Sustainable Competitive Advantage through Embedding Intellectual Capital in the Business Plan and Strategy

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Abstract: Purpose: The purpose of this paper is to present a comprehensive model of embedding intellectual capital in the business plan and strategy. The model aims to increase the sustainable performance of companies and ensure their competitive advantage, suggesting a methodology for managing intellectual capital. A case study of a Macedonian company, where the model is piloted, is presented. Design/methodology/approach: Qualitative research in a form of interviews among managers and a case study of a Macedonian company was used to obtain data about the effects of the piloted model. The transformational process from a traditional to a learning organization started in 2014, with measurement intellectual capital, followed in the next years with measures and activities for managing intellectual capital and integrating it with the business strategy and plan. Findings: The findings confirmed the positive effects of intellectual capital on the company's performance. In the period of 2014-2022 a number of strategic decisions, innovative actions and structural measures have been developed and implemented. For each capital (human, organisational, structural, relational, process and innovation) activities and indicators were specially designed matching the strategic goals, the organisational structure and the available resources. Research limitations/implications: This comprehensive model of embedding intellectual capital in the business strategy for sustainable competitive advantage explored in this paper is piloted for the first time. More examples and studies like this are needed to follow the effects in different companies. Our recommendation is to replicate the research and compare the analyses with different companies, preferably in other countries as well. Practical implications: This study is expected to increase the motivation of other companies to manage intellectual capital and increase their business sustainability and competitive advantage. Originality/value: The presented model has double value – contributing to research and practice in the field of intellectual capital and sustainability management.

Keywords: Sustainable Management, Intellectual Capital, Competitive Advantage, Organisational Development, Business Strategy

1. Introduction

In recent years, the concept of sustainable development has been increasingly addressed by the business sector (Hahn and Scheermesser, 2006).

In the current business environment, more and more organisations see the need to look beyond the traditional concerns of running a business for immediate profit and to begin to deal with factors in the greater world that impinge on their medium to long-term success (Fairfield et al., 2011). Companies must change their strategy from a workforce-based business to a knowledge-based business. The reason for this is the recognition that knowledge is essential component of the business and seen as sustainable strategic resource to gain and maintain a competitive advantage (Muslih et al., 2021). Nowadays, it is widely recognised that organisations need to act in a socially responsible way in order to contribute to the social well-being and competitiveness as well as the financial success of the firm (Moneva and Ortas, 2010).

One of the most used criteria to evaluate the successful functioning of an organisation is its effectiveness. Effectiveness, which involves doing the right things, at the right time, with the right quality etc., can be defined as the ratio between actual output and expected output (Sink, et al., 1989).

Efficiency, however, refers to productivity ratio and reflects how well the resources are utilised to accomplish the result (Sumanth, 1994). Organisational effectiveness is discussed by Zheng et al, (2010) in combination with strategy and knowledge management (KM), where they use the definition the degree to which an organisation realizes its goals. 'Performance' is the umbrella term of excellence and includes profitability and productivity as well as other non-cost factors such as quality, speed, delivery and flexibility (Tangen, 2005).

The concept of organisational performance in literature refers normally to financial aspects such as profit, return on assets, return on equity, and economic value added (Kaplan, 1983). While financial measures of performance are among the most widely used by businesses, many researchers have criticized the short-term thinking and emphasize the importance of the non-financial components of performance measurement (Otley, 1999). Consequently, as a response to a relatively narrow point of view of performance measuring, a more balanced approaches of performance measurement systems to include financial and non-financial performance measures, as well as explaining cause-and-effect relationships between the various measures, and providing better insight in terms of links between performance measurement systems and organisation's strategy have been proposed (Neely and Adams, 2000).

Sustainability-oriented performance and the competitive advantage of an organisation is gained when an organisation has human resources that cannot be imitated or replaced by its market rivals. In order to survive and fight for competitive advantage, every organisation needs to use methods that are different from those of their competition; therefore, any organisation should find rare resources that are impossible to imitate, copy, or replace. McElroy (2006) states that organisations that strive to be sustainable need two things: knowledge of its impacts on the world and the capacity to learn and innovate.

