Drivers of Intrapreneurial Innovation: A Study of Individual Innovative Behaviour in Organisations

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Abstract: Organisations can gain a competitive edge through Intrapreneurial Behaviour (IB) by swiftly innovating and adapting to market changes. Research indicates that intrapreneurship plays a crucial role in the banking sector in achieving a competitive advantage. Organisations can enhance their intrapreneurial capability by leveraging Individual Innovative Behaviour (IIB). However, innovation in the banking sector is often constrained by strict regulations, high safety requirements, and a fundamental need for trust and stability. Therefore, it is important to embrace and stimulate factors that encourage and enable innovation. To our knowledge, research on how intrapreneurship can be stimulated and measured in the Dutch banking sector is currently lacking. Thus, developing indicators and metrics for measuring intrapreneurship in Dutch banks is essential. This study investigates the factors affecting IIB using a quantitative survey. Building on the connection between IB and IIB, IIB is treated as a dimension of IB. The perceived work context, comprising an organisation's entrepreneurial orientation and innovative climate, can empower employees' IIB in the digital era. This context encourages them to generate new ideas and engage in collaborative innovation without fear of failure, thus fostering IIB. Our study explores factors driving IIB, empowering employees to act as intrapreneurs through organisations perceived Entrepreneurial Orientation (EO) and Innovative Climate (IC), with Digital Maturity (DM) as a moderating variable. Data were collected in 2021 from the three largest Dutch banks, which hold over 43% of the market share. A snowball sampling method was used to reach Dutch bank managers knowledgeable about the study's key constructs. This method involved initial contact with human resources departments and managers within these banks. The survey was administered to 167 managers, yielding 125 usable responses (75% response rate). Results indicate that employees in the banking industry with high DM are more likely to engage in IIB when firms support EO strategies and IC, and when employees adopt self-leadership skills.

Keywords: Individual innovative behaviour, Entrepreneurial orientation, Intrapreneurship, Innovative climate, Digital maturity, Self-leadership

1. Introduction

The digital transformation has intensified competition (Nambisan, 2017), forcing organisations to adapt and innovate (Zhao et al., 2021). In this dynamic environment, intrapreneurship – fostering entrepreneurial activities within existing organisations – has become a cornerstone of innovation. Chen and Huang (2009) argue that organisational innovation hinges on the human capital of intrapreneurs, the individuals who fuel the creative process. Intrapreneurial innovation, driven by employee efforts, is essential for maintaining a competitive edge. Individual innovative behaviour (IIB) directly contributes to an organisation's success (de Jong and den Hartog, 2010). In complex sectors like banking, continuous improvement and adaptation are crucial to survive sudden changes (Shalley et al., 2004).

Despite the significant research interest in factors influencing IIB, a gap remains in understanding the specific individual and contextual motivators. Kör (2016) emphasises this need, echoing calls by Pratoom and Savatsomboon (2012) to identify the drivers of IIB. Our study aims to bridge this gap by examining the interplay between individual and organisational factors that influence IIB. We will explore how perceived Innovative Climate (IC), Entrepreneurial Orientation (EO), Digital Maturity (DM), and Self-Leadership (SL) skills interact to promote innovative behaviour. Furthermore, we investigate how perceived EO and DM influence the perceived IC, accordingly, fostering IIB.

An organisation's willingness to innovate is captured by its EO (Covin and Slevin, 1988). EO encompasses the strategic processes that guide entrepreneurial decisions and actions (Lumpkin and Dess, 1996). This strategic posture emphasises innovativeness, proactiveness, and risk-taking (Covin and Slevin, 1988). Employees who perceive a strong EO in their work environment are more likely to exhibit IIB (Amo, 2006; Kang et al., 2016; Kör et al., 2021). An additional driver of IIB is an organisation's IC. Li and Zheng (2014) and Bos-Nehles and Veenendaal (2017) highlight how such a climate fosters innovative behaviour by encouraging the sharing of diverse perspectives on practices, procedures, and behaviours. When organisations embrace creativity, innovation, and risk-taking, employees feel empowered to exhibit innovative behaviour themselves (Bos-Nehles and Veenendaal, 2017).

Digitally maturing organisations are more likely to foster environments conducive to innovation by encouraging and testing new ideas at all levels (Laužikas and Miliūtė, 2020). DM reflects a company's digital transformation status, involving innovation across all organisational levels through the adoption of digital technologies (Chanias and Thomas, 2016). Additionally, in today's fast-paced business environment, employees need to take greater ownership and make quicker decisions. This necessitates empowering self-directed individuals and teams, emphasising SL (Kör, 2016).

