks had been involved in these events and were inviting their corporate clients who happened to be indebted to those same banks. This seems like subtle pressure by banks on their corporate clients to adopt corporate governance principles. Being non-listed, Family Firm A is likely to rely on banks for a significant portion of their external financing needs. Thus, Family Firm A may have experienced such subtle, informal, pressure from a bank that it relies on, to adopt a governance model. This form of pressure to adopt a certain governance model is known in institutional theory as coercive isomorphism. Coercive isomorphism "results from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent" (Dimaggio and Powell, 1983, p. 150). Ervits (2021) also used coercive isomorphism to explain governance disclosure behavior in firms with different ownership structures in an emerging market context.

In 2013, Family Firm A had begun discussions with the Western-based International Organization regarding a major investment that was tied to a governance audit. This is the first example we encounter of Family Firm A being offered a large investment that is conditional on their governance reforms. Considering the possibly pivotal importance of this investment opportunity, we can see how Family Firm A's experience with, and their dependence on, the Western-based International Organization, may have represented a formal source of pressure on Family Firm A to adopt a certain governance model. Such a mechanism can be described as yet another form of coercive isomorphism. In 2014, Family Firm A decided it was worth seeking the governance advisory services of a prominent UAE-based governance consultancy. This consulting firm played a critical role in helping Family Firm A implement governance reforms. We see this experience as an example of the explicit spreading and adoption of a governance model through consulting firms, a form of mimetic isomorphism (see Figure 2).

Considering Family Firm A's statements about issuing an IPO on their early website, and in their interview statements, government plans for facilitating IPOs may have played a role in further motivating Family Firm A's decision to adopt a certain governance model. Thus, government agency listing requirements would represent a formal, expected, pressure on Family Firm A to adopt certain governance practices, a form of coercive isomorphism. Finally, based on Family Firm A's actions and statements from our interviews, Family Firm A seemed to be concerned with trying to satisfy the expectations of the international community within which it operates. Such governance reform pressure, though subtle, placed on Family Firm A by cultural expectations (both local and international) is expected to have influenced Family Firm A in adopting certain governance practices, another form of coercive isomorphism (see Gallego-Alvarez and Pucheta-Martinez, 2020).

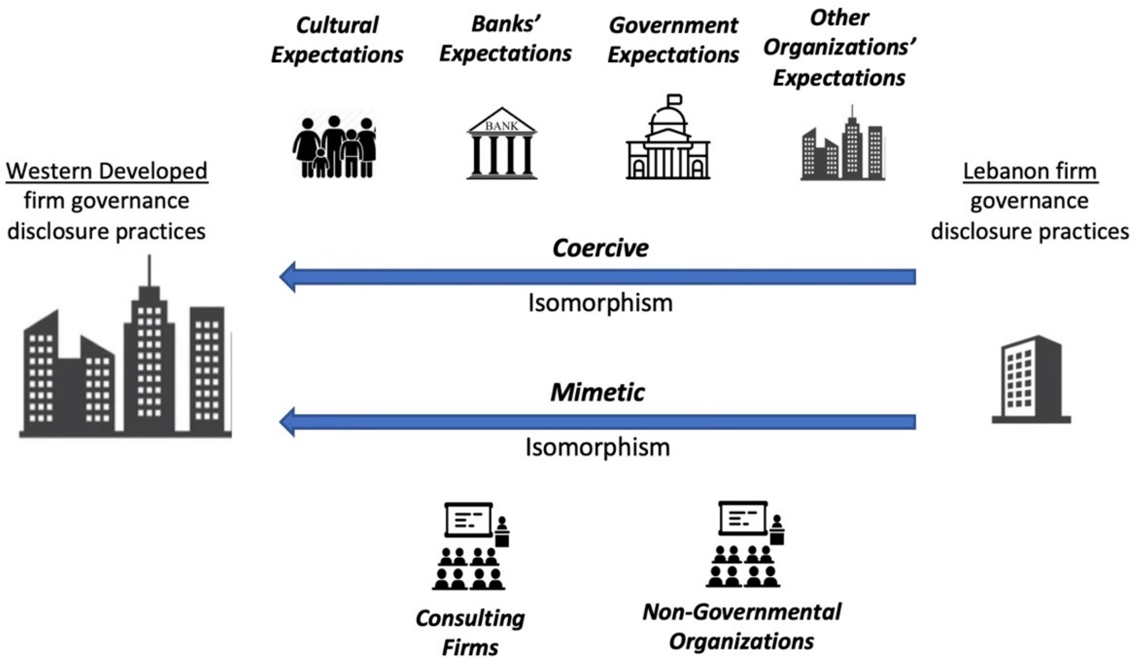

Figure 2: Context-specific Governance Disclosure Model based on Institutional Theoretical Framework

5. Implications and conclusion

We found that institutional theory's mimetic and coercive isomorphic mechanisms offer compelling explanations and thus, may be applicable when trying to understand the motivations behind the decision of a family, non-listed firm, to disclose governance information on its board members, within the limited legal, cultural and developing context of Lebanon (see Figure 2). We help answer the research calls of Evert et al (2016) by unpacking some of the motivations involved in important family firm decisions; of Benavides-Velasco, Quintana-Garcia and Guzman-Parra (2013) by exploring family governance disclosure practices; of Salvato and Moores (2010) by exploring firm disclosure practices in uncommon institutional settings; of Soleimanof, Rutherford and Webb (2018) by the use of an institutional theoretical lens to better understand family firm decisions; of Samara (2021) by exploring cultural impacts on governance practices in the Arab Middle East. With this insight we hope to contribute to discussions on family firm governance reform in similar contexts, as well as those on government policy efforts that may incentivize such behavior.

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Information Security Posture to Organize and Communicate the Information Security Governance Program

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Abstract: Information security practice has evolved greatly from being mostly a technical concern to also becoming a concern of executive management. As a result, there are many different frameworks, guidelines and certification programs for information security governance (ISG) and management. The purpose of these standards and certification programs is to help an organization develop a structured approach for governing and managing information security. However, these standards and guidelines are generic and not tailored for any specific organization. These frameworks usually specify *"what"* should be implemented but not *"how"*. Additionally, these frameworks do not specify *"how"* to communicate the information security posture (ISP) to the executive management in a simplistic manner. This paper first defines and conceptualizes the term *information security posture*, and then proposes a framework on *"how"* to communicate and organize the ISP. Our contribution complements ISG programs adopted by organizations to give executive management a better understanding and oversight. We argue that describing the ISP of an organization will support well-informed decision-making while ensuring alignment with business objectives.

Keywords: Information Security Posture; Information Security Governance; Information Security Management; Information Security Reporting; Risk Management; Information Security Program

1. Introduction

Information security is a topic that receives increasing interest from top-level management. The reason why information security risk has evolved from being mostly a technical concern to becoming a priority for management is that an information security breach could have dire consequences for an organization. It is necessary that ISG (Information Security Governance) is structured in a way that gives an organization oversight over its ISP (Information Security Posture), because this understanding is essential to ensure alignment with business objectives. The term ISP is widely used in the literature but is often interpreted inconsistently because of the lack of standardization. Based on these identified issues this paper discusses three research questions (RQ), as described in table 1:

Table 1: Research questions

RQ1: *What is information security posture from a holistic perspective and what should it consist of?*	**RQ2:** *How to organize the information security governance program and improve the information security posture?*	**RQ3:** *How should the information security posture be communicated to executive management, and be used for better decision-making?*

It is necessary to get a better understanding of how we want to understand ISP before investigating how it can be leveraged. After achieving an understanding of what it should be by making the term more meaningful and useful, then it is possible to describe more in detail what components it should consist of. On this basis it will be possible to explain, organize and communicate what ISP is, and how to improve the posture.

This paper is structured as follows. The theoretical background which gives an introduction to this topic is described first. Next, we describe how the collected research papers were analyzed and compared. Then, the results of our findings are presented. Finally, the paper ends with a discussion on limitations, suggestions for future research and concluding remarks.

2. Background

The purpose of this section is to give a brief description of ISG and ISP.

2.1 Information Security Governance

There are several different interpretations of what ISG is, but they typically have some core similarities. The common agreement among researchers is that ISG should not be seen as a technical matter, but rather as a business matter and a subset of corporate governance (Soomro *et al*., 2016; Von Solms & Von Solms, 2006;

Pérez-González *et al*., 2019; Posthumus & Von Solms, 2004). This underlines the importance of implementing a holistic ISG program that includes human, process, physical and technical issues. In addition to the above-mentioned elements, Slayton (2021) expresses the importance of establishing a “chain of trust” in supply chain management. This is challenging, since ISG must then cross the boundary of “internal control”, and be extended to strategic partners.

The purpose of ISG is for executive management to direct and control information security activities in alignment with business objectives (Posthumus & Von Solms, 2004). This means that executive management needs oversight over the ISG program and must monitor and validate that information security controls are performing according to business objectives (Whitman & Mattord, 2014). Validation is based on collecting measurements and metrics to evaluate the overall effect of the ISG program. Anu (2021) states that developing metrics will help organizational leaders to understand the ISP resulting from the implemented controls and support effective decision-making.

When executive management has obtained oversight and understanding based on knowledge, then according to Slayton (2021), it is possible to direct and manage risk by turning uncertainty into known risk, which in turn forms the basis for selecting information security controls to address and modify the business risk to an acceptable level. It is important to acknowledge that the ISP is not a steady state and that the threat landscape is constantly changing (Williams, 2012). Slayton (2021) argues that the increasing complexity and rapid change in technology result in unpredictability and uncertainty when directing the business, even when an ISG program is implemented. An example of complexity is when an organization has interdependencies with other organizations/suppliers. Broadening the scope of the ISG program to address business partners can help an organization turn uncertainty into a known risk and also make an organization more resilient against unknown risk. This means that the ISG program needs to be flexible to incorporate dynamic changes in the environment (Soomro *et al.,* 2016).

The importance of ISG has led to the development of various standards that can be used for certification to attest an organization’s commitment to secure its business (Siponen & Willison, 2009). These standards are developed as the consensus of experts in the field of ISG and management. Based on this, Von Solms & Von Solms (2004) argue that it is unnecessary to spend the effort to “re-invent the wheel” when an organization can “follow a best practice”. There are some limitations to Von Solms & Von Solms (2004)’s statement. As an example, Siponen & Willison (2009) argue that there is no evidence behind the claim that there always exists a “best practice”. Methods of best practice are not consistently published, and hence there is no evidence of the availability of “best practice”. These standards are also generic and not tailor-made according to organizational differences, a fact that conforms to the research of AlGhamdi *et al*. (2020) who concluded that most proposed frameworks are not validated and do not provide any detailed description of how to implement a framework. Even so, there seems to be a common agreement that applying a standard is a good starting point for ISG, and then supplementing with other standards and frameworks to suit the organization (Veiga & Eloff, 2007; Siponen & Willison, 2009; Culot *et al*., 2021; AlGhamdi *et al*., 2020).

2.2 Information security posture

As mentioned earlier the purpose of ISG is to give executive management oversight over the organization's ISG program and risk environment. This can be achieved by monitoring the ISP. Whitman & Mattord (2014) and Veiga & Eloff (2007) use the term oversight/oversee, while Young (2008), Johnston & Hale (2009) and Anu (2021) use the term ISP, but we argue that they should be interpreted as being equivalent. While the terms can be discussed at different management levels, it can be argued that for the communicational purpose it is beneficial to standardize and use the term ISP instead of oversight/overseeing the ISG program. The reason for preferring to use the term ISP is that it gives management an indication of what is discussed instead of being something they should oversee. Both Johnston & Hale (2009) and Anu (2021) argue that by monitoring ISP, an organization can indicate the alignment of business objectives, but neither defined what ISP should be. Williams (2012) has defined ISP as an indication of the countermeasures against threats implemented to protect the organization’s resources, while Young (2008) gives a similar definition, which states that it is the current organizational state in activities, interaction and integration of information security objectives. Young (2008)’s definition is also compliant with NIST (2022), which defines ISP as the security status of an enterprise’s networks, information, and systems based on information security resources (e.g., people, hardware, software, policies) and capabilities in place to manage the defense of the enterprise and to react as the situation changes.

The resemblance between the definitions is related to the current state/status of the information security controls, and hence it could be argued that it should instead be called information security status. NIST (2022) has defined ISP as synonymous with security status. However, the literature does not discuss how to assess the ISP or how the aggregation of measurement data flows. Based on these definitions, we attempt to add more meaning to the term and supplement the contribution proposed by Young (2008), Williams (2012) and NIST (2022).

3. Method

This research method is based on Kitchenham (2004)'s procedure for Systematic Literature Review and is supplemented with coding concepts from the Grounded Theory (Mills *et al.*, 2006). This research has been conducted according to figure 1 and is further explained below.

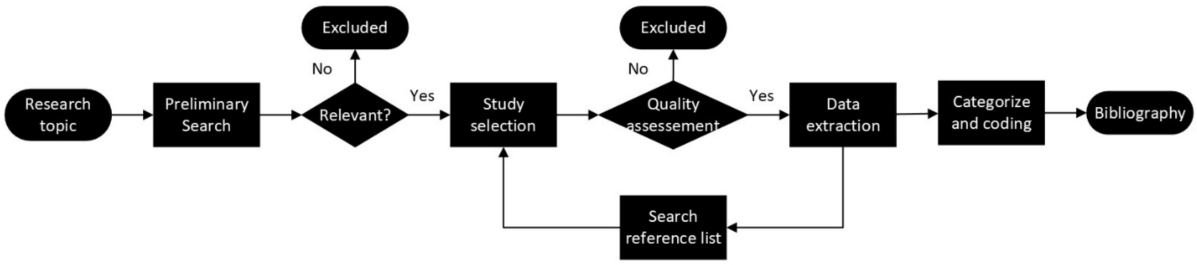

Figure 1: Research method

The research topic was identified based on our own work experience and as the main motivating factor. Two types of search engines were used, here defined as "primary" and "secondary" search engines. The primary search engine is for collecting relevant research papers, which constitute our preferred source. The secondary search engine is for collecting non-research papers, for instance relevant frameworks, guidelines and "best practices" which are supplementary data.

The primary search engine is Google scholar, while ORIA was used to collect relevant research papers, which is a library software from the University of Oslo. The search strings that were used in the preliminary search were: *"Information security posture"* with 16 400 hits, *"Cyber security posture"* with 4820 hits, *"Security posture"* with 5960 hits, *"Information Security Governance"* with 17 800 hits, *"Cyber Security Governance"* with 16 200 hits, *"Information Security Management"* with 42 600 hits, *"Information Security Management System"* with 25 700 hits and *"Information Security Reporting"* with 27 600 hits.

The Secondary search engine consists of ISO, NIST, NSA, ISC^2 and ISACA, which are well known for certifications and developing standards. The search strings were only *"information security posture"* because they mostly provide standards and material on information security governance and management, but not research papers: The findings are ISO (2 hits), NIST (1079669 hits, but without the ability to filter), NSA (40 hits), ISC^2 (1 hit) and ISACA (61 hits). Non-relevant papers were excluded from this research based on the title, abstract and keyword in the preliminary search.

The preliminary search phase covers all search strings mentioned above except for "posture" on research papers published in 2021 and 2022. The main reason is that we wanted the most up-to-date research because there are many papers on ISG and management. Then we reviewed the reference list from these papers to identify more relevant papers. "Posture"-related strings were searched with "any time" and the findings were sorted from newest papers to older ones. We used a broad timespan on "posture" because there is less research literature in this area, and we wanted to ensure we could find all relevant papers. The result was that 17 research papers and 1 journal/article from secondary search engine were deemed relevant by reading the title and abstract. We developed inclusion-exclusion criteria (provided in Table 2) to assess the quality and relevancy.

Table 2: Inclusion-exclusion criteria

Inclusion	Exclusion
Papers that define Information security posture	Papers unrelated to our research topic
Papers that indirectly explain or define information security posture	Papers that contain search strings but do not explain the terms

Inclusion	Exclusion
Papers that explain the characteristics of information security governance	Papers that are not in English
Papers describing a framework for information security governance	

The inclusion-exclusion criteria were applied, and the final list consist of 6 relevant papers. To extract data, we populated a form containing extracted relevant quotes and explanations from different papers. Then we used a concept from the Grounded Theory research method, which consists of developing codes or key concepts from extracted data used for theoretical analysis and identifying core categories (Mills *et al*., 2006). Then, we could use the codes to discover, compare and correlate with different categories. We used this concept to get a better overview of the surveyed research. We defined 10 core categories with corresponding codes and noted which and how many of the research papers discussed those categories. Some codes are identical or similar in different categories and the logic is to make it easier for us to discover interconnections between different categories even though they are discussed directly/indirectly by different papers.

By reviewing the reference list and data extracted from relevant research papers we identified additional 17 research papers relevant for this research and did another iteration, which identified 11 more papers. After verification of the relevancy, we ended up with 16 research papers and 1 journal article related to ISG, management and ISP. Finally, all relevant papers are listed in the bibliography.

4. Results

This section describes the results from analyzing data extracted from the systematic literature review and presents answers to the three research questions.

4.1 RQ1 - What is Information Security Posture from a holistic perspective and what should it consist of?

The first aspect that needs to be discussed is whether ISP should be defined as just the status of the information security activities in an organization. Both Young (2008) and NIST (2022) state that it is the status, but Williams (2012) does not use the term status but an "indication" of implemented security controls. By using the term indication it could be interpreted as saying that there is still uncertainty and that there are unknown aspects of the implemented controls, a view also supported by Slayton (2021). There seems to be a consensus that ISP consists of the status of the implemented security controls. We argue that both status and uncertainty must be addressed as components of ISP. The difference between a posture and status is that a posture is more dynamic, while status is more static. Information security is as Williams (2012) argues not a steady state because of the evolving threat and risk landscape. Simply understanding the current state is not enough to have a holistic understanding of ISP. We argue that organizations also need the component of being able to prepare for ever-changing threats and risk landscapes to reach a "potential future state". By adding this component to the definition, then it can address both known unknowns and unknown risks. Without this component then ISP is limited to known knowledge, which simply could be defined as status.

It can be argued that the basis of ISP is the combination of "current state", "uncertainty" and "potential future state". Even so, there is an intersection between "potential future state" and "current state" because these components depend on each other in the sense that preparing for the future state needs the understanding of the current state of implemented security controls. By including uncertainty is to acknowledge unpredictability that arises with regard to risk. It must also be communicated to executive management that ISP is dynamic because of the rapid change in the threat and risk environment.

Based on the discussed definitions from Young (2008), Williams (2012) and NIST (2022) it can be argued that their definitions give different perspectives on the ISP. For instance, the definition from NIST (2022) starts with the status of the organization's network and information systems which clearly is seen from a technical perspective. Williams' (2012) definition focuses more on the infrastructure security posture and Young's (2008) view is that ISP consists of controls related to recovery, deterrence, detection and prevention. It can be argued that all of these perspectives are correct because they are discussed at different management levels. Management levels can indicate a reporting structure and how measurement data aggregates. The meta-study by AlGhamdi *et al*. (2020) shows that reporting is a critical success factor for good ISG practice, e.g. because it improves decision-making. Among the 14 studies that were evaluated by AlGhamdi *et al*. (2020), 2 studies had been validated and the remaining studies suggested the importance of reporting based on prominent frameworks or their own research. Even so, the 2 validated studies did not specify the quality of the validation process.

Even if there is little-validated evidence that a reporting structure is a critical success factor, it is obviously needed so that executive management can have oversight over the ISP. Based on our findings from Young (2008), Williams (2012) and NIST (2022) who discuss ISP at different levels, and from AlGhamdi *et al*. (2020) who discussed the importance of reporting, it can be argued that there are different posture levels depending on the ISG program, which in combination underlines a reporting structure. This is why we propose that the definition should include different levels of ISP that in total give the executive management a holistic oversight. Based on the discussion above, we define the overall ISP as follows:
"*The information security posture is the current and predicted future state of information security based on a structure for continuous monitoring and oversight over the current state of an organization's security controls (organizational, technological and physical controls) and the constantly changing risk environment for predicting the potential future state. The purpose of continuously monitoring and evaluating the information security posture is to be informed about the information security status with related uncertainties, to understand how well it currently supports business objectives and how it can be adjusted to better support business objectives in a changing threat landscape and business environment.* The information security posture is conceptualized and illustrated in figure 2.