The global transformation of the economy, driven by digital transformation and sustainability challenges, is placing its focus on the evaluation of companies' intangible assets. Thus, if the report of those intangible assets, namely intellectual capital (IC) management, is endowed with credible metrics, recognised, and accepted, it can work as a guarantee, ensuring the reliability and sustainability of an organisation (Matos et al., 2011). Organisations are positioning to incorporate different performance measures integrating them in their organisational goals and strategy. This also implies a change in their business models and management systems. Nowadays, the trend is toward holistic sustainability management systems, methods and tools.

2. Literature review

2.1 Knowledge Management and Intellectual Capital in Companies

Hadders (2017) argues that knowledge is among the key elements in making a business perform in a more sustainable way. To perform sustainably, organisations need the knowledge "how" to pursue this desire. Therefore, it is necessary to develop and implement knowledge management systems and sustainable business models. According to the knowledge-based view (Grant, 1996), the knowledge located in various places within the firms, such as employees, organisational culture, routines, policies, systems, and documents (Alegre et al., 2013), is the main asset used to reach and sustain competitive advantages, since it is unique and hard to replicate and replace. Consequently, the enterprise must implement knowledge management practices able to value and develop the knowledge resource (Beijerse, 2000; Donate and Pablo, 2015). This makes it easier to understand how to manage people and processes, how to achieve growth and competitive processes, and how to organise new products and technologies (West and Noel, 2009; Cardoni et al., 2020).

Intellectual capital and knowledge management are the basic building blocks (cornerstones) of an effective 21st-century management model. The ability of an organization to effectively nurture, capture, leverage, and share its knowledge resources become the key that provides an enterprise with its strategic power advantage in the world. When an organsation develops its ability to build, access and leverage its knowledge resources it is creating its knowledge advantage. In an era of knowledge economics, KM and IC have emerged as major issues that managers must deal with, if the organizations want maintain their competitive advantage (Cabrita, Cruz-Machado and Matos, 2015). With proper management of intellectual property and knowledge, companies will be able to act intelligently, achieving sustainable competitiveness. Designing and articulating a successful competitive strategy is a never-ending task. In this context, the IC management plays an important role in influencing the heterogeneity of companies and their sustainable competitive advantage. (Matos et al., 2020)

Knowledge management and intellectual capital are believed to influence each other, and the relationship between the two constructs is of vital importance to organisational effectiveness and efficiency (Seleim and Khalil, 2011). Intellectual capital is a major player and a foundation for sustainable competitiveness and efficiency. Human capital, structural capital, and relational capital can all be explored in the light of sustainability (Januškaitė and Užienė, 2018).

More than a half-century ago, Penrose (1959) argued that knowledge could be used to explain firm's performance and growth. The role of knowledge (as compared with natural resources, physical capital and low skill labour has taken on greater importance in knowledge-based economies (Taneva-Veshoska et al., 2015). Investments in knowledge and innovation are very important for productivity growth. These investments lead to creating new knowledge, new technologies, new products and services, ensuring more jobs and contributing to increased welfare (Taneva-Veshoska et al., 2015). An effective and efficient use of the unique tangible and intangible assets within firms are important sources of competitive advantage (Peteraf, 1993; Doz, 1996). Knowledge management is a relatively young discipline that is considered an effective source for determining the strategic direction of and developing competitive advantages within a company (Gaviria-Marin et al., 2019).

The knowledge-based organisation paradigm emphasizes that the differences in firms' performances are attributed to differences in the rules of creating, developing, distributing, and using knowledge. Firms need to be able to adapt instantly and accurately by exploiting existing knowledge in order to enhance their competitive advantage (Anand and Walsh, 2020).

The transition from traditional management models towards sustainable management models that not simply measure certain business components, but incorporate knowledge will provide organisations with an adequate tool in the process towards sustainability.

Knowledge and intellectual capital are viewed as the most important source for achieving sustainable competitive advantages (Drucker, 1993; Benevene and Cortini, 2010). When knowledge management activities are used to develop and maintain intellectual capital, it becomes a resource of sustainable competitive advantage (Seleim and Khalil, 2007). On the other hand, when intellectual capital is properly utilized and exploited, it increases the absorptive capacity of the organisation, which, in turn, facilitates its knowledge management processes.