The rest of this article is organised as follows: the "Literature Review and Hypotheses Development". Subsequently, the method and results are presented. The final section discusses the findings, conclusions, limitations, and suggestions for future research.

2. Literature Review and Hypotheses Development

2.1 Intrapreneurship Top-down and Bottom-up Process

Studies (Revuelto-Taboada et al., 2023; Alamur and Gümüştekin, 2022) highlight the importance of intrapreneurship in the banking sector for achieving a competitive advantage. Intrapreneurship drives innovation, crucial for survival in fast-evolving markets. Despite strict regulations and safety requirements, fostering intrapreneurial innovation remains essential for the sector's success.

Intrapreneurship was first introduced by Pinchot (1965) and then by Drucker (1986), who highlighted the link between new opportunities, organisational growth, and economic prosperity. More recent studies have examined the relationship between intrapreneurship and firm performance (Neessen et al., 2019; Hornsby et al., 2013; Rauch et al., 2009) and its impact on innovation (Sinha and Srivastava, 2013). Bosna et al. (2013) claim innovation arises when employees contribute and implement new ideas. Antoncic and Hisrich (2000) describe intrapreneurship as an entrepreneurial activity, while Stevenson and Jarillo (2007) define it as a process initiated by individuals within an organisation. The former emphasises a top-down approach, focusing on the organisation's role, while the latter views it as a bottom-up activity driven by individual employees. Research indicates that intrapreneurship is crucial for gaining a competitive advantage in the banking sector (Revuelto-Taboada et al., 2023; Alamur and Gümüştekin, 2022).

Given that intrapreneurship contains an element of innovation (Rigtering and Weitzel, 2013), which in turn enhances competitiveness in today's digital age, and that innovation can be driven both top-down and bottom-up, there is a need to develop metrics and indicators to measure intrapreneurship. Additionally, it is important to explore whether an organisation's DM level influences these intrapreneurial initiatives.

2.2 Individual Innovative Behaviour

Employees are vital in generating and implementing new ideas to enhance products, services, and processes (De Jong and den Hartog, 2007). This concept, known as IIB, involves the creation, introduction, and application of new ideas within a work role (West and Farr, 1989). Key dimensions of IIB include idea generation, exploration, promotion, and realisation (De Jong and den Hartog, 2010; Scott and Bruce, 1994). Self-leadership (SL) is another critical factor influencing innovative behaviour; it refers to the process by which individuals guide, motivate, and direct themselves toward achieving desired goals (Kör, 2016).

SL empowers individuals to take ownership of their work and drive innovation (Jain, 2015). Research by Carmeli et al. (2006) shows a positive correlation between SL and innovative behaviour, as it enables individuals to take charge of their actions, thoughts, and behaviours (D'Intino et al., 2007; Heiss et al., 2010), ultimately boosting innovation and performance (Manz and Neck, 2004). Given the growing importance of SL in the digital age and its link to innovation and intrapreneurship, this study investigates the following hypothesis:

***H_1**: SL is positively related to IIB at work.*

2.3 Bottum-Up Process of Intrapreneurship

Antoncic and Hisrich (2003) classified the different concepts and definitions of intrapreneurship by distinguishing between EO (bottom-up) and corporate entrepreneurship (top-down). Gawke et al. (2019) state that an EO occurs when employees show initiative, develop innovations, and take certain risks for the company. Employees' EO makes organisations more agile, allowing them to better respond to external and internal changes in the company (Gawke et al., 2019). This type of intrapreneurship, based on employee behaviour, offers new insights that can lead to a sustainable competitive advantage. In addition, EO can help to create a dynamic, flexible, innovative, and competitive organisational structure, thus shaping the work

environment that leads to both organisational success (Zahra, 1986) and individual outcomes (Amo, 2006), such as innovative behaviour (Kang et al., 2016; Kör, 2016; Kör et al., 2021). In such a work environment (i.e., encouraging innovation, proactivity, and risk-taking), openness to change and support for innovative activities can be developed (Kör et al., 2021), in line with employees who are inspired by entrepreneurial organisations to be more innovative. Because they understand that being innovative is a desirable image and that exhibiting innovative behaviour will increase their status (Yuan & Woodman, 2010). In line with these arguments, it is hypothesized that:

H_2: *Perceived EO is positively related to individual innovative behaviour at work*

