

A FIRM'S ORGANIZATIONAL INNOVATION AND ORGANIZATIONAL LEARNING ABILITIES

Igor Dukeov, Lappeenranta University of Technology, Finland

Madara Apsalone, University of Latvia

Iлона Baumane-Vitolina, University of Latvia

Jukka-Pekka Bergman, Lappeenranta University of Technology, Finland

Erika Sumilo, University of Latvia

Abstract. Many recent studies are dedicated to the problem of innovation as a mean of improving a firm's overall performance. Various kinds of innovation in a firm usually are closely interrelated with each other. While the majority of studies focus on technological - product and process - innovation, the investigation of non-technological - marketing and organizational - innovation (ORI), has increasingly attracted the interest of researchers during the last decade. Organizational culture and organizational learning are important drivers of such innovation. For instance, a collaborative culture, trust and open-mindedness encourage new initiatives and ideas, while learning helps not just to improve skillsets and abilities of individual employees, but can also greatly contribute to strategic knowledge management and building a resilient, innovative organization.

This study examines the relationship between a firm's organizational learning ability and its organizational innovation performance. The authors consider such factors as Learning Intention – seeing learning as a key investment and organizational commitment to it, and Openness - open-mindedness and organizational culture open to new ideas and worldviews. This study contributes to the theory of ORI by finding the answer to the question what impact these factors could have on ORI development in a firm.

The findings are based on a quantitative analysis of more than 150 small and medium-sized enterprises surveyed in Russia and Latvia. The survey questions measuring ORI performance were developed in line with the widely used definition introduced in the OECD - Eurostat Oslo Manual. The scales for organizational learning were adopted from the previous studies elaborated this area of a firm activity. The survey compared a firm's innovation performance to that of its closest competitors.

This research demonstrates that some of the elements of organizational learning positively influence ORI activity. The results also suggest that Latvian companies differ from Russian ones in terms of their organizational learning intention.

Key words: *innovation, organizational innovation, organizational learning, knowledge management, organizational culture*

JEL code: D83, O31

Introduction

Many recent studies are dedicated to the problem of innovation as a mean of improving a firm's overall performance. Different kind of innovation in a firm usually are closely interrelated with each other. While the majority of studies focus on technological - product and process - innovation, the investigation of non-technological - marketing and organizational - innovation (ORI), has increasingly attracted the interest of researchers during the last decade. Organizational culture

(OC) and organizational learning are important drivers of such innovation.

For instance, a collaborative culture, trust and open-mindedness encourage new initiatives and ideas. OC through collective values, behaviors and practices can significantly impact long-term thinking, risk-taking abilities and understanding of responsibility, thus increasing the innovation activity of a firm (King, 2007; Turró et al., 2014). It can also influence attitudes towards independence, risk and the distribution of power (Shane, 1994; Tan, 2002; Alvarez and Urbano, 2012). Culture can affect productivity through decision-making process, increasing organizational resilience and forming attitudes towards social equality (Throsby, 2001). Finally, culture shapes the form and effectiveness of leadership (Aktas et al., 2015).

And organizational learning helps not just to improve skillsets and abilities of individual employees, but can also greatly contribute to strategic knowledge management and building a resilient, innovative organization. Numerous scholars (e.g., Argyris & Schön, 1978) consider a firm as the entity for collective learning process and argue that the impact of organizational learning on innovation is positively strong (e.g., Nonaka & Takeuchi, 1995). However, the majority of these studies were investigating the phenomenon of the technological innovation. The non-technological innovation, which is a relatively new concept despite of its introduction in the beginning of the last century (Schumpeter, 1934) has not been attracting attention of researchers for a long period probably because of its unclear definition and various concepts that were associated with it.

In a previous study, the authors concluded that organizational learning and knowledge creation are positively related to organizational innovation and that those factors amongst Latvian and Russian companies could be explored further (Apsalone et al., 2017; Dukeov et al., 2018).

