

Determinants of Knowledge Management and Organizational Performance: Mediation of Human Capital and Organizational Learning

Golubović Corcione Sanela

University Business Academy in Novi Sad, Faculty of Contemporary Arts, Belgrade, Serbia
<https://orcid.org/0009-0003-1765-1002>

Veličković Milica

University of Belgrade, Technical Faculty in Bor, Bor, Serbia
<https://orcid.org/0000-0002-4332-2216>

Fedajev Aleksandra

University of Belgrade, Technical Faculty in Bor, Bor, Serbia
<https://orcid.org/0000-0002-6974-6631>

Puiu Silvia

University of Craiova, Faculty of Economics and Business Administration, Craiova, Romania
<https://orcid.org/0000-0002-3967-3726>

Abstract

Background: It is widely recognized that human capital and knowledge are crucial for enterprises to achieve a competitive advantage. The literature suggests that the antecedents of knowledge management (KM) include technology, learning orientation, leadership, organizational culture, structure, strategy, and trust. The topic is relevant, but there is a lack of comprehensive analysis of the factors enhancing organizational performance (OP) across different countries and industries. Additionally, there is a research gap concerning the mediating role of human capital and organizational learning in the interplay between these antecedents, knowledge management, and organizational performance, particularly within the Serbian context.

Purpose: The Study examines the empirical evidence of the impact of main organizational factors on knowledge management implementation and its direct and indirect effect on organizational performance, through human capital and organizational learning within Serbian manufacturing and service firms.

Study design/methodology/approach: The analysis is based on a defined sample size of 637 anonymous participants employed in ten Serbian manufacturing and service companies, which have already implemented knowledge management principles. The Partial Least Squares Structural Equation Modeling (PLS-SEM) technique, which combines factor analysis and path analysis, was utilized to explore the relationships among constructs. After developing a conceptual model, confirmatory factor analysis was conducted to validate the factor structure of the observed variables.

Findings/conclusions: The results show a positive relation between key organizational factors and KM, and a direct linkage between KM and OP within Serbian firms. Furthermore, human capital and organizational learning were identified as mediating factors between KM and OP. This research contributes additional empirical support for the significance of enhancing OP through the development of human capital and valuable knowledge.

Limitations/future research: The research relies on subjective assessments, potentially introducing bias and measurement error. It also covers only ten manufacturing and service companies in Serbia. Future studies should address these limitations.

Keywords

Knowledge management, Human capital, Organizational learning, Organizational performance, PLS-SEM analysis

Introduction

For centuries, society has recognized the significance of knowledge. Family business owners imparted their commercial wisdom to their children, masters instructed their apprentices, and workers exchanged ideas and expertise on the job. However, the growing globalization of business and rapid technological advancements highlighted a future society grounded in knowledge, where the accumulation, dissemination, and utilization of knowledge underpin economic growth and capital accumulation. In a society like this, industries gain a competitive advantage not through traditional production factors but through the management and integration of knowledge. Consequently, to successfully align the innovative development of products, services, and processes, employees must have adequate knowledge (Pepple et al., 2022). In response to this need, a concept of management called knowledge management (KM) has emerged, underscoring the importance of an organization's ability to learn and to create, manage and evaluate intellectual capital. KM focuses on managing an organization's intangible assets (Yu et al., 2022). It serves as a foundation for innovation and the development of new products (Abbas & Sağsan, 2019), significantly enhancing organizational performance (OP). Evidence of effective practices shows that businesses with strong KM processes are the ones that achieve and maintain a competitive market advantage over extended periods (Chaithanapat et al., 2022). Thus, it can be determined that the number of papers on this topic is increasing significantly due to the importance of the topic. Although the topic is relevant, yet there is a lack of comprehensive analysis of the factors that enhance OP in the application of research models, techniques, and tools across various countries, industries and organizations.

Numerous conceptual studies have explored the critical factors affecting KM in organizations, yet empirical research remains limited in developing countries. For instance, Davenport et al. (1998) pinpointed eight factors for KM success, including technological and organizational infrastructure; a balance between flexibility and accessibility of knowledge; knowledge sharing; a culture oriented towards knowledge; motivated employees; IT methods for transferring knowledge; and the support and commitment of senior management. Gold et al. (2001) identified technical, structural, and cultural infrastructures that facilitate the

maximization of social capital. Ryan and Prybutok (2001) identified five key success factors: an open organizational culture; leadership and senior management commitment; employee engagement; teamwork; and information systems infrastructure. Wong (2005) recognizes eleven important success factors for KM, including management leadership and support, culture, IT, strategy and purpose, measurement, organizational infrastructure, processes and activities, motivational aids, resources, training and education, and human resource management (HRM). Zheng et al. (2009) found that KM mediates the effect of organizational culture on effectiveness and partially mediates the impacts of structure and strategy. Valaei et al. (2017) highlighted technology use and organizational structure as key factors in KM activities. Ugwu and Onyancha (2019) identified top management leadership and collaboration as the most influential organizational factors related to customer service KM applications, while human resources policies and compensation schemes showed low correlations with KM use. Rezaei et al. (2021) conducted research identifying factors like organizational structure, culture, strategy, leadership, trust, and technological infrastructure that influence the empowerment and implementation of KM within organizations, and its effect on OP.

The literature on the structural relationships between organizational factors and KM activities in manufacturing and service enterprises in the Republic of Serbia is scarce. Therefore, this study uses PLS-SEM modelling to explore the influence of organizational factors on KM activities within these enterprises in Serbia. Moreover, although human capital (HC) and organizational learning (OL) capacity play a crucial role in enterprise development, there is a dearth of research on how these two components interconnect and affect OP. Therefore, the initial research concept outlines three objectives for this study:

1. To examine how factors such as organizational culture, structure, strategy, technological infrastructure, leadership support, and trust influence the implementation of a KM system within the Serbian organizations.
2. To investigate the direct impact of KM on OP.
3. To explore the indirect impact of KM on OP, via the mediating variables of HC and

OL in manufacturing and service enterprises in the Republic of Serbia.

The paper is structured into several sections. The next section, following the introduction, presents a literature review that outlines the theoretical foundations of the issue, succeeded by the conceptual model and hypotheses. The final sections are dedicated to methodology, research findings, discussion, implications, limitations, and conclusion.

1. Literature review and hypotheses

Knowledge is recognized as a key resource that positions us ahead of our competitors (Chamba-Rueda et al., 2021). As a result, many scholars describe the present time as an era dominated by intellectual capital and KM (Yu et al., 2022). The concept of KM is multifaceted, with various definitions in scholarly literature, but the

descriptions provided by Nonaka and Takeuchi (1995) are frequently referenced. They depict KM as the integrated process of acquiring, sharing, and utilizing knowledge to enhance organizational value. The main goals of KM include improving productivity and efficiency, cutting costs, and bolstering performance (Mehta & Tariq, 2020), making it a structured approach to managing corporate knowledge (Pacheco et al., 2022). According to Abu-AISondos (2023), a KM system comprises key components such as culture, strategy, people, technology, and processes, which together facilitate the creation, storage, dissemination, and application of knowledge within an organization.

Table 1 summarizes the results from previous studies related to the organizational factors that affect knowledge management practice and their impact on organizational performance.