2.4 Top-Down Process of Intrapreneurship

A supportive work environment that fosters creativity is essential for organisational success (Imran et al., 2010). This environment, known as an IC, is influenced by employees' perceptions (Siegel and Kaemmerer, 1978). IC encourages behaviours like idea generation, collaboration, and participation (Patterson et al., 2005). When employees feel valued for their innovative contributions, they are more likely to engage in innovative behaviours (Bos-Nehles and Veenendaal, 2017). This positive perception encourages initiative, enhancing overall innovation (Runfeng, 2011). Thus, IC empowers employees to innovate, improving performance. This study examines the perceived innovative climate's impact within organisations, leading to the following hypothesis:

H_3: *Perceived IC positively related to IIB at work.*

Building on existing research linking perceived IC and IIB (Scott and Bruce, 1994; Ibrahim et al., 2018; Kruft et al., 2018), this study goes further by proposing that perceived IC mediates the relationship between perceived Entrepreneurial Orientation (EO) and IIB. While direct effects of EO and IC on IIB are hypothesized (Hypotheses 2 and 3), this study examines the indirect influence of EO through IC. Organisations with a strong EO encourage innovation by promoting risk-taking and creativity (Covin and Slevin, 1988), countering bureaucratic constraints that hinder innovation (Yuan and Woodman, 2010; Kör, 2016). When employees perceive a strong EO, it fosters a supportive IC where innovative thinking and participation are valued (Malik and Wilson, 1995), encouraging risk-taking and creativity, which ultimately enhance innovative behaviour (Bos-Nehles and Veenendaal, 2017). Therefore, we propose:

H_4: *Perceived innovative climate mediates the relationship between perceived EO and IIB at work*

2.5 Digital Maturity as a Moderator of Intrapreneurship

Companies that invest in and manage new technologies effectively outperform competitors (Fitzgerald et al., 2014). DM, the ongoing process of digital transformation, is not a one -time achievement but rather a continuous journey (Chanias and Thomas, 2016). Digital technologies are transforming businesses, fostering creativity, innovation, and competitiveness (Waheed et al., 2019). DM capabilities generate valuable ideas, promote innovation, and enable flexible working models. This, in turn, enhances the organisational climate and fosters innovative activities (Zhao et al., 2021). We propose that DM strengthens the relationship between perceived EO and IC. Essentially, digitally maturing organisations can leverage their capabilities to unlock the full potential of a strong entrepreneurial spirit, leading to a more innovative work environment.

H_5: *The effect of perceived EO on perceived IC moderated by perceived DM*

3. Methodology

3.1 Data Collection

This research takes a quantitative approach to understanding factors driving IIB. Data were collected from Dutch banks due to their critical role in supporting the nation's economy, which is highly digitalised and export-oriented (Kempen, 2021). The pandemic amplified the sector’s adaptability and need for innovation, making it essential to explore factors driving IIB to enhance digital maturity and economic resilience (Kempen, 2021; Marcu, 2021).

A survey in English was distributed in 2021 to employees at the three largest Dutch banks, covering over 43% of the market share (Statista, 2023). Using snowball sampling, initial seeds were selected from various departments and management levels to enhance diversity. Clear inclusion criteria were set for HR and managers to ensure a broad range of knowledgeable participants.

The survey, containing 45 Likert-scale questions (1-5), measured key constructs based on established scales. Distributed to 167 managers, the survey yielded a 75% response rate (125 usable responses). Participants included associates, managers, and senior managers, and were randomly selected with informed consent. Anonymity and confidentiality were assured throughout the study. The study used a survey with a five-point Likert scale (strongly disagree to strongly agree) for all constructs except demographics. Existing, validated scales were used in English (i.e., de Jong and den Hartog, 2010; Houghton et al., 2012; Covin and Slevin, 1988; Patterson et al., 2005; Rossmann, 2018).

The sample consisted of 50.1% females (n = 63) and 49.6% males (n = 62). Most respondents were aged 18-29 (36%), with an educational background of an undergraduate degree (52.7%), followed by a master's degree (40.2%) and Ph.D. (7.1%).

4. Analysis and Results

Data collected from the survey were analysed using SPSS Version 25.0. Before hypothesis testing, reliability and validity checks were performed. The study's hypotheses involved multiple regression, mediation, moderation, and moderated mediation effects. Conditional process modeling was conducted using Hayes' Process macro for SPSS (Hayes, 2017) to test these effects.