Thus, this study examines the relationship between a firm's organizational learning ability and its organizational innovation performance. The authors consider such factors as knowledge generation and learning intention – seeing learning as a key investment and organizational commitment to it, and creativity - openness - open-mindedness and organizational culture open to new ideas and worldviews. This study contributes to the theory of ORI by finding the answer to the question what impact these factors could have on ORI development in a firm.

Conceptual background and framework development

Organizational Innovation. Previous studies have demonstrated that innovation provides companies competitive advantage (Damanpour et al. 1989; Schulz and Jobe 2001). For this study, organizational innovation (ORI) is defined according to the “Oslo Manual” by OECD and EUROSTAT as *“the implementation of a new organizational method in business practices, workplace organization or external relations”* (OECD-EUROSTAT, 2005: 51). Thus, an organizational innovation shall be based on strategic management decisions to implement new organizational methods in business practices, improve workplace organization or external relations.

Organizational innovation has been broadly studied and number of definitions exist (e.g., Mothe and Thi, 2010). ORI can be applied at different levels and departments, ORI can also relate to the overall structure or the functional principles of the firm (Wengel et al., 2002). Some studies suggest ORI as firms' responses to technological innovations. Nevertheless, ORI can play an independent role for firm's development as a distinct form of innovation (Tidd et al., 2005).

Three main types of ORI can be distinguished - business practices, workplace organization (distribution of responsibilities) and external relations.

Firstly, ORI might implement new procedures in processes and operations (Som et al., 2012). These are innovations in management practices (IMP). IMP innovations include quality management, lean, risk-management systems that

directly impact the organizational performance. (Wheelwright and Clark, 1992; Reed et al., 2000; Ichniowski et al., 1997; OECD-EUROSTAT, 2005). IMP refers also to new organizational structures and administrative procedures enhancing firm's capabilities to take risks, as well as transparency to new internal and external ideas (Han et al., 1998; Lin and Chen, 2007).

Secondly, ORI might implement new methods in workplace organization (IWO) (OECD-EUROSTAT, 2005; Som et al., 2012). IWO aims at improving business performance through know-how and creative working environment (Scott and Bruce, 1994; Mothe and Thi, 2010). IWO is also closely linked to the organizational culture, as certain working practices foster innovation by shaping attitudes towards independence, risk and the distribution of power (Shane, 1994; Tan, 2002; Alvarez and Urbano, 2012).

Thirdly, ORI include innovations in external relations (IER) by decreasing organizational barriers of the external environment and supporting the interaction with external environment (Heidenreich, 2009; Rammer et al., 2009). IER demonstrates, how a firm is making its network activities (Mothe and Thi, 2010). According to the OECD-EUROSTAT (2005: 51), ORI can be *“intended to increase a firm's performance by reducing administrative or transaction costs, enhancing labor productivity by improving workplace satisfaction, gaining access to non-tradable assets (such as non-codified external knowledge), or reducing costs of supplies”*.

Organizational Learning Ability. Several studies stress the crucial role of knowledge generation in innovation activity development of a firm (Lam, 2000; Lam and Lundvall, 2006). Lam (2010) argues that due to the fact that conditions underlying the innovation processes in a firm are social, they considerably depend on the organizational structure and the processes taken place within the firm. Many studies related to innovation consider the very process of innovation as one based on creativity (Glynn, 1996), as well on ability to learn effectively (Argote, 1999; Senge, 1990; Agyris and Schon, 1978) and generate knowledge that is new for the firm (Nonaka, 1994; Nonaka and Takeuchi, 1995; Nonaka and von Krogh, 2009). Lam (2010) states that the efficiency of the innovation process is very much based on the knowledge that a firm can absorb from the external environment. On the other hand, if innovation is a tool of converting knowledge into added value, continuous knowledge acquisition is the essential process for innovation. That also means the firms with high innovation activity should learn on how to learn as they must experience the constant necessity on new knowledge obtaining (Senge et al., 1990).