Table 1 Literature review on determinants

Analyzed links	Definition or core idea	Key findings	Type of relation
Organizational Culture and Knowledge Management	Organizational culture (OC) shapes the values, norms, and behaviors that guide how knowledge is created, shared, and applied within the organization, directly influencing the effectiveness of KM practices (Lam et al., 2021; Cadarin et al., 2017).	Most studies confirm that OC has a significant and positive impact on KM by fostering environments conducive to knowledge sharing, learning, and innovation (Rezaei et al., 2021; Lam et al., 2021; Aldulaimi, 2015; Zehir et al., 2011). OC is critical for effective KM processes, including knowledge creation, sharing, and application (Wong, 2005; Park et al., 2004). OC is a crucial factor for the success of KM initiatives (Zheng et al., 2009) and is linked to organizational effectiveness and competitive advantage (Azeem et al., 2021; Aldulaimi, 2015). While most studies report a positive correlation, some findings indicate OC's impact may be limited to certain KM elements such as knowledge conversion and protection (Valaei et al., 2017).	Positive
Organizational Structure and Knowledge Management	Organizational structure (OS) defines how tasks, roles, and responsibilities are allocated and coordinated, shaped by formalization, centralization/decentralization, and specialization dimensions, which together determine information flow, decision-making, and organizational efficiency (Abubakar et al., 2019; Baligh, 2006).	OS significantly shapes KM by influencing communication patterns, decision-making, and the implementation of new ideas (Zheng et al., 2009). Decentralized and less formal structures are shown to enhance KM activities (Chen et al., 2010; Schminke et al., 2000), while high centralization may restrict interactions and knowledge creation (Lee & Choi, 2003; Gold et al., 2001). Although some studies find a negative linkage between OS and KM effectiveness, especially in overly centralized structures (Zheng et al., 2009; Lee & Choi, 2003), most evidence supports a positive impact when structures are sufficiently decentralized and supportive of KM (Rezaei et al., 2021; Valaei et al., 2017; Wong, 2005).	Positive
Strategy and Knowledge Management	Strategy (STG) determines how KM is prioritized, integrated, and aligned with a company's long-term objectives, directly shaping KM practices and initiatives (Lynch, 1997; Daft, 1995).	A clear alignment between STG and KM is widely found to enhance innovation and overall OP (Abu-AISondos, 2023; Zheng et al., 2009; Zack, 1999). Treating knowledge as a strategic resource enables companies to better compete in dynamic environments (Singh et al., 2021; Grant, 1996). When KM initiatives are integrated with business strategies, organizations experience improved competitiveness and more effective task execution (Abu-AISondos, 2023; Nikabadi et al., 2016). Most studies demonstrate a positive direct and indirect influence of STG on KM and organizational effectiveness (Abu-AISondos, 2023; Zheng et al., 2009), though some research notes no significant impact (Rezaei et al., 2021).	Positive
Technological Infrastructure and Knowledge Management	Technological infrastructure (TI) encompasses the information systems, tools, and platforms that enable the creation, storage, sharing, and retrieval of knowledge, forming the backbone for effective KM processes (Abubakar et al., 2019; Chong et al., 2010; Alavi & Leidner, 2001).	TI facilitates efficient knowledge sharing, storage, and access, thereby enhancing KM and organizational outcomes (Mitrović et al., 2018; Islam et al., 2015; Alavi & Leidner, 2001). Investment in TI is shown to be essential for integrating knowledge and supporting systematic KM processes (Abubakar et al., 2019; Gold et al., 2001). TI positively influences knowledge quality, knowledge creation, and innovation and KM in general (Valaei et al., 2017; Valaei & Rezaei, 2017; Yang et al., 2012; Nonaka et al., 2006; Lee & Choi, 2003).	Positive
Leadership Support and Knowledge Management	Leadership support (LS) refers to the commitment and actions of leaders in valuing,	Supportive leadership fosters open communication, trust, autonomy, and employee engagement, all of which significantly	Positive

	promoting, and enabling knowledge-related activities, which directly shape the environment for effective KM (Singh et al., 2021; Wang & Noe, 2010).	enhance KM processes and OP (Kimpah et al., 2023; Singh et al., 2021; Novak et al., 2020; Takaishi et al., 2019). Studies show that managerial support, participatory decision-making, and positive leadership behaviors encourage knowledge sharing, innovation, productivity and collaborative relationships (Wang, 2025; Nauman et al., 2024; Zulfqar et al., 2022; Lam et al., 2021; Strese et al., 2016; Singh, 2008; Politis, 2001). Numerous studies confirm a strong positive relationship between LS and effective KM (Lam et al., 2021; Rezaei et al., 2021; Aldulaimi, 2015).	
Trust and Knowledge Management	Trust (TR) reflects the degree of confidence and reliability among employees and leaders, which is foundational for open knowledge sharing and effective KM in organizations (Hodzic et al., 2025; Torlak et al., 2021).	High levels of TR directly promote knowledge sharing, collaboration, and the successful implementation of KM processes, leading to improved OP (Hodzic et al., 2025; Rezaei et al., 2021; Ogunmokun et al., 2020; Abubakar et al., 2019). Conversely, a lack of TR can cause knowledge hoarding, hinder KM initiatives, and increase opportunistic behaviors (Abu-ALSondos, 2023; Wang, 2016; Abu-ALSondos et al., 2015; Hosseini et al., 2014). So, most studies confirm that TR has a positive impact on KM.	Positive
Knowledge Management and Organizational Performance	KM is recognized as a strategic factor that strengthens OP by supporting goal achievement, efficiency, innovation, and competitive advantage (Singh et al., 2021; Mahfodh & Obeidat, 2020; Abubakar et al., 2019).	Effective KM practices lower costs, optimize resources, and improves decision-making, innovation, and competitiveness (Kimpah et al., 2023; Singh et al., 2021; Abubakar et al., 2019; Huang & Li, 2017; Jain & Moreno, 2015). Numerous studies confirm KM's positive impact on profitability, project success, sustainability, and creative performance (Demir et al., 2023; Kokkaew et al., 2022; Rawashdeh et al., 2021; Lam et al., 2021; Rezaei et al., 2021; Alshawabkeh et al., 2020; Abbas & Saqsan, 2019; Graha et al., 2019; Chiabrishvili & Zaim, 2018; Yusr et al., 2017).	Positive
Human Capital as a Mediating Variable	HC, represented by the collective knowledge, skills, experience, and creativity of employees, is recognized as a core resource that links KM to OP by enabling value creation and sustainable competitive advantage (Abu-ALSondos, 2023; Campbell et al., 2012; Wang et al., 2014; Hsu & Fang, 2009).	Studies confirm that KM positively influences HC, which in turn enhances OP (Rezaei et al., 2021; Wang et al., 2014). HC is crucial for innovation, efficiency, and new product development (Hsu & Fang, 2009). Strategic investment in HC leads to improved operational and financial outcomes (Wang et al., 2014). HC acts as a mediator between KM and OP by enabling the transfer of knowledge to organizational results (Rezaei et al., 2021; Hsu & Fang, 2009).	HC mediates the relationship between KM and OP
Organizational Learning as a Mediating Variable	OL refers to the processes and behaviors through which organizations create, acquire, and apply knowledge, thus enhancing adaptability and performance; OL is closely linked to KM as it transforms knowledge into improved business outcomes (Idrees et al., 2023; Abubakar et al., 2019; Liao & Wu, 2009).	Multiple studies show that OL mediates the relationship between KM and OP, facilitating the translation of knowledge into innovation, growth, and improved organizational results (Rawashdeh et al., 2021; Karasneh, 2019; Jain & Moreno, 2015; Liao & Wu, 2009). Strong KM leads to greater OL, which then positively impacts OP (Nouri et al., 2017; Imran et al., 2016). Most findings support OL's key mediating role, although a few studies show no significant effect (Gorelick & Tantawi-Monsou, 2005).	OL mediates the relationship between KM and OP

Source: the authors

Based on the synthesized findings presented in Table 1, the following hypotheses are proposed to guide the empirical investigation of this study:

- H1. Organizational culture has a positive influence on knowledge management.
- H2. Organizational structure has a positive influence on knowledge management.
- H3. Organizational strategy has a positive influence on knowledge management.
- H4. Technological infrastructure has a positive influence on knowledge management.
- H5. Leadership support has a positive influence on knowledge management.
- H6. Trust has a positive influence on knowledge management.
- H7. Knowledge management has a positive influence on organizational performance.
- H8. Human capital mediates the relationship between knowledge management and organizational performance.
- H9. Organizational learning mediates the relationship between knowledge

management and organizational performance.

Each hypothesis reflects the established relationships among key variables as supported by the existing literature and well-established theories. However, the novelty of the research lies in simultaneous investigation of a comprehensive set of organizational factors (organizational culture, structure, strategy, technological infrastructure, leadership support, and trust), rather than examining isolated drivers of knowledge management, thereby conceptualizing KM as a systemic organizational capability. More importantly, the study extends existing research on the knowledge management - organizational performance nexus by moving beyond direct effects and explicitly testing human capital and organizational learning as two distinct and complementary mediating mechanisms through which knowledge management influences organizational performance. In that way, the model gives a more detailed explanation of how

knowledge management affects performance outcomes, especially in an transition economy context.

The information provided led to the development of a conceptual model, which is depicted in Figure 1.

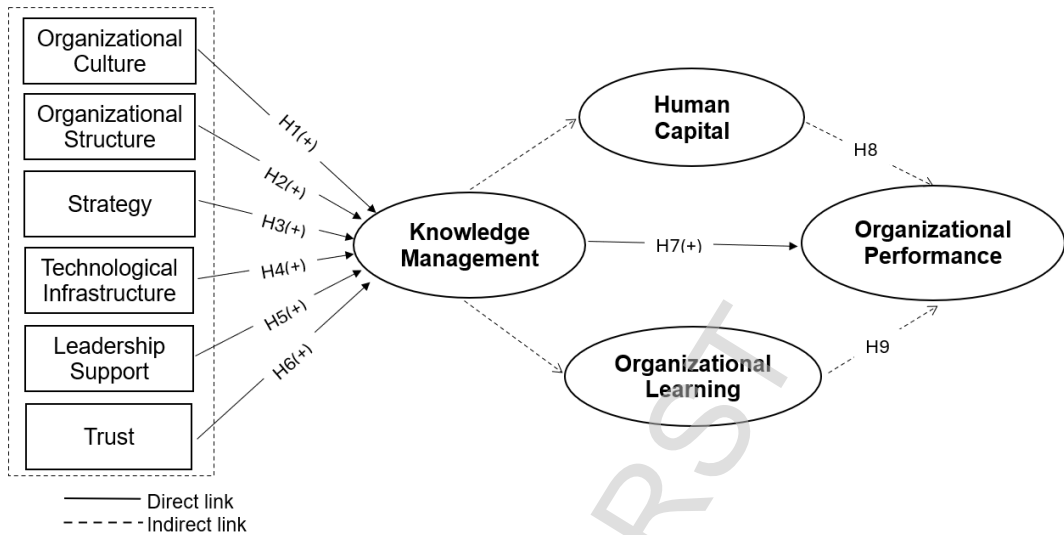


Figure 1 Conceptual model
Source: the authors

2. Research methodology

Serbia represents a theoretically and practically relevant setting for this study, since it represents transition economy, where organizations are still in the process of institutionalizing modern management practices such as KM. Unlike companies in developed market economies, Serbian firms operate in an environment characterized by uneven digitalization, limited R&D investment, and evolving institutional and regulatory frameworks, which makes the implementation and effectiveness of knowledge management practices particularly context-dependent. These characteristics provide a valuable opportunity to examine how organizational factors of KM translate into OP under conditions of structural transformation of economy, thereby enhancing the contextual relevance and broader applicability of the findings to other emerging and transition economies.

