SOCIETY. INTEGRATION. EDUCATION
Proceedings of the International Scientific Conference. Volume VI, May 24th -25th, 2019. 351-364

ORGANIZATIONAL DESIGN, INTERNAL COLLABORATION AND PERFORMANCE: AN EMPIRICAL ASSESSMENT IN LATVIA

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Abstract. *We live in the time of transformations and in response to environmental challenges, traditional forms of organizational designs are changing towards more networked ones. Human resource practitioners claim that 'Organization of the future' requires freedom to act, flexible working practices, outcome-based performance management, and high-trust working relationships, however, there is limited empirical attention directed to the elements of organizational structures, and organizational design aspects have not been explicitly addressed. This research aims to identify which organizational design mechanisms facilitate collaboration within organizations and positively contribute to organizational performance. The quantitative study uses data from a structured survey of Latvian organizations. The research findings provide empirical evidence of the positive impact of decentralization, outcome-based performance management and internal trust on collaboration within the organizational boundaries and performance measured as customer satisfaction. Assessing differences between organisations it was found that internal trust appears to be even more important collaboration ensuring factor for large organizations than for smaller ones. Research results show that managers should establish internal trust-based relationships within their organizations since the effect of trust on collaboration could not be overestimated.*
Keywords: *collaboration; knowledge sharing; organisational design; structure; trust*

Introduction

Knowledge sharing and collaboration are often presented as the means for competing in the knowledge economy (Keith & Dotsika, 2007), however, this requires supporting organizational design, structure, and practices (Chalkiti, 2012). Organizational design and structure has an important role in organizational adaptation (Stan & Puranam, 2017) and is valued as one of the key factors for business success (Nikolenko & Kleiner, 1996). Prior research highlights that firms` organizational designs can significantly facilitate interactions with external and internal knowledge sources (e.g., Foss, Lungggsie, & Zahra, 2013), thus improving organizational performance and operational excellence (e.g., Hernaus, Vuksic, & Stemberger, 2016; Hunter, 2002). Since the organizational design is one of the factors that can support or hinder information sharing (Burke, 2003)

http://dx.doi.org/10.17770/sie2019vol6.3974

and collaboration, designing and redesigning the organizations can be regarded as a key activity of managers (Vissher & Visscher-Voerman, 2010).

HR practitioners indicate that high-performing organizations today operate in a radically different way than they operated 10 years ago (Deloitte Development LLC, 2017). Hierarchical structures are diminishing, and dominant organizational designs are changing towards much more networked ones (Chartered Institute of Personnel Development [CIPD], 2012). The rapid advancement of technology has caused the emergence of virtual organizations and network structures which facilitate the sharing of knowledge and other resources (Zehra, 2014). Organizational design has always been an important research topic and, given the current strategic challenges, it is vital to understand what organization design capability must involve (Marsh, Sparrow, Hird, Balain, & Hesketh, 2009). Researchers have indicated that a better understanding of the organizational design, the inner organization of the firm and especially structure is needed (e.g., Weigelt & Miller, 2013; Foss et al., 2013). The need to develop our understanding of the contemporary ways of working and how organizational design helps to manage knowledge sharing within and across boundaries is also acknowledged by professionals (CIPD, 2012). In line with the growing importance of collaboration within and across organizational boundaries, there is limited empirical attention directed to the elements of organizational structures, and organizational design aspects have not been explicitly addressed (e.g., Foss et al., 2013).

This research aims to identify which organizational design mechanisms facilitate collaboration within organizations and positively contribute to organizational performance. To reach the aim of this research study, two objectives are set: first, to examine the relationship between organizational design characteristics and internal collaboration, and organizational performance measured as customer satisfaction; second, to assess the dominant forms of organizational designs in Latvia and to explore how ready Latvian organizations are to implement networked designs characteristic to the ‘organization of the future’. This research is based on the quantitative methodology. Data were gathered by online survey in Latvia in spring 2018, and the partial least squares structural equation modelling technique was used for data analysis.