Knowledge generation, in turn, is closely related to creativity (e.g., Baker and Sinkula, 1999; Calantone et al., 2002). A firm that established its orientation on learning should continuously looking for the new forms of organizing this learning process and knowledge generation (Biemans, 1995; Jaworski and Kohli, 1993; Stathakoulous, 1998).

Creativity is the process of making new things by using the existing knowledge in a new way Maley (2003). The process of creativity means to create an additional value. Many scholars tried to define creativity by focusing on particular aspects. According to Barron (1955) creativity has to be effective and original. The opposite view was expressed by Corazza (2016), who argued that it is not necessary for the creativity to have as the end product something original or effective and suggested that creativity is something that is perceived not as a routine-like action or matter. Previous studies show that creativity is often a precondition for innovation, as it underlies the process of thinking “outside-the-box” as well as enhances thinking on how to do the things in a new way and create a value at the same time (Zhou & George, 2001; Liu et al., 2017).

Thus, the authors propose two constructs to describe organizational learning processes in a company: knowledge generation and creativity, and propose the following hypotheses:

H1a: Knowledge generation is one of the main factors positively influencing IMP;

H1b: Knowledge generation is one of the main factors positively influencing IWO;

H1c: Creativity is one of the main factors positively influencing IMP;

H1d: Creativity generation is one of the main factors positively influencing IWO.

Organizational Culture. OC can be defined as “*a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems*” (Schein, 1985: 17). Culture explains the way, how a group of people commonly decide and solve problems, culture also includes past learnings that are shared with new members of the group (Louis, 1980). Previous studies have listed OC as a significant factor for knowledge management – it influences generation of knowledge and affects the relations between individual and organizational knowledge (David and Fahey, 2000). Empowering and inclusive culture helps to develop trust between individuals and groups (ibid), thus fosters sharing of ideas and knowledge (Davenport and Prusak, 1998). OC can also provide basis for participation in organizational learning that requires a high degree of commitment (Gupta et al, 2000).

López et al (2004) encouraged enterprises to create favorable working environments with a collaborative culture - long-term vision, communication and dialogue, trust, teamwork, empowerment, ability to tolerate ambiguity, risk assumption as well as respect and diversity – in order to improve organizational learning.

To assess the impact of the OC on organizational learning and ORI, the culture was structured using four dimensions adopted from the competing values framework by Denison and Spreitzer (1991). It demonstrates dilemmas between stability and change on one hand and internal and external environment on another. The framework consists of two axes – centralization vs decentralization and competition vs the maintenance of the sociotechnical system (Denison and Spreitzer, 1991). Thus, four dimensions of the OC can be developed – human relations model (the team), open systems model (the adhocracy), rational goal model (the firm) and internal process model (the hierarchy). This study adopted them as the team, development, result, as well as consistency orientation.

Thus, the authors propose the following hypotheses:

H2a: Team orientation of a firm is one of the main factors positively influencing IWO;

H2b: Team orientation of a firm is one of the main factors positively influencing IER;

H2c: Development orientation of a firm is one of the main factors positively influencing IWO;

H2d: Development orientation of a firm is one of the main factors positively influencing IER;

H2e: Result orientation of a firm is one of the main factors positively influencing IWO;

H2f: Consistency orientation of a firm is one of the main factors positively influencing IMP.

Methodology of the study

A structured, closed-ended questionnaire was developed to test the research questions. Questionnaire items measuring organizational learning were adopted from studies of Griese, Pick and Kleinaltenkamp (2012) and Zortea-Johnston (2012). Creativity was measured using such indicators as the value of open-mindedness, encouraging to think “outside of the box,” rewarding people for people for creativity and innovation, building and supporting cross-functional expert teams and initiating creative dialogues. Another learning indicator – knowledge generation – was measured through seeing learning as an investment not as an expense, seeing learning as a key necessity for organizational survival, considering learning as a key value for improvement, systematically identifying the need of knowledge relevant to manage the competitive position, checking, whether the knowledge base is reasonably extended through the new generated knowledge and defining strategic goals for generation of knowledge concerning customers, competitors, and markets.