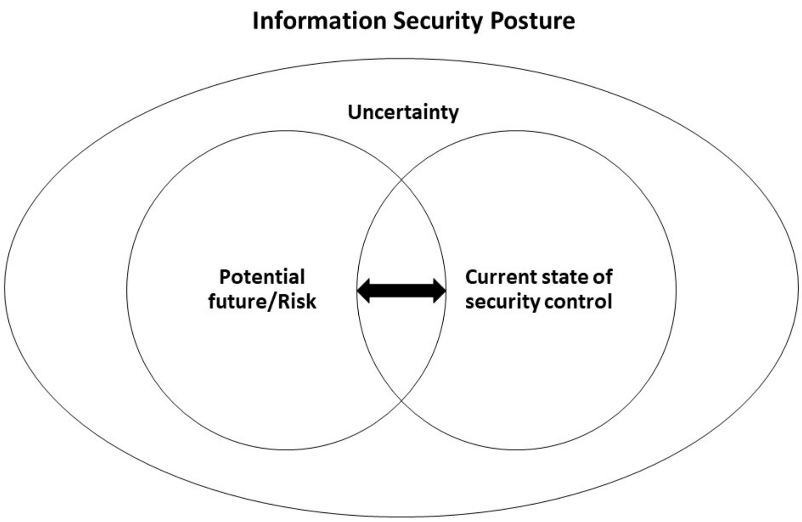

Figure 2: Conceptualization of Information Security Posture

4.2 RQ2 – How to organize the information security governance program and improve the information security posture?

The papers mentioned earlier state that reporting is a critical success factor, but none of them specify "how" to organize a reporting structure. We therefore propose a concept, which is adaptable to different organizations. We also break down the concept of ISP into separate levels, to make it more manageable for instance to conduct a capability maturity assessment on different levels of ISP, which in turn determines the overall ISP.

The main difference between ISP and the maturity level of information security management is that ISP also addresses the degree of alignment with business objectives. Improving the maturity level does not necessarily lead to an improved posture level, since a mature security control/process might not be well aligned with business objectives. Hence, maturity assessment is one of the many tools used to improve ISP. Since the ISP consists of different levels, then each level must be defined to have the same common ground for discussions. We have defined the management level as suggested by Von Solms & Von Solms (2006) with three sub-level: Strategic, tactical and operational.

The strategic level represents the overall ISP. It sets the basis for directing all management levels while receiving compiled reports from the tactical level. The accumulation of reports gives the executive management oversight over to which extent the organization is aligned with business objectives, which is used to improve decision-making.

The tactical level consists of two key components: the potential future state by risk management and the current state of security controls. The tactical level receives direction from the strategic level and directs the operational level by enforcing policies and receiving measurement data about conformance. The component "current state of security controls" is determined by collecting data from different sources based on all types of security controls, which can be organizational, technological and physical. The component "potential future state by risk management" is determined by assessing potential risk based on data from the "current state" and the predicted future threat landscape. It is important to address all elements of risk like adversarial threats, natural occurrences, human-related incidents and opportunities (Posthumus & Von Solms, 2004). Then, the tactical level compiles all measurement data from the two key components into a report which is submitted to the strategic level.

The operational level consists of the individual security controls grouped by organizational, technological and physical types. The operational level receives direction from the tactical level, executes according to policy and produces measurement data indicating the conformance level. The most important aspect is that every security control must address people, process, technology (Posthumus & Von Solms, 2004; Veiga & Eloff, 2007) and suppliers (Slayton, 2021; Culot *et al*., 2021), which gives a holistic understanding of the ISP. Every organization is different, and not everyone who works with access control is organized in the same department, and hence may have different managers; this is what Palmberg (2009) refers to as the functional groups. To address this issue, it is necessary to remove barriers between functional groups by organizing cross-functional team members, which Palmberg (2009) defines as process management. By organizing processes, it is necessary to define roles, and most importantly to avoid that process owners have conflicting authority with functional group leaders. Process owners are accountable for their respective processes and must ensure alignment with defined policies. This means that the process owner must oversee performance measurement, ensuring continuous improvement and the desired posture level by leading members in the process team (Palmberg, 2009).

4.3 RQ3 - How should the information security posture be communicated to executive management, and used for better decision-making?

We have discussed how to organize a reporting structure, but even so there is no widely accepted method on how to report. Below, we propose some reporting concepts and define criteria for different ISP levels corresponding to categories. An example is provided in table 3:

Table 3: Posture levels and criteria

Colour code	Posture category	Criteria
White	Excellent posture	80%-100% conformance
Green	Good posture	60%-79% conformance
Yellow	Moderate posture	40%-59% conformance
Orange	Poor posture	20%-39% conformance
Red	Critical posture	0%-19% conformance

By using posture criteria, a process manager can assign a posture level to the ISP they are accountable for. The conformance is determined by an average score from the metrics collected from different postures according to a pre-set baseline. This sets the basis for decision-making since it can be used to discuss which posture should be prioritized to reach a higher conformance level, or it can be used for identifying risk. Since each posture consists of data about conformance levels and is organized in a manner that can aggregate to different management levels, it is possible to discuss it on any level. This model can be integrated into a dashboard, which automatically monitors and collects measurements. By implementing a dashboard, the executive management has oversight and can oversee the ISG program.

As already discussed it is important to address uncertainty, where an example is provided in table 4. The uncertainty assessment should be used in conjunction with posture-level criteria:

Table 4. Correspondence between uncertainty and confidence levels

Uncertainty level	Confidence level
High	0%-24%
Medium	25%-59%
Low	60%-79%
Minimal	80%-100%

The purpose of considering the uncertainty levels is to communicate how confident you are in the data from the ISG program. For instance, if you report a moderate ISP, then you must also state how confident you are in that assessment. Things that can affect the confidence level e.g., the amount and how you collect data, how you process data, method and the validity of the assessment. Understanding the uncertainty means that you acknowledge it and can manage uncertainty to an acceptable level of confidence, which could lead to better decision-making. The principle is that it is unsafe to make important decisions based on highly uncertain ISP assessments.

5. Limitation

While this research contributes by defining, adding more meaning and conceptualizing ISP, it is important to discuss the limitations of this research.

First, regarding the method for collecting data, there is the possibility that the search strings and engines have not been optimal. However, we argue that the quality of data collection was fairly good, because from the reference list the term ISP was mentioned directly and indirectly in 8 research papers, while 2 of the research papers had defined the term, as well as 1 non-research web article. From the initial search, even more research papers mentioned the term ISP, but these articles were irrelevant for this research. There is a possibility that ISP has been discussed and defined by other researchers and it is possible that we could have found more research papers by performing more iterations of data collection. With a data collection period from 17.01.2022 until 24.02.2022, we judged that we had reached what Crang & Cook (2007) defines as the “theoretical saturation”. This means that it might be possible to find research papers with similar findings possibly explained in different ways. However, this would probably not result in a significant additional contribution to our research. Another strategy could be to define a new terminology instead of using ISP, to get a new perspective. However, since the term has not been elaborated on and is a widely used term, we found it beneficial to add more meaning and context to the existing term than to define a new term.

Another reason is that very few research papers have discussed how to implement an ISG program so that the executive management can have oversight over all information security activities. From the data collection, we found only theoretical frameworks, and papers discussing proposed frameworks/standards are generic and do not provide any methodical validation. It is possible that the chosen search strings or searching techniques were suboptimal, meaning that there is still a possibility that there are some research papers on this matter that have not been covered.

Finally, the proposed framework for ISP is a theoretical contribution and has not been validated or tested for practicality. Even so, our research expands and elaborates on how to organize an ISG program, supports other researchers’ contributions, and it addresses the need for a framework that describes “how” to organize and communicate an ISG program.

6. Conclusion

This research argues that potential future state and uncertainty are also key components for understanding ISP besides status, and discusses how these components can be related and organized. We argue that ISP can be separated into different levels like a reporting structure, which in turn determines the overall ISP. Then, we suggested how to report ISP levels and communicate uncertainty levels. There might still be some limitations in our research, in which case our contribution can form the basis for further research. Potential future research could be to implement this framework by using action research which could be used to learn and improve the framework and elaborate on “how” to organize an ISG program, hence this research is the first step in this journey.

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Work in Progress Papers

Failed Tech Deployment Initiatives: Is Poor IT Governance to Blame?

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Abstract: Information Technology (IT) solutions have become a critical enabling tool in businesses and communities. As a result, organisations invest heavily in technology solutions to transform businesses. Motivated by rapid technological advancements, there have been radical changes in IT infrastructure management, IT applications, and IT services delivery. The recent COVID-19 pandemic also encouraged the rapid adoption of technology solutions. However, despite numerous prescriptive models and 'best practice frameworks' available in the field, and an increased uptake of ITG in organisations, achieving key ITG outcomes is consistently ranked as one of the top concerns of management. After establishing a theoretical foundation for effective ITG practices (via literature review), this study begins a pilot examination to determine if tech deployment failure can be attributed to poor ITG.

Keywords Information Technology (IT) Governance, Effectiveness of IT Governance, IT Deployment

1. Introduction

Today, Information and Communication Technology (ICT) solutions play a significant role in enabling businesses. Therefore, organisations commit considerable funds to both capital and operational expenses to deploy ICT (Lovelock et al., 2016; McLellan, 2014). At the same time, deploying technology is often associated with significant organisational change and risks (Davis, Schoorman, & Donaldson, 1997; EDUCASE centre for applied research, 2008; Gauld & Goldfinch, 2006; Laudon & Laudon, 2014). As a result, significant technological advancements have increased awareness of technology management. However, some IT deployment cases fail to deliver (Gauld & Goldfinch, 2006; Gole & Shinsky, 2013). For instance, some of the recent case studies of challenged IT deployment initiatives where the deployment of technology failed to deliver the expected outcomes include the Queensland Health project, the WINZ NZ kiosk security failure and the NOVOPAY project (NZ Government, 2013).

Recent rapid advancements in ICT have introduced increased complexity in ICT planning and decision-making processes (Asgarkhani, 2012; Venkata, Reddy, & Chandra, 2012; Wen & Hsu, 2012). The literature on ITG provides advice and recommendations on models and frameworks for ITG implementation (De Haes & Van Grembergen, 2010; Van Grembergen & De Haes, 2009; Weill & Ross, 2004; Weill & Vitale, 2002; Williams, 2012). Achieving key ITG outcomes is consistently ranked as one of the top concerns of management. The review of previous ITG research indicates two prominent theories are applied to provide a theoretical foundation: Agency Theory and Stewardship Theory. Most ITG practices and approaches are grounded in Agency Theory (Bonazzi & Islam, 2007; McColgan 2001). However, practitioners are increasingly concerned that practices guided by Agency Theory fail to respond to a rapidly changing tech sector.

This study concentrates on broad questions: What influences or constitutes the effectiveness of ITG practices? And how do poor ITG practices contribute to the failure of IT deployment initiatives? Based on the in-progress outcomes of the current research, the paper examines the connection between poor ITG and failed IT deployment projects.

2. The methodology

The research methodology constituted a systematic literature review followed by a pilot case study analysis via thematic analysis. A Systematic Literature Review (SLR) established a theoretical model of parameters likely to influence effective ITG (Cooper, 2003; Okoli, 2015; Elliott, 2018). Multiple case studies were considered to assess if IT initiatives fail due to poor ITG. Case study analysis has been recommended as a suitable methodology for qualitative studies where contextual analysis adds value to the study (Baxter & Jack, 2008; Ritchie & Lewis, 2003; Stake, 2006; Yin, 2011).

3. The theoretical foundation of ITG effectiveness

The systematic literature review established eight key themes in three broad groups as the theoretical model of influencers or indicators of effective ITG (Asgarkhani, Cater-Steel, Toleman, & Ally, 2017; Asgarkhani, Cater-Steel, Toleman, & Ally, 2018).

- **Group A - IT Maturity**: The experience and rigour in implementing ITG best practices ((De Haes & Van Grembergen, 2010; DeLone & McLean, 1992; Delone & McLean, 2003; Van Grembergen, 2004; Weill & Ross, 2004; Weill & Vitale, 2002)
- **Decision-making Support Structure** - IT steering committee, Strategic information systems planning steering committee, Reporting structure (IT directors to CEO), monitoring and assessing the value returned from decisions made on deploying IT.
- **Formalised ITG systems and process** - ITG standards and framework, Business and IT partnership in decision making, Formalised portfolio management, Formalised information strategy planning, A formal process for strategic information systems planning, Formalised IT deployment project governance.
- **Effective communication of strategic issues -** IT director or CIO involved in executive decision-making and represented on the executive committees, IT strategy committee (or similar) tasked with reporting and discussing IT issues; a CIO or a similar role is to raise awareness and articulate a vision for IT's role.
- **Group B - Strategic Alignment of IT and Business**: The connection and coherence between fulfilling business strategy and the IT strategy (De Haes & Van Grembergen, 2010; Kaplan & Norton, 2004; Prasad, Green, & Heales, 2008; Ramgovind, Eloff, & Smith, 2015; Van Grembergen, 2004; Van Grembergen & De Haes, 2009; Weill, 2004).
- **Business outcome-orientated alignment of IT and Business -** IT strategies recognise and support new business outputs (products and services), Technology support for business outcome diversification strategies, and technology and service support for business outcome differentiation.
- **Alignment of organisational quality-orientated strategies with strategies for the use of IT solutions** - Adoption of IT Solutions supports business outcomes (products and services quality), including production and marketing.
- **Group C - Organisational performance influenced by technology deployment**: Organization's overall performance and delivery of outcomes supported by IT relative to its competition (DeLone & McLean, 1992; Delone & McLean, 2003)(Esteves & Joseph, 2008; Halonen et al., 2009; Hellsten & Karkove, 2006; Zaied, 2012).
- **The history and the current state of IT deployment within an organisation** - The current level of process automation via IT, User acceptance of technology solutions, Support mechanisms for IT solutions, Timely delivery of relevant information for effective decision making, Effective service management of IT solutions.
- **Awareness of the organisation's financial performance supported by IT solutions** - Processes for monitoring an organisation's performance; metrics such as return on investment are used to assess the value delivery of IT
- **Operational excellence influenced by the deployment of IT** - The existence of processes and metrics for operational performance, Seeking ongoing productivity improvements via the deployment of technology solutions, Service level agreements and the timeline for service delivery

4. Case study analysis

Six case studies that were selected for analysis included: New Zealand's NovoPay (NZ Government 2013), Victoria's (Australia) HealthSMART (Brouwer 2011), UK's IT in NHS (Campion-Awwad et al. 2014), Canada's Phoenix project (Barnhart et al. 2013), HP's ERP Implementation (Chaluverdi & Gupta, 2005), and JetSmart Qantas.

In the end, the case study analysis resulted in identifying twenty two factors that contributed to IT deployment failure - including: (1) lack of adequate implementation and rollout planning (resulting in implementation difficulties), (2) lack of sufficient training for IT personnel (inadequate technical know-how), (3) inadequate test planning and poor testing processes, (4) lack of sufficient technology and people resource, (5) data migration failures (prior to implementation and rollout), (6) poor or slow adoption of technology by the organisation (including the user community), (7) poor technology governance and executive oversight, (8) lack of role clarity and confused roles accountability, (9) lack of stakeholder involvement, (10) complexity of design and functionality – possibly ending with poor design of functionality & usability, (11) poor day to day tactical and operational project management, (12) conflicting or dysfunctional leadership, (13) poor IT and Business alignment (business case) for the technology deployment concerned, (14) unrealistic goals and expectations, (15) poor scope definition and scope creep, (16) poor risk and contingency assessment/planning, (17) poor relationship management of parties involved (including external parties), (18) poor business processes and practices, (19) ineffective communication, (20) lack of flexibility of models or frameworks applied, (21) unrealistic and unnecessary pressure on project teams, and (22) inadequate change management.

Next, an extended analysis of the case studies involved the establishment of broader categories of factors/contributors to IT project failures (Creswell, 2015). The establishment of more general themes/established high-level connections between IT failure and poor IT governance (Creswell, 2015). The grouping resulted in eight broader categories that embodied the twenty-two factors which contributed to IT deployment failure: (1) Implementation and rollout factors, (2) resource management issues, (3) Accountability and role clarity matters, (4) IT and business alignment considerations, (5) IT leadership factors, (6) Design and functionality issues, (7) Risk and change management contributors, and (8) the existence and the utilisation of standardised frameworks and processes.

5. Concluding analysis

Next, the connection between the identified categories of eight contributors to IT deployment failure (the results of case study analysis) and the theoretical model of influencers/indicators of effective ITG (the results of the systematic literature review) are investigated and mapped. The method for indicating a connection between a category of failure contributors (case studies) and a specific group of influencers/indicators of effective IT government was as follows:

If any contributor to IT deployment failure from the case study analysis is likely to be influenced by any indicator identified by the literature review (either broad or individual indicators), the research establishes a connection between the broad theme (identified by case study analysis) and the general (heading) category of indicators of literature review.

For instance, one of the contributors to failure (case study analysis) in the category of resources management issues is the lack of sufficient training for IT personnel (inadequate technical know-how). However, this factor could be influenced by the lack of formalised information strategy planning (including resources) and a formalised IT deployment project governance (literature review). Therefore, the category of resource management issues from case studies could be influenced by ITG organisational maturity (literature review). Therefore, this sample of six projects suggests that the failure of IT deployment was influenced by ineffective or poor governance.

Finally, the theme/code presence was examined (case study analysis) was used to determine the significance of the contributing factors to failure. NovoPay had experienced problems related to all eight types of contributors to project failures. Table 3 presents the summary of the theme/code presence analysis – Table 1.

Table 1: Summary of Case Study Analysis by theme/code presence

Identified categories of themes (Areas of Failure)	NovoPay	JetSmart Project (Qantas)	ERP at HP	HealthSMART	IT in NHS	Phoenix
Implementation Management	√	√	√	√	√	√
Resources Management (including people)	√	-	√	-	√	√
Accountability and clarity of roles	√	√	-	√	√	-
IT-Business alignment	√	√	√	√	√	√
Information Technology Leadership	√	√	-	-	√	√
Design and functionality	√	√	√	-	√	√
Risk and change management	√	√	√	√	√	√
Use of standardised processes and practices	√	√	√	√	√	√

The analysis presented in table 3 suggests that problems associated with four themes were present in all six case studies: (the list). Therefore, this sample indicates that these four groups of contributors significantly impacted IT deployment failures. In addition, at least three of the four groups are concerned with high-level governance matters: (1) IT-Business alignment, (2) risk and change management, and (3) use of standardised processes and practices (M. Asgarkhani, 2011; M. Asgarkhani, 2012; M. Asgarkhani & Sitnikova, 2014; Wu et al., 2015). Consequently, the analysis suggests that ineffective or poor governance played a role in the failure of IT deployment.

6. Conclusions

A systematic literature review was conducted to determine critical influencers (or indicators) of effective ITG. Next, secondary data from six case studies of IT deployment were analysed. The analysis aimed at identifying the factors/contributors that led to IT deployment failure. The thematic analysis of the project case studies determined eight main factors contributing to the failure of the investigated IT deployment projects. The last stage of the study mapped the theoretical model based on the literature review to the identified groups of contributors to project failures (case study analysis). The mapping suggested a connection between IT deployment failure and poor governance.

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Building Positive Reputation and low risk for Financial Organizations Through Culture

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Abstract: In a continuously changing world environment, following financial crisis, pandemic crisis, wars, environmental disasters, along with the changes in the once "static" banking sector per-se, given the expansion of digital currencies, online financial services, expansion of digital offerings, the rise of open-banking, one should expect a substantial change to an organisation's reputation. Risks are emerging from everywhere and have as a result the increased focus from investors and regulators on how culture is formed in financial institutions. At the same time, culture (a quite diverse term that we will try in this paper to define and place in the banking sector frame), is considered to be a critical factor for banks to be able to respond effectively to all the changes and build long-lasting positive reputation and success. The ability to leverage the compliance program and embed ethics, top-down, contributes also significantly. Here, we will visit the notion of transformation, change culture in a digital era. In this paper, we will try to define positive reputation for banks in this new era and set the grounds for the importance of understanding the need to manage or/and change Culture, along with aligning risks and people.

Keywords: Reputation, Culture, Banks, Risk, Digital, Ethics, Transformation

1. Definition of Reputation

People have always been struggling for reputation in an effort to attain social status and mobility among others. For firms (Mailath and Samuelson, 2003), reputation can guarantee financial resources such as capital or loans, from banks and markets in general, but also revenue from sales to consumers and lower cost from better relations with suppliers.

The reputation of a company is dependent on many factors. Some of these are the quality of goods, the power of branding and communication, leadership and strategy, the goals and vision of the company, the ability to understand and meet customer needs, the perceived risks, and reliability (Money and Hillenbrand, 2006) and also include employees' performance, the impact of the media, and external partners' influence.

According to game theorists such as Sztompka, (2000) reputation is the perception, or better phrased, the opinion that other players have about the value of a "player" in a game.