Literature review: Organizational design and structure

According to the literature, organizational design (OD) is defined as “the deliberate process of configuring structures, processes, reward systems, and people practices to create an effective organization capable of achieving the business strategy” (Kates & Gailbraith, 2008, 1). Robbins (1990, 5) defines OD as “constructing and changing an organization’s structure to achieve the

organization's goals". Researchers describe a range of dimensions of OD such as structure, coordination, culture, and power (e.g., Gebauer, Fischer, & Fleisch, 2010; Foss et al., 2013) and address the organization`s shape and internal structures as the key elements of OD (e.g. Nikolenko & Kleiner, 1996; Vissher & Visscher-Voerman, 2010; Curado, 2006; Burke, 2003).

The organization`s internal structure "reflects how the firm has allocated distinct jobs to subunits and achieved coordination among them" (Weigelt & Miller, 2013, 1414). Researchers categorize organizational structure into three elements - formalization, centralization, and integration (Mahmoudsalehi, Maradkhannejad, & Safari, 2012). Other authors determine the structure by two main aspects – differentiation and coordination (Kretschmer & Puranam, 2008). Further, Pereira-Moliner, Pertusa-Ortega, Tari, Lopez-Gamero, & Molina-Azon (2016) suggest that organizational design characteristics include specialization, decentralization, formalization and link mechanisms. Similarly, Weigelt and Miller (2013, 114) consider differentiation and coordination as two major aspects that define an internal structure, and define differentiation as "segmentation of the organizational system into subsystems", and coordination as "achieving unity of effort of various subsystems" relating both aspects to unit autonomy.

The Chartered Institute of Personnel Development (CIPD, 2017) summarizes the most common types of organizational structures as functional (by the different functions present in the organization, for example, sales, production, HR); geographical or customer-based (by specific customer group, market, geographical location of operation); product-line based (by specific product groups); matrix (combining hierarchical and functional approaches, typically with multiple reporting lines); project-based, and network (decentralized and flexible, includes internal and external stakeholder relationships). Each of the structures has advantages and disadvantages and some are more applicable to dynamic environments, some less. For example, functional structures are typically hierarchical and highly formalized; they imply little delegation, therefore, may find it difficult to share knowledge (Foss et al., 2013). Matrix and project structures, which are more decentralized, have problems of coordination and collaboration. In relation to knowledge sources, researchers found that decentralized firms rely more on external knowledge, while centralized firms derive knowledge from internal sources (Arora, Belenzon, & Rios, 2014).

Prior researches indicate that an organization's performance depends on the collaboration of decision-making authority with the knowledge required to make those decisions (Martin-Perez, Martin-Cruz, & Estrada-Vaquero, 2012; Christie, Joye, & Watts, 2003). The Economist described collaboration as the highest level of coordination drawing the link from coordination to cooperation and collaboration (The Economist Intelligence Unit, 2008). According to the Deloitte survey, 94 percent of surveyed companies reported that "agility and

collaboration" were critical to their organization's success, (Deloitte Development LLC, 2017). The collaboration includes link mechanisms and informal social relations (Pereira-Molinier et al., 2016). Researchers and practitioners agree that an essential prerequisite for collaboration and knowledge sharing is a high-trust relationship (e.g., Tsung-Hsien, 2013; CIPD, 2017). Positioning collaboration as a critical capability and establishing trust will enable companies to reap the full benefits of our globalized, high technology environment (The Economist Intelligence Unit, 2008).

The effectiveness of certain organizational structure depends on the chosen competitive strategy (Pereira-Molinier et al., 2016) and characteristics of the environment or activities (Foss et al., 2013, 1417). It could be assumed that one set of characteristics of the organizational design may be more suitable for differentiation while others for low-cost strategies.

Management scholars and practitioners agree that in response to environmental challenges, traditional forms or organizational structures will be replaced by more flexible ones (Nikolenko & Kleiner, 1996). We live in the time of transformations and, since organization structures predetermine the way employees work (Hunter, 2002), a shift from hierarchical to networked organizations is going on (Satell, 2017). The 'organization of the future' will be characterized by new organizational forms such as a high degree of empowerment, strong communication, a rapid information flow and a network of teams (Deloitte Development LLC, 2016). According to the CIPD, an 'organization of the future' requires the following: freedom to act; virtual teams or work groups; outcome-based performance measurement; flexible working practices; technology-enabled work environments; and high-trust working relationships (CIPD, 2017).