Taking into account the mentioned institutional environment in Serbia and that the objective of the study is to examine the organizational determinants and performance implications of KM, it was necessary to focus on organizations in which at least basic KM practices were already established, ensuring the relevance and validity of the empirical assessment. Accordingly, this research involved 10

organizations that have already implemented at least basic KM principles across various sectors in the Republic of Serbia. While such sampling method may limit the generalizability and causal interpretation of the findings, it is appropriate for exploratory and theory-extending research and provide a reliable basis for examining the proposed relationships (Sekaran & Bougie, 2016).

Initially, this study employed a deductive research approach, which involved reviewing relevant literature followed by data analysis and testing. A questionnaire was designed to gather the necessary research data. This questionnaire comprised 48 questions that examined the effects of OC, OS, STG, TI, LS, and TR on KM, as well as their impact on the OP of organizations in the Republic of Serbia. Additionally, the questionnaire included demographic questions regarding gender, education level, work experience, type of industry, and organization size.

The construction of research questions was based on background studies and articles by Carless et al. (2000); Gold et al. (2001); Darroch (2005); Yang et al. (2012); Wang et al. (2014); Park and Lee (2014); Islam et al. (2015); Jain and Moreno (2015); Shamim et al. (2019); Lam et al. (2021). A 7-point Likert scale, which ranges from 1 (completely disagree) to 7 (completely agree),

was utilized to measure the indices in the questionnaire.

After preparation, the questionnaires were reviewed by managers and revised based on their feedback. To maximize the effectiveness of the data collection, participants were thoroughly briefed on the content of the questionnaire and the overarching research objectives prior to the survey. Participation in the survey was entirely voluntary, and respondents were not incentivized with rewards. Data collection involved administering the questionnaires directly at the companies' premises during work breaks. The authors conducted the research personally, allowing them to address any questions or doubts that arose during the questionnaire process.

The PLS-SEM (Partial Least Squares - Structural Equation Modeling) technique was used to explore the relation between the proposed indicators.

2.1. Data Analysis

A total of 637 questionnaires were completed anonymously and considered reliable for further analysis. This sample size exceeds the minimum requirement of 380 respondents, ensuring a reliability level of 95% with a margin of error of 5%, according to the recommendations of Krejcie and Morgan (1970).

The survey, conducted in 2024, included 403 males and 234 females with various work

experiences. Classified by their level of education, the highest number were participants with High school degrees (48.82%), and the lowest number belonged to respondents with College degrees (6.75%). Demographic details of the participants are displayed in Table 2.

Table 2 Demographic characteristics of the respondents

Variables	Category	Value	%
Type of Industry	Manufacturing	577	90.58
	Service	60	9.42
Organizational size	Small	40	6.28
	Medium	268	42.08
	Large	329	51.64
Gender	Male	403	63.27
	Female	234	36.73
Education level	High school	311	48.82
	College degree	43	6.75
	University degree	194	30.46
	Master's and PhD	89	13.97
Organization work experience	<=5	251	39.40
	6-10	152	23.86
	11-15	163	25.59
	>15	71	11.15

Source: the authors

Although PLS-SEM does not require normally distributed data, extremely nonnormal data can produce deceptive final results (Hair et al., 2022). Based on the results obtained, presented in Table 3, the skewness and kurtosis statistics of all the variables ranged from -2 to 2. According to Hair et al. (2022), considering the robust performance of PLS-SEM, these values can be considered acceptable, and it can be concluded that the study data are normally distributed.

Table 3 The normality test

Variable	Skewness (statistic)	Skewness (SD)	Kurtosis (statistic)	Kurtosis (SD)
OC	-1,387	0,097	1,387	0,193
OS	-1,651	0,097	1,897	0,193
STG	-1,184	0,097	1,343	0,193
TI	-1,619	0,097	1,645	0,193
LS	-1,440	0,097	1,370	0,193
TR	-1,520	0,097	1,183	0,193
KM	-1,297	0,097	1,836	0,193
OL	-1,800	0,097	1,539	0,193
HC	-1,440	0,097	1,797	0,193
OP	-1,561	0,097	1,716	0,193

Source: the authors

Regarding the methodological procedure, in order to reduce the common method bias (CMB), the authors took care that the anonymity and confidentiality of the collected information were ensured. For statistical checking, Harman single-factor test was used, and the results have shown that CMB does not pose any significant concern in this research, since a single factor explains 41.05%

of the total variance, which is less than 50% (Fuller et al., 2016). In addition, the full collinearity test was performed as one of the most suitable methods for the identification of CMB in PLS-SEM (Kock, 2015). Full collinearity was assessed using the Variance Inflation Factor (VIF). The VIF test revealed no signs of multicollinearity among the indicators. The highest VIF value recorded is 2.937

(refer to Table 4), which is below the suggested maximum value of 5, as per Hair Jr et al. (2021).

3. Research results

Data was analyzed using the SmartPLS 4 software package. PLS-SEM modelling is a two-tiered process: evaluating the measurement model and assessing the structural model.

3.1. Measurement model

The evaluation of the measurement model involves determining outer loadings, assessing the

reliability of the measurement instrument Cronbach's Alpha (CA) and Composite Reliability (CR), examining convergent validity (AVE - Average Variance Extracted), and verifying the discriminant validity of the model construct.

Outer loadings indicate the intensity and direction of the connections between research variables and their composite measures. In this study, a threshold above 0.7, as recommended by Hair et al. (2010), was used to assess the quality of the outer loadings, which are detailed in Table 4.