3. Methodology

In order to understand in more depth the topic "sustainable competitive advantage" and explore the opportunities companies have for embedding intellectual capital in the business plan and strategy, case study method was used.

Qualitative research in a form of interviews among managers and a case study of a Macedonian company was used to obtain data about the effects of the piloted model. The transformational process from a traditional to a learning organization started in 2014, with measurement intellectual capital, followed in the next years with measures and activities for managing intellectual capital and integrating it with the business strategy and plan. The research aimed to find answers whether there are positive effects of intellectual capital on the company's performance.

3.1 Embedding Intellectual Capital in the Business Plan and Strategy - Case Study of Macedonian Company

The initiatives for investments in knowledge, R&D&I, especially for the business sector barely exist. N. Macedonia spends only 0.22% of its GDP on R&D which is one of the lowest percentages in Europe (where the government is the biggest contributor to total R&D expenditures). One of the few private companies that invest in knowledge, R&D&I in N. Macedonia is the Civil Engineering Institute MACEDONIA JSC SKOPJE (CEIM).

CEIM is a private company established in 1975 in Skopje, N. Macedonia, active in the construction industry. CEIM offers services in all areas of construction: planning, research, design, quality control, surveillance and construction. CEIM operates on the market in N. Macedonia, and through its subsidiaries regionally in: Serbia, B&H, Albania, Montenegro and Kosovo.

In the last 8 years CEIM successfully transformed itself into a learning organisation, by setting up system for KM and IC. This is a very unique and rare case happening in N. Macedonia, a developing country and a modest innovator (European Innovation Scoreboard, 2020).

The CEIM strategy is designed with an orientation towards sustainable development and knowledge-based economy, improving the R&D activities and gain applied knowledge and competencies. The decision in 2014 to transform the company from a traditional organisation to a learning organisation, which learns and manages its knowledge and IC was initiated by the Supervisory Board of CEIM. The decision was based on the assessed needs

and life cycle stage, as well as the challenges of the environment (political and economic) and the vision for the future.

The need for implementing all the KM/IC activities were:

- more complex working conditions and aggravating factors and risks, both in the environment and in the constitution of the company
- the trend of encouraging development, research and innovation, as the main drivers of development in the modern global economy and the main strategic commitment of the European Union
- rapid technological development, rapid obsolescence of technologies and technological skills, the need for long-term planning to upgrade knowledge, which will have a longer use value
- competitiveness in the market, based on modern ways of corporate organization, planning, management, operations and marketing
- phase of the life cycle in which the company is - reaching full maturity, which imposes the need to pursue goals and directions that will continue the upward trend of development, and will avoid stagnation and decline
- the company's tendency to expand more intensively on foreign markets

The company's vision is supported by constantly upgraded knowledge and innovation, applied for continuous improvement of services and participation in modern trends in science, technology and economy. Such a vision implies the development of the company not only as an important business actor in the economy, especially in the construction sector in the country and the region, but also in the direction of: application of the latest knowledge and technological achievements in operation, in accordance with national and European trends for sustainable development, use of many years of experience and knowledge in the service of the progress of science, economy and society.

In the period of 2014-2022 a number of strategic decisions, innovative actions, structural measures, and organisational changes have been developed and implemented, based on the adopted strategies for investment and development of the IC in CEIM.

Several aspects were observed before starting to build an innovative model for transformation toward achieving sustainable performance and KM and IC:

- Stage of the life cycle - the need to continue the trend of an upward line of development, and prevent stagnation and decline;
- Complex operating conditions and risks;
- Rapid technological development; and
- Necessity for long-term planning, upgrading the knowledge and organisational memory.

In the process of building an innovative model for transformation and development of learning organisations towards sustainable performance, through KM and IC a large number of analyses were conducted to assess the current situation in CEIM, and then a series of measures and activities were developed and implemented in order to improve resources in each capital and successfully manage knowledge toward reaching the goal of becoming learning organisation.
A number of documents (strategies, rulebooks, manuals and guidelines) have been created and adopted, that serve as a basis and support for activities and support the transformation. All implemented activities are implemented in accordance with CEIM Strategies:

- Development strategy,
- Strategy for human resources management, and
- Strategy for KM.