Questionnaire items measuring organizational culture were mainly self-operationalized. Questionnaire items measuring innovation performance were developed based on the definitions provided in the Oslo Manual (OECD-

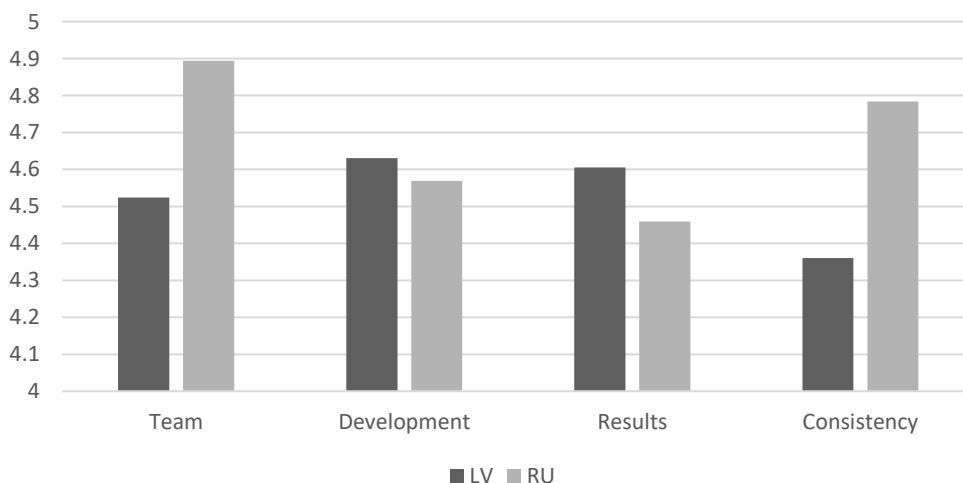
EUROSTAT, 2005), as well as from other studies (Eurostat, 2012; Dadura and Lee 2011). The authors respondents to compare innovation performance in their company to the innovation performance by their competitors using a seven-point Likert scale (where 1 corresponds to “strongly disagree” and 7 corresponds to “strongly agree”). Given that only meaning on the end-points was provided, the authors assume that the variables are measured on a continuous scale.

Few background questions were also included to understand the profile of companies, such as the annual turnover and number of employees. Profile variables were measured using a nominal scale. This study included enterprises with no more than 1000 employees. Such an approach allowed to include more businesses in the scope of analysis, at the same time excluding large industry leaders with different factors affecting innovation processes. In total 134 completed questionnaires were collected.

Research results and discussion

Assessing organizational learning indicators in the surveyed companies, this study concludes that both creativity and knowledge generation were rather common, however creativity was more highly rated than knowledge generation – 4.8 vs 4.3 in a scale from 1 to 7. Russian companies were more creative, while Latvian companies had stronger knowledge generation abilities and processes.

When assessing organizational culture, this study concludes that Latvian companies have a stronger tendency towards development and results, while Russian companies – towards team and consistency (Fig. 1). Three dimensions, describing team, development and result organization of an organizational culture, were rather closely related to each other. Thus, companies with stronger orientation towards team, had stronger orientation towards development and achievements. Orientation towards consistency was moderately linked to the other dimensions.



Source: authors’ calculations based on survey data

Fig. 1. Dimensions of organizational culture

All organizational culture indicators were linked to organizational learning indicators (Table 1). Team and development orientation had the strongest relation to creativity (Pearson Correlation .698 and .871 respectively), while result orientation and consistency – to knowledge generation (Pearson Correlation .684 and .523).