Table 4 Measuring instrument, factor loadings and VIF value

Indicator	Description	OL	VIF
Organizational Culture (Gold et al., 2001; Wang et al., 2014; Islam et al., 2015; Lam et al., 2021)			
OC_1	In my organization, there is a willingness to cooperate within the organizational unit.	0.773	1.942
OC_2	Leaders in my organization encourage employees to express and share their opinions and ideas about their work.	0.778	2.216
OC_3	Employees are valued for their individual expertise.	0.820	2.363
OC_4	Employees are encouraged to interact with other groups.	0.757	1.938
OC_5	Our company culture is flexible, and the atmosphere is congenial.	0.806	2.209
OC_6	Our corporate culture fosters discussion and the exchange of ideas.	0.855	2.878
Organizational Structure (Gold et al., 2001; Islam et al., 2015)			
OS_1	In my organization, the structure encourages collective behavior over individualistic actions.	0.780	1.603
OS_2	In my organization, the structure is designed to foster the creation of new knowledge.	0.780	1.571
OS_3	The structure of my department promotes interaction and the exchange of knowledge.	0.790	1.657
OS_4	Disseminating new ideas to decision-makers within our organization is a straightforward process.	0.825	1.762
Organizational Strategy (Wang et al., 2014; Islam et al., 2015)			
STG_1	Our organization reacts quickly to changes.	0.831	1.555
STG_2	Our organization encourages entry into new markets and is committed to investing in new products/services.	0.827	1.577
STG_3	We meet with customers once a year to understand their future product/service needs.	0.826	1.598
Technological Infrastructure (Gold et al., 2001; Islam et al., 2015)			
TI_1	Our organization has an efficient information system.	0.733	1.466
TI_2	Our organization utilizes technology that monitors the activities of competitors and partners.	0.815	1.701
TI_3	Our organization has technology that enables employees to collaborate with individuals both within and outside the organization.	0.821	1.935
TI_4	Our organization utilizes technology that enables knowledge mapping and enhances the acquisition of new knowledge.	0.860	2.064
Leadership Support (Carless et al., 2000; Shamim et al., 2019; Lam et al., 2021)			
LS_1	In my organization, management recognizes the role of knowledge in the success of the company.	0.865	2.893
LS_2	In my organization, management allocates sufficient financial resources to facilitate knowledge exchange and knowledge management initiatives.	0.844	2.606
LS_3	Leaders support and foster employee development.	0.758	1.649
LS_4	Management advocates for open and transparent communication.	0.786	1.939
LS_5	Management grants employees' sufficient autonomy to independently determine their work methods and consider their subordinates' input before making decisions.	0.753	1.672
Trust (Carless et al., 2000; Park & Lee, 2014; Shamim et al., 2019)			
TR_1	Management fosters trust, inclusion and cooperation among team members.	0.898	2.596
TR_2	I feel like a part of the family in my organization.	0.911	2.937
TR_3	I am satisfied with the performance evaluation system implemented in my organization.	0.857	1.889
Knowledge Management (Gold et al., 2001; Yang et al., 2012; Park & Lee, 2014)			
KM_1	Our company creates new knowledge that is widely applicable.	0.808	2.332
KM_2	Our company has processes for generating new knowledge from existing knowledge.	0.796	2.289
KM_3	Our company has processes for filtering knowledge.	0.749	1.925
KM_4	My organization utilizes knowledge in the development of new products/services, problem-solving, and enhance efficiency.	0.738	1.794
KM_5	Members of different sectors collaborate to acquire new knowledge, methods and inventions.	0.803	2.440
KM_6	My organization has developed processes to gather knowledge about our customers, suppliers, and competitors.	0.761	2.137
KM_7	Through the exchange of information and knowledge, we often come up with new ideas that can be used to improve our business.	0.713	1.866
KM_8	In our company, knowledge is available to everyone who needs it.	0.742	1.867
Human Capital (Wang et al., 2014; Lam et al., 2021)			
HC_1	Employees in our organization have excellent professional skills.	0.822	2.148
HC_2	Employees in our organization are creative and often develop new ideas and knowledge.	0.850	2.468
HC_3	In my organization, considerable effort is put into selecting the right candidate.	0.822	2.181
HC_4	Employees possess the necessary work experience to perform their duties effectively.	0.845	2.409
HC_5	Employees recognize the significance of knowledge for the organization's success.	0.757	1.892
Organizational Learning (Jain & Moreno, 2015; Lam et al., 2021)			
OL_1	Our organization offers opportunities for the personal development of employees and has dedicated staff to provide career guidance and advice.	0.865	2.256
OL_2	Our organization encourages employees to participate in formal development activities, such as training, professional seminars, and symposiums.	0.838	2.103
OL_3	Our organization provides formal training programs to equip new staff with the necessary skills for their roles.	0.733	1.558
OL_4	Our information systems are regularly maintained and updated with the latest knowledge.	0.778	1.670
Organizational performance (Gold et al., 2001; Darroch, 2005)			

OP_1	In general, our organization is doing better than it was five years ago.	0.759	2.003
OP_2	Over the past 12 months, our organization has met its performance targets.	0.785	2.110
OP_3	Over the past two years, our organization has improved its ability to innovate new products/services.	0.744	1.790
OP_4	Over the past two years, our organization has improved its ability to rapidly commercialize innovations.	0.800	2.101
OP_5	In the last two years, our organization has enhanced its capacity for rapid adaptation to unforeseen changes.	0.727	1.709
OP_6	Our company's customer satisfaction rates surpass those of our main competitors.	0.778	1.844

Source: the authors

The reliability of a measurement instrument refers to its internal consistency and stability. For this model, Cronbach's alpha coefficient and CR values exceed 0.7, meeting the acceptability criteria set by Hair et al. (2010), with results presented in Table 5.

The convergent validity test results, evaluated using the average variance extracted (AVE) statistics and referenced in Table 5, are satisfactory. All values exceed 0.5, which aligns with the benchmark set by Molina et al. (2007), indicating that the measurement instrument's convergent validity is established.

Table 5 Convergent validity and construct reliability

Constructs	Cronbach's alpha	CR	AVE
OC	0.886	0.888	0.638
OS	0.805	0.807	0.630
STG	0.771	0.771	0.686
TI	0.822	0.832	0.653
LS	0.861	0.862	0.644
TR	0.867	0.868	0.791
KM	0.898	0.899	0.584
HC	0.877	0.880	0.672
OL	0.819	0.832	0.648
OP	0.859	0.861	0.587

Source: the authors

Discriminant validity is confirmed if the square root of the AVE exceeds the inter-construct correlations. Additionally, the correlations between indicator pairs should remain below 0.90 (Hair et al., 2010). The findings of the Fornell & Larcker method range from 0.498 to 0.889, indicating a good correlation among the composite variables. As shown in Table 6, the HTMT ratios of correlations for each construct pair are below the acceptance threshold of 0.90 or less, as suggested by authors Franke and Sarstedt (2019). Both test results confirm discriminant validity.

Table 6 Discriminant validity of the construct

Constructs	HC	KM	LS	OC	OL	OP	OS	STG	TI
KM	0.855								
LS	0.790	0.830							
OC	0.770	0.795	0.792						
OL	0.797	0.850	0.798	0.716					
OP	0.850	0.828	0.697	0.618	0.890				
OS	0.885	0.891	0.833	0.872	0.860	0.775			
STG	0.725	0.827	0.763	0.774	0.899	0.741	0.804		
TI	0.724	0.892	0.765	0.726	0.828	0.739	0.848	0.899	
TR	0.752	0.783	0.871	0.712	0.712	0.643	0.860	0.606	0.677

Source: the authors

Confirming discriminant validity is crucial as a preliminary step in analyzing the relationships among composite variables. Various methods have been suggested for this purpose, including the Fornell-Larcker criterion, Cross-loadings, and the Heterotrait-Monotrait ratio (HTMT). Henseler et al. (2015) advocate for the HTMT ratio analysis, citing its superior efficacy over the other methods. In this study, the Fornell-Larcker criterion and the HTMT ratio were employed to test discriminant validity. According to Fornell and Larcker (1981), the construct correlation should be more substantial than that of other constructs.

3.2. Structural model

Upon reviewing the measurement model, the connections between composite variables are assessed, and the suggested hypotheses are confirmed. Path coefficients (β) are calculated to ascertain the dynamics between exogenous and endogenous variables within the model. The statistical significance of these connections is gauged through the bootstrapping method, utilizing 5,000 samples for this study. The structural model's explanatory capability is determined by the coefficient of determination (R^2) and the effect size (f^2).

Table 7 Hypothesis testing results of the structural model

Constructs	β	STDEV	t-value	p-value	Results
<i>Direct effect</i>					
OC \rightarrow KM	0.122	0.035	3.443	0.001	Supported
OS \rightarrow KM	0.168	0.044	3.846	0.000	Supported
STG \rightarrow KM	0.111	0.037	2.970	0.003	Supported
TI \rightarrow KM	0.328	0.036	9.005	0.000	Supported
LS \rightarrow KM	0.137	0.042	3.288	0.001	Supported
TR \rightarrow KM	0.150	0.039	3.889	0.000	Supported
KM \rightarrow OP	0.195	0.057	3.431	0.001	Supported
<i>Indirect effect</i>					
KM \rightarrow HC \rightarrow OP	0.256	0.040	6.434	0.000	Supported
KM \rightarrow OL \rightarrow OP	0.278	0.031	8.848	0.000	Supported

Source: the authors

The research model includes seven direct effect hypotheses. The findings presented in Table 7 and Figure 2 show that all of them are statistically significant and supported, with respective values ($\beta=0.122$, $t=3.443$, $p<0.001$; $\beta=0.168$, $t=3.856$,

$p<0.000$; $\beta=0.111$, $t=2.970$, $p<0.003$; $\beta=0.328$, $t=9.005$, $p<0.000$; $\beta=0.137$, $t=3.288$, $p<0.001$; $\beta=0.150$, $t=3.889$, $p<0.000$; $\beta=0.195$, $t=3.431$, $p<0.001$).