Under the same lens, reputation is based on the record of a player's past actions and thus is an important signaling mechanism in a game, especially when Axelrod's (1984) shadow of the future, i.e., the possibility of repeating the game with the same players, is high.

Following Sztompka's perception of reputation based on past actions, Pizzorno (2004) states that the latter can actually be a record of acts worthy or not worthy of trust. The reputation of one person, like other intangible assets, is particularly valuable if and only if it has been recognized by other "important" persons.

Clearly one should agree with this view of Pizzorno, as it is evident that important factors, familiar faces, other means such as media, political figures, known authors, professors and scholars tend to coordinate the public and establish a reputation for a person or an organisation.

Practitioners also agree on the importance of reputation. In a survey conducted by Paul Dunay (2008) with a sample of financial institution's senior management executives, 53% of respondents agreed that reputation management is a high priority.

Another important finding from Dunay's research is that more than half of the respondents are not prepared to protect their corporate reputation in a possible crisis in the Internet.

Corporate reputation is a combined notion, in which internal and external insights make a unique combination and in the end they create the idea that others hold for the organisations but also the idea that the employees hold for the organisation. And as always it ends with competition perceive its reputation and dynamics (Harvey, Tourky, Knight, & Kitchen,2017).

2. Reputation and organizational Culture

In a continuously changing world environment, following financial crisis, pandemic crisis, wars, environmental disastersone should expect a substantial change to an organisation's reputation.

The acceptance of organisational ethics can influence reputation in many ways. For organisations, such as service organisations, the employees can be the face of the organisation.

Therefore, they can directly influence customer experience and perceptions of the particular organisation (Hatch & Schultz, 2003).

Accepting that, investing in creating a common employee' behaviour can be vital for an institution and its reputation (Harvey, Osman, & Tourky, 2022). A simple way of connecting reputation and culture is the following: "Culture describes how a company really does business, and reputation is how external stakeholders perceive it" Max Rudolph, 2014.

What needs to be understood, is that having a negative reputation can cost in many ways to an organisation. Direct financial costs, to human resource costs (indirect financial costs), meaning that the organisation is not attractive to an applicant and therefore it cannot build a dynamic and skilful workforce.

Successful culture and successful risk culture- which brings positive reputation – as successful strategy, should be top-down. Starting from the top management and leading to the middle, touching all levels and sides of the organisation. Consistency should also be a key factor (Rudolph, 2014).

Compliance, ethics and culture are all related. For all institutions, despite the particular sector, building a long-term success is greatly related to how well you've managed to define your ethics and compliance, both inside and outside the organizational structure, as stated by Sujatha Dwaraganath 2018.

Compliance provides a base for ethics and strong decision making. When these staff members are treated with respect, product line managers can learn best practices and how their unit fits in with the company strategy. A robust culture is what makes a competitive advantage for a company, making stronger, with greater adaptability in change and new circumstances. Especially, the recent years have shown that nothing should be taken for granted. Especially for the financial sector there hasn't been a single year for more than a decade now, with what we can call stability and normality.

And what do we mean by that? - Particular and well-placed risk practices, ethical code practice, in total compliance with governmental and international instructions, putting aside personal managerial conflicts, and egos, while having the top management along with all staff actively participating in these procedures at all times. As Dwaraganath (2018) describes it: A company's reputation ultimately depends on its long-term culture, its ability to leverage the compliance program and embed ethics in a top-down and bottom-up methodology. This patient approach provides a win-win for customers, employees, owners and other stakeholders.

It should be mentioned that since the start of the pandemic, the work culture in most if not in all sectors, has undergone great changes. Need for rapid adaptation to change, re-evaluation of values, needs and priorities, where ethical values such as team spirit, safety, productivity, employer's skills, had to be put in under a new prisma, in zero time. The companies to maintain a positive organizational culture and thus a positive internal and external reputation, need to avoid any risks related and overcome any obstacles that occur from factors such as lack of loyalty, of engagement and low performance.

3. Culture, Risk and the financial institutions

In a continuously changing world environment, following financial crisis, pandemic crisis, wars, environmental disasters, along with the changes in the once "static" banking sector per-se, given the expansion of digital currencies, online financial services, expansion digital offerings, the rise of open-banking, one should expect a substantial change to an organization's reputation. Also, the need for investing in innovation technologies, has by definition a risk attached.

The once traditional banking organizations now work side by side with online financial services providers and the pressure is becoming higher and higher (Forbes, 2021).

At the same time, the continuous changes and evolvements in technology, also bring (as one would expect) changes and adaptations in the regulatory systems across the financial sector, in different countries and strengthen the role of the national, European, international regulatory bodies. Normally, this results in different stakeholders becoming more and more interested and worried at the same time for the particular culture that is formed in the financial institutions.

According to a KPMG (2021) research, financial organizations are more and more motivated, if not pressured, to adapt a steady culture across all levels of the institution. If not, the risk becomes higher from clients and other stakeholders. In the minds of the customers, for example, banks are expected to deliver a culture journey that is consistent, steady and side by side with the current circumstances. This will influence the devotion of their customers and therefore their reputation.

The banks' culture journeys need a consistent and absorbed exertion from the top down. The organisations that recognize and assume the two sides of the coin approach, will be the banks that eventually will have more and more chances of strengthening and outshining.

In banks the issue of culture remains in the top management agenda as a priority. It is their responsibility along with the HR and Internal Communication, to create a common culture and bring along to all levels and employees of the organization. It should also be included as a high priority in the Risk strategy agenda.

4. Change culture and Transformation

In the midst of all the changes that have been already mentioned, and given that many others will come, in an unpredictable financial and non-static world, financial organizations are under a transformation period and program. The organisations' strategies are under the transformation prisma and plan, and all activities are synchronized.

However, the challenges and the at the same time, the very high benefits that transformation programs promise to have, result in strategies not being fully implemented (KPMG, 2021). In this context, risks are emerging from all sides, and therefore the regulators and all stakeholders start having an increased focus on how culture is shaped, embedded and managed in banking organizations. And this is because culture is clearly recognized as vital for organizations to respond to transformation and assure strategy success.

To manage culture in a transformation period, alignment is needed between people and risk, if not
While many organizations recognize the need to manage or change culture, they don't always know where to start or how to tackle the problem. It is crucial that organizations align people and risk, or change can be uneven and the impact fragmented (KPMG, 2021). "Organizational culture ensures that no matter what lens we view culture through we are aligning the employee experience with the risk strategy and shaping and managing the culture in line with this" (KPMG, 2021).

5. Digital ready Culture and Transformation – Change Management

The understanding of the importance of Culture for Transformation strategies, withing banking organizations, has been set by the above. Given the expansion of digital currencies, online financial services, expansion of digital offerings, the rise of open banking, one should expect a substantial change to an organisation's reputation, during this transformation period.

Digital technologies influence and bring internal and external culture change. There is a need, in the era of technology and transformation to operate in an increasingly volatile environment, as well as empower new ways of working and putting employee prospects so that they can meet the rhythms of technology (Alvesson and Sveningsson 2015; Dawson 2003).

In order to approach the digital journey effectively, organisations need to understand how they are affected and where their own transformation journey starts: Customized transformation means finding those methods and tools that suit the firm and that enable them to make the appropriate transformative (Schneider and Kokshagina, 2021).

Digital leadership should be also put in the scope of the discussion. Digital leaders gradually increase the space of their business actions. They concurrently contemplate their core business's digital transformation and the examination of new digital corporate openings.

Chief digital officers are frequently regarded as orchestrators and enablers (Schneider and Kokshagina, 2021). As orchestrators, they need to negotiate with the existing businesses units and contract with structural change on their everyday routine. As enablers, it is evident what digital transformation creates for the current business teams and they have to find win-win situations for everyone (Schneider and Kokshagina, 2021).

When we talk about technology implementation and dispersal, digital technologies are no different from other technologies and it is specific to the technology and the context. For example, to improve the use of AI, building trust by establishing a sense of fairness, transparency, and accountability as well as a accurate viewpoint on the technology's competences have arisen as vital to stand-in the technology implementation (Schneider and Kokshagina, 2021).

What we generally accept here, and it can set the ground for future in depth research, is that technologies, and more in particular, digital technologies are the driving force behind digital culture change.

6. Conclusion

The ongoing crisis worldwide and in particular, in the financial sector during the recent years, has had implications that have changed the whole market arena.

The workplace will not be the same again and the services provided by the banks, have also entered a new level. The direct impact on organizational culture is already evident, and the necessary changes, are already taking place. Yet, the final effective model is still to be found.

In this context, the idea or question remains, about whether remote or hybrid personnel lose some of the social adhesive that is vital to a common perception of culture?

The focus for financial services organizations now is to be intentional about establishing new touchpoints with employees, continue inclusive communication, encouraging diverse perspectives and reimagining and experimenting with new ways of keeping the culture alive for everyone no matter where they are working (KPMG, 2021).

Digital culture change is also challenged and influenced by the transformation era in which most financial institutions find themselves nowadays. ‘”A disrupted, constantly changing environment and an increased importance as well as intensified application of digital technologies” (KPMG, 2021).

In periods of continuous changes and transformation, the ability to leverage the compliance program and embed ethics, top-down, contributes also significantly in the culture change of an organization, in this digital era.

In this paper, we try to define positive reputation for banks in this new era and set the grounds for the importance of understanding the need to manage or/and change culture, along with aligning risks and people, during transformation times and digitization.

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Late Submissions

The Role of Machine Learning in Managing Uncertainty in Projects – A View on Early Warning Systems

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Abstract: Machine learning techniques deals with, among other things, pattern recognition in large amounts of data to identify trends and possible events in the future regarding a given topic of interest. Machine learning methods are useful for addressing challenges in and creating new benefits for organisations. This paper looks at how machine learning can contribute to manage projects effectively. Many organisations apply the concept of project. A part of them are purely project-based organisations, and a part of them carry out projects in addition to their mass-production activities and permanent operations. Within the realm of project management, this paper sets its focus on studying the role of machine learning in handling unexpected events and uncertainty in projects. One of the ways to deal with unexpected events and uncertainty is to capture early warning signs that can predict unexpected events. A major failure of projects can be seen as a combined effect of a series of small failures, negative results or problems that have occurred over a period of time. Project teams may not notice or just ignore early warning signs of these problems and choose to work further in the project. This could finally lead to a major failure, at which point no preventive actions could save the project from the major failure. Several researchers have researched on early warning signs and systems within the context of projects. Early warning signs can be seen as some kind of a pattern recognition from a pool of relevant data. This paper aims to answer the following two interrelated research questions: (1) What role does machine learning have in early warnings in projects? (2) How can machine learning contribute to effective project management (for example, handling uncertainty in projects)? This is a conceptual paper, based on literature study.

Keywords: Uncertainty management, Machine learning, Project Management, Early warning signs, Learning in organisations

1. Introduction

Projects are one-time activities that has time and resource limitations. They are aimed at achieving specific objectives. Projects are a popular work-form, and several industries conduct their businesses by carrying out projects. Projects are per definition unique. However, the degree of uniqueness can vary from project to project. Uniqueness associated with other characteristics of the project concept – such as, time and resource limitations, involvement of various stakeholders (their needs, requirements, expectations, worldviews, interests, and influence), and being generally susceptible to changes in the internal and external environments – contribute to create uncertainty in projects. Managing uncertainty is important to make sure effective conduct of projects. Hillson (2004, page 3-4) says,

> *"Much of the typical project management process seems to be like trying to drive a car by looking in the rearview mirror, with the concentration on reporting, review, control, and monitoring. Instead projects and businesses need a forward-looking radar, scanning the murky and unclear future to identify the outlines of possible obstacles or shortcuts, allowing the driver to make necessary course corrections in time to avoid disaster and steer toward the desired destination".*

Other researchers, such as Perminova et al. (2008) and Olsson (2007) also point out the significance of managing uncertainty in the discipline of project management.

One of the ways to deal with uncertainty and unexpected events is to capture and address early warning signs that can predict unexpected events. A major failure of projects can be seen as a combined effect of a series of small failures, negative results or problems that have occurred over a period of time. Project teams may not notice or just ignore early warning signs of these problems and choose to work further in the project. This could finally lead to a major failure, at which point no preventive actions could save the project from the major failure. Several researchers have studied on early warning signs and systems within the context of projects (HajiKazemi et al., 2015; Klakegg et al., 2010).

Early warning signs can be seen as a pattern recognition from a pool of relevant data. This paper sets its focus on studying the role of machine learning – which deals with large amount of data to find patterns / trends and predict a possible future – in handling unexpected events and uncertainty in projects.

This paper aims to answer the following two interrelated research questions: (1) What role does machine learning have in early warnings in projects? (2) How can machine learning contribute to effective project management (for example, handling uncertainty in projects)? This is a conceptual paper, based on literature study.

As followed by the introduction, the paper provides relevant concepts / theories and then a brief description of the research method that is applied in the study associated with this paper. After that, a discussion on how machine learning can improve managing uncertainty in projects is presented. Finally, concluding remarks winds up the whole discussion.

2. Relevant concepts / theories

2.1 Uncertainty management in projects

Uncertainty within the context of projects can be described in several ways. Perminova et al. (2008, page 76) define "uncertainty as a context for risks as events having a negative impact on the project's outcomes, or opportunities, as events that have beneficial impact on project performance". Ward & Chapman (2004) and Olsson (2007) also view the term uncertainty as a kind of an umbrella-term to include risk management (threats) and opportunity management (opportunities) – that is, both the negative and positive sides of uncertainty in projects respectively. Ward & Chapman (2004, page 857) further say that uncertainty management "is also about identifying and managing all the sources of uncertainty that give rise to and shape our perceptions of threats and opportunities".

Nobre and Tobias (2008) provide the following definition of uncertainty, which reflects the theory of bounded rationality (Nobre, 2005):

- Insufficient information: Uncertainty is the difference between available information and needed information
- Insufficient cognitive capacity to process information: Uncertainty is the difference between the cognitive capacity that the organisation has and the cognitive capacity that the organisation needs to have

Bounded rationality is the idea that people make decisions that are satisfactory for them, but not the optimal, since their understanding of the situation is shaped by limited information and limited cognitive capacity.

The above description points out that there are greater benefits that organisations can obtain by using some kind of a means to process all possible information (that can be a huge amount of data / information that human brain cannot process it effectively) regarding a given situation, make sense of the information, acquire better understanding of the situation, and act accordingly. One such means can be machine learning.

2.2 Machine learning

2.2.1 What is machine learning?

Historically there have been two ways to approach statistical modelling. In what was up until recently the most used method, the analyst would apply assumptions regarding how the data were generated. In the other method, the underlying data mechanism were treated as unknown (Breiman, 2001). The first method is sometimes referred to as the classical method, while the last approach is commonly known as ML. This technique applies two elements when constructing a relationship between a dependent and independent variable: One algorithm which models the relationship between input data and the variable to be examined, and another algorithm that learns which input variables gives the best fit.

Baduge et al. (2022, page 2) describe machine learning (ML) as follows:

> *"Machine learning is a subfield of artificial intelligence where a computer observes a given set of data and generates a model based on the input data which can be used to solve problems. ML is different from traditional programming. In traditional programming, rules are coded in a computer language without*

> *explicit learning from the data. In contrast to traditional programming, ML uses data to generate predictive models which are then used for predictions with the unseen data. For some problems, it is extremely difficult to develop a rule-based program due to the complexity of the code and ML can be used in these instances provided sufficient data is available relevant to the considered problem".*

Machine learning techniques can broadly be categorised into three subgroups: Supervised learning, unsupervised learning, and reinforcement learning. Unsupervised learning includes algorithms tasked with recognizing patterns in data and determining output classification categories, while algorithms in the supervised learning class rely on clearly defined independent variables which is then related to a dependent variable (Hastie et al., 2009). Reinforcement learning, unlike the others, do not require training data, but instead iteratively try to maximize a mathematical "reward" and through that reach an optimal allocation of input (Sutton & Barto, 2018).

Relevant datasets can be constructed based on other research and expert knowledge within the domain. The data is used for training the model, a process which is typically supported by testing and validation techniques such as K-fold Cross Validation and Rolling Forecast Origin (Hyndman & Koehler, 2006). Both methods measure the algorithms systematic performance when predicting out of sample data.

Today, ML methods are being used broadly. ML-applications can be seen in self-driving cars Shreyas et al., 2020), chatbots (Rahman et al., 2017), financial analysis and risk assessment (Guerra & Castelli, 2021; Samitaset al., 2020), healthcare patient assessment (Aydoseli et al., 2022; Romero-Brufau et al., 2021) and more.

One of the topics that is closely associated with ML is "big data". Referring to earlier studies, Olsson & Bull-Berg (2015) describe big data as a large amount of data that require a new way to process them. Traditional ways (databases) do not have the ability to deal adequately with collecting, storing, processing or analysing big data.

The major purpose of big data is to utilize a large amount of data to obtain new knowledge / understanding and improve decision making. Data analytics play an important role here. According to L'heureux et al. (2017, page 7777), "the ability to extract value from Big Data depends on data analytics. […]. Data analytics involves various approaches, technologies, and tools such as those from text analytics, business intelligence, data visualization, and statistical analysis". The authors further suggests that ML can be considered as a fundamental component of data analytics. Wang & Alexander (2016) also point out that ML has been applied on big data.

2.2.2 Benefits of machine learning / artificial intelligence in projects

ML can be seen as one of the central elements of artificial intelligence (AI). The new wave of digital transformation, in which artificial intelligence (AI) plays a key role, has been making its impact on several industries. One of those industries is the construction industry. When describing AI and ML methods and applications in the construction industry, Baduge et al. (2022, page 1) say:

> *"Due to this digital transformation, massive amounts of data are generated, and systematic analysis of these data and predictive modelling can be used to generate innovative architectural and structural designs, improve construction and operational safety, reduce the embodied and operational energy requirements, reduced construction and operational costs, increased construction speeds, improved payback periods and enhance sustainability. However, analysing massive amounts of data and recognizing patterns by human or conventional computer programs using rule-based approaches is not realistic. Therefore, the capability of AI [artificial intelligence] to process massive amounts of data, recognize the pattern, and ability to build large-scale statistical models is a key facilitator of the building and construction industry 4.0 to process its digitized data".*

A concrete example of AI's benefits is its role in transforming current practices of offsite manufacturing used in prefabricated buildings – where factory-made components of the buildings are transported to and assembled onsite – to an industrial construction system. Integrated analysis for manufacturing's big data (which is a part of AI) is useful for all aspects of automation in offsite manufacturing (Baduge et al., 2022). It is to be noted that prefabrication can reduce uncertainty associated with building something onsite where the building process is susceptible to deal with weather changes.

Other concrete examples of AI's benefits include the following (ibid.): Construction management is currently done by using experiences from the professionals and commercially available software. Progress monitoring is currently carried out by manual extraction of information from construction sites. At present, manual supervision methods are generally applied in safety related activities onsite. Gathering and extracting relevant information, and automation by using AI can improve quality of construction management, progress, and safety. Uncertainty in projects can be reduced by availability of right information at right time at right place. The authors also mention how ML can be used to improve key activities in the construction industry – For instance, architectural design, material design and optimisation. As their conclusion, Baduge et al. (2022) say that the use of AI / ML applications can remove uncertainty in one or several segments of the projects (for example, material design and optimisation) and can contribute to a better-quality assurance, more efficient processes and/or reaching the chosen project goals with a greater ease and more certainty.

Digital twins generate a digital replica of a building that can evolve over the time by using the data that emerge during the lifecycle of the building. AI can contribute to develop digital twin models by processing large amount of data that are gathered during the construction and remaining lifecycle of the project. Pan & Zhang (2021) mention that a data-driven digital twin framework, integrated with Building Information Modelling (BIM), Internet of Things (IoT), and data mining for advanced project management, can enhance data communication and exploration to better understand, predict, and optimize the physical construction operations.

3. Research method

This paper adopts narrative literature review as its research method. According to Gregory & Denniss (2018), narrative literature reviews present "a (non-systematic) summation and analysis of available literature on a specific topic of interest" (page 893). Baumeister & Leary (1997, page 312) say that a narrative literature review is useful "when one is attempting to link together many studies on different topics, either for purposes of reinterpretation or interconnection". This paper focuses one specific major topic (that is, application of machine learning in uncertainty management in projects), and studies, among other things, the interconnection between two sub-topics (that is, machine learning and uncertainty management in projects). Narrative literature reviews incorporate various studies to enable the researcher to understand different views and characteristics of the chosen topic and generate a holistic understanding of the study (Campbell Collaboration, 2001; Kirkevold, 1997). As the authors (ibid.) point out, gaining of this understanding is generally supported by the researcher's experience, and existing theories and models. In this paper, we use existing theories, studies and our experience to acquire more knowledge on the chosen topic.