The summary of the strategic goals of these documents are presented in Table 1.

Table 1: CEIM Strategic documents and their objectives

Development strategy	Strategy for human resources management	Strategy for knowledge management
Building sustainable brand, maintaining reputation in the business and social spheres	Improving employee motivation and introducing new motivational techniques	Detection (mapping) of knowledge in CEIM (basic level, advanced level, specific knowledge, research potential)
Maintaining a competitive advantage in the domestic market	Performance management	
Expanding the operations in markets in other countries	Development of managerial and leadership skills of the Company's management staff	Lack or need for certain knowledge (training plan and professional development
Improving financial performance	Improving organisational culture	
Advancing existing services	Hiring experienced staff, experts in a specific field	Sharing, creating and retaining knowledge
Development of new services	Continuous development of staff	Organisational memory
Strengthening the capacities and nurturing the HR	Identification of competencies for each job position	Managing external knowledge networks and infrastructure
Continuity in investments	Talent management and career planning	

The most relevant strategic document for KM and IC is the KM strategy. The goal of the KM strategy is to create long-term value for CEIM by focusing on knowledge and building the necessary capacity to maintain its competitive advantage in the country and the region. Furthermore, the strategy supports maintaining the features of a learning organisation, adapting to the needs and challenges in its environment.

Embeding intellectual capital in the business plan and strategy meant that for each capital (human, organisational, structural, relational, process and innovation) activities and indicators were specially designed matching the strategic goals, the organisational structure and the available resources. Examples for each strategic goal and its relation to different capitals and suitable indicators are presented in Table 2.

Table 2: Embeding intellectual capital in CEIM Strategy

Development strategy	**Activities**	**Capital**	**Indicators**
Building sustainable brand, maintaining reputation in the business and social spheres	-Measuring client satisfaction and loyalty -Nurturing good relations with stakeholders -Implementing sustainability principles -Positioning and promoting the company as attractive company for young and talented engineers	Relational Organisational	-Assessed satisfaction based on service, quality, collaboration, etc. -Number of meeting, frequency and type of communication, established collaboration -CSR plan and activities developed and implemented -Presentations for students, Number of internships, Promotion of career fairs, Collaboration with universities and professors, etc.
Maintaining a competitive advantage in the domestic market	-Assessment of the quality of services offered -Market analysis offering competitive prices -Offering complex project services hard to copy -Taking initiatives for changes in the laws or policies in the civil engineering sector	Process Relational Structural Innovation	-High standards for quality and project management -Digitalisation and centralised monitoring of project management -Database for costs and comparison with prices from other companies -Number of complex, long-term projects providing strategic consultancy services -Number of initiatives and proposals submitted -Memberships and networking in Chambers and Professional Associations
Expanding the operations in markets in other countries	-Market analysis, competitors, potential investments -Choice of most suitable forms	Relational	-Detailed analysis -List of competitors -List of potential partners

Development strategy	Activities	Capital	Indicators
	of promotion, networking, finding partners		-Analysis of planned investments -Plan of promotion -Number of events and new relations established
Improving financial performance	-Financial analysis of CEIM services -Analysis of projects based on their profitability, size, complexity, etc.	Financial	-Profitability of each service offered by the Departments -Ranking projects based on revenue and profitability
Advancing existing services	-Development of unique services -Continuous improvement of the current services with training programs -Transfer of knowledge and technology	Structural Human Innovation	-Number of improved services -Investments in training -Established partnerships with universities -Number of new research projects -Number of EU funded projects
Development of new services	-Implementation of Program for technological development -Enhancing the research potential of CEIM employees -Collaboration activities with academia	Innovation Human	-Number of joint research projects -Number of employees completing MSc and PhD studies -Number of EU funded projects for research and education -Number and quality of collaboration established with universities and research institutes
Strengthening the capacities and nurturing the HR	-Strategic management of knowledge -Training program -Career development of employees -Talent management program	Human Innovation Process	-Investments done in education -Employees progressing in their career -Effective implementation of mentorship program -Digitalisation of organisational memory -Employee engagement
Continuity in investments	-Investment program in research, education, infrastructure	Process Human Innovation	-Number of research projects funded by the company -Implemented training program and improved competencies

This table presents only selection of the developed activities and indicators, and related capital. Embeding the intellectual capital and its components was done in the business plan and strategy, having in mind the organisational structure and expected outputs form each work position.