For this research, the above-discussed theory translates into three research questions:

RQ1: How organization design characteristics (formalization, decentralization, and specialization) impact internal collaboration and firm performance?

RQ2: How organizational design orientation (process, strategic or customer) impact internal collaboration and firm performance?

RQ3: Which are dominant forms or organizations` structures in Latvia and how ready we are for an 'organization of the future'?

Methodology

The context of the research study is Latvian private and public-sector organizations. A structured questionnaire with 39 items was developed to measure

variables. Further the logic of variable selection and questionnaire development tis described.

Dependent variables

DV1: Internal *collaboration*. Organizations' internal collaboration was modelled as a result of successful organizational design mechanisms and as the dependent variable. It was measured with five items based on the contributions by Pereira-Molinier and colleagues (2016).

DV2: Performance. Krohlbacher and Reijers (2013) measured firm performance as product quality, customer satisfaction, market share, order-to-delivery time, time-to-market speed, and delivery reliability. Taking into consideration the different nature of the firms` activities, performance in this research was measured as perceived product or service quality, and *customer satisfaction and loyalty*, since other aspects were not applicable to all of the sample firms and not measurable using subjective evaluation criteria. The Respondents were asked to rate customer satisfaction and loyalty in five items similar to Kohlbacher & Reijers (2013), including questions related to customer complaints, the ratio of price to value, company reputation, customer loyalty, and overall perceived customer satisfaction. Product or service quality was measured as a result-related variable, still included in the model as a mediating variable between collaboration and customer satisfaction, since satisfaction depends on quality.

Independent variables

Organizational design characteristics: a measurement was made of the level of specialization, decentralization, and formalization with three statements for each variable following Pereira-Molinier et al. (2016). A single item was included to measure the implementation of outcome-based performance management (CIPDD, 2017). The external trust scale had two items measuring whether the organization trusts its partners and whether they perceive their partners trust them. Similarly, internal trust measured trust relationships between colleagues and departments. Organizational design orientations were measured with three single items asking the respondents to assess the reasons for organizational design – process, strategic or customer design orientation.

To measure the above-mentioned variables, a 5-point Likert scale from 1 (disagree) to 5 (agree) was used.

Competitive strategies: Six items were considered to measure the competitive strategies chosen by firms based on previous studies of Kohlbacher & Reijers (2013). The respondents had to indicate, on a scale from 1 (they did not use such a strategy at all) to 5 (the strategy was very important for their establishment), their opinion concerning the cost and differentiation competitive advantages pursued by their organization. For the analysis, the items were divided

into two groups - belonging to differentiation competitive advantage and cost competitive advantage.

Control variables

Several factors that may explain differences in collaboration and performance were included as controls. The organization`s age was measured as 'below 5 years', between '5 and10 years'; between '10 and 15 years' and 'more than 15 years'. The measurement was designed taking into consideration that Latvia gained independence in 1991, thus the maximum age of private companies was around 25 years. Another control was firm size measured as the number of full-time employees. It was measured as 1-9 (microenterprises); 10-49 (small enterprises); 50-249 (medium size organizations) and above 250 which for Latvia are regarded as large organizations (Central Statistical Bureau [CSB], 2015). Ownership rights were measured as state-owned, privately owned and other forms. Moreover, the industry where organizations operated was measured according to NACE classificatory (Lursoft, 2017) and then grouped as seen in Table1.

Finally, the respondents were asked to evaluate the internal structure of the organization. Definitions were provided for functional, geographical, product line, matrix, project and network structures, and the respondents had to choose the one which most precisely corresponded to the organization they represented. Of the respondents, 53% marked their organizations as having a functional structure; 22% as a matrix structure; 11% a project structure; 5% a product line structure; 4% a geographical structure and 5% stated that their organization had a network structure.

The data were gathered via an online survey distributed to HR specialists and managers from organizations which are members of the Latvian Association for People Management via the association website, as well as to RISEBA University partner organisations and students of Master programme "Human Resource Management" using webropoolsurveys.com platform. The data gathering period was spring 2018. The survey resulted in 322 competed questionnaires which were considered valid for further analysis. Table 1 presents the sample characteristics of the represented organisations.