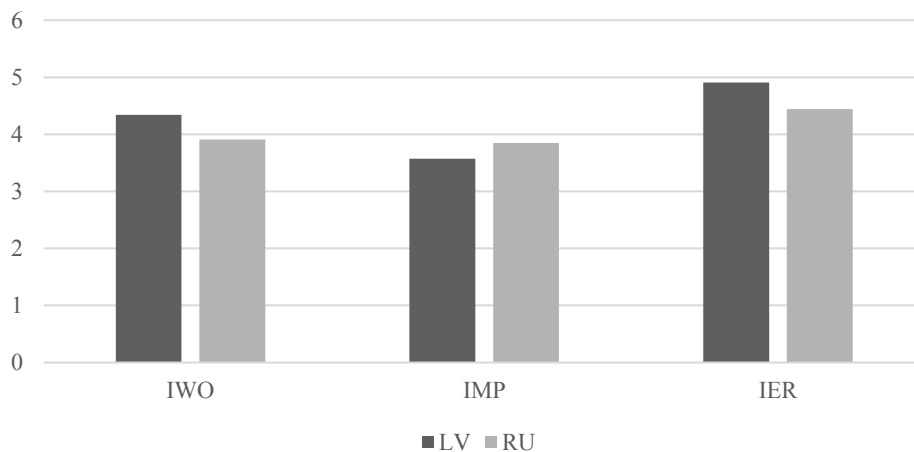
Table 1

Relations between organizational culture and learning indicators

		Team	Development	Results	Consistency
Creativity	Pearson Correlation	.698**	.871**	.632**	.250**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00
	N	131	131	131	131
Knowledge generation	Pearson Correlation	.638**	.761**	.684**	.523**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00
	N	130	130	130	130

Source: author's construction based on survey data

Organizational innovation in workplace organization and external relations was more common in Latvian companies, while innovation in management practices – in Russian companies. From the innovation indicators, IWO and IER were more developed in the surveyed companies, compared to IMP (Fig. 2). All types of organizational innovation were positively related to organizational learning and all dimensions of organizational culture.



Source: authors' calculations based on survey data

Fig. 2. Organizational innovation performance

The relationship between organizational culture, organizational learning and organizational innovation performance is further assessed, using multiple linear regression analysis. The assumptions for the analysis are the following: dependent and independent variables are measured on the continuous scale (for this analysis the authors consider the scale as interval, considering that only endpoints were indicated), and the observations are independent (assessed with Durbin-Watson for each of the regression models).

By using a multiple linear regression model with stepwise variable entry method (criteria: Probability-of-F-to-enter $\leq .050$, Probability-of-F-to-remove $\geq .100$), IWO can be seen as a function of knowledge generation and result orientation that explain 34% variation in the IWO performance (Table 2). Durbin-Watson statistic is in a range from 1.5 to 2.5, and the corresponding ANNOVA analysis indicates that the model is good fit for the data ($F(2, 121) = 31.626, p < .0005$).

Table 2

IWO Regression Model

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
.586	.343	.332	1.153	.046	8.461	1	121	.004	1.964

Predictors: (Constant), result orientation, knowledge generation, dependent Variable: IWO
 Source: author's construction based on survey data

Considering this, the hypotheses H1b and H2e can be accepted as proposed in the paper.

IER can be seen as a function of development orientation, the model explains 17.5% variation in the IER performance (Table 3). Durbin-Watson statistic is in a range from 1.5 to 2.5, and the corresponding ANNOVA analysis indicates that the model is good fit for the data ($F(1, 124) = 26.321, p < .0005$).

Table 3

IER Regression Model

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
.418	.175	.168	1.546	0.175	0.175	1	124	.000	1.806

Predictors: (Constant), development orientation, dependent Variable: IER
 Source: author's construction based on survey data

Considering this, the hypotheses H1b and H2e can be accepted as proposed in the paper. Considering this, the hypothesis H2d can be accepted as proposed in the paper.

IMP can be described as function of knowledge generation and consistency. The model explains 42.7% of the variation in IMP (Table 4). Durbin-Watson statistic is in a range from 1.5 to 2.5, and the corresponding ANNOVA analysis indicates that the model is good fit for the data ($F(2, 123) = 45.909, p < .0005$).