Mediation (Model 4) and moderation (Model 1) analyses were conducted using Hayes' PROCESS macro. The mediation model (Figure 1) quantified total, direct, and indirect effects using bias-corrected nonparametric bootstrapping with 5000 bootstrap samples (Preacher and Hayes, 2004). This robust method, recommended by Mackinnon et al. (2004), provides high power and accommodates smaller sample sizes without normality assumptions.

4.1 Reliability and Validity

To ensure construct validity, internal consistency, convergent, and discriminant validity were assessed (Table 1). Cronbach's α exceeded .7, composite reliability and average variance extracted were above .88 and .5, respectively, and factor loadings were above .5 with inter-construct correlations below .9. These results confirm the measures' accuracy in capturing the intended constructs.

Table 1: Cronbach's α, AVE, composite reliability and factor loadings

Construct	Cronbach's Alpha	AVE	CR	Factor Loading
SL	.73	.60	.91	.58 - .86
IIB	.85	.50	.88	.50 - .78
EO	.87	.54	.90	.55-.83
IC	.85	.65	.94	.72 - .93
DM	.86	.60	.92	.55 - .86

4.2 Testing of Hypothesized Direct and Indirect Effects

We analysed the data using multiple regression to test our hypotheses (Table 2). The results show significant positive relationships between perceived EO (β = .518, p = .000), perceived IC (β = .307, p = .000), and SL (β = .461, p = .000) on IIB at work, supporting hypotheses 1 to 3.

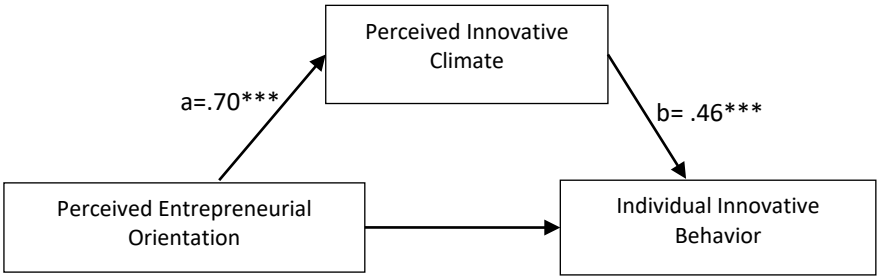
Table 2: The results of the regression analysis

Path	β	t	p	Adjusted R2	Hypothesis Results
SL →IIB	.433	5.326	.000***	.181	H1 Support
PEO → IIB	.340	4.016	.000***	.109	H2 Support
PIC → IIB	.475	5.984	.000***	.219	H3 Support

Notes: *p<.05; **p<.01; ***p<.001. PEO: Perceived EO, PIC: Perceived IC

Figure 1 shows the results of the mediation analyses using bias-corrected bootstrapping, as recommended by Hayes (2017); detailed results are in Table 3. Following Baron and Kenny's (1986) full mediation model, the independent variable indirectly affects the dependent variable through the mediator. The indirect effect of perceived entrepreneurial orientation on innovative work behaviour via perceived innovative climate (.33) was

significant (95% CI: LL .1706, UL .4716), supporting H4. Sobel's test confirmed full mediation by perceived innovative climate (z = 3.330, p < .001).



Direct effect, c'= .016, p>.05 after adding mediator

Indirect effect, c= .33

Notes:*p<.05; **p<.01; ***p<.001

Figure 1: The proposed mediator model

Table 3: Mediation Analysis

Variable / Effect	β	SE	t	p	95% Confidence Interval	
					LLCI	ULCI
PEO→IIB	.016	.112	.1429	.887	-.2049	.2367
PEO→PIC	.70	.064	10.8659	.000***	.5723	.8273
PEO→PIC→IIB	.46	.112	4.1576	.000***	.2429	.6845
Direct	.16	.112	.1429	.887	-.2049	.2367
Indirect	.33	.0763			.1706	.4716
Total	.34	.0848	4.0159	.000***	.1727	.5083

Note: Based on 5000 bootstrap samples, *p<.05; **p<.01; ***p<.001.

Our study examined how DM moderates the relationship between PEO and PIC (H5). Figure 2 illustrates this interaction using Hayes' process moderation. The analysis (model 1) revealed a significant interaction effect (β = .13, p = .005), indicating that the influence of PEO on PIC depends on the level of perceived DM. As shown in Figure 2, higher DM strengthens the positive relationship between EO and IC, supporting hypothesis 5.