Table 1 ***Sample characteristics***

Industry	%	Number of employees	%	Ownership	%	Organization's age	%
Production	23	1 - 9	14	Public	26	Less than 5 years	11
Service	55	10 - 49	15	Private	69	5 -10 years	18
Trade	11	50 - 249	28	Other	5	11 – 15 years	15
Government	11	> 250	43			> 16 years	56

Source: author`s calculations
n=322

Results and discussion

The partial least squares structural equation modelling (PLS-SEM) technique was chosen to predict the most important factors relevant to collaboration and customer satisfaction and loyalty. The particular technique has been chosen because it implies the features of multiple regression and does not assume normality of data distribution, it is applicable for relatively small samples and if the research area is relatively new (Ringle, Wende, & Becker, 2014). Besides this technique allows including a larger number of indicators and explore a larger number of relationships simultaneously (Hair & Ringle, 2011).

The data were analysed using SPSS and SmartPLS software. Common method bias (Koch, 2015) was addressed with Hartman's single factor test and it produced a variance equal to 19.7%. Table 2 presents descriptive statistics.

Table 2 ***Descriptive statistics***

Construct / Variable		Variable code (in Fig.1)	Mean value	Standard deviation
Organizational design characteristics	Specialization	*spec*	3.68	1.02
	Decentralization	*decent*	2.98	1.09
	Formalization	*formal*	3.00	1.35
	Internal trust	*inttrust*	3.83	0.96
	Outcome-based performance management	*pms*	4.11	1.08
	expertise	*exp*	4.31	0.94
Organizational design orientation	Process orientation	*procor*	4.13	1.03
	Strategy orientation	*strator*	3.89	1.13
	Customer orientation	*custor*	3.90	1.16
Collaboration		*collab*	3.89	0.76
External trust		*exttrust*	4.23	0.78
Competitive strategies	Differentiation	*difstrat*	3.78	1.16
	Low cost	*lcstrat*	3.67	1.11
Quality		*qual*		
Performance	Customer satisfaction and loyalty	*sat*	3.87	0.68

Source: author`s calculations
n=322

The model was designed, and algorithms were calculated as seen in Figure 1. To evaluate reflectively measured models, the following was examined: outer loadings (size and significance), composite reliability, convergent validity or

average variance extracted (AVE), and discriminant validity (Hair & Ringle, 2011).

The outer model shows how correctly each construct is measured or how each set of indicators are related to their latent variable. One item was excluded from the construct since the loading was below the minimum threshold value 0.708 (it was spec3); it was retained in the model as a single item construct and re-coded as expertise (exp). The remaining manifest variables exhibited outer loadings high enough and were good measures of their latent variables. A bootstrapping procedure was used to determine statistical significance and all loadings were statistically significant ($p < 0.05$).