Table 4

IMP Regression Model

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
.654	.427	.418	1.017	.046	9.887	1	123	.002	1.902

Predictors: (Constant), knowledge generation, consistency orientation, dependent Variable: IMP
 Source: author's construction based on survey data

Considering this, the hypotheses H1b and H2e can be accepted as proposed in the paper. Considering this, the hypotheses H1a and H2f can be accepted as proposed in the paper.

Even though creativity has positively related to all organizational innovation indicators, according to this analysis it was not amongst the main factors influencing any particular sub-type, thus H1c and H1d cannot be supported. Similarly, team organization was positively related to all types of organizational innovation, while this dimension was not one of the main factors influencing any particular sub-type, thus H2a and H2b cannot be supported by this analysis. Finally,

development orientation of a firm was strongly positively related to IWO, however was not amongst the main factors influencing it, thus H2c cannot be supported by this analysis as well.

Conclusions, proposals, recommendations

This study aimed at exploring the relation between organizational culture, organizational learning and organizational innovation based on the sample of small and medium-sized enterprises from Latvia and Russia. There are not much studies focusing on organizational innovation and its connection to organizational culture as well as to organizational learning. At the same time all the aspects related to a firm's knowledge management processes and corporate culture cannot be considered without putting them in context of cultural and institutional specifics of the country where the firm operates (Hutchings & Michailova, 2006). From this perspective our research delivers the results tied to culture of two countries which allowed the authors to come up with some comparative analysis.

The results provided evidence that:

1. Organizational culture has strong, positive influence on both organizational learning and organizational innovation involvement in a firm.
2. Organizational culture and organizational learning could partly explain all sub-types of organizational innovation. In particular, the knowledge generation ability was one of the key factors influencing IWO and IMP while the development orientation was one of the key factors influencing IER, and the result orientation was one of the main factors influencing IWO and consistency was one of the main factors influencing IWO.
3. The surveyed companies demonstrate the best performance on IWO and IER sub-type of organizational innovations, though performance on IMP sub-type of organizational innovations was relatively lower. Latvian companies demonstrated a better performance in IWO and IER, while Russian companies were stronger in implementing IMP sub-types of organizational innovation.

Based on the research results, the authors consider organizational culture as a cornerstone for developing creative and knowledge generating organizational environment. Such, in turn, positively contributes to organizational innovation performance.

For further research the authors recommend elaborating on differences between Latvian and Russian companies, assessing them in a broader context of main business activities and environment of their work. Base on the findings that a firm reflects to a certain degree the cultural heritage (Balabanova at al., 2018) it would be interesting to compare the state and privately owned companies. It would be valuable also to increase the number of the companies in the study and to consider the organizational innovation performance of companies in other countries of the region.

Acknowledgements

The research has been supported by the European Regional Development Fund post-doc research support No. 1.1.1.2/VIAA/1/16/016

Bibliography

- Argote, L., 1999. *Organizational Learning: Creating, Retaining and Transferring Knowledge*. Norwell, MA: Kluwer Academic Publishers.
- Aktas, M., Gelfand, M., and Hanges, P., 2015. Cultural Tightness–Looseness and Perceptions of Effective Leadership. *Journal of Cross-Cultural Psychology*. 47(2), 294-309.
- Alvarez, C., & Urbano, D., 2012. Cultural-cognitive dimension and entrepreneurial activity: A cross-country study. *Revista de estudios sociales*, (44), 146-157.