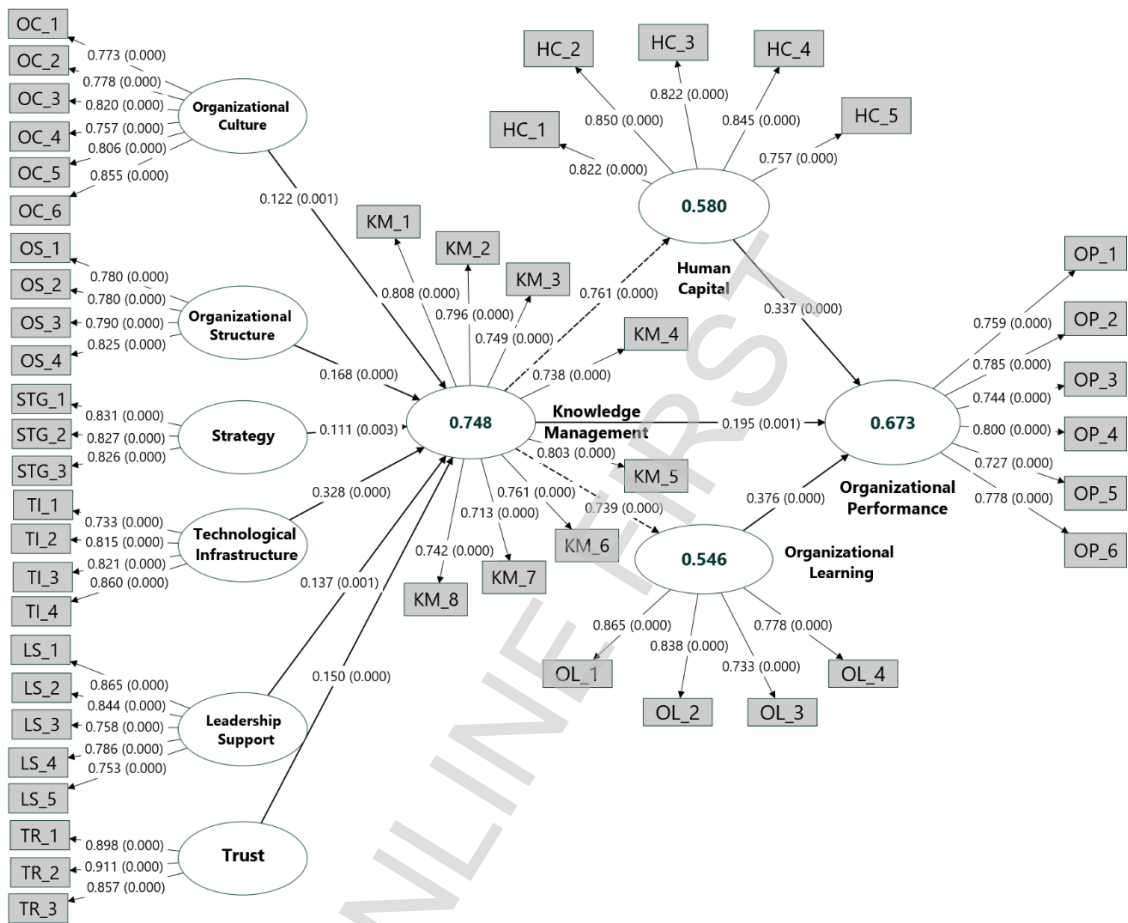


Figure 2 Structural model
Source: the authors

The mediation analysis explored the indirect effects of HC and OL on the relationship between KM and OP. The findings presented in Table 7 reveal that KM has a positive and statistically significant indirect effect on OP ($\beta=0.256$, $t=6.434$, $p<0.000$) and ($\beta=0.278$, $t=8.848$, $p<0.000$), respectively, thus supporting the hypotheses H8 and H9. According to these results, the mediation effect of HC and OL between KM as an independent variable and OP as a dependent is complementary partial. Complementary partial mediation means that both direct and indirect effects are statistically significant and point in the same direction (Baron & Kenny, 1986), like in this study, which means that part of the effect of the

independent variable on the dependent variable is explained by the mediator variables.

The R^2 (coefficient of determination) was utilized to assess the variance in composite dependent variables. According to Chin (2010), proposed cutoff R^2 values are as follows: 0.190 weak, 0.333 moderate, and 0.670 substantial. The findings presented in Table 8 show substantial values of $R^2=0.748$ for KM and $R^2=0.673$ for OP, all surpassing the 0.670 threshold. Therefore, the results indicate that the model has significant explanatory power.

Table 8 R² and f² values of structural models

Predictor(s)	Outcome(s)	R ²	f ²
OC	KM	0.748	0.022
OS			0.033
STG			0.020
TI			0.162
LS			0.024
TR			0.032
KM	OP	0.673	0.038
HC			0.135
OL			0.182

Source: the authors

The coefficient f² evaluates how effectively each predictor variable explains the dependent variable, signifying the effect sizes of the paths. Cohen (1988) categorizes f² values above 0.35 as large, above 0.15 as moderate, and between 0.02 and 0.15 as small. According to these benchmarks and Table 8 results, the predictor variables OC, OS, STG, LS, and TR have a small explanatory influence (f²=0.022; f²=0.033; f²=0.020; f²=0.024; f²=0.032) on KM, as does the predictor variable KM (f²=0.038) on OP, and the mediating variable HC on OP (f²=0.135). On the other hand, the predictor variable TI has moderate significance in explaining the endogenous variable KM (f²=0.162), as well as the mediating variable OL on OP (f²=0.182).

4. Discussion and implications

4.1. Discussion

The progression of technology and a modern workforce profile have made it essential for OC and strategies to focus on KM and IT tools, promoting organizational knowledge and improving overall performance. Many companies in developing countries, including Serbia, have recognized the importance of KM and are beginning to implement this concept in their business practices to enhance their competitive position and overall performance.

The key findings of the study highlight the importance of understanding and applying knowledge-based culture, structure, and strategies by management in organizations in the Republic of Serbia, providing critical insights that can greatly enhance practical applications. The study expanded the understanding of the knowledge-based perspective and its theoretical consequences by introducing OL for a deeper understanding of the mechanisms through which OP is attained. The study carried out an in-depth investigation into the direct impact of key organizational elements (OC, OS, TI, LS and TR) on KM. It also evaluates the direct and indirect effects (using HC and OL as

mediators) of KM on OP in organizations operating in Serbia.

OC is a fundamental factor in KM, shaping beliefs and behaviors within an organization. When employees recognize knowledge as an important resource, positive cultural influences are expected to enhance KM and OP. Accordingly, the results obtained support the primary assumptions in this paper, indicating that OC has a statistically significant impact on KM, consistent with Rezaei et al. (2021).

OS delineates the activities, roles, and responsibilities, as well as the communication channels within the firm, and in that way can influence KM processes. Previous studies indicate that when individuals are granted higher levels of autonomy in decision-making and accountability, they tend to experience greater job satisfaction. Current research revealed that structure positively influences KM and is statistically significant, which is in line with Valaei et al. (2017) and Rezaei et al. (2021), but in contrast with a study conducted by Zheng et al. (2009).

A strong strategy allows companies to explore new opportunities, and take calculated risks, potentially leading them to become market leaders. To achieve good performance, the company should adopt an expansion strategy, which is essential for maximizing returns on investments and is a major determinant of corporate success. KM programs thrive when they are aligned with the business strategy. The findings of this research confirm the hypothesis H3, indicating that strategy has a significant and positive effect on KM. This finding is in line with Abu-AISondos' (2023) reports, but contrary to the study results of Rezaei et al. (2021).

TI facilitates knowledge codification (transforming tacit knowledge into explicit knowledge) and enables KM, which further promotes rapid information exchange and fosters creativity and learning, ultimately resulting in improved OP. The results presented in this study indicate a statistically significant and positive impact of TI on KM, supporting the findings specified in Abu-AISondos (2023).

LS can foster an environment in which knowledge sharing is the norm, facilitating effective KM processes and significantly enhancing overall OP. Rezaei et al. (2021) indicate a positive relationship between knowledge-based leadership and KM. Similarly, Lam et al. (2021) indicate that leadership style significantly affects KM practices, which aligns with our study's

finding supporting hypothesis H5, suggesting that LS positively affects KM.

This study showed that trust is one of the key factors for KM implementation in organizations. Studies by Ogunmokun et al. (2020) and Rezaei et al. (2021) confirm the positive impact of TR on KM, which is in line with our findings and supports our hypothesis H6.

An organization can generate organizational value based on its capacity to create, share, and utilize knowledge, which in turn enhances its competitiveness. The study results confirmed that KM has a positive direct effect on OP, consistent with recent works that see KM as a key linkage for increasing organizational capabilities and performance (Demir et al., 2023; Kokkaew et al., 2022; Rawashdeh et al., 2021; Singh et al., 2021; Rezaei et al., 2021; Alshawabkeh et al., 2020; Mahfodh & Obeidat, 2020).

HC is a resource that is valued through experience, education, knowledge, and training. It is very difficult to imitate or copy and therefore represents a fundamental strategic aspect of any knowledge-oriented organization. Organizations should therefore invest in HC and in increasing their knowledge and experience by developing a learning-based OC by offering education, training, and mentoring. HC and OL were identified as positive mediators in the connection between KM and OP (H8 and H9), supporting the findings of Karasneh (2019); Nouri et al. (2017); Jain & Moreno (2015) and Liao & Wu (2009). To improve OP, managers need to utilize factors that encourage employees to acquire new knowledge, embrace open innovative ideas, and share information. Furthermore, they should focus on establishing conditions that promote OL, as a supporting environment is closely linked to enhanced OP.