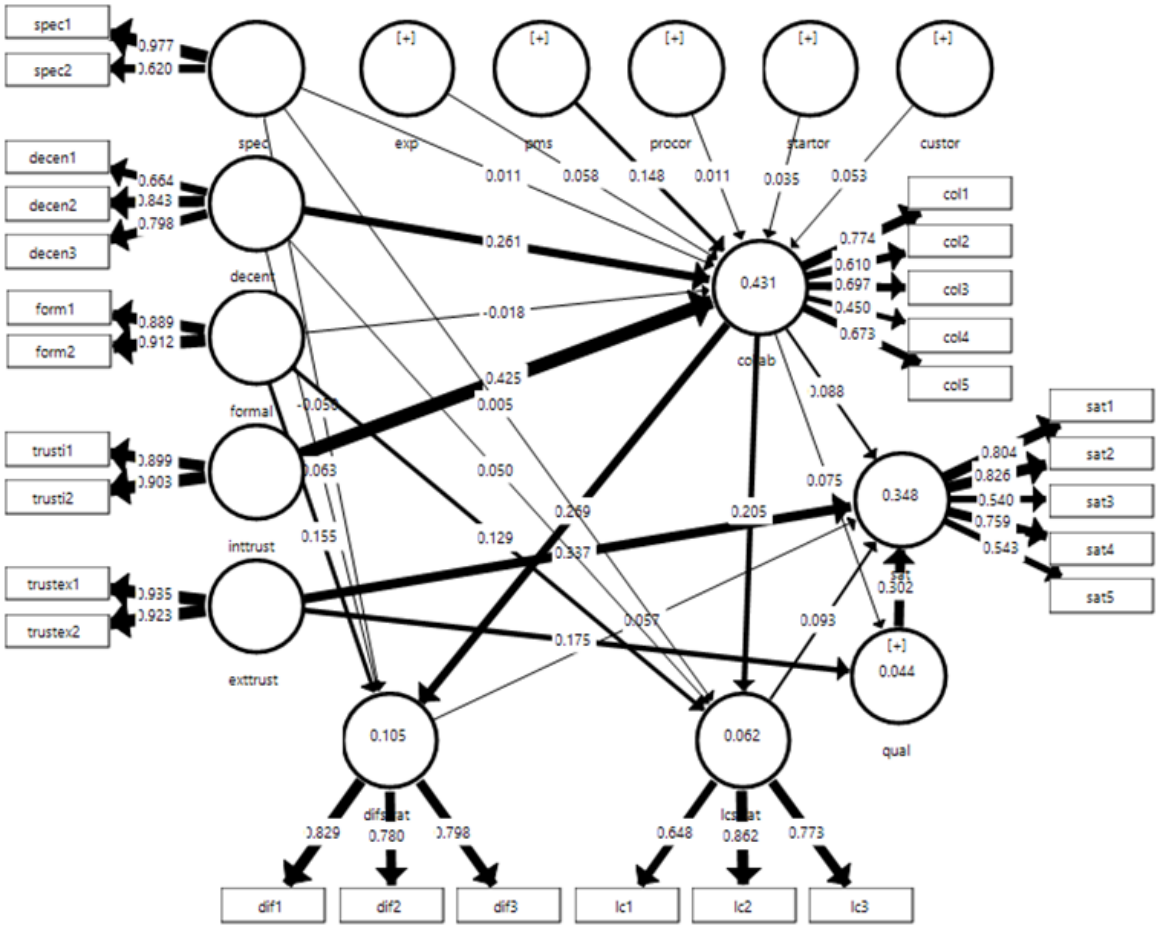

Figure 1 ***Full model with highlighted relative path coefficients*** *(authors` construction)*

Internal consistency reliability was assessed using Cronbach's alpha, and coefficients for the model were the following: sat=0.74; collab=0.66; decent=0.66; formal=0.77; spec=0.61; exttrust=0.84; intrust=0.77; lcstart= 0.66; difstrat=0.73. Composite Reliability scores of the model were in between 0.79

and 0.93, which were well above the threshold level 0.7, thus indicating sufficient constructs` internal consistency reliability. Convergent Validity of the reflective constructs was examined with average communality or AVE (average variance extracted), and all AVE scores were above 0.5 and thus were acceptable. Discriminant Validity represents the extent to which measures of a given construct differ from a measure of other constructs in the same model. The Heterotrait-Monotrait (HTMT) ratio of correlations was used, and values ranged from 0.022 to 0.739, which were lower than 0.85 (a threshold for conceptually distinct constructs). Besides, Bias Corrected confidence intervals showed that neither confidence interval included a value of 1. Thus, the discriminant validity was demonstrated by the HTMT method. Collinearity statistics revealed that all values were in between 1.14 and 2.12, thus they were less than 5, indicating that collinearity was not a problem for the model.

Since the measurement model showed satisfactory results, it was used for analysis. The primary evaluation criteria for SEM are R2 results. R2 values 0.75, 0.50 and 0.25 for endogenous latent variables indicate substantial, moderate or weak predicting capacity (Hair & Ringle, 2011). As seen from Figure 1 and Table 2, R^2 values: the model explains 43% of collaboration and has moderate predicting capacity, and it explains 35% of customer satisfaction and loyalty, thus showing weak predicting capacity for this construct. The model has no predicting capacity for competitive strategies, still, the aim was not to explain these strategies, but to find relationships.