- Apsalone M., Dukeov I., Baumane-Vitolina I., Sumilo E., Berke-Berga A., 2017. *The impact of knowledge management, learning and socio-cultural factors on Innovation*. New Challenges of Economic and Business Development – 2017: Digital Economy. Riga, Latvia. [Online] Available at:
https://www.bvef.lu.lv/fileadmin/user_upload/lu_portal/projekti/bvef/konferences/evf_conf2017/Proceedings.pdf. [Accessed 15 January 2019].
- Argyris, C. & Schön, D.A., 1978. *Organizational Learning: A Theory of Action Perspective*, Addison-Wesley, Reading, MA.
- Baker, W.E. & Sinkula, J.M., 1999. The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science*, Vol. 27 No. 4, 411-27.
- Balabanova, E., Rebrov, A., Koveshnikov, A., 2018. Managerial Styles in Privately Owned Domestic Organizations in Russia: Heterogeneity, Antecedents, and Organizational Implications. *Management and Organization Review* 14:1, 37–72
- Barron, F., 1955. The disposition toward originality. *The Journal of Abnormal and Social Psychology*, 51(3), 478.
- Biemans, W.G., 1995. The implementation of marketoriented development. *European Journal of Marketing*, Vol. 29 No. 5, 31-2.
- Calantone, R.J., Cavusgil, S.T. & Zhao, Y., 2002. Learning orientation, firm innovation capability and firm performance. *Industrial Marketing Management*, Vol. 31 No. 6, 515-24.
- Corazza, G. E., 2016. Potential originality and effectiveness: The dynamic definition of creativity. *Creativity Research Journal*, 28(3), 258-267
- Damanpour, F., Szabat, K. A., & Evan, W. V., 1989. The relationship between types of innovation and organisational performance. *Journal of Management Studies*, 26, 587–602.
- Davenport, T. H., & Prusak, L., 1998. *Working knowledge: How organizations manage what they know*. Harvard Business Press.
- David, W., & Fahey, L., 2000. Diagnosing cultural barriers to knowledge management. *The Academy of management executive*, 14(4), 113-127.
- Denison, D. R., & Spreitzer, G. M., 1991. Organizational culture and organizational development: A competing values approach. *Research in organizational change and development*, 5(1), 1-21.
- Dukeov, I., Apsalone, M., Baumane-Vitolina, I., Bergman, J-P., Sumilo, E., 2018. A firm's organizational innovation and organizational knowledge management abilities. *New Challenges of Economic and Business Development – 2018: Productivity and Economic Growth*. Riga, Latvia, pp. 177-187.
- Glynn, M. A., 1996. Innovative Genius: a Framework for Relating Individual and Organizational Intelligence to Innovation. *Academy of Management Review* 21, 1081-1111.
- Griese, I., Pick, D., Kleinaltenkamp, M. 2012. Antecedents of knowledge generation competence and its impact on innovativeness. *Journal of Business & Industrial Marketing*, 27(6), 468 - 485.
- Gupta, B., Iyer, L. S., & Aronson, J. E., 2000. Knowledge management: practices and challenges. *Industrial management & data systems*, 100(1), 17-21.
- Heidenreich, M., 2009. Innovation patterns and location of European low- and medium-technology industries. *Research Policy*, 38 (3), 483-494.
- Hutchings, K., & Michailova, S. 2006. The impact of group membership on knowledge sharing in Russia and China, *International Journal of Emerging Markets*, Vol. 1 Issue: 1, pp.21-34.
- Ichniowski, C., Sha, K. & Prensushi, G., 1997. The effects of human resource management practices on productivity: a study of steel finishing lines. *American Economic Review*, 87(3), 291-313.
- Jaworski, B. & Kohli, A.K., 1993. Market orientation: antecedents and consequences. *Journal of Marketing*, 57(3), 53-70.
- King W. R., 2007. A Research Agenda for the Relationships between Culture and Knowledge Management. *Knowledge & Process Management*, 14 (3), 226–236.
- Lam, A., 2000. Tacit knowledge, Organizational Learning, Societal Institutions: an Integrated Framework. *Organization Studies* 21, 487-513.
- Lam, A., 2010. Innovative organizations: structure, learning and adaptation. *Innovation Perspectives for the 21st Century*, Madrid: BBVA, Spain, 163-175.