Organizational factors positively influence KM, which in turn enhances OP in the studied organizations. These organizations acknowledge the strategic importance of KM by its integration into daily operations through knowledge-oriented cultures, structures, and strategies, continuous learning practices, and the adoption of advanced technologies, thereby enhancing the alignment of products and services with customer expectations. Well-developed information systems in Serbian organizations, support faster knowledge storage, while training that emphasizes the value of knowledge is crucial. Together, these elements boost overall performance, aligning with results from Demir et al. (2023). When employees view knowledge as a vital resource and adapt their

behavior accordingly, it is likely that HC, KM, and OL will positively impact OP in today's technological landscape.

4.2. Implications

4.2.1. Theoretical implications

By applying the PLS-SEM technique, this study advances the literature by offering an integrated examination of how key organizational factors impact KM and how KM, in turn, influences OP both directly and indirectly through HC and OL in Serbian manufacturing and service firms. The proposed research framework is based on established models from previous research (Kokkaew et al., 2022; Rezaei et al., 2021; Rawashdeh et al., 2021; Valaei et al., 2017; and Zheng et al., 2009), demonstrating how an OC, OS, and STG focused on KM, HC, and OL can boost performance. The findings suggest that organizations aiming for optimal performance need to focus on implementing KM processes. It highlights the essential importance of KM, HC, and OL in improving organizational effectiveness.

This study significantly contributes to the existing literature, particularly in Balkan countries where such research is limited. The results of this study can be utilized for comparative evaluation alongside findings from other organizations, aiding in the establishment of universally recognized links that will enhance the advancement of KM concepts.

4.2.2. Practical implications

Implications for managers. The findings from this analysis have brought about the understanding that simply embracing a KM system as a strategic market direction is insufficient. Managerial support for a learning environment and employee training is also necessary to transform ideas into valuable contributions.

Studied organizations should continue to invest in HC, KM practices, and learning, as well as in technology, to enhance their OP. To increase the value of knowledge, enterprises should ensure that all employees have access to current information and a strong understanding of technologies for effective knowledge dissemination.

Due to heightened regulatory demands, organizations need to allocate more resources to adapt their business strategies to frameworks that support knowledge sustainability. It is essential to integrate the significance of the KM process into the cognitive behaviors of the workforce and to

develop a culture within the organization that values knowledge. Notably, all organizational elements, both hard and soft, equally affect KM; overlooking any aspect can yield negative results.

Implications for policymakers. This study offers valuable insights for policymakers. Policymakers in Serbia should encourage the transition toward a knowledge-driven economy by improving national KM strategies that integrate innovation, digitalization, and HC development. National policies should prioritize continuous education, reskilling, and professional training programs that strengthen HC and enhance knowledge-sharing capabilities across industries. Policymakers should also introduce targeted incentives for firms implementing structured KM practices, such as tax relief or grants for organizations that implement certified KM systems, invest in digital innovation, or develop employee learning platforms.

Conclusion

Kokkaew et al. (2022) highlighted the need to transition from a “production-based economy to a knowledge-based economy” in the twenty-first century. Management's primary role now is to boost the productivity of knowledge workers, ensuring all employees can access and benefit from information.

Organizational knowledge is crucial for firms to ensure that individual expertise is shared throughout a team or department rather than being limited to a single employee. KM requires an open organizational culture that values knowledge sharing and is led by leaders who encourage and reward creativity and innovation. In such an environment, employees feel safe to share their knowledge and learn from their experiences. However, many organizations, particularly in developing countries, face challenges such as individualistic cultures, rigid organizational structures, inadequate leadership involvement in KM activities, a limited understanding of the KM advantages, and an absence of incentive structures. The main difficulty for companies is to understand KM and successfully execute it through a KM system. It is also essential to treat knowledge as an organizational asset to significantly boost the capability, speed, and efficiency of a firm in providing goods and services. This approach helps companies gain an advantage in the market through implementing strategies like product excellence, cost efficiency, and distinguishing themselves from competitors.

The current study indicates that all organizational elements involved, such as culture, structure, strategy, technological infrastructure, leadership support, and trust, are aligned with KM practices and serve as sources of improvement in OP.

Limitations

The study has its limitations and raises unanswered questions for further exploration. To begin with, the study depends on the personal evaluations of the participants, and the obtained results are based on their viewpoints, which could be influenced by bias and inaccuracies in measurement. Another limitation is that the survey included only ten manufacturing and service companies in the Republic of Serbia. The dataset is heavily skewed toward large and medium manufacturing firms, with a predominance of male respondents, primarily those who have completed high school or university education, which could impact the results. The fact that the sample consisted mainly of respondents employed in large companies that invest much more in knowledge management may be the reason for obtaining positive results. Further research should focus on addressing these limitations and minimizing their potential impact on the results. Future research could extend this study by adopting cross-country designs to enable comparative analyses of KM practices under different institutional and cultural conditions. Longitudinal research designs would further allow examination of the dynamic and causal relationships between KM, HC, OL, and OP over time. In addition, qualitative or mixed-methods approaches, such as in-depth interviews or case studies, could enrich the conceptual framework by providing deeper insights into KM processes and by exploring additional mediating mechanisms, including employees' commitment to organizational learning. Further research could also include objective indicators, especially for OP assessment, which will reduce subjectivity and potential errors regarding the obtained results.

Declarations

Availability of data and materials

The database utilized and examined during this study can be obtained from the corresponding author upon reasonable request.

Funding

The research presented in this paper was carried out with the finance support of the Ministry of Science, Technological Development and Innovation of the Republic of Serbia, within the framework of financing scientific research work at the University of Belgrade, Technical Faculty in Bor, in accordance with the contract with registration number 451-03-137/2026-03/ 200131.

Acknowledgements

The authors thank all anonymous participants in the voluntary survey for their support on a draft of the paper.

References

- Abbas, J., & Sağsan, M. (2019). Impact of knowledge management practices on green innovation and corporate sustainable development: A structural analysis. *Journal of Cleaner Production*, 229, 611-620. <https://doi.org/10.1016/j.jclepro.2019.05.024>
- Abu-AlSondos, I. A. (2023). An empirical study of critical success factors in implementing knowledge management systems (KMS): The moderating role of culture. *Uncertain Supply Chain Management*, 11. <https://doi.org/10.5267/j.uscm.2023.7.016>
- Abu-AlSondos, I. A., Pangil, F., & Othman, S. Z. (2015). An empirical study on the effect of individual factors on tacit knowledge-sharing in the ICT sector. *International Journal of Management Studies*, 22(2), 1-16.
- Abubakar A. M., Elrehailb, H., Alatailatc, M. A., & Elc, A. (2019). Knowledge management, decision-making style and organizational performance. *Journal of Innovation & Knowledge*, 4, 104-114. <https://doi.org/10.1016/j.jik.2017.07.003>
- Alavi, M., & Leidner, D. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*, 25(1), 107-136. <https://doi.org/10.2307/3250961>
- Aldulaimi, S. (2015). Exploring the Effect of Organizational Culture, Leadership and Strategy on Organizational Effectiveness with Mediating Effect of Knowledge Management. *International journal of economics, commerce and management*, 3(4), 1-19.
- Alshawabkeh, R., Rumman, A.A., Al-Abbadi, L., & Abu-Rumman, A. (2020). The intervening role of ambidexterity in the knowledge management project success connection. *Problems and Perspectives in Management*, 18(3), 56-66. [http://dx.doi.org/10.21511/ppm.18\(3\).2020.05](http://dx.doi.org/10.21511/ppm.18(3).2020.05)
- Azeem, M., Ahmed, M., Haider, S., & Sajjad, M. (2021). Expanding competitive advantage through organizational culture, knowledge sharing and organizational innovation. *Technology in Society*, 66, 101635. <https://doi.org/10.1016/j.techsoc.2021.101635>
- 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), 1173-1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Baligh, H. H. (2006). Organization Structures: Theory and Design, Analysis and Prescription. *Information and Organization Design Series*, 5. Springer New York, 33-64. http://doi.org/10.1007/0-387-28317-X_2
- Cadorin, E., Johansson, S.G., & Klofsten, M. (2017). Future developments for science parks: Attracting and developing talent. *Industry and Higher Education*, 31, 156-167. <http://doi.org/10.1177/0950422217700995>
- Campbell, B.A., Coff, R., & Kryscynski, D. (2012). Rethinking sustained competitive advantage from human capital. *The Academy of Management Review*, 37(3), 376-395. <http://dx.doi.org/10.5465/amr.2010.0276>
- Carless, S.A., Wearing, A.J., & Mann, L. A. (2000). Short Measure of Transformational Leadership. *Journal of Business and Psychology*, 14, 389-405. <https://doi.org/10.1023/A:1022991115523>
- Chaithanapat, P., Punnakitikashem, P., Oo, N. C. K. K., & Rakthin, S. (2022). Relationships among knowledge-oriented leadership, customer knowledge management, innovation quality and firm performance in SMEs. *Journal of Innovation & Knowledge*, 7(1), 100162. <https://doi.org/10.1016/j.jik.2022.100162>
- Chamba-Rueda, L. M., Davila, G. A., & Pardo-Cueva, M. (2021). Quality management, knowledge creation, and innovation performance: Insights from Ecuador. *Latin American Business Review*, 24, 1-28. <https://doi.org/10.1080/10978526.2021.1997144>
- Chen, C. J., Huang, J. W., & Hsiao, Y. C. (2010). Knowledge management and innovativeness: the role of organizational climate and structure. *International Journal of Manpower*, 31(8), 848-870. <http://doi.org/10.1108/01437721011088548>
- Chiabrishvili, M., & Zaim, H. (2018). The role of knowledge management for long-term sustainability in Kuwait companies. *Middle East Journal of Management*, 5(4), 340-355. <https://doi.org/10.1504/MEJM.2018.095586>
- Chin, W. W. (2010). How to write up and report PLS analyses. In V. Esposito Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of partial least squares: Concepts, methods and applications* (pp. 655–690). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-32827-8_29
- Chong, C., Chong, S., & Lin, B. (2010). Organizational demographic variables and preliminary KM implementation success. *Expert Systems with Applications*, 37(10), 7243-7254. <https://doi.org/10.1016/j.eswa.2010.04.003>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Routledge. <https://doi.org/10.4324/9780203771587>
- Daft, R. L. (1995). *Organizational theory and design*. St. Paul, Minnesota: West Publishing Co.
- Darroch, J. (2005). Knowledge management, innovation and firm performance. *Journal of Knowledge Management*, 9(3), 101-115. <https://doi.org/10.1108/13673270510602809>
- Davenport, T., Long, D. W., & Beers, M. (1998). Successful knowledge management projects. *Sloan management review*, 39(2), 43-57.