Table 3 ***SEM model results***

Constructs	Variables	DV1: collaboration		DV2: customer satisfaction and loyalty	
		Path Coefficient	P Value	Path Coefficient	P Value
Organizational design characteristics	Specialization	0.011	0.827	-	-
	Decentralization	0.261	0.000	-	-
	Formalization	-0.018	0.730	-	-
	Internal trust	0.425	0.000	-	-
	Outcome-based performance management	0.148	0.004	-	-
	expertise	0.058	0.327	-	-
Organizational design orientation	Process orientation	0.011	0.876	-	-
	Strategy orientation	0.035	0.583	-	-
	Customer orientation	0.053	0.293	-	-
Collaboration		-	-	0.088	0.078

External trust		-	-	0.174	0.000
Competitive strategies	Differentiation	-	-	0.057	0.357
	Low cost	-	-	0.093	0.097
Quality				0.302	0.000
	R^2	0.431	-	0.348	-

Source: author`s calculations
n=322

Regarding the RQ1, Figure 1 shows how organizational design elements influence collaboration and customer satisfaction. Results in Table 2 show that three elements of organizational design have a statistically significant impact on collaboration - internal trust shows the highest positive and statistically significant path coefficient, followed by decentralization and outcome-based performance management. This appears to be in line with Mason and Lefrere (2003) who identified trust as the primary enabler of effective collaboration. This finding complements the prior work of Busi and Bitici (2006) who concluded that there is a lack of understanding of what collaboration means and what it implies on the performance measurement by showing the positive link between the two. Moreover, the total effect (which includes both – direct and indirect effect (Hair & Ringle, 2011)) of internal trust, decentralization and outcome-based performance management on customer satisfaction is also positive and significant. Since decentralization means higher levels of autonomy, this result is in line with Weigelt and Miller (2013) who found that autonomy lowers the cost of a hierarchy in banks.

A multigroup analysis was performed to find out any impact of control variables on the relationships. Using “size” as a grouping variable, significant differences were identified in path inttrust->collab (t=2.124; p=0.036) between large organizations and smaller ones. The path coefficient for large organizations was 0.536, while for smaller ones the coefficients were between 0.238 and 0.264. Thus, the results showed that internal trust influenced collaboration more in larger organizations than in smaller ones. A multigroup analysis was also performed with other control variables (organizations’ age; industry; ownership and dominant form or organizations` structure), however, no significant differences between groups were identified.

In relation to the competitive strategies, collaboration has a positive and significant relationship with both. Interestingly, that collaboration appears to be more important for the execution of a differentiation strategy. As per organizational design characteristics, only formalization shows a positive and significant relationship with both strategies.

Answering RQ2, organizational design orientation does not indicate a statistically significant relationship with collaboration, and the result shows that collaboration is affected by the result, not the reason of OD.

In relation to RQ3, data show that Latvian organizations are not yet ready for an 'organization of the future' since the average decentralization was very low and functional structures were dominant. Globally, according to Deloitte research, many companies have already moved away from functional structures – only 38 percent of all companies are still functionally organized (Deloitte Development LLC, 2016). However, in Latvia, there is still 55% functionally structured organizations and only 5% have network structures. Furthermore, the level of internal trust is low. Interestingly that internal trust was evaluated lower than external trust (Wilcoxon Signed Ranks Test Z=-6.632; p=0.000) showing that an important component of the future organization is missing in the sample organizations. Nevertheless, the situation with outcome-based performance management systems is satisfactory, they are present in most of the sample organizations and exhibit a positive impact on collaboration and customer satisfaction.

Conclusion

The research study examined the relationship between organizational design characteristics and collaboration within the organization as well as performance measured as customer satisfaction. The findings provide empirical evidence of the positive impact of decentralization, outcome-based performance management and internal trust on collaboration within the organization. Moreover, internal trust appears to be even more important for larger organizations than for smaller ones.

The research study adds to the scarce literature of organizational design by highlighting the organizational design elements which are crucial for collaboration and appear to be relevant for customer satisfaction in today's dynamic environment. It provides support for the view that effective organizations are those with higher levels of autonomy (Weigelt & Miller, 2013) and outcome-based performance management.