4. How machine learning can improve uncertainty management in projects – a look at early warning systems

4.1 "Black swans" and early warning signs

One of the aspects in managing uncertainty in project is to capture early warning signs of unexpected events and find out ways to deal with those events. In this regard, we will refer a term called "black swan". Taleb (2007) describe a black swan event as an outlier, since it exists outside of the usual expectations. Experience of the past may seem inadequate to predict the possible occurrence of black swan events.

Different approaches for managing black swan events have been suggested by researchers. The KPMG white paper (2013) suggests proper flow of independent and transparent information within the project. Murphy & Conner (2012) point out that black swan events have warning signs. Their suggestion is to identify early warning signs for minor negative events and deal with them effectively, so that a black swan event can be avoided in the future, or at least its effect can be reduced. Kenett (2013) suggests that obtaining and merging data, and data-based uncertainty analysis can enhance traditional methods that are currently used in uncertainty management.

The description mentioned above points out that black swan events can be predicted, at least to a certain extent, if adequate amount of relevant data can be obtained and studied / structured to provide a better understanding of the situation.

4.2 Machine learning and early warning systems (EWS) for project management

We recommend adaptation of ML driven solutions for EWS within project management. A ML-based EWS can provide project managers with assistance regarding risks and opportunities relevant for their project by estimating impacts of specific events relevant for the expected project performance. In addition, a ML-based

EWS would be able to gather, process, classify and analyse data at a speed otherwise not attainable, thus opening the possibility of almost instant uncertainty-assessment as the project manager logs project-relevant data.

Several studies say that the adaption of ML provides a substantial improvement for contemporary EWS within domains such as economics, health and construction, for example:

- Guerra & Castelli (2021) looks at, among other things, ML and risk / EWS in Banking domain, artificial neural networks (ANN), and recent trends including developing early warning systems (EWS) for bankruptcy and refining stress testing.
- Samitas et al. (2020) describe EWS for predicting financial crisis. In this regard, it establishes a framework for quantifying and determining contagion through the system after a (black swan) event occurred. It uses support vector machine for prediction. Its prediction is very accurate out of sample performance (98.8%).
- Nguyen (2021) focuses on construction management. Based on previous research, the study assumes that Construction Price Index is important, and then use K-nearest Neighbours to predict future Construction Price Index. Out of sample performance indicates an improvement relative to contemporary methods.
- Romero-Brufau et al. (2021) describe EWS in health. It uses gradient boosting to improve contemporary EWS.

To look at uncertainty management in projects using ML, we must first identify what mechanics are behind the change in uncertainty. However, before that, we need to find or define a factor that captures project uncertainty – for instance, what is the best variable or set of variables to capture our definition of negative or positive results within a project? What central factors determine that we consider a project failure or success? This can vary from project to project, so we will call this variable *Y*. One example of *Y* can be budget overruns. Project governance imply that budget restrictions should be adhered to, thus a large budget overrun could for some imply a large project failure.

The potential predictors for *Y* can be assumed to vary between domains and over time as both projects and society change. Therefore, detailed assumptions regarding how the data is generated should be avoided. Thus, a ML approach to statistical modelling is warranted.

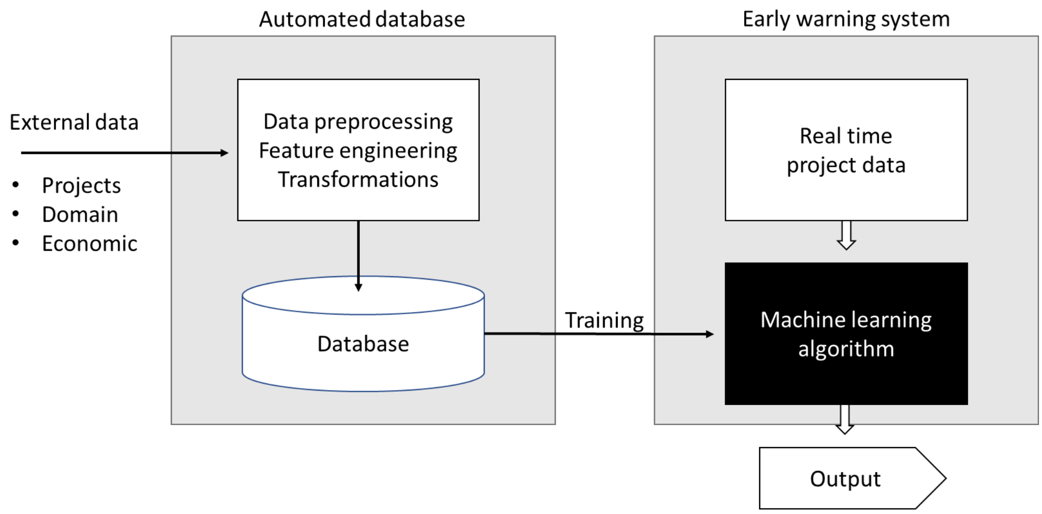

Figure 1: A suggested solution for real time project management system

A suggested solution for real time project management system can be seen in Figure 1. By connecting a database to various online data sources through application programming interfaces, a scripted system can autonomously download, prepare and store large amounts of diverse data. Feature engineering, which includes tasks such as deciding which tests should be executed and which external data should be downloaded, can be an iterative process where end-user experience and knowledge is taken into account. Pre-processed data would be used to train a machine learning algorithm to assess which factors were relevant for the observed change within a given Y-variable. By integrating the trained ML-system with the enterprise software that the organisation uses for its project management, project data can be seamlessly and instantly accessed by the ML-algorithm. This allows for the events from within the project to immediately be put in relation with all the internal and external data the ML-algorithms have access to, and an output be generated regarding the effect of the most central uncertainty parameters involved. Thus, the project manager will get almost instant feedback of the project information. The proposed system thus becomes an integral part of the project managers sensemaking.

The quality of the uncertainty-assessment from an ML-framework for project management such as the one suggested in Figure 1 will be heavily dependent on the quality, type and amount of the training data that are accessed through external databases.

Once the early warnings are identified, then that information is shared in the project / organisation so that the involved actors can interpret, understand, and make sense of the information, and collectively reflect upon their understanding. This collective reflection by the actors, who generally represent different disciplines and functions, can lead to a holistic / systemic understanding of the situation; including the warnings, the context in which the warned events can occur and affect, and possible consequences of the effect. This knowledge can provide a base for designing or developing solutions as a response to deal effectively with the warning signs. As a result, appropriate actions can be taken. The experience and knowledge acquired through this process can then be utilised in the whole process again if necessary to identify and address early warning signs in the future. Figure 2 illustrates the process.

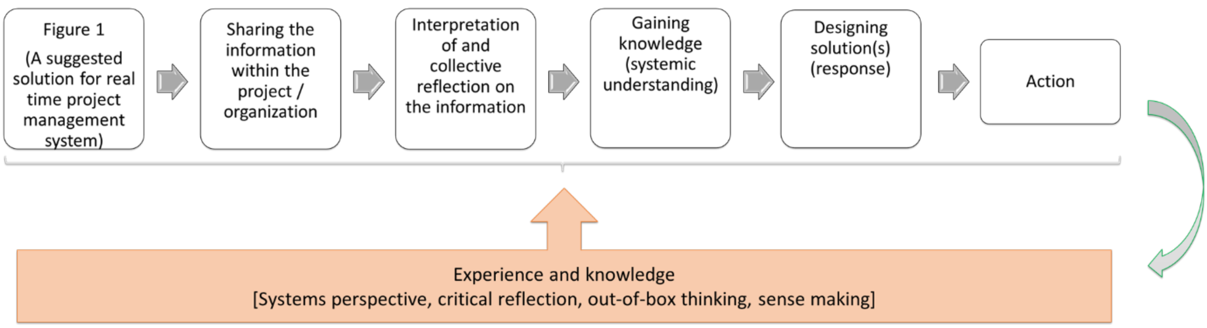

Figure 2: Addressing early warning signs (developed from Hajikazemi et al. (2016))

Collective reflection and discussion around the identified early warning signs mentioned in the above process can also lead to find out other early warning signs that the ML algorithm (in Figure 1) may not find, and / or provide valuable nuances and additional information to the early warning signs that are identified by the ML algorithm.

Referring to other studies, Li & Mo (2020) present three stages of an early warning process: Identification, estimation and evaluation, processing and post-evaluation. Figure 2 incorporates / reflects on these three stages.

Though the application of ML seems very promising, there are several challenges. Some of them are:

- Cost: There is a significant amount of cost connected to dealing with / structuring unstructured and various forms of data. How much effort organisations are willing to put into the effort is a question.
- Effective application: When describing application of BIM in construction projects, Zabin et al. (2022) say "the rapid development of ML applications, the growing generation of BIM-related data in projects, and the different needs for use of this data present serious challenges to adopt and effectively apply ML techniques to BIM-based projects in the Architecture, Engineering, Construction and Operations (AECO) industry". This statement suggests, among other things, a need for learning to make sure an effective adoption and application of ML.

5. Concluding remarks

This paper attempts to answer the following two interrelated research questions:

1. What role does machine learning have in early warnings in projects?

2. How can machine learning contribute to effective project management (for example, handling uncertainty in projects)?

We have addressed these two questions based on narrative literature study. In chapter 2, we have presented some key benefits of ML in the construction industry that applies projects as its prominent work-form. In chapter 4, we have addressed the two research questions by using relevant theory and illustrations (Figure 1 & 2).

Dealing effectively with uncertainty is a significant challenge in projects. One of the main parts of this challenge is to capture, process and try to make sense of a relatively vast amount of information / data that can contribute to eliminate or reduce uncertainty. ML can play a key role in this regard: Identify and describe early warning signs of potentially unforeseeable or unpredictable future events that can affect the project. This contribution can then enable organisational actors to make appropriate efforts to face the uncertainties of the future effectively.

Our study shows that knowledge sharing and learning play an important role in addressing early warning signs in projects by applying ML. We believe that both the technological aspects (such as ML) and organisational and people-related aspects (such as collective reflection and knowledge sharing) should be taken into consideration jointly in order to harvest greater benefits. Project-based organisations that have a process – like the one that we have presented in Figure 2 – can apply the process (and the related ML application) to learn continuously in an effective manner. They can become learning organisations. Learning organisations have the ability to deal effectively with, among other things, changes, uncertainty and efficient use of resources. In this regard, it is relevant to mention a quote from Charles Darwin: "It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change".

We believe that our study contributes to illustrate the connection between ML, uncertainty management in projects, knowledge sharing and learning. Hence, it can also contribute to develop and test a theoretical framework for the application of ML in managing uncertainty in projects. We also believe that out paper contributes to facilitate further discussion on this topic and to create more knowledge. As further research, we suggest studies on measuring the effect of ML in addressing uncertainty (early warning signs) in projects. It can also be useful to study closely how structural and cultural / social aspects of organisations affect the application of ML in managing uncertainty in projects.

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What does Ownership Structure tell us about Integrated Reporting of Polish listed Companies?

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Abstract: This paper aims to link the quantity and quality of information disclosed in Integrated Reports of the Polish listed companies with their ownership structure, through which we explore the manifestation of governance mechanism. Our study investigates two main problems in the literature concerning factors and logical relations explaining companies' disclosure patterns in the information reported to stakeholders; the first concerns measures of the quantity and quality of disclosure, and the second is focues on the explanation of the relations. Our paper addresses both issues by proposing an application of advanced textual analysis tools to assess the quantity and quality of the information disclosed. Second, contrasting to the great majority of existing research that is based almost exclusively on correlation methods with linearity assumptions, this study presents a practical implementation of the QCA tool to analyse how the ownership structure influence the company disclosure patterns. The results obtained in this study may be of great importance to the governance of companies and IR prepares and regulators.

Keywords: ownership structure, governance mechanisms, integrated reporting, disclosure patterns

1. Introduction

Ownership structure, directly or indirectly, strongly affects disclosure policies (Raimo et al., 2020, Eng & Mak, 2003). Our study aligns with the literature that tries to find factors and logical relations explaining companies' disclosure patterns. Despite extensive research in that field, the picture is still unclear, and empirical investigations often give contradictory results. Researchers employ many theories to explain the companies' disclosure levels, but the agency theory and governance mechanisms seem to be among the dominant one what is confirmed by the studies of e.g. von Alberti-Alhtaybat et al., (2012). Following that approach, we treat the disclosure simultaneously as a tool for managers to inform shareholders about the company situation (Verrecchia, 1983) and as a vehicle to influence the perception of company image and reputation (Merkl-Davies & Brennan, 2007).

We choose integrated reports (IR) as a disclosure pattern that is presumed to be most focused on shareholders' needs. This reporting tool is frequently nominated as the current frontier of corporate reporting (Raimo et al., 2020). Therefore, considering its increased relevance in business practice, IR has been identified as a relevant topic in empirical research (Nwachukwu, 2021). Despite the considerable interest in the topic of IR from practitioners and academia and the vast amount of empirical work on this form of communication, only a few studies are dedicated to its quality analysis. This paper aims to cover this research niche by linking the quantity and quality of information disclosed with the ownership structure through which we explore the manifestation of the governance mechanism that mitigates the agency problem (Fama & Jensen, 1983). The ownership structure as a factor explaining the disclosure patterns has been the area of investigation over the decades, but scholars lack solid consensus. At least two primary problems possibly influence today's state-of-the-art: (1) measures of the quantity and quality of disclosure and (2) analysis tools to explain the relations. As the quantity and quality of disclosure cannot be quantified directly, academics have developed many proxies usually based on hand-collected data suffering from the researcher's biases and the lack of repetitiveness. To deal with that issue, we follow the approach of Caglio et al. (2020) and Melloni et al. (2017) in combining the properties indicated in the IIRC Framework (IIRC, 2021) with the advanced tools in textual analysis. We cover two dimensions of disclosure characteristics: amount and style, as they demonstrate the level of informativeness and perception manipulation.

Concerning the second issue, in the great majority of research regarding the influence of corporate mechanisms on company disclosure patterns, correlation methods with linearity assumptions are almost exclusively employed. These traditional tools have many limitations and are unsuitable for explaining complex mechanisms present in management reality (Fiss, 2007). To exclude that problem, we use the Qualitative Comparative Analysis (QCA) technique, recently considered a remedy analysis tool in management and business research, to move forward areas with conflicting results and lurking potential moderators (Fainshmidt et al., 2020). The QCA allows investigating governance mechanisms as complements for each other and not substitutes. It follows the new approach in corporate governance studies, claiming that governance mechanisms' interdependencies guarantee their effectiveness (Misangyi & Acharya, 2014). The QCA is based on set theory, which allows it to explain complex causality and exclude the traditional methods' limitations (Schneider & Wagemann, 2012).

This study aims to bridge this literature gap by being the first to analyse the role of ownership structure in the IR context using advanced tools in textual analysis and an innovative approach to the QCA. It answers the call of Raimo et al. (2020), underlining the need for studies concerning the role of ownership structure in integrated reporting practices.

Analysing Polish listed companies, we expect that various ownership structures will influence the amount and style of IRs differently and that equifinality will show more than one path to specific outcomes. We find asymmetric causality explanations for the positive and negative results.

The main body of our paper consists of five parts. After the Introduction, there is a Literature Review and Hypothesis Development. In the third part, we present Research Methodology with the description of sample selection, data collection, variables, and methods. Finally, the results of our models are discussed in the fourth part, followed by the Conclusion.

2. Literature Review and Hypothesis Development

2.1 Governance Mechanisms and Disclosure Patterns

There is a lack of a straightforward answer to which factors influence companies' different ways of disclosing information (Khlif et al., 2017). Depending on studies, researchers use numerous variables to explain disclosure practices, covering the companies' internal characteristics such as size, performance, growth, corporate governance, and external environmental characteristics. The theoretical background to logical models on the companies' disclosure is also diverse; however, the agency theory, as it is confirmed by the studies of e.g. Brennan & Merkl-Davies, (2018) and Camilleri (2018) is one of the most widely applied (). Following this theory, disclosure can be exploited to manifest the agency problem. A manager has the information advantage over investors and can decide to use disclosure as a tool to increase informativeness towards shareholders about the ' 'company situation (Dye, 1985) or to increase obfuscation and manipulate the perception of the ' 'company image and reputation (Merkl-Davies & Brennan, 2007). In response to the threat of exploitation, shareholders have a range of governance mechanisms to protect their interests. Consequently, the analysis of ownership structure applied through its governance mechanism can explain patterns in disclosure practices (Fan & Wong, 2002).

The consensus among governance researchers presents a clear view of the mechanisms essential for controlling the agency problem (Misangyi & Acharya, 2014). The most common perspective divides these mechanisms into (1) control (monitor) of managers' decisions and behaviour, and (2) alignment of managers' incentives (Jensen & Meckling, 1976).

2.1.1 Monitoring Mechanism - External Ownership and Disclosure

Many studies recognise institutional investors as the resolution to the agency problem (Dalton et al., 2007). On the one hand, equity holders such as banks, insurance companies or investment funds usually have a large block of shares that give them sufficient potential benefits to have an incentive to monitor given company (Cornett et al., 2007). On the other, capital markets and managers consider institutional investors to have high credibility, and as literature shows, they can induce changes in companies' management and strategy (Demiralp et al., 2011). Diamond and Verrecchia's (1991) theoretical model indicates that a substantial block of shares in the hands of institutional investors encourages companies to disclose more to reduce information asymmetry.

Nevertheless, the empirical analysis provides mixed results, depending on the type of disclosure and capital market origin. For example, Barako et al. (2006), investigating listed companies from Kenya, observed that institutional investors' presence positively impacts voluntary disclosure. The same relation was obtained by many scholars studying CSR disclosure (look at Ali et al. (2017) for a literature review). In contrast, Donnelly and Mulcahy (2008) and Prado-Lorenzo et al. (2009) find no significant influence of institutional ownership on voluntary disclosure of Irish companies and CSR disclosure of Spanish companies, respectively. Arcay and Vazquez (2005) reported significant negative relation evaluating voluntary disclosure in the Spanish market.

The absence of clear relation is also observed in the empirical articles examining state and foreign ownership influence on 'companies' information practices. The are many examples with contradictory results, like Tagesson et al. (2009), who confirmed a significant positive correlation between Internet-based social disclosure and state ownership among Swedish listed firms. Hu et al. (2018) concluded their study with no significant relationship between state ownership and the likelihood of CSR disclosure in Chinese listed companies. Cannizzaro and Weiner (2018) indicated a significant negative relationship between state ownership and foreign direct investment disclosure of multinational companies. Regarding foreign investors lately, Abu 'Qa'dan et al. (2019) found no influence on CSR disclosure in Jordanian manufacturing companies. Still, Cormier et al. (2004) observed significant negative relation with Environmental Disclosure of German listed companies, while Liang et al. (2012) indicated positive relation with voluntary disclosure of companies from Taiwan.

2.1.2 Alignment Mechanism - Managerial Ownership and Disclosure

The effect of managerial ownership on different disclosure patterns has been of interest to accounting scholars for a long time (Mohd Ghazali, 2007). There is a common assumption that managerial ownership is negatively related to disclosure levels (Raimo et al., 2020). The explanation usually indicates the entrenchment effect when the managers hold large blocks of shares (Fan & Wong, 2002). Khlif et al. (2017) confirm that relation in the meta-analysis of empirical studies, investigating articles with voluntary disclosure and ownership structure. Contrary, a publication regarding CSR disclosure in Asian countries by Iatridis (2013) for Malaysian companies gives the opposite results. The same results, but for voluntary disclosure, are reported for, e.g. New Zealand (Jiang et al., 2011).

2.2 The neo-configurational approach in governance mechanisms research

Assuming that the different combinations of shareholder structures influence the disclosure features, we employ QCA analysis, a technique that encompasses unravelling causally complex patterns in terms of equifinality, conjunctural causation, and asymmetry (Schneider & Wagemann, 2012). QCA is a set-theoretic method that uses sets and searches for set relations to form concepts and formulate casual relations between social phenomena by applying Boolean algebra rules (Schneider & Wagemann, 2012). The method was first presented by Ragin (1987) and was initially predominately used in sociology and political science. Lately, this approach has also been explored in business and management studies, contributing to the development of a new wave of "neo –configurational" research (Greckhamer et al., 2018), but it is still relatively unknown by a large number of scholars (Seny Kan et al., 2016). Ragin (1987, pp. xix) points out that QCA *comprises a set of strategies and techniques that bridge and transcend the qualitative-quantitative divide.* On the one hand, QCA requires in-depth knowledge similar to that in case study research to determine particular cases and relevant conditions, configurations, and outcomes. On the other, it can indicate conclusive cross-case patterns, which is the domain of quantitative analysis.