- Demir, A., Budur, T., Omer, H. M., & Heshmati, A. (2023). Links between knowledge management and organisational sustainability: does the ISO 9001 certification have an effect?. *Knowledge Management Research & Practice*, 21(1), 183-196. <http://goi.org/10.1080/14778238.2020.1860663>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: a comparison of four procedures. *Internet Research*, 29(3), 430-447. <https://doi.org/10.1108/IntR-12-2017-0515>
- Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, 69(8), 3192-3198. <https://doi.org/10.1016/j.jbusres.2015.12.008>
- Gold A. H., Malhotra A., & Segars A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185-214. <https://doi.org/10.1080/07421222.2001.11045669>
- Gorelick, C., & Tantawy-Monsou, B. (2005). For performance through learning, knowledge management is the critical practice. *The Learning Organization*, 12(2), 125-139. <https://doi.org/10.1108/09696470510583511>
- Graha, A.N., Sudiro, A., Armanu, A., & Ratnawati, K. (2019). The role of knowledge management in organizational performance: case study of University of Malang, Indonesia. *Problems and perspectives in management*, 17(1), 230-243. [https://doi.org/10.21511/ppm.17\(1\).2019.20](https://doi.org/10.21511/ppm.17(1).2019.20)
- Grant, R. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109-122. <https://doi.org/10.1002/smj.4250171110>
- Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate data analysis: A global perspective*. 7th Edition. NJ: Pearson Upper Saddle River.
- Hair, J. F., Hult, T., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 3rd Edition. Thousand Oaks: Sage. <https://doi.org/10.1007/978-3-030-80519-7>
- Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook*. <https://doi.org/10.1007/978-3-030-80519-7>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hodzic, N., Efendic, A., & Kapo, A. (2025). Team effectiveness in a virtual environment: the role of trust and knowledge sharing. *Strategic Management-International Journal of Strategic Management and Decision Support Systems in Strategic Management*. <https://doi.org/10.5937/StrMan2400017H>
- Hosseini, M. R., Tahsildari, H., Hashim, M. T., & Tareq, M. A. (2014). The impact of people, process and technology on knowledge management. *European Journal of business and Management*, 6(28), 230-241.
- Hsu, Y. H., & Fang, W. (2009). Intellectual capital and new product development performance: The mediating role of organizational learning capability. *Technological Forecasting & Social Change*, 76, 664-677. <http://doi.org/10.1016/j.techfore.2008.03.012>
- Huang, J. W., & Li, Y. H. (2017). Green innovation and performance: The view of organizational capability and social reciprocity. *Journal of Business Ethics*, 145, 309-324. <https://doi.org/10.1007/s10551-015-2903-y>
- Idrees, H., Xu, J., Haider, S. A., & Tehseen, S. (2023). A systematic review of knowledge management and new product development projects: trends, issues, and challenges. *Journal of Innovation & Knowledge*, 8(2), 100350. <https://doi.org/10.1016/j.jik.2023.100350>
- Imran, M. K., Ilyas, M., Aslam, U., & Rahman, U. U. (2016). Organizational learning through transformational leadership. *The Learning Organization*, 23(4), 232-248. <http://doi.org/10.1108/TLO-09-2015-0053>
- Islam, M. Z., Jasimuddin, S. M., & Hasan, I. (2015). Organizational culture, structure, technology infrastructure and knowledge sharing. Empirical evidence from MNCs based in Malaysia. *VINE Emerald Group Publishing Limited*, 45(1), 67-88. <https://doi.org/10.1108/VINE-05-2014-0037>
- Jain, A., & Moreno, A. (2015). Organizational learning, knowledge management practices and firm's performance: An empirical study of a heavy engineering firm in India. *The Learning Organization*, 22(1), 14-39. <http://doi.org/10.1108/TLO-05-2013-0024>
- Karasneh, A. (2019). Reinforcing innovation through knowledge management: Mediating role of organizational learning. *Interdisciplinary Journal of Information, Knowledge and Management*, 14, 235-252. <https://doi.org/10.28945/4427>
- Kimpah, J., Ibrahim, H. I., Rothmann, S., & Jaaffar, A. H. (2023). Participative decision-making, autonomy, and creative performance: Evidence of match-up employee relations between engineers and managers. *Serbian Journal of Management*, 18(2), 331-351. <https://doi.org/10.5937/sjm18-38188>
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1-10. <https://doi.org/10.4018/ijec.2015100101>
- Kokkaew, N., Jokkaw, N., Peansupap, V., & Wipulanusat, W. (2022). Impacts of human resource management and knowledge management on non-financial organizational performance: Evidence of Thai infrastructure construction firms. *Ain Shams Engineering Journal*, 13, 101750. <https://doi.org/10.1016/j.asej.2022.101750>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 607-610. <https://doi.org/10.1177/001316447003000308>
- Lam, L., Nguyen, P., Le, N., & Tran, K. (2021). The Relation among Organizational Culture, Knowledge Management, and Innovation Capability; Its Implication for Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 66. <https://doi.org/10.3390/joitmc7010066>