Regarding managerial implications, managers should acknowledge the importance of organizational design and the firm's internal structure since it affects collaboration which, in turn, is vital for knowledge sharing. Decentralized organizational designs in today's dynamic environment facilitate collaboration and even positively influence customer satisfaction. Further, middle and senior managers should establish internal trust-based relationships within their organizations since the effect of trust on collaboration could not be overestimated.

However, the findings should be considered in light of the research limitations. Most important limitations are related to the use of the electronic

survey method, sample size, and geographical coverage. Data were gathered only in Latvia, and this limits the generalizability of the findings. Moreover, the result variable was measured only as customer satisfaction; future research should include other indicators, such as profit, market share, growth etc. Further studies could be extended to other locations and include more manifest variables.

References

Arora, A., Belenzon, S., & Rios, L.A. (2014). Make, buy, organize: the interplay between research, external knowledge, and firm structure. *Strategic Management Journal, 35*(3), 317-337. DOI: https://doi.org/10.1002/smj.2098

Burke, M.E. (2003). Philosophical and theoretical perspectives of organizational structures as information processing systems. *Journal of Documentation, 59*(2), 131-142. Retrieved from https://scholar.google.co.uk/citations?user=3TtWCbkAAAAJ&hl=en

Busi, M., & Bitici, U.S. (2006). Collaborative Performance Management: Present Gaps and Future Research. *Journal of Performance and Productivity Management, 55*(1), 7-25. DOI: https://doi.org/10.1108/17410400610635471

Chalkiti, K. (2012). Knowledge sharing in dynamic labor environments: insights from Australia. *International Journal of Hospitality Management, 24*(4), 522-541. DOI: https://doi.org/10.1108/09596111211226806

Christie, A., Joye, M., & Watts, R. (2003). Decentralization of the firm: theory and evidence. *Journal of Corporate Finance, 9*(2), 3-36. Retrieved from http://www.wiwi.uni-bonn.de/kraehmer/Lehre/SeminarSS09/Papiere/Christie_et_al_Decentralization_theory_evidence.pdf

CIPD (2012). *Innovative forms of organizing*, London: CIPD.

CIPD (2017). *A guide to organization design approaches, the types of organizational structures, and the factors which influence the choice of organization design.* Retrieved from https://www.cipd.co.uk/knowledge/strategy/organisational-development/design-factsheet

CSB (2015). *Large, medium and small enterprises.* Retrieved from http://www.csb.gov.lv/en/statistikas-temas/termini/large-medium-and-small-enterprises-35202.html

Curado, C. (2006). Organizational learning and organizational design. *The Learning Organization, 13*(1), 25-48. DOI: https://doi.org/10.1108/09696470610639112

Deloitte Development LLC (2016). *Global Human Capital Trends 2016 The new organization: Different by design*, Deloitte University Press.

Deloitte Development LLC (2017). *Rewriting the rules for the digital age: 2017 Deloitte Global Human Capital Trends*, Deloitte University Press.

Foss, N.J., Lungggsie, J., & Zahra, S.A. (2013). The role of external knowledge sources and organizational design in the process of opportunity exploitation. *Strategic Management Journal, 34*(12), 1453-1471. DOI: https://doi.org/10.1002/smj.2135

Gebauer, H., Fischer, T., & Fleisch, E. (2010). Exploring the interrelationship among patterns of service strategy changes and organizational design elements. *Journal of Service management, 21*(1), 103-129. DOI: https://doi.org/10.1108/09564231011025137

Hair, J.F., & Ringle, C.M. (2011). PLS-SEM; indeed a silver Bullet. *Journal of Marketing Theory and Practice, 19*(2), 139-151. DOI: https://doi.org/10.2753/MTP1069-6679190202

Hernaus, T., Vuksic, V.B., & Stemberger, M.I. (2016). How to go from strategy to results? Institutionalizing BPM governance within organizations. *Business Process Management Journal, 22*(3), 173-195. DOI: https://doi.org/10.1108/BPMJ-03-2015-0031

Hunter, J. (2002). Improving organizational performance through the use of effective elements of organization. *Leadership in Health Services, 15*(3), 12-21. DOI: https://doi.org/10.1108/13660750210441893

Kates, A., & Gailbraith, J.R. (2008). *Designing Your Organization: Using the STAR Model to Solve Critical design Challemges.* NJ: Jossey-Boss.