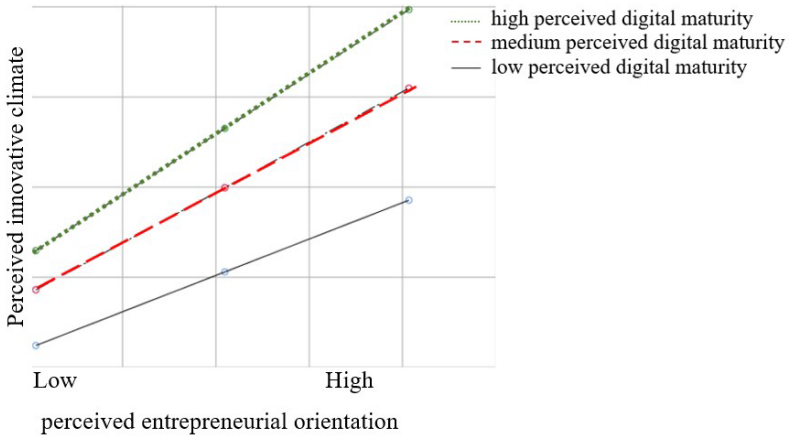


Figure 2: Moderation effect

5. Conclusion and Limitations

This study explores factors influencing IIB within organisations, especially in today's rapidly evolving digital landscape. The findings reveal a positive relationship between perceived EO and IIB. Employees who perceive their organisation as valuing innovativeness, proactiveness, and risk-taking are more likely to engage in

innovative behaviours. This finding aligns with previous research suggesting that entrepreneurial environments encourage "thinking outside the box" and proactive participation in the innovation process (Kör, 2016). Therefore, organisations should foster an environment that encourages these traits to boost innovation and proactive employee participation. The study also highlights the significant impact of perceived IC on IIB. IC leads to an increased positive perception of the employees on the innovative ideas and plans of the organisation (Kang et al., 2015). Organisations should create a supportive environment that values innovation, encourages open dialogue, and rewards proactive contributions. This can be achieved through strategic initiatives such as revising company policies, promoting collaboration, and recognising innovative achievements.

This study contributes to individual innovation research by investigating SL skills as an antecedent of IIB at work. Innovative behaviour is largely motivational in nature (Amabile, 1988; Tian and Sanchez, 2017), and, as such, likely to be stimulated by SL skills. According to Neck and Manz (1996), individuals can be trained to adapt and enhance their SL skills in order to improve their work outcomes, such as IIB (Carmeli et al., 2006). The findings show a positive relationship between SL skills and IIB at work. This finding is in agreement with the studies of Carmeli et al. (2006), DiLiello and Houghton (2006), and Kör et al. (2021), which found that IIB is influenced by the individuals' SL skills. Thus, the practice of SL strengthens the desired behaviour necessary for innovativeness within the organisation. During the COVID pandemic period, some of the employees have to work remotely, organisations need to motivate their employees in the way they would have done on the work floor. This is especially crucial in hybrid or remote work settings where self-motivation is key. Workshops, mentoring, and resources on self-leadership can empower employees to take initiative and drive innovation independently. Furthermore, the study reveals that perceived digital maturity strengthens the relationship between perceived EO and perceived innovative climate. The COVID-19 pandemic has underscored the critical role of digital solutions in banking, highlighting the need for both innovation and digital transformation (Yıldırım and Erdil, 2023). Our findings suggest that a high level of DM acts as a catalyst, amplifying the positive influence of a strong entrepreneurial spirit on fostering a culture of innovation. In essence, digital transformation strengthens the link between an organisation's entrepreneurial drive and its ability to create an innovative work environment.

This study offers valuable findings, but limitations exist. It relies on Dutch banking data, limiting generalisability. Snowball sampling was chosen due to challenges in accessing specialised respondents. To reduce biases, seeds were selected across departments and levels with clear inclusion criteria. Interviews could provide richer insights. Additionally, the data is from a single time point and sector. Future research should include a broader sample across industries and cultures. Despite these limitations, the framework can be applied in service, manufacturing, and automotive sectors.

References

Alamur, B., & Gümüştekin, G. E. (2022). Analysis of intrapreneurship according to various demographic variables in mature organizations: A research in the banking sector. FORCE: Focus on Research in Contemporary Economics, 3(1), Article 1

Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior*, 10, pp.123–167.

Amo, B. W. (2006) "The influence from corporate entrepreneurship and intrapreneurship on white-collar workers' employee innovation behaviour", *International journal of innovation and learning*, *3*(3), pp.284-298.