- Lee, H., & Choi, B. (2003). Knowledge management enablers, processes, and organizational performance: an integrative view and empirical examination. *Journal of Management Information Systems*, 20(1), 179-228. <https://doi.org/10.1080/07421222.2003.11045756>
- Liao, S., & Wu, C. (2009). The Relationship among Knowledge Management, Organizational Learning, and Organizational Performance. *International Journal of Business and Management*, 4(4), 64-76. <https://doi.org/10.5539/ijbm.v4n4p64>
- Lynch R. (1997). *Corporate Strategy*. London: Pitman Publishing.
- Mahfodh, A., & Obeidat, A. (2020). Knowledge sharing tools and their impact on enhancing organizational performance. *International Journal of Academic Research in Business and Social Sciences*, 10(9), 91-112. <http://dx.doi.org/10.6007/IJARBS/v10-i9/7708>
- Mehta, A. M., & Tariq, M. (2020). An Institution Based View Towards Innovation Strategy and Knowledge Management in the European Region. *Journal of Management Information and Decision Sciences*, 23(4), 223-228.
- Mitrovic, Z., Obradovic, V., & Suknovic, M. (2018). Knowledge management in the Public sector - The case of Serbian Local Government. *Serbian Journal of Management*, 13(2), 293-309. <https://doi.org/10.5937/sjm13-15037>
- Molina, L. M., Llorens-Montes, J., & Ruiz-Moreno, A. (2007). Relationship between quality management practices and knowledge transfer. *Journal of Operations Management*, 25(3), 682-701. <https://doi.org/10.1016/j.jom.2006.04.007>
- Nauman, S., Zheng, C., & Basit, A. A. (2024). Supervisor knowledge hiding's impact on employee creativity: implications for thriving at work and future career. *Knowledge Management Research & Practice*, 23(1), 40-51. <https://doi.org/10.1080/14778238.2024.2334455>
- Nikabadi, M.S., Bagheri, S., & Mohammadi-Hoseini, S.A. (2016). Effects of knowledge management strategy and organizational learning capability on innovation-driven performance in an oil company. *Knowledge Management & E-Learning: An International Journal*, 8(2), 334-355. <https://doi.org/10.34105/j.kmel.2016.08.022>
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford: Oxford University Press. <https://doi.org/10.1093/oso/9780195092691.001.0001>
- Nonaka, I., von Krogh, G., & Voelpel, S. (2006). Organizational knowledge creation theory: evolutionary paths and future advances. *Organization Studies*, 27(8), 1179-1208. <https://doi.org/10.1177/0170840606066312>
- Nouri, B. A., Ghorbani, R., & Soltani, M. (2017). The effect of knowledge management on organizational innovation with the mediating role of organizational learning (case study: Agricultural Bank in Iran). *Journal of Applied Economics and Business Research*, 7(3), 194-211.
- Novak, A., Breznik, K., & Natek, S. (2020). How leaders can initiate knowledge management in organizations: role of leadership style in building knowledge infrastructure. *Human Systems Management*, 39(1), 37-50. <http://doi.org/10.3233/HSM-190596>
- Ogunmokon, O. A., Eluwole, K. K., Avci, T., Lasisi, T. T., & Ikhide, J. E. (2020). Propensity to trust and knowledge sharing behavior: an evaluation of importance-performance analysis among Nigerian restaurant employees. *Tourism Management Perspectives*, 33, 100590. <https://doi.org/10.1016/j.tmp.2019.100590>
- Pacheco, G. V., Castillo, A. E., Manotas, E. N., & Arevalo, O. (2022). Analysis of the knowledge management in industrial exporting SMEs. *Procedia Computer Science*, 203, 476-480. <https://doi.org/10.1016/j.procs.2022.07.065>
- Park, H., Ribière, V., & Schulte, W. (2004). Critical attributes of organizational culture that promote knowledge management technology implementation success. *Journal of Knowledge management*, 8(3), 106-117. <https://doi.org/10.1108/13673270410541079>
- Park, J. G., & Lee, J. (2014). Knowledge sharing in information systems development projects: explicating the role of dependence and trust. *International Journal of Project Management*, 32(1), 153-165. <https://doi.org/10.1016/j.ijproman.2013.02.004>
- Pepple, D., Makama, C., & Okeke, J. P. (2022). Knowledge management practices: A public sector perspective. *Journal of Business Research*, 153, 509-516. <https://doi.org/10.1016/j.jbusres.2022.08.041>
- Politis, J.D. (2001). The relationship of various leadership styles to knowledge management. *Leadership & organization development Journal*, 22, 354-364. <http://dx.doi.org/10.1108/01437730110410071>
- Rawashdeh, A. M., Almasarweh, M. S., Alhyasat, E. B., & Rawashdeh, O. M. (2021). The relationship between the Quality Knowledge Management and Organizational Performance via the mediating role of Organizational Learning. *International Journal for Quality Research*, 15(2), 373-386. <http://doi.org/10.24874/IJQR15.02-01>
- Rezaei, F., Khalilzadeh, M., & Soleimani, P. (2021). Factors Affecting Knowledge Management and Its Effect on Organizational Performance: Mediating the Role of Human Capital. *Advances in Human-Computer Interaction*, 8857572. <https://doi.org/10.1155/2021/8857572>
- Ryan, S. D., & Prybutok, V. R. (2001). Factors affecting knowledge management technologies: a discriminative approach. *Journal of Computer Information Systems*, 41(3), 31-37. <https://doi.org/10.1080/08874417.2001.11647019>
- Sekaran, U., Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). Wiley & Sons, West Sussex.
- Schminke, M., Ambrose, M. L., & Cropanzano, R. S. (2000). The effect of organizational structure on perceptions of procedural fairness. *Journal of applied psychology*, 85, 294-304. <http://doi.org/10.1037//0021-9010.85.2.294>
- Shamim, S., Cang, S., & Yu, H. (2019). Impact of knowledge oriented leadership on knowledge management behaviour through employee work attitude. *The International Journal of Human Resource Management*, 30(16), 2387-2417. <https://doi.org/10.1080/09585192.2017.1323772>
- Singh, S. K. (2008). Role of leadership in knowledge management. *Journal of Knowledge Management*, 12(4), 3-15. <http://doi.org/10.1108/13673270810884219>

- Singh, S.K., Gupta, S., Busso, D., & Kamboj, S. (2021). Top management knowledge value, knowledge sharing practices, open innovation and organizational performance. *Journal of Business Research*, 128, 788-798. <https://doi.org/10.1016/j.jbusres.2019.04.040>
- Strese, S., Meuer, M.W., Flatten, T.C., & Brettel, M. (2016). Organizational antecedents of cross-functional cooperation: The impact of leadership and organizational structure on cross-functional cooperation. *Industrial Marketing Management*, 53, 42-55. <https://doi.org/10.1016/j.indmarman.2015.11.006>
- Takaishi, K., Sekiguchi, K., Kono, H., & Suzuki, S. (2019). Interactive effects of work autonomy and proactive personality on innovative behavior. *Asian Business Research*, 4(1), 6-16.
- Torlak, N.G., Demir, A., & Budur, T. (2021). Decision-making, leadership and performance links in private education institutes. *Rajagiri Management Journal*, 16(1), 63-85. <http://doi.org/10.1108/RAMJ-10-2020-0061>
- Ugwu, C. I., & Onyancha, O. B. (2019). Organizational factors and knowledge management applications to user-centred services in federal university libraries in Nigeria. *Journal of Librarianship and Information Science*, 51(1), 275-288. <https://doi.org/10.1177/0961000617726124>
- Valaei, N., & Rezaei, S. (2017). Does Web 2.0 utilisation lead to knowledge quality, improvisational creativity, compositional creativity, and innovation in small and medium-sized enterprises? A sense-making perspective. *Technology Analysis & Strategic Management*, 29(4), 381-394. <http://dx.doi.org/10.1080/09537325.2016.1213806>
- Valaei, N., Nikhashemi, S. R., & Javan, N. (2017). Organizational factors and process capabilities in a KM strategy: toward a unified theory. *Journal of Management Development*, 36(4), 560-580. <https://doi.org/10.1108/JMD-04-2016-0057>
- Wang, J. (2016). Knowledge creation in collaboration networks: Effects of tie configuration. *Research Policy*, 45(1), 68-80. <http://dx.doi.org/10.1016/j.respol.2015.09.003>
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, 20(2), 115-131. <http://doi.org/10.1016/j.hrmr.2009.10.001>
- Wang Z. (2025). Linking innovative knowledge sharing and employees' innovative behaviour: the mediating role of thriving at work. *Knowledge Management Research & Practice*, 23(1), 52-62. <http://doi.org/10.1080/14778238.2023.2261411>
- Wang, Z., Wang, N., & Liang, H. (2014). Knowledge sharing, intellectual capital and firm performance. *Management Decision*, 52(2), 230-258. <http://dx.doi.org/10.1108/MD-02-2013-0064>
- Wong, K. Y. (2005). Critical success factors for implementing knowledge management in small and medium enterprises. *Industrial Management & Data Systems*, 105(3), 261-279. <https://doi.org/10.1108/02635570510590101>
- Yang L.-R., Chen J.-H., & Wang, H.-W. (2012). Assessing impacts of information technology on project success through knowledge management practice. *Automation in Construction*, 22, 182-191. <https://doi.org/10.1016/j.autcon.2011.06.016>
- Yu, S., Abbas, J., Alvarez-Otero, S., & Cherian, J. (2022). Green knowledge management: Scale development and validation. *Journal of Innovation & Knowledge*, 7(4), 100244. <https://doi.org/10.1016/j.jik.2022.100244>
- Yusr, M., Mokhtar, S., Othman, A., & Sulaiman, Y. (2017). Does interaction between TQM practices and knowledge management processes enhance the innovation performance? *International Journal of Quality & Reliability Management*, 34(7), 955-974. <https://doi.org/10.1108/IJQRM-09-2014-0138>
- Zack, M. H. (1999). Developing a knowledge strategy. *California management review*, 41(3), 125-145. <https://doi.org/10.2307/41166000>
- Zehir, C., Ertosun, Ö.G., Zehir, S., & Müceldilli, B. (2011). The effects of leadership styles and organizational culture over firm performance: Multi-national companies in Istanbul. *Procedia-Social and Behavioral Sciences*, 24, 1460-1474. <http://doi.org/10.1016/j.sbspro.2011.09.032>
- Zheng, W., Yang, B., & McLean, G. N. (2009). Linking organizational culture, structure, strategy, and organizational effectiveness: mediating role of knowledge management. *Journal of Business Research*, 63(7), 763-771. <https://doi.org/10.1016/j.jbusres.2009.06.005>
- Zulfqar, A., Valcke, M., Hussain, B., & Devos, G. (2022). Analyzing the relationship between transformational leadership and participative decision making with related outcomes at Pakistani higher education. *Journal of Education and Social Studies*, 3(3), 300-310. <https://doi.org/10.52223/jess.20223312>

✉ Correspondence

Sanela Golubović Corcione

University Business Academy in Novi Sad, Faculty of Contemporary Arts, Belgrade
Svetozara Miletića 12, 11108, Belgrade, Serbia

E-mail: sanela.golubovic@fsu.edu.rs