Keith, P., & Dotsika, F. (2007). Knowledge sharing: developing from within. *The Learning Organization, 14*(5), 395-406. DOI: https://doi.org/10.1108/09696470710762628

Koch, N. (2015). Common method bias PLS-SEM; A full collinearity assessment approach. *International Journal of e-Collaboration, 11*(4), 1-10. DOI: 10.4018/ijec.2015100101

Kohlbacher, M., & Reijers, H.A. (2013). The effects of process-oriented organizational design on firm performance. *Business Process Management Journal, 19*(2), 245-262. DOI: https://doi.org/10.1108/14637151311308303

Kretschmer, T., & Puranam, P. (2008). Integration through incentives within differentiated organizations. *Organization Science, 19*(6), 860-875. Retrieved from https://pdfs.semanticscholar.org/741e/64d87e132fcd5b5209561ba46c6e17f02281.pdf

Lursoft (2017). *NACE classificatory.* Retrieved from https://nace.lursoft.lv/?vr=3&old=0&v=en&o=&q=

Mahmoudsalehi, M., Maradkhannejad, R., & Safari, K. (2012). How knowledge management is affected by organizational structure. *The Learning Organization, 19*(6), 518-528. DOI: https://doi.org/10.1108/09696471211266974

Marsh, C., Sparrow, P., Hird, M., Balain, S., & Hesketh, A., (2009). *Integrated Organizational Design: The new Strategic priority for HR Directors,* Lancaster: center for Performance-led HR; Lancaster University.

Martin-Perez, V., Martin-Cruz, N., & Estrada-Vaquero, I. (2012). The influence of organizational design on knowledge transfer. *Journal of Knowledge Management, 16*(3), 418-434. DOI: https://doi.org/10.1108/13673271211238742

Mason, J., & Lefrere, P. (2003). Trust, Collaboration, e-Learning and Organizational Transformation. *International Journal of Training and Development, 7*(4), 259-270. DOI: https://doi.org/10.1046/j.1360-3736.2003.00185.x

Nikolenko, A., & Kleiner, B.H. (1996). Global trends in organizational design. *Work study, 45*(7), 23-25. DOI: http://dx.doi.org/10.1108/00438029610150966

Pereira-Molinier, J., Pertusa-Ortega, E., Tari, J., Lopez-Gamero, M., & Molina-Azon, J., (2016). Organizational design, quality management and competitive advantage in hotels. *International journal of Contemporary Hospitality Management, 28*(4), 762-784. DOI: https://doi.org/10.1108/IJCHM-10-2014-0545

Ringle, C.M., Wende, S., & Becker, J.M. (2014). *SmartPLS.* Hamburg: Smart-PLS.

Robbins, S. (1990). *Organization theory: structure, design, and applications.* International ed. Engelwood Cliffs: Prentice-Hall.

Satell, G. (2017). What Makes an Organization "Networked"? *Harvard Business Review,* June 08.

Stan, M., & Puranam, P. (2017). Organizational Adaptation to interdependence Shifts: The role of Integrator Structures. *Strategic Management Journal, 38*(5), 1041-1061. DOI: https://doi.org/10.1002/smj.2546

The Economist Intelligence Unit (2008). *The role of trust in business collaboration*, London: The Economist.

Tsung-Hsien, T. (2013). How expected benefit and trust influence knowledge sharing. *Industrial management & Data Systems*, *113*(4), 506-522. DOI: https://doi.org/10.1108/02635571311322766

Vissher, K., & Visscher-Voerman, I. (2010). Organizational design approaches in management consulting. *Management Decision*, *48*(5), 713-733. DOI: https://doi.org/10.1108/02517471080000701

Weigelt, C., & Miller, D.J. (2013). Implications of internal organization structure for firm boundaries. *Strategic Management Journal*, *34*(12), 1411-1435. DOI: https://doi.org/10.1002/smj.2074

Zehra, A.B. (2014). New Organization structures: virtual organizations. *International Journal of Engineering and Applied Sciences*, *6*(2), 18-27. Retrieved from http://eaas-journal.org/survey/userfiles/files/v6i203%20VIRTUAL%20ORGANIZATIONS.pdf