Antoncic, B., & Hisrich, R. D. (2000). Intrapreneurship modeling in transition economies: A comparison of Slovenia and the United States. *Journal of Developmental Entrepreneurship*, *5*(1), 21.

Baron, R. M., & Kenny, D. A. (1986) "The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations", *Journal of personality and social psychology*, *51*(6), p.1173.

Bosna, N., Jones, K., Autio, E., & Levie, J. (2013). *Global Entrepreneurship Monitor 2007 Executive Report*. https://www.gemconsortium.org/report

Carmeli, A., Meitar, R., Weisberg, J. (2006) "Self-leadership skills and innovative behavior at work", *International Journal of Manpower*, 27(1), pp.75–90. https://doi.org/10.1108/01437720610652853

Chanias, S., & Thomas, H. (2016) "How digital are we? Maturity models for the assessment of a company's status in the digital transformation", *Management Report / Institut für Wirtschaftsinformatik und Neue Medien, 2*, pp.1-14.

Chen, C., & Huang, J. (2009) "Strategic human resource practices and innovative performance: the mediating role of knowledge management capacity", *Journal of Business Research , Vol. 62*, pp.104-114.

Covin, J. G., & Miles, M. P. (1999) "Corporate entrepreneurship and the pursuit of competitive advantage", *Entrepreneurship theory and practice*, *23*(3), pp.47-63.

Covin, J., & Slevin, D. (1988) "The influence of organization structure on the utility of an entrepreneurial top management style", *Journal of Management Studies, 25*(3), pp.217-238.

de Jong, J., & den Hartog, D. (2010) "Measuring Innovative Work Behaviour", *Creativity and innovation management, 19*(1), pp. 23-36.

DiLiello, T.C., Houghton, J.D. (2006), "Maximizing organizational leadership capacity for the future', *Journal of Managerial Psychology*, 21(4), pp. 319–337. https://doi.org/10.1108/02683940610663114

D'Intino, R. S., Goldsby, M. G., Houghton, J. D., & Neck, C. P. (2007) "Self-leadership: A process for entrepreneurial success", *Journal of leadership & organizational studies*, *13*(4), pp.105-120.

Drucker, P. (1985), Innovation and Entrepreneurship: Practice and Principles, Harper and Row, New York, NY.

Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2014) "Findings from the 2013 Global Executive Study and Research Project: Embracing digital technology: A new strategic imperative" [Research report]. *MIT Sloan Management Review*.

Gawke, J. C., Gorgievski, M. J., & Bakker, A. B. (2019). Measuring intrapreneurship at the individual level: Development and validation of the Employee Intrapreneurship Scale (EIS). *European Management Journal*, *37*(6), 806-817.

Fornell, C., & Larcker, D. F. (1981) "Evaluating structural equation models with unobservable variables and measurement error", *Journal of marketing research*, *18*(1), pp.39-50.

Hayes, A.F. (2017). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*; Guilford Publications: New York, NY, USA.

Heiss, C., Engbert, K. A. I., Gröpel, P., Ziegler, M., & Brand, R. (2010) "Self-leadership and volition: distinct and potentially supplemental constructs?", *Psychological Reports*, *107*(2), pp.447-462.

Hornsby, Jeff, Iñaki Peña-Legazkue, and Maribel Guerrero. "Guest editorial: The role of corporate entrepreneurship in the current organizational and economic landscape." *International Entrepreneurship and Management Journal* 9 (2013): 295-305.

Houghton, J., Dawley, D., & DiLiello, T. (2012) "The abbrevaited self-leadership questionnaire (ASLQ)", *Journal of Leadership Studies, 7*(2), pp. 216-232.

Ibrahim, H. I., Mohamad, W. M. W., & Shah, K. A. M. (2018) "Organizational innovative climate as a predictor of innovative behaviour among engineers in the electrical and electronic manufacturing industry", *Review of Integrative Business and Economics Research*, *7*, pp.1-14.

Imran, R., Saeed, T., Anis-ul-Haq, M., & Fatima, A. (2010) "Organizational climate as a predictor of innovative work behavior", *African Journal of Business Management*, 4(15), pp.3337–3343.

International Monetary Fund. European Dept. (2021). Statement by Mr. Hilbers and Ms. Eijking on Kingdom of the Netherlands – the Netherlands November 10, 2021, *IMF Staff Country Reports*, *2021*(243), A003. Retrieved Jan 5, 2022, from https://www.elibrary.imf.org/view/journals/002/2021/243/article-A003-en.xml

Jain, R. (2015). Employee innovative behavior: A conceptual framework. *Indian Journal of Industrial Relations*, 1-16.