QCA has more substantial advantages, distinguishing it from the most common statistic and econometric techniques (multiple regression or cluster analysis). QCA is based on configuration analyses (also referring to conjunctural causation in set theory) and assumes that combinations (configurations) of factors (variables), which form patterns or profiles rather than individual independent variables, lead to an outcome (Schneider & Wagemann, 2012). More precisely, they compete to explain an outcome (Fiss, 2007). Also, QCA distinguishes between necessary and sufficient conditions for an outcome. A sufficient but not necessary condition allows the existence of other sufficient conditions for the same outcome. It means that the set-theoric perspective assumes the existence of equifinality understood as alternative factors that can produce the same outcome (Schneider & Wagemann, 2012). Usually, statistical analysis is uni-finally oriented (Wagemann et al., 2016), which contrasts with organisational reality, where more than one causal condition often explains a specific outcome (Fainshmidt et al., 2020). Finally, a set theory also encompasses concept and causal relations asymmetry. The asymmetry indicates that the same configurations of factors rarely explain at the same time, both negative and positive outcomes (Seny Kan et al., 2016).

After a literature review and taking into consideration the equifinality, conjunctural causation of QCA, we formulate the hypothesis as follows:

H 1 Different combinations of the external and insider ownership representing monitoring and alignment mechanisms lead to a high quality in IR.

H 2 Different combinations of the external and insider ownership representing the monitoring and alignment mechanisms lead to a high quantity in IR.

H 3 Configurations for high and low quality and a high and low quantity in IR are asymmetrical.

3. Research Methodology

To test our hypothesis, we conducted our research on companies listed on the Warsaw Stock Exchange (WSE). We decided to limit our analysis to 2015-2019 as before that time only a few companies published IRs. We collected all the IR published by companies listed on the WSE in Polish language. As a result we identified 79 IRs (as of December 2020). Second, to create the IR text database, we entered each issuer's web page to download the reports. Finally, we were able to collect a sample of 55 avaiable files. As the last step, to complete our database with corporate governance and financial variables, we used EMIS database. The variables that were missing in EMIS were collected manually.

To measure the quality and quantity of the text in IRs, we applied CLARIN.PL tools (http://clarin-pl.eu/en/what-is-clarin/). We used the Literary Exploration Machin (LEM), a web-based application within CLARIN. PL designed for Polish text to conduct stylometric and semantic analysis (Piasecki et al., n.d.). Regarding IR quantity (amount dimension of text), we stick to a widely used and simple measure, which is the number of words (tokens) in a document, as it refers to the IIRC Framework (2021) recommendation to *express concepts [. . .] in as few words as possible* (IIRC, 2021: paragraph 3.38). To measure the IR quality, we decided to use Subjectivity as a measure that better evaluates the information perception as favourably or unfavourably (IIRC, 2021: paragraph 3.44), while in previous papers, researchers concentrated on tone, which measures the level of positiveness in a text.

To apply QCA with our data, we use models described by the following equation:

IR High Quality or IR High Quantity or IR Low Quality or IR Low Quantity= (1)

f (Institutional, Foreign, State, Managerial, HH.)

We ran four models for each disclosure characteristics variable separately but with the same five conditions (explanatory variables). To test H1, we developed a model with an IR High Quality as the outcome variable. We measured IR High-Quality counting words with positive and negative tones (subjective words). The lower the percentage of subjective words in a report, the higher its quality. For testing H2, we calculated the natural logarithm of tokens in each report. To verify configurations asymmetry, therefore, to verify H3, we used IR Low-Quality variables (with a high percentage of subjective words) and IR Low Quantity variable (with a small number of words). To measure the relation between monitoring mechanism and IR quality and quantity, we used four explanatory variables, which are: Institutional (Institutional Investor(s) ratio in Shareholder Structure), Foreign (Foreign Investor(s) ratio in Shareholder Structure), State (State ratio in Shareholder Structure), HH (The Herfindahl-Hirschman Index of 'shareholders' concentration). We evaluated the alignment mechanism with one variable Managerial, which measures the ratio in Shareholder Structure in the hands of board members. QCA did not require control variables in the models.

Finally, the QCA analysis results for each outcome are presented as models of sufficient and necessary conditions configurations separately, along with the degree of consistency and coverage. Consistency is defined as the degree to which empirical evidence is consistent with the set-theoretic relation in question (Rihoux & Ragin, 2008). At the same time, coverage can be interpreted as a numeric expression of the empirical importance (sufficiency), and relevance (necessity) of a given condition (or a combination) for producing an outcome (Schneider & Wagemann, 2012). The formulas expressing consistency and coverage are as follows (Rihoux & Ragin, 2008):

$$Consistency\ (X_i \leq Y_i) = \frac{\sum(\min\,(X_i\,,Y_i\,)}{\sum(X_i)} \quad (2)$$

$$Coverage\ (X_i \leq Y_i) = \frac{\sum(\min\,(X_i\,,Y_i\,)}{\sum(Y_i)} \quad (3)$$

Where min indicates the selection of the lower of two values, X_i represents membership scores in a combination of conditions, and Y_i represents membership scores in the outcome.

4. Results

Table 1 presents the results of the necessary analysis for the two outcomes, IR High Quality and IR High Quantity – the first step in analysing QCA results. For all variables, the value of coverage metrics is lower than 0.9, which means that there is no single factor (variable) included in the models that explain by itself IR High Quality and IR High Quantity. That result indicates the necessity of running further steps in QCA with sufficient conditions (Allen and Allen 2015).

Table 1 Necessary Conditions for outcome variables: IR High Quality and IR High Quantity

Outcome variable	Inegrated Reporting High Quality		Inegrated Reporting High Quantity	
Condition Tested	Consistency	Coverage	Consistency	Coverage
Institutional	0.464160	0.718325	0.411107	0.619902
Foreign	0.366128	0.663694	0.442481	0.781529
State	0.470485	0.670170	0.479625	0.665665
Managerial	0.210119	0.594433	0.212766	0.586481
HH	0.548138	0.720888	0.518933	0.664973

Source: own elaboration with fs/QCA software

The combinations of sufficient conditions for the H1 Model are presented in Table 2. Out of 32 possible logical combinations of variables (factors/conditions), we received three solutions that led to an IR High Quality. The only variable which is not included in all solutions as a condition is the 'shareholders' concentration ratio (HH), which means that it is not relevant to the outcome. This is contrary to the results of regression obtained by Raimo et al. (2020). In our study, in all solutions, there is a presence of at least one strong outside shareholder with no managerial investor at the same time. This falls in line with the results of Raimo et al. (2020) and extends the findings of Mohd Ghazali (2007) on CSR disclosure. We may also conclude that this result manifests the monitoring mechanism. However, the type of outside shareholder varies depending on the solution. We can expect that a company uses plain language when there is only a foreign investor or an institutional investor with high shareholder concentration as a significant shareholder. The monitoring mechanism works in favour of high IR quality when the shareholders' concentration is low, and there are all types of outside investors as significant shareholders. For that Model, we do not observe that the alignment mechanism is linked to the less subjective IR.

Table 2: Configurations for IR High Quality

I.R. High Quality = f(Institutional, Foreign, State, Managerial, HH)			
Configuration	raw coverage	unique coverage	consistency
~Institutional*Foreign*~State*~Managerial	0.339424	0.194308	0.791155
Institutional*~Foreign*~State*~Managerial*HH	0.245257	0.117006	0.877987
Institutional*Foreign*State*~Managerial*~HH	0.118412	0.0115952	0.903485
solution coverage: 0.468025			
solution consistency: 0.775772			

Note:~ means absence of a condition in a model, absence means that a condition is irrelevant for the Model
Source: own elaboration with fsQCA software

Table 2 presents the Model's configurations for testing H2. We received four solutions, where the first and the last are the same as the first and third solutions in H1 model. It shows that when exclusively foreign investor is present or all three types of investors are present, IRs are both emotionless and longer. They are also longer when there is only a State as a significant investor and a low concentration level. This result highlights how State participation and low concentration level push companies to disclose longer IR but with lower quality information. Finally, we also have the presence of an alignment mechanism that does not cooperate with monitoring and relates to longer IRs. Consequently, hypotheses H1 and H2 are confirmed by the QCA models.

Table 3: Configurations for IR High Quantity

I.R. High Quantity = f(Institutional, Foreign, State, Managerial, HH)			
Configuration	raw coverage	unique coverage	consistency
~Institutional*Foreign*~State*~Managerial	0.405698	0.296069	0.921376
~Institutional*~Foreign*State*~Managerial*~HH	0.405337	0.288136	0.83321
~Institutional*~Foreign*~State*Managerial*HH	0.109629	0.0302921	0.924012
Institutional*Foreign*State*~Managerial*~HH	0.130544	0.013343	0.970509
solution coverage: 0.745041			
solution consistency: 0.852662			

Note:~ means absence of a condition in a model, absence means that a condition is irrelevant to the Model
Source: own elaboration with fsQCA software

To test H3, we run two additional models for IR low quality and IR low quantity. Results in Table 4 and Table 5 indicate that different conditions cause the occurrence and absence of an ' 'IR's quality and quantity, which is the causal explanation of asymmetry and confirms H3.

Table 4: Configurations for IR Low Quality

I.R. Low Quality = f(Institutional, Foreign, State, Managerial, HH)			
Configuration	raw coverage	unique coverage	consistency
~Institutional*Foreign*~State*~Managerial*~HH	0.260362	0.145818	0.870277
Institutional*~Foreign*~State*Managerial*~HH	0.183497	0.0885456	0.96627
~Institutional*~Foreign*~State*Managerial*HH	0.123964	0.0290128	1
Institutional*Foreign*State*~Managerial*~HH	0.135644	0.0211002	0.965147
solution coverage: 0.411077			
solution consistency: 0.89134			

Note:~ means absence of a condition in a model, absence means that a condition is irrelevant to the Model
Source: own elaboration with fsQCA software

Table 5: Configurations for IR Low Quantity

I.R. Low Quantity = f(Institutional, Foreign, State, Managerial, HH)			
Configuration	raw coverage	unique coverage	consistency
~Institutional*Foreign*~State*~Managerial*~HH	0.250825	0.0982765	0.861461
Institutional*~Foreign*~State*Managerial*~HH	0.184818	0.0924091	1
Institutional*~Foreign*~State*~Managerial*HH	0.272827	0.109644	0.935849
~Institutional*~Foreign*State*~Managerial*HH	0.264026	0.153649	0.822857
~Institutional*~Foreign*~State*Managerial*HH	0.115878	0.023469	0.960486
Institutional*Foreign*State*~Managerial*~HH	0.129813	0.0183351	0.949062
solution coverage: 0.676568			
solution consistency: 0.842081			

Note:~ means absence of a condition in a model, absence means that a condition is irrelevant to the Model
Source: own elaboration with fsQCA software

We may observe that the presence of foreign investors is not a guarantee of high-quality IR. However, the alignment mechanism works against the IR quality.

5. Conclusion

This paper analysed the role of ownership structure in integrated reporting quality and quantity. The characteristics of the ownership structure are presumably important, as some types of shareholders may possess the skills, motivations, and knowledge necessary to monitor and prevent the concealment of information and therefore increase the level and quality of disclosure (Donnelly & Mulcahy, 2008). In our study, using a sophisticated method of textual analysis to assess the quantity and quality of the information disclosed together with the QCA, we confirmed all three hypotheses of this research. We empirically proved that different combinations of the external and insider ownership representing monitoring and alignment mechanisms lead to a high quality of IR. We also positively verified that different combinations of the external and insider ownership representing monitoring and alignment mechanisms lead to a high quantity of information disclosed in IR. Moreover, the configurations for high and low quality and a high and low quantity in IR occurred to be asymmetrical.

This work contributes to the enrichment of existing literature on ownership structure and IR and broadens the agency theory application field. This study enriches the list of determinants of IR quality beyond those frequently analysed in the existing research by indicating *inter alia* the importance of state participation and (low) ownership concentration level, which both lead to lower IR quality. Furthermore, this work stimulates reflections on the applications of the analytical tools as the results obtained in our work derived from the QCA approach, considered more advanced than the linear regression analysis, not always confirm the results of previous research.

The results of this study have important implications for IR preparers, users, policymakers, and regulators. In the field of corporate governance, regulators can develop an effective mechanism concerning the ownership structure capable of improving the quality of the information provided by the company. They should favour the presence of the strong outside shareholders, foreign investors, and a diversified ownership structure to boost the quality of the information disclosed by companies. The conclusions drawn from our analysis should be particularly relevant to individual investors who particullarly suffer information asymmetry. The practical dimension of our analysis is that to enlarge the company's transparency, investors should push for the appropriate corporate governance concerning ownership structure; the quality of IR increases if there are foreign and institutional stakeholders. If there is a high concentration of ownership and higher managerial ownership, IR can be expected to be of lower quality. For practice, decision-making based on the analysis of IR information by external investors and minority shareholders should be linked to looking at stakeholder structure because this is the determinant of the quality of information disclosed.

This study has two limitations. The first is that it analyses limited characteristics of ownership structure. The second is connected with exclusively one country analysis. Further studies could focus on more determinants of the ownership stricter and their impact on IR and might consider other countries. Still, the proposed approach and tools are universal and applicable in a broad context. They are more sophisticated than those commonly used in the existing empirical research and can be helpful in better understanding the 'IRs' quality determinants, which is the critical contribution of this work.

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The Impact of Workers not Returning to the job Market

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Abstract: The objective of this study is to understand the paradigm shift that unfolded during the "Great Resignation\Reshuffling" (2020-2022) within the minds of workers with respect to not re-engaging in the job market after the pandemic. In early 2022, according to the U.S. Bureau of Labor Statistics (BLS), there were approximately 11 million job openings and 6 million unemployed individuals. The convergence of these two data points indicates five million jobs with vacant seats. Therefore, we aim to answer this research question: What obstacles have workers encountered that have prohibited them from re-engaging in the job market after the pandemic within the framework of Maslow Hierarchy of Needs Theory? To investigate this question and the associated unprecedented phenomenon, an inductive qualitative research analysis was conducted to review and code archival data from three sources: Reddit posts, the U.S. government (BLS, White House, Federal Reserve) documents, and press articles. The content from more than 1,000 pages (31 posts and 45 articles) was systematically analysed through first and second cycle coding to extract themes that identify the factors being considered by individuals who have chosen to remain on the job market side lines. This article attempts to magnify the American worker's voice in an environment where it could feel like "nobody is listening" (Shaw, 2000) The findings indicate that salary, stumbling blocks, steward of care, sense of worth and stress are the leading factors that may prohibit individuals from returning to work. To triangulate these findings, additional press articles, government documents and Reddit posts will be coded to increase the data set (second study). The research limitations include a review of only three document sources, a focus on one country alone (the United States) and only one social media platform. Therefore, it cannot be stated that this list is exhaustive. More research is needed to include other platforms and sources. Nonetheless, the findings could help organizations understand this paradigm shift and formulate recruitment and retention programs that address the factors and needs of employees in a post -pandemic work environment that remains full of uncertainty and disruptions.

Keywords: Labor Shortage, Sense of Worth, Salary, Paradigm Shift, Return to Work

1. Introduction/Background:

On March 11, 2020, the "World Health Organization (WHO) declares COVID-19 a pandemic" (CDC, 2022) and within 96 hours, the entire United States of America was thrown into a whirlwind shutting down borders, schools, and organizations to contain the transmission of the infectious disease known as the Coronavirus (COVID-19). In the first quarter of 2020, Americans clung to their television screens as the number of Covid-19 cases crept across the globe. As more cases developed, organizations had to reassess the human capital cost in light of dwindling revenue. The decision by U.S organizations to furlough and/or lay off workers lead to an unprecedented 14.7 percent unemployment rate. "This is the highest rate and the largest over-the-month increase in the history of the data (available back to January 1948). The number of unemployed persons rose by 15.9 million to 23.1 million in April." (Unemployment Rate Rises to Record High 14.7 Percent in April 2020, 2020.) The United States drew a clear line in the sand, nonessential employees had to cease working in physical buildings or be able to work remotely. In addition, the economy slowed which forced companies to "decide who they can still afford to pay" (Jensen, 2020).

2. Research Question:

For years, the idea of work/life balance has been a topic of discussion among human resource professionals and this topic could be instrumentational in understanding the paradigm shift that has occurred in the mindset of workers post pandemic. Over the last year, the data has demonstrated there are more jobs open then available individuals to work and there appears to be a gap. To investigate why there is a delta of five (5) million between job openings and unemployed individuals, this research looked at what obstacles workers encountered that prohibited them from re-engaging in the job market after the pandemic within the framework of Maslow Hierarchy of Needs Theory? In the third quarter of 2020, the CDC released guidelines and tools to reopen the United States schools and corporations. As the post-pandemic fog cleared, organizations found themselves in an unexpected and unprecedented crisis. Henny (2021) states, "The U.S. economy is poised to take off in coming months as it rebounds from the coronavirus pandemic, but the recovery faces a new challenge in an apparent labor market shortage. Employers are reporting difficulty in onboarding new workers, even though the nation's unemployment rate is at 6% and some 9.7 million Americans say they are actively looking for a job, according to Labor Department data. "Henney goes on to emphasize people who had either been terminated, furloughed, or voluntarily left the job market are slow to return for fear of catching COVID-19 or walking away from unemployment benefits that provide greater stability than working a forty-hour week. Many legislators and media hosts suggested individuals are not returning to the job market due to the increased stimulus checks, extended unemployment benefits and eviction bans being in place. The financial windfall of money was one potential reason for individuals not participating in closing the labor shortage, however, we suspect this could be an attributing factor but not the root cause. The purpose of this research is to explore what obstacles have prohibited workers from returning to the job market after the pandemic. Their lack of labor participation has led to a deficiency of economic pollination throughout the United States causing shortages, delays, and stock outs.

3. Literature review

Maslow discusses the basic needs that every individual faces as they progress through life. According to McLeod (2018), Maslow hierarchy of needs states there are five (5) tiers of human needs that can be further broken down into three (3) categorical needs listed lowest to highest: base needs (physiological and safety needs), psychological needs (belongingness/love and esteem needs) and lastly self-actualization (self-fulfilment needs). (Reference Figure 1) Maslow goes on to state individual must fulfil or satisfy the lower-level need prior to transitioning to the next level and thus we set out to demonstrate this has been observed over the last two years with respect to the Covid-19 pandemic and the slow return to the workforce. During the government shutdown individuals were able to fulfil the basic needs through the accumulating savings from minimal commute, lack of vacation spending and/or federal stimulus package which provided $300 a week, child tax credits and instated eviction bans. In addition, individuals were able to develop meaningful relationships with immediate family as the distractions of commutes, activities and social meetings were halted. Once the restrictions were lifted connections with extended family and close friends became more heartfelt and cherished. Individuals were able to reflect on work-life balance and their own self-worth which leads to the top of the pyramid, doing something that is fulfilling and not just a job but the thing we were created to achieve.

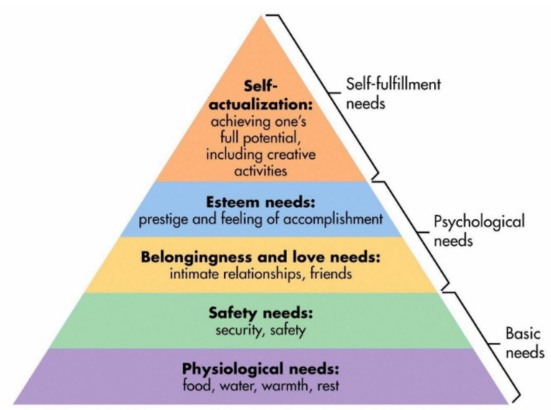

Figure 1:Maslow Hierarchy of Needs (McLeod, 2018)

According to Maslow (1943), the five (5) levels of Maslow's hierarchy are as followed: 1) Physiological needs are at the base of the pyramid as these are biological needs such as food, water, warmth, and shelter 2) Safety needs are centered around safety, security, and order 3) Belongingness and love needs are where individuals seek personal connections through meaningful relationships with others 4) Esteem needs hinge on establishing respect and achievement for oneself and in the eyes of others and lastly 5) Self-Actualization needs are described by Maslow as "self-fulfillment…the desire to become more and more what one is, to become everything that one is capable of becoming".

4. Conceptual model and propositions

This study utilizes an inductive qualitative methodology to understand what elements are being considered while re-engaging in the labor force by workers. Corporate America has been thriving for years whereas workers have been struggling to manage the stress of making ends meet with through the current living wage. According to Maurer (2022); Richter (2022) and Rosenberg, E. (2022), the Job Opening and Labor Turnover (JOLT) reported that approximately 4.5 million Americans quit their job in November of 2021 (Figure 2) and some noted attributing factors were pay, flexibility, commute, family safety and improved working conditions.