Additionally, the developed system was reflected in the digitalisation system, currently in development which will integrate all the indicators and would support the management of knowledge and intellectual capital in the company. Monitoring the progress of managing knowledge and intellectual capital in CEIM and measuring effects and benefits from this transformation process will be done during this and next year continiously using several quantitative and qualitative methods. It is planned all the components of IC to be embedded in the business plan, and the indicators to be part of the action plan and the reports done annually. With this besides the financial reports the company will start creating and publishing a non-financial report on the performance of the company.

4. Conclusion

This case study serves as proof and inspiration for companies, providing evidence of the positive effects on sustainable performance from managing intellectual capital (IC) and knowledge. The research contributes to the field by offering new findings and proposing a new model for enhancing company's sustainability-oriented performance and innovation. The survey conducted in Macedonian company contributes to the knowledge about business models and sustainable management in developing countries.

Building an innovative model for transformation and development of learning organisation is far from easy and smooth. One important notion is that this is a long-term process and the benefits from it can be observed after few years. CEIM's approach towards building a model for transformation and development of learning organisation, is reflected through their attitudes toward the employees, enabling and nurturing work environment and organisational climate which ensures employees' engagement, motivation, and pursue for professional growth.

Effects and benefits from KM and IC in CEIM are multiple:

- the company's knowledge is properly stored, visible, used, and has an added value,
- new knowledge is co-created in joint research projects with Universities with applied focus relevant to the business strategy of the company,
- knowledge is shared with the mentorship and internship program,
- investments in IC positively influence the achievement of its business goals,
- organisational services and processes are upgraded or renewed, and
- the productivity and the organisational performance is improved and sustainability-oriented.

The results from the qualitative and quantitative analysis (Scandia Navigator, VAIC, cost-benefit, correlation) confirmed the positive effects of KM and IC have on the company's performance. Results showed that this process of KM and IC is enhancing competitiveness of the company and will bring even greater results on long term.

4.1 Implications for research

This research design is quite viable in opening new directions for future research and practical implications for companies in developing countries. This specific transformation toward learning organisation and strategic management of knowledge and intellectual capital explored in this paper is not exploited often in developing countries. More examples and studies like this are needed to replicate the specific model and make strong recommendations. This study is expected to increase the motivation of other companies to invest and manage knowledge and intellectual capital activities and enable sustainability-oriented performance of their company.

4.2 Implications for practice

The implications of the findings presented are important from a practical perspective, as the information can assist managers to recognize the relevance of the topic and its importance, and support organisation development toward sustainability-oriented performance. The experience of the Macedonian company and its transformation, the effects and benefits obtained are of great importance for developing countries and industry. The positive effect for other companies is that the developed and implemented actions for managing and measuring knowledge and intellectual capital can be replicated and further used by other organisation, motivated to enhance their development and sustainability-oriented performance. This transformation model from traditional to learning organisation, proposes a set of actions and measures, has innovative approach to follow the progress, using quantitative and qualitative methods. Additionally, the investments in knowledge and intellectual capital are directly linked to increasing the potential of human capital and the competitive advantage of the organisation. It can be expected that this Macedonian company will serve as an inspiration and role model for other companies in developing countries to follow this example, replicate, and benefit from managing knowledge and intellectual capital.

This case study has a wider impact on society level as well, contributing to building knowledge-based economy, economic growth and development in developing countries. The knowledge-based economy places great importance on the diffusion and use of information and knowledge as well as its creation through developing knowledge networks. The determinants of success of enterprises, and of national economies as a whole, is ever more reliant upon their effectiveness in gathering and utilizing knowledge. This impact can be strengthened and long lasting, if government, professional bodies and associations support this process of managing knowledge and intellectual capital on micro level and create incentives for companies who work in a sustainable manner.

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