Kang, J. H., Solomon, G. T., & Choi, D. Y. (2015) "CEOs' Leadership Styles and Managers' Innovative Behaviour: Investigation of Intervening Effects in an Entrepreneurial Context", *Journal of Management Studies*, 52(4), pp.531–554.

Kempen, P. (2021). The Netherlands' banking sector: Facts & Figures (2021). *European Banking Federation*. Retrieved January 5, 2022, from https://www.ebf.eu/the-netherlands/

Kleysen, R., & Street, C. (2001) "Towards a Multi-Dimensional Measure of Individual Innovative Behavior", *Journal of Intellectual Capital, 2*, pp.284-296.

Kör, B. (2016) "The mediating effects of self-leadership on perceived entrepreneurial orientation and innovative work behavior in the banking sector", *SpringerPlus*, 5(1), pp.1-15.

Kör, B., & Maden, C. (2013) "The relationship between knowledge management and innovation in Turkish service and high-tech firms", *International Journal of Business and Social Science*, *4*(4), pp.293-304 .

Kör, B., Wakkee, I., & van der Sijde, P. (2021) "How to promote managers' innovative behavior at work: Individual factors and perceptions", *Technovation*, 99(102127).

Kruft, T., Gamber, M., & Kock, A. (2018) "Substitutes or complements? The role of corporate incubator support and innovation climate for innovative behavior in the hosting firm", *International Journal of Innovation Management*, *22*(05), p. 1840006.

Laužikas, M.; Miliūtė, A. 2020. Liaisons between culture and innovation: comparative analysis of South Korean and Lithuanian IT companies, *Insights into Regional Development* 2(2): 523-537.

Li, X., & Zheng, Y. (2014) "The Influential Factors of Employees' Innovative Behavior and the Management Advices", *Journal of Service Science and Management, 7*(6), p. 5.

Lumpkin, G., & Dess, G. (1996) "Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance", *The Academy of Management Review,* pp. 135 - 172.

Malik, S. D., & Wilson, D. O. (1995) "Factors influencing engineers' perceptions of organizational support for innovation", *Journal of Engineering and Technology Management*, 12(3), pp. 201–218.

Manz, C.C., & Sims, H.P. (2001) *The new super leadership: Leading others to lead themselves*. Berrett-Koehler Publishers, Oakland

Manz, C.C., Neck, C.P., 2004. *Mastering Self-Leadership: Empowering Yourself for Personal Excellence*, third ed. Prentice-Hall, Upper Saddle River, NJ.

Nambisan, S. (2017) "Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship", *Entrepreneurship Theory and Practice*, 41(6), pp. 1029–1055. https://doi.org/10.1111/etap.12254.

Neck, C. P., & Manz, C. C. (1996) "Thought self-leadership: The impact of mental strategies training on employee cognition, behavior, and affect", *Journal of organizational behavior*, *17*(5), pp. 445-467.

Neessen, P. C. M., Caniëls, M. C. J., Vos, B., & de Jong, J. P. (2019). The intrapreneurial employees: Towards an integrated model of intrapreneurship and research agenda. *International Entrepreneurship and Management Journal*, 15(2), 545-571. doi:10.1007/s11365-018-0552-1.

Norrestad, F. (2021) Banking in the Netherlands - statistics & facts. Statista. Retrieved January 5, 2022, from https://www.statista.com/topics/3442/the-banking-sector-in-the-netherlands/#dossierKeyfigures

Patterson, M. G., West, M. A., Shackleton, V. J., Dawson, J. F., Lawthom, R., Maitlis, S., Robinson, D. L., & Wallace, A. M. (2005) "Validating the organizational climate measure: links to managerial practices, productivity and innovation", *Journal of Organizational Behavior*, 26(4), pp. 379–408.

Pinchot, G. I. (1985). Intrapreneuring: Why You Don't Have to Leave the Corporation to Become an Entrepreneur (SSRN Scholarly Paper 1496196). https://papers.ssrn.com/abstract=1496196

Pratoom, K., & Savatsomboon, G. (2012) "Explaining factors affecting individual innovation: The case of producer group members in Thailand", *Asia Pacific Journal of Management*, *29*(4), pp. 1063-1087.

Preacher, K. J., & Hayes, A. F. (2004) "SPSS and SAS procedures for estimating indirect effects in simple mediation models", *Behavior research methods, instruments, & computers*, *36*(4), pp. 717-731.

Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009) "Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future", *Entrepreneurship theory and practice*, *33*(3), pp.761-787.

Revuelto-Taboada, L., Portalanza-Chavarría, A., & Cedeño-Alejandro, F. (2023). Promoting intrapreneurial behavior in banking: The role of high-performance work systems, knowledge management processes, and supervisor support. Service Business, 17(3), 789–817.

Rigtering, J. C., & Weitzel, U. (2013). Work context and employee behaviour as antecedents for intrapreneurship. *International Entrepreneurship and Management Journal*, 9, 337-360.

Runfeng, Y. (2011) "Influence of goal orientation in performance appraisal on staff innovative behaviour: Mediating effect of innovative climate", In *Proceedings of the 8th International Conference on Innovation and Management* (pp. 445-451).

Scott, S., & Bruce, R. (1994) "Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace", *Academy of Management Journal , 38*, pp.580-607.

Shalley, C., Zhou, J., & Oldham, G. (2004) "The effects of personal and contextual characteristics on creativity: where should we go from here?", *Journal of Management, Vol. 30*, pp. 933-958.

Siegel, S. M., & Kaemmerer, W. F. (1978) "Measuring the perceived support for innovation in organizations", *Journal of Applied Psychology*, 63(5), pp.553-562.

Sinha, Nupur, and Kailash BL Srivastava. "Association of personality, work values and socio-cultural factors with intrapreneurial orientation." *The Journal of Entrepreneurship* 22.1 (2013): 97-113.

Siponen, M., Mahmood, M. A., & Pahnila, S. (2014) "Employees' adherence to information security policies: An exploratory field study", *Information & management*, *51*(2), pp. 217-224.

Statistia (2023, June 19). Biggest banks in the Netherlands 2022, by total assets. Retrieved from https://www.statista.com/statistics/762148/leading-banks-in-the-netherlands-by-total-assets/

Stevenson, Howard H., and J. Carlos Jarillo. "A paradigm of entrepreneurship: Entrepreneurial management." *Entrepreneurship: Concepts, theory and perspective*. Berlin, Heidelberg: Springer Berlin Heidelberg, 2007. 155-170.

Stinglhamber, F., & Vandenberghe, C. (2003) "Organizations and supervisors as sources of support and targets of commitment: A longitudinal study", *Journal of Organizational Behavior*, 24(3), pp. 251–270.

Talaei-Khoei, M., Mohamadi, A., Mellema, J. J., Tourjee, S. M., Ring, D., & Vranceanu, A. M. (2016) "The direct and indirect effects of the negative affectivity trait on self reported physical function among patients with upper extremity conditions", *Psychiatry research*, *246*, pp. 568-572.

Tian, Q., & Sanchez, J. I. (2017) "Does paternalistic leadership promote innovative behavior? The interaction between authoritarianism and benevolence", *Journal of Applied Social Psychology*, *47*(5), pp. 235-246.

Waheed, A., Miao, X., Waheed, S., Ahmad, N., & Majeed, A. (2019)"How new HRM practices, organizational innovation, and innovative climate affect the innovation performance in the IT industry: A moderated-mediation analysis", *Sustainability*, *11*(3), p. 621.

West, M., & Farr, J. (1989) "Innovation at work: Psychological perspectives", *Social Behavior*, pp. 15-30.

Westerman, G., Bonnet, D., and McAfee, A. 2014. *Leading Digital: Turning Technology Into Business Transformation*, Harvard Business Review Press.

Yoo, S. J., Huang, W.-H., & Lee, D. Y. (2012) "The impact of employee's perception of organizational climate on their technology acceptance toward e-learning in South Korea", *Knowledge Management & E-Learning: An International Journal (KM&EL), 4*(3), pp. 359-378.

Yuan, F., & Woodman, R. W. (2010) "Innovative behavior in the workplace: The role of performance and image outcome expectations", *Academy of management journal*, *53*(2), pp. 323-342.

Zahra SA (1986) A canonical analysis of corporate entrepreneurship antecedents and impact on performance. In: Pearce and Robinson (eds), Best Paper Proceedings. 46th Annual Meeting, Academy of Management, p 71–75.

Zhao, X., Liu, Y., Xie, Y., & Fan, J. (2021) "Firm-level digital transformation affects individual-level innovative behavior: Evidence from manufacturing firms in China", *Social Behavior and Personality: An international journal*, 49(11), p.10840.