Figure 2: Graph Demonstrating the Number of People Quitting Their Job Over Two Decades

According to Richter (2022), the pandemic created a space for individuals to reconsider "their work and their priorities and what they want to do". The pandemic changed everyone's perspective on working conditions, salaries, standards, and overall work/life balance. In addition to the perspective shift, K through 12 educations morphed into virtual learning from homes. Dining room tables and kitchen islands became the new classroom and parents became pseudo teachers.

The measures listed above were put in place as a strategy to reduce the spread of Covid-19. Nevertheless, the closures of daycares/schools, buildings and the implementation of healthcare screens made returning to work more challenging. Over time, social distancing and immunization strategies were implemented which slowed the spread of COVID-19 and therefore, corporations were able to resume supplying goods and services. However, corporations found themselves without individuals to conduct tasks which would produce saleable goods and services. Workers seemed to have found a way to embrace life without work. At the same time, there seemed to be a shift in how workers viewed the meaning of work. Could the dismissal of their services have triggered an awakening in their sense of self-worth? As Corporate America struggles to entice workers to trade in quality family time for eight (8) hours days on a production line, there appears to be resistance. The call for workers is being made on social media, television, billboards, and radio stations. Nonetheless, there is still a labor shortage. The way of work is on the brink of collapse and understanding the mindset of workers could be the key to entice individuals back to the job market. To identify what is unfolding, we have performed a document analysis to set the framework.

4.1 Propositions:

P1: The pandemic changed the workers sense of self-worth/self-actualization as individuals leave jobs in pursuit of more fulfilling purpose.
P2: The time away from work during the pandemic has led to individuals value fulfilling belongingness and love needs above having a job.
P3: The labor shortage provided an environment that allowed workers to negotiate compensation packages as esteem needs were met.

5. Research method

The research methodology was structured to identify what obstacles have prohibited workers from returning to the job market after the pandemic. According to the BLS, there are approximately 11 million job openings and six (6) million unemployed individuals. In other words, if every person was placed in a job vacancy there would still have a deficit of five (5) million individuals. In addition, the labor force participation rate (LFPR) is down two (2) percent hovering around 61.5%. The LFPR "shows the number of people seeking work or working, expressed as a percentage of the total population." and is calculated by taking "the total labor force (employed plus unemployed) and divide it by the total civilian noninstitutionalized population." (Amadeo, 2022) Baker (2018) states the LFPR aides in understanding the landscape of the labor market as it indicates the number of individuals who are unable or unwilling to work at the current wage. To understand the phenomenon that is unfolding, a document analysis was conducted to identify various document sources that provided a firsthand account of the job market landscape and the working individuals perspective.

Bowen (2009) and Morgan (2021) state the use of document analysis as an unobtrusive and non-reactive methodology which allows for avoidance of social desirability bias, is representative across spans of time and the method is more efficient in cost and time when compared to other qualitative research methods. According to Cardno (2019), the approach and management of the content is straightforward and rarely requires Internal Review Board approval to analyze the data. This research study and the methodology was vetted through the Temple Internal Review Board (IRB) and determined to be exempt.

In the words of Mitch Kapor “getting information off the internet is like taking a drink from a fire hydrant” (Kapor, n.d.) and therefore, it was crucial to select the most appropriate sources that both represented the labor market and the individual being sought after for employment. To ensure a holistic viewpoint was presented, 76 documents across three types (U.S. government, press and social media) were analyzed to investigate the paradigm shift occurring in workers across the United States.

5.1 *Data Collection*

In selecting where to obtain data, we searched the internet from April through June of 2022 using the key phrase of “why people aren’t going back to work, why are people not returning to work, the great resignation, and the great reshuffling”. The title and opening paragraph of each article was read prior to importing the article into the Qualitative Analysis System (Nvivo). A total of 45 articles were identified and imported into a data file within Nvivo using NCapture.

To effectively observe the tone, sentiment and voice of the worker, the Reddit social media platform was selected. Thus, the “r/antiwork “subreddit community was selected to observe content that “is curated and promoted by site members through voting” (Stafford, n.d.). To obtain a more representative sample from the working individual, 31 “r/antiwork” subreddit posts were analyzed over a month. The subreddit “r/antiwork” is a community “for those who want to end work, are curious about ending work, want to get the most out of a work-free life, want more information on anti-work ideas and want personal help with their own jobs/work-related struggles.” (Reddit, 2021) The Reddit posts were unfiltered and first-hand accounts from individuals who were or had worked. The posts contained emotional language, imagery and stories that opened the door into their life and shared actual situations pertaining to work and why they were or had left the job market. The Reddit platform was selected as it provides a forum for the people to share content from their point of view and in through their own voice. According to the Reddit site, “Reddit is a growing family of millions of diverse people sharing the things they are care about most” and with over 100,000 active communities and 13 billion post and comments this platform is a representative sample of individuals at the center of this research (Reddit, 2021).

5.2 *Data Analysis*

All documents were compiled through the search criteria listed above. In accordance with Proferes et. al. (2021) the documents were obtained and imported into the Nvivo system, the records were screened and any duplicates or unretrievable full text articles were removed. The remaining documents were either stored in a data file labelled Website or Reddit. Each document was systematically coded in NVivo, a computer assisted qualitative data analysis software. Two (2) rounds of document analysis were performed. The first round contained and coded 60 documents, however, to ensure data saturation was achieved an additional 15 documents were coded as a robustness check. As specified by Miles (2020), the articles, and posts were processed through first and second cycle coding by assigning descriptive labels/meanings and then consolidated into code clusters which in turn condense into themes. The first level coding was utilized to “reduce the qualitative data to allow a more manageable focus”. (Kant, 2007) The second level coding process was used to consolidate the first level codes into more generalizable terms that narrows the focus. Level 3 coding was employed to further refine the content focus and move towards “critical density” better known as themes (Kant, 2007).

6. Data analysis and results/discussion

This study set out to explore what obstacles have prohibited workers from re-engaging in the job market after the pandemic within the framework of Maslow Hierarchy of Need Theory. The document analysis yielded forty-seven first cycle codes which were consolidated into nine (9) second cycles codes and five (5) themes. The five (5) main emerging themes were identified as salary, stumbling block, steward of care, sense of worth, and stress (Reference Table 2).

Table 2: Document Analysis NVivo Coding Results

First Level Coding	Second Level Code	Third Level Code (Theme)
Commute	Pay	Salary
Incentives		
Salary		
Wages		
Government Benefits	Support	
Savings, Support and Assistances		
Barriers to Returning to Work	Obstacles	Stumbling Block
Child Care Cost to More Than Salary		
Immigration Restrictions		
Jobs are not in the Location Where People Reside		
Schools		
Vaccinations		
Care Responsibilities	Responsibilities	Steward of Care
Family		
Power and Respect	Power	Sense of Worth
Power Shift		
Personal Interest	Purpose For Me	
Purpose		
Self-Care		
Self-Reflection		
The Job is My Purpose		
Disregard	Work Conditions	
Double Standards		
Employee and Worker Disregard		
Job Fit		
Lack of Support		
Not Enough Hours		
Overworked	Options	
Poor Management		
Toxic Work Environment		
Unrealistic Expectations		
Work Life Balance		
Workers' Rights		
Health Concerns	Stress	Stress
Mental Health		
Normal		
Struggle		
Tired		
Uncertainty		

6.1 Results

The codes listed above were systematically categorized into themes with the total number of times the code was linked to a file and/or references. The data indicates that sense of worth was the highest referenced with denoting 498 references, followed by salary at 301, stress at 90, steward of care at 74 and stumbling block at 29. The data suggest that during the pandemic, individuals that were released from their employment experienced a paradigm shift within where a sense of self-worth emerged. According to Krugman (2021), the pandemic "gave employees more time to think about their careers: The pandemic gave American employees time and opportunities to reassess their situations and priorities". We would claim that surrounding factors caused by the pandemic allowed for the four lower levels known as the deficiency needs to be met thus given rise for individuals to engage in the growth needs. According to McLeod (2022), "growth needs continue to be felt and may even become stronger once they have been engaged" and hence this sense of self-worth to upskill and take one's time finding the right job that brings about happiness. This newfound realization has led millions to redefine what requirements need to be in place for them to accept an offer. Workers are leveraging unions and strikes to demand better conditions in return for their services. Workers are demanding "a living wage, wages are not the only factor in job quality, with the pandemic likely propelling people to reevaluate what they value and want in a job. Workers also place a high value on—and now have the leverage to demand—benefits such as paid family and medical leave and health insurance; a workplace safe from harassment, illness, and physical injuries; flexible scheduling; a better work-life balance; and a career path with clear upward mobility". (It's a Good Jobs Shortage: The Real Reason So Many Workers Are Quitting. n.d.). The days of saying you are valued and are "essential" to the organization are over if the companies support and actions are not mirroring the sentiment. "Essential workers are tired of being thanked one day and then treated as expendable the next day, …The headline isn't that there's a shortage of people willing to return to work. Instead, it's a scarcity story. We have a shortage of safe, good-paying, sustainable jobs." (U.S. Labor Unions Are Having a Moment., n.d.) Therefore, the results support P1*: The pandemic changed the workers sense of self-worth/self-actualization as individuals leave jobs in pursuit of more fulfilling purpose and P2: The time away from work during the pandemic has led to individuals valuing fulfilling belongingness and love needs above having a job.* As the study progress the initial code of work-life balance moved into focused coding as work conditions and finally into axial/thematic coding of Sense of Worth. Thus, leading to the workers awakening of their sense of self-worth after the pandemic.

The changing dynamic has led to a power shift that has given workers a negotiation platform that did not exist pre-pandemic. In this current environment, individuals are negotiating for a sustainable salary, flexibility, better working conditions which will lead to less stress. For example, one reddit post referred to the current salary at a specific job as "Poverty Wages" and made a declaration to "reclaim your life." This one post focuses on the obstacles created by working for low wages and highlighted that it deprives individuals of their times with hobbies, friends, and family. If the salary cannot sustain the lowest level of need such as water, food and shelter why should one allow it to strip away the benefits obtained in the next three levels (safety of working conditions, love and belonging of family/friend and esteem for oneself and by others). Ergo, workers are leveraging the labor shortage to demand an improved working experience inclusive of salary, stress reduced conditions and acknowledgement of the workers sense of worth/esteem value. Hence, supporting proposition *P3: The labor shortage provided an environment that allowed workers to negotiate compensation packages as esteem needs were met.*

Furthermore, the pandemic has created an environment that has demonstrated that remote working can be equally as effective. During the pandemic, several organizations quickly reconfigured operations to enable employees to work from home (flexible working arrangement). After more than 365 days with productive results, individuals are associating hybrid work environments as normal. One survey demonstrating that 68% of workers prefer the option to work from home. In the same article, "The Prudential Survey showed that 1 in 3 Americans would not want to work for an employer that doesn't offer at least partial remote working." (10 Surprising Return to Work Statistics, 2021). The hybrid working arrangement plays another key role in whether worker can and/or are willing to return to work. Many working individuals are stewards of care for children or elderly relatives that has caused them not to be able to return to work. According to the Biden Administration, "Between February 2020 and March 2021, 520,000 mothers and 170,000 fathers between ages 20 and 54 left the labor force and have not returned. Many needs or want to work but cannot because of childcare disruptions." (FACT SHEET: President Biden Announces Additional Steps to Help Americans Return to Work. (2021, May 10) Moreover, individuals have been able to engage in loving meaning relationship with family that has fulfilled the sense of connection that has been traded for years of work.

The last two themes that emerged were stumbling block and stress. Many individuals had to contemplate whether they could or should return to work due to obstacles that existed. Individuals were faced with wanting to accept an offer, but the following had to be considered: cost of childcare versus salary, school scheduling, vaccination policies and jobs availability/location. The stumbling blocks that could impact one's ability to return without interruption has led to declining and delaying acceptance of offers. In line with, Hossain et. al., (2020), the global pandemic has had an impact on the mental and physical wellbeing of individuals. Parks et.al., (1998) states, "Previous studies suggest that depression, anxiety disorders, substance abuse, increased suicidal tendencies, and PTSD commonly follow major economic crises or natural disasters" and this crisis is no different. Stress has seeped into everyday life as individuals continued to navigate through school closures, unintentionally contracting disease and/or infecting others, financial instability, food insecurity, disruption to routine and having to be everything to everyone in one space. These stressors, in combination with the "trauma of job loss…might be keeping some workers from returning to the workforce. This trauma can erode confidence and self-esteem, which surfaces doubt in skills and abilities." (Employees Aren't Returning to the Job Market: Here are Some of the Reasons Why, n.d.) The power of stress could be hampering one's esteem needs and ultimately surpassing the desire or ability for individuals to return. Employers need to convince their employees that they are taking measures to alleviate stress inducing factors from the workplace.

Based on this study organizations need to develop a comprehensive package that acknowledges and appeals to the five levels of Maslow's hierarchy need theory. Individuals have had time to assess and meet levels of need within their life. As these individuals have satisfied the lower need levels, they are moving up the Maslow Hierarchy pyramid and thus requiring more than the pre-pandemic workplace baseline.

6.2 Discussion

As the job market is changing and the expectation of an acceptable employment offer is being redefined, there are various elements the tangential that should be considered. What happens if most workers never return to work and/or continue to shuffle between companies? Will this labor shortage and the response to the potential and existing workers become a lynch pin to the success of organization culture and retention and if it goes unaddressed how will the economy respond? Dotsey et.al, (2017) mentions the absence of the workers will be felt in "government programs such as Social Security and Medicare, or through family assistance… As a result, a society with a lower participation rate is also burdened with higher tax rates because the government has a narrower tax base from which to draw revenue." In other words, the economy could reach a breaking point that will be felt by all-in-one way or another.

7. Research Contribution

The purpose of this study was to explore: What obstacles have workers encountered that has prohibited them from re-engaging in the job market after the pandemic within the framework of Maslow Hierarchy of Need Theory. During the height of the global pandemic, educational institutions, restaurants, hotels, and various corporations closed their doors in alignment with government mandates and this led to millions of individuals being laid off or furloughed. Nonetheless, once corporations were ready to return to normal productions level, the workers did not answer the call. Organizations quickly found themselves in a precarious business state where the demand had returned but inventory and/or services could not be met as staffing shortages were felt across the country. This labor shortage quickly became known as "The Great Resignation" where individuals were and are continuously saying no to job offers entirely.

Based on the document analysis, five (5) emerging themes were identified. These emerging themes salary, stumbling block, steward of care, sense of worth and stress. Workers appeared to have an awakening in which the pre-pandemic work conditions and salaries are no longer acceptable. The practical implications of this information could help organizations understand the worker in this current work environment. Organization can no longer just think about filling a seat as there are just too many to fill at this time. The current five (5) million-person gap between unemployed individuals and job openings means organizations are left in a perilous state. If the labor shortage continues, the economy will continue to experience supply shortages, delays to schedules and climbing inflation. The findings from this study suggest workers are facing five (5) obstacles that are prohibiting them from returning to the job market. Hiring managers and human resource representatives should be aware of these obstacles or consider asking question in the interview process to understand 1) what the biggest obstacles are and 2) are there ways to mitigate them in a way that both parties can be move towards agreement. There is a potential for these findings to be incorporated into Human Resources strategies to engage, attract, and maintain workplace loyalty and commitment in a time when workers have the negotiating power.

7.1 Limitation

In accordance with Bowen, (2009) this study has unveiled several discussion points, however, there are limitations that require acknowledgement. The research was conducted on 76 documents and posts which is not an extensive data set. In addition, document analysis is primarily generated for a purpose outside of research and therefore may not obtain insufficient details, obtain biased selectivity which can skew the format or tone of document and content can have low retrievability as some documentation can be blocked or deleted. Boslaugh (2007) mentioned, secondary data was not collected with this specific research question in mind. The literature also suggests document analysis should be triangulated to add validity. Lastly, Reddit is one social media forum with a specific subset of individuals which may not represent the larger population.

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Emotional Intelligence and Performance in Social Economy Organisations: The Portuguese Experience

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Abstract: The present article aims to analyse *emotional intelligence* as an influence in the various dimensions of the organizational life, namely in the professional context it is possible to observe a diverse set of emotional situations, that seem to influence the work performance of the collaborators and organisations. An exploratory study with a qualitative approach was developed in the sector of social economy organisations (Private Social Solidarity Institutions at Viana do Castelo District, Portugal) that aimed to investigate the impact of the emotional intelligence of employees on the performance of social economy organisations. The interviews were conducted with the technical directors of the Residential Structures for the Elderly, whose sample was defined by convenience. The results showed the existence of a positive relationship between emotional intelligence and job performance, both from a technical and relational point of view, and suggest the existence of influence on the performance of the organisations themselves.

Keywords: Emotional intelligence (EI), job performance, human resources, social economy organisations.

1. Introduction

Over the past decades, there has been a growing recognition of the importance of human capital for the effectiveness and performance of organisations. At the same time, some of the traditional models of organisational behaviour and human resource management (HRM) have been questioned, particularly as regards the role of emotions in organisations, in which a transition from a model of denial of emotions, to a model of emotion management that considers their potential to represent a competitive advantage for organisations.

Several studies (Zaid *et al*., 2016; Greenidge *et al*., 2014) point to a correlation between emotional intelligence (IE) and performance and suggest an important positive influence on other areas of organisational functioning, such as job satisfaction, leadership, productivity, and behaviours of organisational citizenship and interpersonal relationships, emphasizing the need to optimize the contribution employees can make to the organisation's performance.

It seems evident that there is a positive influence of the IE of employees on the behaviour and results of the organisation. It is intended, therefore, and from a previous literature review, to develop an exploratory study in private social solidarity institutions in the district of Viana do Castelo (Portugal) that develop the social response of Residential Structure for Elderly (RSE) to investigate the impact of EI on individual and organisational performance and to obtain some clues that may help the definition of HRM processes. From the bibliographical research carried out, there are few research papers based on the study of the relationship between EI and organisational performance in the social sector.

2. Literature Review

The concept of EI is recent in the context of the scientific literature and has significant variability in terms of conceptual definition. Research into the concept developed significantly from the 20ths, associated with another broader concept, called social intelligence, whose definition and investigation seem to have influenced the way EI came to be contextualized later (Bar-On, 2006; Torres, 2014).

The existence of multiple definitions of social intelligence (Thorndike, 1920; Doll, 1935; Wechsler, 1939; Gardner, 1983, in Bar-On, 2006) created a mixed confusion and controversy regarding the concept and, at the same time, the opportunity to define new approaches. Salovey and Mayer (1997) suggest that the concepts of EI and social intelligence are related and may represent interrelated components of the same construction, as it identifies EI as an integral part of social intelligence (Bar-On, 2006).

It is a review of the definition of EI that combines the idea that emotion makes smarter thinking, and that smarter thinking about emotions is based on a model of EI that designates a form of social intelligence situated between cognition and emotion (Mayer, Salovey & Caruso, 2000) and represents the ability to reconcile emotions and reason (Cunha et al., 2007).

The development of the concept of EI has been boosted by Goleman (1995) who defines EI as the "ability to recognize our feelings and those of others, to motivate ourselves and to manage well, emotions in us and our relationships" (Goleman*,* 2006, p. 323) in a five-dimensional model: self-awareness, self-regulation, motivation, empathy, and social skills. A few years later, the model proposed by Goleman (2006) underwent a new revision and was reduced to four main domains: self-awareness, self-mastery, social awareness, and relationship management, each of which provides a set of core competencies for high EI, which is also called the emotional competence network (Goleman, Boyatzis & Mckee, 2002).

A new contribution to the development of the concept of emotional and social intelligence comes with Bar-On (2006), considering it a multifactorial matrix of interrelated emotional and social skills, abilities, and facilitators that influence the ability to recognize, understand and manage emotions, relate to others, and adapt to change and solve personal and interpersonal problems and effectively cope with daily demands, challenges, and pressures.

The conceptual definitions of EI presented by Salovey and Mayer (1997), Goleman (2006), and Bar-On (2006), although distinct, present complementarity in several aspects (Fernández-Berrocal & Extremera, 2006). Thus, the literature brings us to the existence of three conceptual models of EI (see table 1): (i) the emotional skill model of Salovey and Mayer (1997), (ii) the emotional skills model of Goleman (2006,) and (iii) the Bar-On's emotional-social intelligence model (2006).