- Lam, A. & Lundvall, B-Å., 2006. *The Learning Organization and National Systems of Competence Building and Innovation* in E. Lorenz and B- Å. Lundvall (eds.) *How Europe's Economies Learn: Coordinating Competing Models*, Oxford: Oxford University Press, 109-139.
- Liu D., Gong Y., Zhou J., Huang J.-C., 2017. Human resource systems, employee creativity, and firm innovation: the moderating role of Firm ownership. *Academy of Management Journal*, 60(3), 1164–1188.
- Lin, C.Y.Y. & Chen, M.Y.C., 2007. Does innovation lead to performance? An empirical study of SMEs in Taiwan. *Management Research News*, 30(2), 115-132.
- Louis, M.R., 1980. Surprise and sense making: What newcomers experience in entering unfamiliar organizational settings, *Administrative science quarterly*, 226 - 251.
- Mothe, C. & Thi, T.U.N., 2010. The link between non-technological innovations and technological innovation. *European Journal of Innovation Management*, 13(3), 313-332.
- Nonaka, I., 1994. A dynamic theory of organizational knowledge creation, *Organization Science* 5, 14-37.
- Nonaka, I. & Takeuchi, H., 1995. *The knowledge-creating company*. New York: Oxford University Press
- OECD-EUROSTAT, 2005. *Oslo-Manual: Guidelines for Collecting and Interpreting Innovation Data*. 3rd Edition, Paris, OECD-EUROSTAT Publications.
- Nonaka, I., & von Krogh, G., 2009. Perspective—Tacit Knowledge and Knowledge Conversion: Controversy and Advancement in Organizational Knowledge Creation Theory, *Organization Science* 20, 635-652.
- Rammer, C., Czarnitzki, D. & Spielkamp, A., 2009. Innovation Success of Non-R&D-Performers: Substituting Technology by Management in SMEs. *Small Business Economics*, 33, 35-58.
- Reed, R., Lemak, D. J. & Mero, N. P., 2000. Total quality management and sustainable competitive advantage. *Journal of Quality Management*, 5 (1), 5-26.
- Senge, P., 1990. *The Fifth Discipline: the Art and Practice of the Learning Organization*, New York: Doubleday.
- Schein, E.H., 1985. *Organizational culture and leadership*. John Wiley & Sons.
- Schulz, M., & Jobe, L. A., 2001. Codification and tacitness as knowledge management strategies: an empirical exploration. *The Journal of High Technology Management Research*, 12(1), 139-165.
- Senge, P., 1990. *The Fifth Discipline*, Doubleday, New York, NY.
- Shane, S., 1994. Cultural values and the championing process. *Entrepreneurship Theory and Practice*, 18(4), 25-41.
- Stathakoloulos, V., 1998. Enhancing the performance of marketing managers: aligning strategy, structure and evaluation systems. *European Journal of Marketing*, 32 (5/6), 536-58.
- Schumpeter, J. (1934). *The theory of economic development*. Harvard University Press, Cambridge, MA
- Tan, J., 2002. Culture, nation, and entrepreneurial strategic orientations: Implications for an emerging economy. *Entrepreneurship Theory and Practice*, 26(4), 95-111.
- Tidd, J., Bessant, J., & Pavitt, K., 2005. *Managing innovation: Integrating Technological, Market and Organisational Change*, 3-rd ed., West Sussex: Wiley.
- Turró, A., Urbano, D., and Peris-Ortiz, M., 2014. Culture and Innovation: the Moderating Effect of Cultural Values on Corporate Entrepreneurship. *Technological Forecasting and Social Change* 88, 360-369.
- Wengel, J., Lay, G., Nylund, A., Bager-Sjögren, L., Stoneman, P., Bellini, N., Bonaccorsi, A., & Shapira, P., 2002. *Analysis of empirical surveys on organizational innovation and lessons for future Community Innovation Wheelwright, S. C. & Clark, K. B., 1992. Revolutionizing Product Development: Quantum Leaps in Speed, Efficiency and Quality*. New York, the Free Press.
- Zhou, J., & George, J.M., 2010. When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*, 44, 682–696.
- Zortea-Johnston, E., Darroch, J. & Matear, S, 2011. Business Orientations and Innovation in Small and Medium Sized Enterprises. *International Entrepreneurship and Management Journal*, 8(2), 145-164.