Table 1: EI theoretical models

Models	Author	Model Designation	Description
Skills Model	Salovey-Mayer (1997)	Emotional Ability Model	It defines EI as the ability to perceive, understand, manage, express, and use emotions to facilitate thinking, measured through a range of basic skills.
Mixed models	Goleman (2006)	Emotional Skills Model	It looks at EI as a set of key competencies and skills that drive overall performance as measured by multiple comparator evaluations.
	Bar-On (2006)	Emotional-social intelligence model	Describes the interrelationship of emotional and social skills, abilities, and facilitators that influence intelligent behaviour and determine how we effectively understand and express ourselves, understand others, relate to them, and deal with daily demands, as measured by self-perception/report.

From the perspective of Cunha *et al.* (2007) mixed models, especially Goleman's (2006) are more popular in business, while Salovey and Mayer's (1997) aptitudes tend to be more receptive in academic and scientific circles. For Mauthner (2006) the great point of divergence between the two approaches focuses not only on the definition of the concept but also on the techniques for measuring what emotional intelligence is for each of them.

However, the most relevant will be to consider the complementarity of the models, weighing their strengths and limitations (Cunha *et al*., 2007) since, despite the existence of different types of EI models, there are theoretical similarities between them arising from the common attempt to understand and measure emotion management factors (Mayer *et al*., 2000).

3. Work performance versus EI

Job performance plays an important role in the growth and development of an organisation, as individual employee performance contributes largely to the overall effectiveness and organisational success (Korkaew and Suthinee, 2012). Sonnentag and Frese (2002) refers to a construct behavioural approach based on individual, interpersonal and situational aspects that is part of the actions taken by the individual to contribute to the achievement of the organisationally relevant goals. According to Borman and Motowidlo (1997), work performance has two meta-dimensions: *task performance* and *context performance*. The *task performance* *dimension* refers to the technical contribution to the achievement of the result inherent to the position or function held, which varies according to the tasks to be performed by the individual within a position or function. The *context performance dimension* refers to the extra-role activities and behaviours that contribute to organisational outcomes. In this perspective, work performance is perceived as a multi-causal phenomenon influenced by a set of variables and dimensions of a psychological, social, organisational, and situational nature (Bennett & Stamper, 2001; Dalal, 2005, in Devonish & Greenidge, 2010).

To contribute to a better understanding of this concept, we present a synthesis of the six performance models presented by Bendassolli (2012), based on the literature review (see table 2).

Table 2; Work performance models

Performance model	Conceptual approach
Campbell, 1990	Behavioral performance
Borman and Motowidlo, 1993	Multidimensional performance, based on task performance and contextual performance dimensions
Murphy, 1989	Dynamics and multidimensional performance
Frese and Zaptf, 1994	Active performance
Pulakos, Arad, Donovan and Plamondon, 2000	Adaptive performance
Beal, Weiss, Barros and MaCermid, 2005	Episodic performance

The first model (Campbell, 1990) defines performance as a behaviour or action that is relevant to the organisation's objectives and can be measured in terms of contribution levels to those objectives, based on three aspects: dimensions, determinants, and predictors. The second model (Borman and Motowidlo, 1993) performance is defined as a multidimensional concept, in which task performance (associated with formal role) and contextual (emerging) performance are distinguished and the contributions generated by each one is analysed in the dimensions. The third model (Murphy 1989) emphasizes the dynamic and multidimensional nature of the concept of performance and reinforces the need not to limit performance to the task domain. The fourth model (Frese & Zaptf, 1994) called active performance, is based on a process of action regulated by a sequential and interconnected chain, regulated by an active and initiative individual. The fifth model (Plamondon et al., 2000) is called adaptive performance and completes Campbell's model (1990) by inserting components that could cope with individuals' adaptation strategies to the new conditions and demands of the job. The sixth model (Beal et al., 2005) is called episodic performance and is dedicated to the investigation of the relationship between affective states and performance, at the intraindividual level.

3.1 Multidimensionality of work performance

The analysis of the literature related to the conceptualization of work performance allowed us to identify a diversity of conceptual proposals, given the diversity of variables involved in it.

To Devonish and Greenidge (2010), the concept of performance encompasses both positive and negative behaviours and unfolds in three dimensions: (i) task performance; (ii) counterproductive behaviours; and (iii) citizenship or contextual performance. The *performance dimension* in (i) the task is characterized as the effectiveness of the employees' contribution to the activities that constitute the technical core of the organisation (Borman & Motowidlo, 1997). *Counterproductive Behaviour* (ii) is deviant, voluntary, and intentional behaviours that can be reactive or planned and significantly violate organisational norms and as such directly or indirectly constitute harm to the organisation and/or its members (Devonish & Greenidge, 2010; Bennett & Robinson, 2000). *Contextual performance* (iii) refers to flexible, voluntary, and positive work behaviours that go beyond task-specific behaviours and support the social and psychological environment in which task performance takes place (Organ, 1997). These behaviours encourage the effective performance of the organisation (Williams & Anderson, 1991). This dimension of performance differs from the notion of task performance in three respects: a) it is less likely to be considered prescribed or formally described in job analysis; b) is seen as less likely to lead to formal rewards; and c) refers to pro-active, interpersonal, and cooperative (Van Dyne *et al*. 1995) proactive, interpersonal, and cooperative behaviours (Organ, 1997).

3.2 EI and performance organisational context

Bukari and Ali (2009) show that emotionally intelligent individuals, using more effective emotional regulation mechanisms, tend to be better corporate citizens and more ethical than individuals with low emotional quotient and are less likely to engage in counterproductive behaviours (Greenidge *et al*., 2014; Mayer *et al.* 2000).

EI can be considered as a predictor of professional performance (Cobêro, Primi & Muniz, 2006) and have an impact on the attitudes and behaviours of employees, specifically the reduction of deviant behaviours and individual performance is positively related to organisational citizenship behaviours (Turnipseed & Vandewaa, 2012).

There is significant evidence in the literature regarding the existence of a positive correlation between emotional intelligence skills and behavioural and organisational outcomes (Zaid *et al*., 2016) between EI and retention (Codier *et al*., 2009, *in* Zaid *et al*., 2016) as well as between EI and job satisfaction (Min and Lee, 2008, *in* Zaid *et al*., 2016). Several studies have shown evidence that EI is significantly and positively related to individual work performance and has a direct relationship with contextual performance and counterproductive behaviours (Greenidge *et al*., 2014).

It seems that people with higher levels of EI present higher levels of performance and professional success (Salovey & Mayer, 1997; Goleman, 2006). Bar-On (2006) also recognizes that EI, in addition to being of particular importance to the individual's level, greatly optimizes its performance. Goleman (2006) considers that emotional intelligence plays a crucial role in improving work performance as well as personal success.

Carmeli and Josman (2006) consider that attempts to empirically investigate the role of emotional intelligence in individual workplace success have been limited and are in the formative stage and need further evaluation.

4. Issues and objectives

There are several studies in the American and European contexts regarding EI (Ang Choi Hwai & Amin, 2016; Kenneth *et al.* 2008; Mishra & Das Mohapatra, 2010; Zakieh *et al*., 2013; Carmeli & Josman, 2006) but they are, still, few studies in the social sector. To contribute to EI research, this study was developed in the context of the sector of social economy organisations, with the following starting question: What is the impact of EI on individual and organisational performance, in the sector of social economy organisations, from the perspective of Private Social Solidarity Institutions (hereafter PSSI) technical directors with the residential structure for the elderly? For this purpose, two hypotheses were defined: Hypothesis 1: There is a positive relationship between the employees' emotional intelligence and individual performance; Hypothesis 2: There is a positive relationship between employees' emotional intelligence and organisational performance.

This study sought to investigate the perceptions of the technical directors of the private solidarity institutions, namely how they perceive the relationship between the EI and the performance of the organisations in which they operate. Thus, in order to provide an answer to the starting question, the following objectives were set: objective 1: to identify and characterize the participants' perception regarding the existence of relationship between EI and performance, both individually and organisationally; objective 2: to identify participants' perceptions of how they conceive emotional intelligence; objective 3: identify and characterise the selection criteria adopted by organisations in the scope of recruitment and selection procedures and infer if there is evidence of concern with EI components; objective 4: identify and characterise the evaluation criteria adopted by organisations in the framework of employee performance evaluation processes and infer if there is evidence of concern with EI components; objective 5: identify and characterize the practices adopted by organisations in the context of managing the emotional intelligence of employees; objective 6: identify the valuation attributed by organisations to the employees' EI; objective 7: collect suggestions to implement in the future by organisations in the management of emotional intelligence of employees.

The sample consists of the set of Private Social Solidarity Institutions of the district of Viana do Castelo that, cumulatively, develop the social responsibility of residential structure for the elderly (RSE) and have the status of private social solidarity institutions (PSSI). The Social Charter of the Ministry of Solidarity and Social Security (http://www.cartasocial.pt) was used to identify 14 PSSI that develop the social responsibility of RSE, according to table 3.

Table 3: Private social solidarity institutions at Viana do Castelo with the social response from RSE

PSSI	Legal regime	Geographic locality
Lar de Santa Teresa	Associação de solidariedade social	União das freguesias de Viana do Castelo (Santa Maria Maior e Monserrate) e Meadela
Posto de Assistência Social de Alvarães	Associação de solidariedade social	Alvarães
Centro Social Paroquial de Vila Nova de Anha	Centro social e paroquial	Anha
Centro Social e Cultural de Carreço	Associação de solidariedade social	Carreço
Centro Social e Paroquial de São Sebastião de Chafé	Centro social e paroquial	Chafé
Casa Sacerdotal da Diocese de Viana do Castelo	Instituto de organização religiosa	Darque
Centro Paroquial de Promoção Social e Cultural de Darque	Centro social e paroquial	Darque
Centro Paroquial e Social de Lanheses	Centro social e paroquial	Lanheses
Centro Paroquial e Social de Barroselas	Centro social e paroquial	União das freguesias de Barroselas e Carvoeiro
Centro Social e Cultural da Paróquia de Cardielos	Centro social e paroquial	União das freguesias de Cardielos e Serreleis
Centro Social Paroquial Deão	Centro social e paroquial	União das freguesias de Geraz do Lima (Santa Maria, Santa Leocádia e Moreira) e Deão
Santa Casa da Misericórdia de Viana do Castelo	Santa casa da misericórdia	União das freguesias de Viana do Castelo (Santa Maria Maior e Monserrate) e Meadela
Congregação Nossa Senhora da Caridade	Associação de solidariedade social	União das freguesias de Viana do Castelo (Santa Maria Maior e Monserrate) e Meadela
Centro Social e Paroquial de Vila Fanca	Centro social e paroquial	Vila Franca

Data collection was performed using semi-structured interviews, composed of a set of previously formulated key questions that sought to meet specific objectives. Of the 14 organisations in the sample, interviews were conducted in 8 organisations, corresponding to the total of organisations that responded favourably to the research. From the 8 organisations that collaborated with the study, 10 interviews were obtained. The fact that there are more interviews than participating organisations is related to the fact that some participating organisations have more than one technical director of RSE.

The participants were the technical directors who are characterized in terms of gender, age group, qualifications, function in the organisation, seniority in the organisation, and legal status of the organisation to which they belong: ten individuals, of which nine are female and one male. There is a high prevalence of female members, which is closely related to the area of training required by technical directors in the social and human sciences, where there are traditionally more women attending such training. Most participants in the study are 40 years old or younger, and it is noted that only 20% of respondents are older than 40 years, thus finding that the participants in this study are mostly young.

Regarding the distribution of respondents by literacy qualifications, it is found that 60% have a degree at the level of the graduation course, 30% have a master's degree and none have a PhD. No participants with lower qualifications than the undergraduate level was identified, which is related to the requirement of minimum qualification to perform the technical direction function. All participants perform the function of technical direction, which is related to the request made for the interview. From the set of participants, it was found that 60% remain in their organisation for more than one year and less than five years, which may be related to the age of the study participants, as 40% of participants is in early career and has recently completed studies. From the total, it was possible to collect data from organisations with different legal regimes, with 50% being *social solidarity associations*, 37% from *social and parish centers* and 13% being the *holy house of mercy*. Thus, diversity was obtained in the context of PSSI.

5. Discussion of results

Although this is an exploratory study and, therefore, limited in terms of the representativeness of the results, we found that the results obtained point to the existence of a relationship between EI and the performance of both employees and the organisation itself.

The analysis of the different perspectives presented by the interviewees leads us to a concept of EI that is, globally, understood as the internal capacity to make good management of their own emotions. It implies a personal capacity to listen, to put oneself in the other's place, empathize, understand, adapt, and maintain a balance between the personal and professional spheres, aspects mentioned by the participants. Such competences can be found in the definitions presented by several authors such as Salovey & Mayer, 1997; Goleman, 2006 and Bar-On 2006.

The results indicate that, in general, EI has the potential to influence individual performance in terms of accomplishing the tasks inherent to the function, as well as in interpersonal relationships, which is in line with the studies developed by Zaid *et al*. (2016), who establish a positive correlation between emotional intelligence skills and behavioural and organisational results and provide support for the working hypothesis formulated in the context of the present work.

The perception of EI presented by most respondents reinforces the importance of self-awareness of emotions, their self-regulation capacity and empathy, dimensions that are highlighted in Goleman's model (2006). Similarly, respondents highlight the relevance of adaptive, negotiating, and flexibility skills, which refers to the Bar-On model (2006) and the importance of social skills. Being the context of the IPSS was described by the interviewees as potentially generating moments that challenge the management of emotions, either because it is a context whose services are based on interpersonal relationships and care, or because it is a context where losses are constant, the dimension social media described by Bar-On (2006) finds support in this sector of activity.

Respondents perceive the relationship between emotional intelligence and job performance. From their perspective, EI has an impact on work performance at two levels. It has an impact on individual job performance, both at the task level and on the relationship with other employees and users, and on the performance of the organisation itself, as the performance of the organisation results largely from the performance of its employees. This perception is related to the multidimensional performance perspective presented by Borman and Motowidlo (1997).

The technical directors consider that emotions constitute an inseparable component of the person and have an impact on interpersonal relationships and professional performance, based on the skills of each employee and the situations that determine their expression in the workplace. Respondents highlight the importance of both personal competences at the EI level and the importance of environmental factors at the level of the results that corroborate the work performance models developed by Campbell (1990), Borman and Schmit (1997), and Pulakos *et al*. (2000) that reinforce the dynamic, multi-causal, and multidimensional nature of work performance.

For the interviewees, the EI seems to reveal a greater influence on the level of interpersonal relationships, either with other employees or with users, and the conflict management capacity is highlighted by its influence on professional performance. Within an eminently relational area of activity, such as PSSI, this capability is even more relevant given the high number of relational interactions. The higher the emotional maturity, the better will be the ability to develop strategies to deal with adversities and, therefore, the well-regulated emotional intelligence has greater benefit for the organisation, as contribute to the quality of service. These results are in line with the perspective presented by Salovey and Mayer (1990; 1997) who argue that people who have developed EI-related skills are better able to engage in adaptive behaviours and thus have the advantage of adapting to problem-solving.

No organisation has revealed evidence using employee candidate emotional intelligence rating scales within their recruitment and selection processes. It should be noted, however, that there is concern on the part of technical directors and organisations to evaluate some aspects that may relate to emotional intelligence, such as the ability to deal with one's loss, the ability to teamwork and interpersonal relationships, integrity, simplicity, the ability to understand the target group, flexibility, and adaptation, the ability to regulate emotions between personal and professional contexts and the ability to communicate.

Institutions that have the Organisational Performance Assessment (OPA) implemented adopt a qualitative approach, which aims to measure not only task-related aspects but also relational and other aspects, which may incorporate some dimensions and indicators of EI.

It´s also observable the existence of a set of non-formal strategies adopted by the organisations and their technical directors that, somehow, contribute to the management of employees' emotions. The mediation is developed essentially in situations where the unregulated expression of emotions is most evident. In these situations, mediation is developed both to provide support to employees in the regulation of emotions and the adoption of behaviour more appropriate to the work context, and to prevent the occurrence of undesirable situations from the work point of view that may hurt the operation of the service and the organisations themselves.

At the level of individual strategies, were identified a set of attitudes that seem to relate essentially to the personal and professional characteristics of the technical directors, and for which there seems to be no orientation from the framing organisation. Such strategies are based on the establishment of relationships of relational proximity with the employees, which provide a facilitating environment for mediation. Organisations foster an attitude of cooperation and facilitation in managing the emotions of their employees. From the set of emotion regulation strategies proposed by Ashforth and Humphrey (1995, in Cunha, 2007), there are two that stand out in the set of participating organisations, namely the compartmentalization and normalization of emotions. Generally, organisations recognize as inevitable the existence of situations that may lead to the expression of unwanted emotions, despite their efforts to prevent their occurrence.

Organisations, much through their technical directors, strive to adjust emotionality to contexts and use relational proximity and mediation to prevent occurrences or restore normality whenever undesirable situations exist. Formally, they do not establish a set of behavioural prescriptions but seek to develop strategies to guide the behaviour of employees themselves through an institutional culture of example and understanding.

The eminently relational context in which social economy organisations are developing reinforces the need to develop HRM practices focused on the promotion and management of emotional intelligence, for which respondents provide interesting suggestions on how to develop employee empowerment sessions “emotional gymnastics” teams that can contribute to reducing individual and organisational performance problems.

6. Conclusions

It is possible to conclude that organisations recognize the importance of EI and adopt informal practices to facilitate the management of their employees' emotions, although they need support to internally train themselves and therefore empower their employees. It is therefore believed that it may be relevant to develop capacity-building programs for organisations and their technical directors in the management of EI.

The research results have important implications for the management of social economy organisations by providing evidence of an impact relationship between EI and the work performance of employees and therefore the performance of the organisations themselves. Also highlights the importance of EI as a daily tool for employees and their organisations, essential to the nature of the care services to be provided.

Results invite reflection on the potential of developing the EI competencies of the employees and the organisations themselves. In the field of HRM, this research contributes by presenting a set of practical suggestions that can be adopted in terms of development of human resources processes. Also highlights the reflection on the importance of developing future training programs for organisations in managing the emotions of their employees, through the adoption of formal practices that facilitate the development of EI.

Being the manifestation of emotions inherent to the human condition, it is important to develop strategies to ensure proper expression, avoiding the negative effects of its manifestation in inappropriate contexts, which can impact the performance of employees and the performance of organisations.

As limitations present in the study, we highlight the small size of the sample, its limitation to a geographical context, and the inherent impossibility of generalizing the results. A larger sample may reinforce confidence in the results. However, despite the limitations in terms of sample size, the results obtained allow us to conclude that there are similar data among the different interviewees, which may suggest that the sample allowed for relative saturation.

In the future, it may be relevant to adopt a mixed methodology that allows qualitative and quantitative data to be crossed. Also noteworthy is the fact that this study is based on the perceptions of the technical directors and, as such, is not exempt from deviations of perception. Although the study is carried out in the national territory, where research related to EI in the context of social economy organisations is still scarce, which is a factor of innovation, it would be relevant to develop it in a more comprehensive territory, to verify the maintenance of the results obtained. Future studies may also allow EI to be explored in other regions and with other members of organisations.

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Antecedents and Outcomes of Employee Engagement in the Hospitality Sector: A Non-western Study

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Abstract: Both academics and practitioners increasingly emphasize employee engagement as a means to generate higher levels of job performance and organizational success. While the employee engagement literature is well established not much is known about employee engagement in the Arab region and engagement of the expatriate's workforce living in these countries is non-existent despite their importance and disproportionate number compared to the local population. This paper focused on the antecedents of employee engagement of expats residing in Kuwait. It examined the relationship between employee engagement, service climate, co-worker support, and psychological capital. On the second level of analysis, we assessed the relationship between employee engagement and organizational citizenship behavior, employee engagement and quit intention. We also examined the extent to which job satisfaction is impacted by OCB. Results are based on 536 cases. Two software statistical packages (SPSS 25.0 and AMOS 24.0) are used for the analyses. The SEM results revealed that service climate, co-worker support, and psychological capital were positively related to employee engagement. Furthermore, we found that employee engagement has a positive relationship with OCB. However, employee engagement does not have any significant relationship with quit intention. Finally, the results showed that OCB is negatively associated with quit intention. Seven hypotheses were tested and subsequent managerial implications are provided. The theoretical and practical implications of these findings provide detailed and novel insights.

Keywords: Employee engagement, quit intention, employee satisfaction, hospitality sector, non-western context

1. Introduction

In today's rapid changing economy and dynamic business environment, organizations are facing a highly competitive business situation. Organizations are challenged with new technologies, rapid innovation, economic uncertainties, fierce competition, high employee turnover, as well as demanding consumers whose preferences and expectations are continuously changing (Holston-Okae, 2017). These challenges demand the attention of managers to remain competitive (Sharma and Prasad, 2018). An important aspect of organizations that has a great influence on organizational performance and which has attracted the attention of both academics and practitioners is employee engagement (Agarwal, 2014).

Many tourism and hospitality companies of all sizes are finding increasingly difficult to recruit and retain employees. For example, recent findings from the US Bureau of Labor Statistics show that the leisure and hospitality sectors have some of the highest turnover rates of any industry. In 2017, leisure and hospitality recorded a turnover of 11.852 million jobs (or 73.8% annual total separations rates of the industry), of which 1.905 million (representing 82.0% annual separation rate) were attributed to the Arts, entertainment, and recreation, and 9.946 (or 72.5% annual total separation rate) were recorded for accommodation and food services related jobs. Employment turnover is measured by adding the sum of quits, layoffs and discharges, and other separations. Interestingly, annual total separations rates of the industry was 7.936 million (annual quits rate = 49.4%), of which 781 thousand were for Arts (annual quits rate = 33.6%), entertainment, and recreation, and 7.155 million for accommodation and food services sectors (annual quits rate = 52.1%). The annual quits rates are the highest in the turnover category compared to layoffs and discharge rates. The accommodation and food services rates are about four times higher than the layoffs and discharges rates (Bureau of Labor Statistics, 2018).

Retaining employees is a critical management issue (Walsh & Taylor, 2007), and engaging them is even more challenging (Kang, 2014). Employee engagement is associated with a positive, affective-motivational, work-related state of mind characterized by vigor, fulfillment, absorption, and dedication (Rothbard, 2001).

Expatriates constitute 49% of the total population of the Gulf Sates. The number of expatriate workers residing in the Gulf Cooperation Council (GCC) states is significantly higher compared to the local population. Saudi Arabia hosted the largest number of expatriates with a record of over 10 million, followed by the UAE and Kuwait. In the UAE, expatriates made up 88.5% of the total population. Expatriates constitute 89.9% of the total population of Qatar and 69.4% of that of Kuwait (National Institutes of Statistics, 2016) (Table 1). These numbers are composed of several different types of expatriates who, as employees, play different roles in their host countries.

This study examines the antecedents of employee engagement with a focus on expatriates from three work-related constructs: organizational level (service climate), group level (co-worker support), and individual level (psychological capital). Whereas service climate and psychological capital have been widely tested in research about the antecedents of employee engagement, co-worker support remains under-represented. The inclusion of co-worker support in this study emerged initially out of interviews conducted with 15 expatriates working in the hospitality sector. Our interviews paved the way for this quantitative paper.

The purpose of this paper was to empirically examine the antecedents of employee engagement in the hospitality sector (e.g., hotels, restaurants, coffee shops, airlines/airports) with Kuwait as a case study to shed light on engagement of expatriates in a context where the expatriate population overwhelmingly outnumbers the local population. The expatriate workforce of Kuwait constitutes about 70% of the total national population (Table 1). Kuwait was a convenient choice as the authors reside in Kuwait. The objective of the study was to develop and test a theoretical model that explains the interrelationships among seven constructs identified in the literature -psychological capital, service climate, co-worker support, organizational citizenship behavior, employee satisfaction, turnover intention, and to explore the mediating effects of expat employees' work engagement.

Results of this study were based on 536 questionnaires completed by expatriates working in the hospitality sector in Kuwait. It is our hope that the study findings would stimulate further research on employee engagement in this part of the world and with the expatriate workforce as a focus. Research focused on expatriate employees residing in an Oil-rich Arab context would not only make a theoretical contribution, but also provide management in hospitality with an understanding of the effects of engagement and of the practical tools that can stimulate employee engagement in this particular work context and living environment.

2. Literature review

2.1 Employee engagement

Employee engagement can be defined as "the level of commitment, enthusiasm, and involvement an employee has towards his work which can be deliberately seen in his/ her loyalty towards the work" (Sharma and Singh, 2018). Hewitt and Associates (2004) linked employee engagement with employee commitment to the success of the organization, their passion for their work, and energy in the workplace. They argued, engaged employees "stay, say, and strive-stay with and are committed to the organization, say positive things about their workplace, and strive to go above and beyond to deliver extraordinary work".

Gubman (2004) argued that employee engagement goes beyond employee satisfaction and performance. He links employee engagement to an intensified emotional state that leads to organizational loyalty and organization citizenship behavior.

Engaged employees within an organization provide a competitive advantage to organizations because of their performance, positive word-of-mouth (Joo and Mclean, 2006), willing to align themselves with organizations' strategies, mission, and values (Soni and Mehta, 2018), trust in and commitment to the organization (Baumruk, 2004).

There is also empirical evidence for the relationship between employee engagement and employee wellbeing (Hansen, Byrne & Kiersch, 2014). Marlatt (2002) supported that employee engagement reduces despair, anxiety, and enhances psychological wellbeing, whereas disengaged employees are likely to witness increased psychological distress.

2.2 Antecedents of employee engagement

The antecedents of employee engagement have attracted the attention of academics and researchers in the past few years. Finding out and understanding the factors that enhance employee engagement can lead to employee and management synergy. Many factors were found to contribute to employee engagement. For example, Gangai and Agrawal (2017) examined the relationship between perceived leadership styles and employee engagement and found that the two have a highly significant relationship. Their results also supported that transformational leadership had a stronger relationship with employee engagement than transactional leadership. Goswami and Goswami and Goswani (2017) also showed empirical evidence that trust in the leader has a positive influence on employee engagement. Jain and Ansari (2018) examined the role of perceived organizational politics on employee engagement and concluded that perceived negative organizational politics negatively affects work and organizational engagement. Goswami and Goswami's (2017) research supports the hypothesis that workplace inclusion is positively related to employee engagement. Boon et al. (2011) identified four Human Resources Management practices namely, teamwork, empowerment, reward, and communication. Several studies have also indicated the relationship between CSR and employee engagement (Soni and Mehtan, 2018).

According to Vazirani (2007) important drivers that make the employee engaged include, career development, leadership, empowerment, pay and benefits, health and safety, communication, and job satisfaction. Bhalera (2013) reported that workplace culture, work-life balance, policies and practices are major drivers of employee engagement. Saks (2006) and Balain and Sparrow (2009) indicated that perceived organizational support, perceived supervisor support, and organizational justice are important antecedents of employee engagement. According to Ram and Prabhaka (2011), employee engagement is affected by job characteristics, intrinsic and extrinsic rewards, perceived supervisor support, perceptions of procedural justice, and perceptions of distributive justice. Kaur (2017) found that the most identified antecedents in the literature across countries and industries are organizational communication, organizational culture, rewards, remuneration and recognition, employee development, job satisfaction, fair feedback and benefits/compensation, mentoring, work life balance, relationships with peers, workplace relationships, job characteristics, career development, organizational commitment, HRM practices, transformational leadership, and personality traits, etc.

A systematic literature review of employee engagement, its definitions, antecedents, and outcomes undertaken by Kaur (2017) indicated that employee engagement is multi-faceted, dependent on the country (e.g., Canada, Iran, India, Jordan, Yemen, Uganda, Malaysia, Pakistan, Slovenia, South Africa, Ghana, Kenya), and on the industry under investigation (e.g., retail, education, banking, telecommunication, hotels, service, hospitals, government, insurance, airlines).

Kaur (2017)'s extensive literature review, which considered empirical research published between 1971-2016, clearly suggests that the antecedents of employee engagement are contextual. This leads to the conclusion that managers need to be cautious when using, interpreting, and applying the results of other studies to their respective company. The study "highlights country-wise variation between antecedents and employee engagement (…) and showcases that every work setting has a different approach to drive engagement among employees" (Kaur, 2017). Similarly, Nienaber, Martins, Randburg' (2016) edited book "Employee Engagement in a South African Context" as the title suggests clearly argued that employee engagement can be better understood when it is country and industry specific.

2.3 Employee engagement in hospitality

Only a handful of studies focused on employee engagement in hospitality (Kang, 2014) representing a handful of countries, the majority of which is US-based. Kang's study "represents one of the first to develop and test a comprehensive model of employee engagement based on positive organizational behavior" (p. iii). Based on a sample of frontline hospitality employees in Norway, Slatten and Mehmetoglu (2011) concluded that employee engagement is closely linked to the employee's innovative behavior at work, and that "perception of role benefit, job autonomy, and strategic attention were all significantly related to greater employee engagement".

Focusing on frontline hotel employees and their managers in Romania, Karatepe (2013) proposed and tested a research model that investigates whether work engagement functions as a mediator of the effects of high-performance work practices on job performance and extra-role customer service, and found that work engagement acts as a full mediator of the effects of HPWPs on job performance and extra-role customer service. He supported that HPWPs –i.e., training, empowerment, and rewards- predict work engagement. The purpose of Kang's (2014) doctoral study was to develop and test a theoretical model that explains the interrelationships among six constructs -psychological capital, service climate, work engagement, organizational citizenship behavior, employee satisfaction, and turnover intention, and to explore the mediating effects of employee engagement.

Kang (2014) found positive and statistically significant correlations between psychological capital and employee engagement, and between service climate and employee engagement. Employee satisfaction was positively correlated with employee satisfaction, which in turn negatively affect employee turnover. Results of a study about frontline staff in five-star hotels in Seol, Korea, conducted by Paek et al. (2015), suggested that work engagement partially mediates the effect of employee psychological capital on job satisfaction and affective organizational commitment. The authors concluded that frontline employees with high psychological capital are more engaged with their work and more likely to display job satisfaction and affective organizational commitment (Paek et al, 2014). Huertas-Valdiva, Llorens-Montes, and Ruiz-Moreno's (2017) study based on a Spanish sample concluded that both empowering leadership and psychological empowerment mediate the engagement of employees working in hospitality in Spain. A study in the US by Kang and Busser (2018) support that psychological capital and service climate positively mediate employee engagement, and concluded that the two antecedents were more important to engage managers than frontline employees.

3. Methods

3.1 Data collection and sample

The data for this study was collected during the month of March 2018 from employees working at various service companies in Kuwait. The access to the target employees was facilitated by the MBA students who were working in those companies. The questionnaire was distributed to participants by the MBA students along with a letter explaining the purpose of the study and the structure of the survey. Participation was voluntary, and the respondents were assured of the confidentiality of their responses. Respondents were asked to rate the degree of agreement on each statement of the survey, from strongly agree (5) to strongly disagree (1).

A total of 693 surveys were distributed and 536 complete surveys were received and used for the data analysis, representing a response rate of 77.34%.

3.2 Measurement

All constructs in this research were operationalized using reliable and valid scales previously established in previous research.

Service Climate. We measured this variable with six items developed by He et al., (2010). It includes items such as: "My organization has clear ideas about customers and their needs", "High quality service is emphasized as the best way to keep customers coming back to my organization".

Psychological Capital. We used a four-item scale adapted from Paek et al., (2015) to measure the construct of psychological capital. Due to a poor loading, one item from the four-item scale was removed from the analysis. Example of items: "I always look on the bright side of things regarding my job".

Co-worker support. Co-worker support was evaluated with a scale of five items developed by Hon (2013) such as: "coworkers help each other out if someone falls behind in his/her work".

Employee Engagement. The scale used to measure employee engagement was a four-item measure adapted from Schaufeli et al., (2002) such as: "I feel energized at work".

Organizational Citizenship Behavior (OCB). To measure OCB, we used a four-item scale adapted from a scale developed by Lee and Allen (2002) such as: "I defend the organization when other employees criticize it".

Job Satisfaction. We measured this construct using Tsui et al.'s (1992) five-item measure such as: "I am satisfied the nature of the work I perform".

Quit intention. To measure quit intention, we used a measure of three items developed by Konovsky and Cropanzano (1991) such as: "I frequently think about quitting my job at this organization".

Control variables. We controlled our results by including four control variables namely, ethnicity, education level, seniority, and rank.

4. Analysis and results

We used a two-stage methodology to analyze the collected data. In the first stage, we assessed the reliability and validity of the constructs used in this research. In the second stage, we tested the causal relationships using the structural equation modeling (SEM). Two software packages (SPSS 25.0 and AMOS 24.0) were used to analyze the data.

4.1 Measurement model assessment

We assessed in this sub-section the reliability and validity of the various scales we used in this research. To check the scales reliability, we first ran a principal components analysis with Varimax rotation and extracted six factors. The six factors explain together 68.354% of the total variance. All item loadings were greater than 0.60, supporting uni-dimensionality (i.e., degree to which items load significantly on their respective constructs), with the exception of PsyCap 2, PsyCap 3, and JS2. We kept these three items in our analysis due to their significant loadings.

We also checked constructs' reliability using two other indexes: Cronbach's alpha (α) and composite reliability (CR). All values of the two indexes exceeded the recommended value of 0.7. Thus, the constructs are considered sufficiently reliable.

4.1.1 Validity.

We checked the two types of validity: convergent validity and discriminant validity. To assess the convergent validity, we used two statistical indexes AVE and KMO. For both values greater than or equal to 0.50 are considered as satisfactory (Lucian et al., 2008). All the AVE and KMO indexes are superior to the minimum value of 0.50 (See Table 2). Therefore, the conditions for convergent validity are fulfilled of all the variables used in our research.

To evaluate the discriminant validity - the degree to which measures of any two variables are empirically distinct, we used a model fit comparison approach. We run and compare between two confirmatory factor analysis (CFA) models, the first one is a constrained model with all factor correlations fixed at 1.0, and the second one is an unconstrained model. The CFA unconstrained model revealed significantly better model fit (CFI = 0.902, χ^2/df = 3.615, TLI = 0.888, NFI = 0.869, and RMSEA = 0.070) than the CFA constrained model (CFI = 0.837, χ^2/df = 5.106, TLI = 0.825, NFI = 0.806, and RMSEA = 0.088). Thus, the constructs were discriminant of one another.

4.2 Structural model assessment

4.2.1 Descriptive statistics and correlations.

Table 1 details the descriptive statistics and correlations among the independent and dependent variables. As shown, the three independent variables (Climate service, psychological capital, and co-worker support) are positively correlated with employee engagement (r = 0.589, $p < 0.01$; r = 0.624, $p < 0.01$, 0.643, $p < 0.01$, respectively). In addition, employee engagement is positively correlated with OCB and job satisfaction (r = 0.633, $p < 0.01$, 0.666, $p < 0.01$, respectively) and negatively with quitting intention (r = -0.263, $p < 0.01$). Lastly, job satisfaction is positively correlated with OCB (r = 0.600, $p < 0.01$) and negatively with quitting intention (r = -0.242, $p < 0.01$)

Table 1: Descriptive statistics and correlations

N	Construct	Means	Std. Dev.	1	2	3	4	5	6	7
1	Service climate	3.946	.781	1	.518**	.670**	.589**	.576**	.498**	-.217**
2	Co-worker support	3.905	.816		1	.626**	.624**	.501**	.582**	-.227**
3	Psychological capital	3.890	.846			1	.643**	.577**	.559**	-.219**
4	Employee engagement	3.984	.810				1	.633**	.666**	-.263**
5	OCB	3.906	.801					1	.600**	-.249**
6	Job satisfaction	3.774	.770						1	-.242**
7	Quitting intention	2.973	1.109							1

**. Correlation is significant at the 0.01 level (2-tailed).

4.2.2 Hypothesis testing

The different hypotheses derived from the conceptual model were tested using the SEM technique in AMOS 24.0. To assess the model fit, we used the following statistical indices: the comparative fit index (CFI), χ2/degrees of freedom (df), Tucker–Lewis index (TLI), normed fit index (NFI), and root mean square of approximation (RMSEA) (e.g. Hair et al., 1998).

We run one single model in AMOS that examines the direct relationships. The model estimation produced the following statistical index values: CFI = 0.925, χ^2/df = 2.570, TLI = 0.915, NFI = 0.883, and RMSEA = 0.054, indicating a good model fit with the data (Gefen et al. 2000; Hair et al. 2006). The results of the structural relationships are depicted in Figure 1. The coefficients are standardized and the values in brackets are the T of Student.

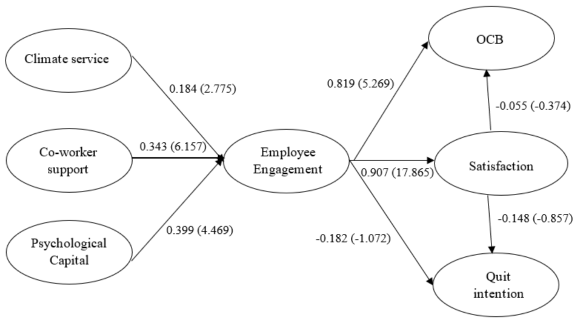

Figure 1: Estimated research model

As depicted in Figure 1, climate service has a positive and significant relationship with employee engagement (β = 0.184, T = 2.775, *p* = 0.006)[1]. Thus, H1 is accepted. As we predicted, co-worker support relates positively and significantly to employee engagement (β = 0.343, T = 6.157, *p* = 0.000) leading to accept H2. Also, psychological capital has a positive and significant relationship with employee engagement (β = 0.399, T = 4.469, *p* = 0.000), in support of H3. As suggested in H4, employee engagement relates positively and significantly to OCB (β = 0.819, T = 5.269, *p* = 0.000). Also, we found that employee engagement has a positive and significant effect on job satisfaction (β = 0.907, T = 17.865, *p* = 0.000), in support of H 5. However, employee engagement does not have any impact on quit intention (β = -0.182, T = -1.072, *p* = 0.284), so we reject H6. Finally, inconsistent with our expectations, job satisfaction does not have any significant impact on either OCB nor on quit intention (β = -0.055, T = -0.374, *p* = 0.708; β = -0.148, T = -0.857, *p* = 0.392; respectively), rejecting H7 and H8.

We also examined the potential effects of four control variables (Ethnicity, seniority, education level, and rank). The results are depicted in Table 3. We found that ethnicity, seniority, and rank have significant controlling effects on employee engagement (β = -0.063, T = -2.002, *p* = 0.045; β = 0.098, T = 3.077, *p* = 0.002; β = 0.132, T = 4.134, *p* = 0.000; respectively). Furthermore, education level exerts significant controlling effects on both OCB and quit intention (β = 0.172, T = 4.588, *p* = 0.000; β = -0.101, T = -2.302, *p* = 0.021; respectively). However, all other controlling effects were not significant.

Table 2: Results of the controlling effects

Path specified	Path Coefficient β	t-Value	*p*-Value
Ethnicity – Employee engagement	-0.063	-2.002	0.045
Ethnicity – OCB	0.068	1.822	0.068
Ethnicity – Job satisfaction	0.060	1.761	0.078
Ethnicity – Quit intention	-0.020	-0.453	0.651
Seniority – Employee engagement	0.098	3.077	0.002
Seniority – OCB	-0.035	-0.937	0.349
Seniority – Job satisfaction	-0.049	-1.450	0.147
Seniority – Quit intention	0.053	1.196	0.232
Education level – Employee engagement	-0.030	-0.950	0.342

[1] Here, β is the regression coefficient, T indicates the t-value (A relationship is significant if the t-value is greater than 1.96) and P indicates the p-value.

Path specified	Path Coefficient β	t-Value	*p*-Value
Education level – OCB	0.172	4.588	0.000
Education level – Job satisfaction	0.016	0.475	0.635
Education level – Quit intention	-0.101	-2.302	0.021
Rank – Employee engagement	0.132	4.134	0.000
Rank – OCB	0.038	1.051	0.293
Rank – Job satisfaction	0.017	0.503	0.615
Rank – Quit intention	0.050	1.132	0.258

5. Discussion (In progress)

5.1 Main findings

Despite the acclaimed importance of employee engagement to the success of an organization, only a few empirical studies examined the antecedents of employee engagement in hospitality (Saks, 2006; Kim et al., 2009; Kang and Busser, 2018). Employee engagement in an Arab context is non-existent. Employee engagement with a focus on the expatriate workforce is also not represented in the general literature. This paper tried to fill these three gaps by focusing on the engagement of expats working in hospitality in a GCC country wherein the number of expats is three times bigger than that of the national population. Furthermore, because the drivers of employee engagement are country, industry, and organization-specific, it becomes important for managers to continuously monitor the engagement of their workforce (Slatten and Mehmetoglu, 2011).

In this study, we examined the effect that service climate, co-worker support, and employee psychological capital have on employee engagement, and also the effect that employee engagement has on OCB and intention to quit. Whereas service climate, co-worker support, and psychological capital were positively and statistically correlated with employee engagement, no relationship was found between quit intention and employee engagement and OCB and employee engagement. These results support the importance of for organizations to have a good service climate, to encourage co-worker support, and to enhance the psychological capital of their employees. On the other hand, the fact that neither quit intention nor OCB is directly linked to employee engagement but is moderated by employee satisfaction in that higher job satisfaction decreases employee intention to quit is a very important finding.

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