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Modelling the Impact of Knowledge Management on Financial Performance

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Abstract:

Research Question: This study seeks to identify and analyze the key factors that contribute to the positive impact of knowledge management on the financial performance of enterprises. **Motivation:** Understanding how organizations that implement knowledge management strategies achieve improvements in financial performance is crucial. Although the link between knowledge management and financial success is often discussed, specific factors influencing this relationship remain underexplored, particularly in the context of Serbia. The goal is to address this gap and provide a model that links these two elements. **Idea:** The core idea of this research is to develop and test a model that illustrates how knowledge management dimensions influence financial performance in enterprises. **Data:** Data were collected through a survey of 126 middle and upper management employees from both public and private enterprises in Serbia. The independent variable is measured by an instrument assessing nine dimensions of knowledge management, while the dependent variable is financial performance, assessed through seven specific items. **Tools:** Multiple linear regression analysis was applied to determine the relationship between knowledge management dimensions and financial performance. **Findings:** The results indicate a significant positive influence of the dimensions of knowledge management on financial performance. The developed model highlights both the positive and negative effects of these dimensions, offering a comprehensive view of how knowledge management drives financial outcomes. **Contribution:** This study contributes to the existing literature by offering a model that explains the impact of knowledge management on financial performance. The model serves as a foundation for future research and can encourage the development of strategies to increase business outcomes through knowledge management.

Keywords: knowledge management, financial performance, human capital, competitiveness, labour-management relations, labour productivity, profitability

JEL Classification: L21, L23, L25, M19

1. Introduction

Companies secure their position on the global market through improving business processes, increasing productivity and strengthening competitiveness. Knowledge plays a key role in modern business, which should be given special attention. The use and integration of knowledge in business processes become essential for achieving success, while at the same time improving competitiveness, innovation and productivity (de Menezes Lima et al., 2023). In today's business environment, knowledge is considered an organization's most valuable resource, while effective knowledge management is recognized as an important source of strategic advantage.

Business success is closely related to the use of resources, capabilities, and competencies. Numerous studies have examined how knowledge management affects financial performance. These studies confirm the positive impact of knowledge management on financial results and emphasize a strong connection between the creation and application of knowledge and the financial performance of companies (Alibegovic & Mesanovic, 2022; Makore & Eresia-Eke, 2022). Viewing knowledge as a process, employees should focus on its creation, exchange and distribution, which is achieved through sharing of information and data between individuals and teams at all levels of the organization (Dustmohammadloo et al., 2023; Son, Phong

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& Loan, 2020). In order to achieve business excellence, companies must work long-term on improving the quality of business through increasing the productivity of work and knowledge of each employee. The development of knowledge and business excellence contributes to the improvement of market operations, with clearly defined goals and strategies for their achievement. As an interdisciplinary concept, knowledge management requires ongoing refinement to ensure high organizational performance.

Knowledge management has a significant positive impact on organizational performance in modern business, including financial and non-financial aspects. Additionally, it contributes to increasing the level of trust within the organization, which significantly facilitates the exchange and application of knowledge (Dahinine, Chouayb & Bensahel, 2023). Knowledge drives innovation in both processes and product development. In addition to knowledge, the key element of this complex concept, the knowledge-based economy is characterized by processes of market globalization, global competition, the development of new forms of connection and cooperation between companies, as well as the adoption of modern management methods, new systems and changes in the rules of business conduct. Although it is a complex phenomenon caused by various factors, the successful development of a knowledge-based economy depends primarily on the ability of companies to apply existing knowledge, create new ones, and encourage creativity and innovation (Bak, 2023; Becla & Czaja, 2022; Filipovic, Nikolic & Ilic, 2015). Effective knowledge management practices that include all levels of the organizational structure result in improving competitive advantage, encouraging innovation and developing organizational learning.

In this paper, the subject, problem and goal of the research are primarily presented. In the following sections, the theoretical framework of the research, the methodology, the obtained results, as well as the created model are given, followed by a discussion and a conclusion.

2. Theoretical Background

Knowledge management is a systematic process of coordinating people, technology, and organizational resources to support the generation, sharing, and application of knowledge (Rani, 2023). This business concept promotes the structured use of knowledge, skills, and innovation to improve organizational efficiency and effectiveness (Perez-Soltero et al., 2023a).

Modern theoretical approaches emphasize the need for a deeper understanding of knowledge as a strategic resource within organizations (Hernandez-Linares et al., 2023; Bernal-Torres et al., 2023; Kowshik, Chew & Lee, 2025). One important approach is the knowledge-based view of the firm, which considers knowledge as the most important resource that enables long-term competitive advantage. According to this approach, an organization's ability to create, integrate, and use knowledge is key to achieving positive organizational performance (Hughes et al., 2021; Kaur, 2022; Bergh et al., 2024; Satar et al., 2024).

Modern business operations of organizations imply adaptation to the dynamic market. Accordingly, the theory of dynamic organizational capabilities can be added to the knowledge-based view of the firm (Shiferaw & Kero, 2024). Namely, this theory implies that having knowledge alone is not enough, but also requires the ability to quickly adapt and organize resources in accordance with changes in the environment (Ma et al., 2021). Dynamic capabilities allow organizations to recognize changes in market conditions, to absorb relevant knowledge and to transform their resources in order to maintain a competitive advantage (Martos-Pedrero, Jimenez-Castillo & Ferron Vilchez, 2025). Additionally, an important concept in modern theoretical approaches is the absorptive capacity of organizations, which refers to their ability to identify, understand, interpret and apply external sources of knowledge for the purpose of improving their internal processes and innovations (Sancho-Zamora et al., 2021; Gerdoci et al., 2023; Tamirat & Amentie, 2023). Therefore, in addition to internal knowledge, organizations should identify and use knowledge from outside the organization, successfully integrate it into their business processes and achieve maximum effects (Awwad, Abuhommous & Adaileh, 2025).

The importance of applying this business concept in organizations is reflected in the fact that information technologies and artificial intelligence significantly improve knowledge management activities, including decision support systems based on databases, management information systems, expert systems and resource planning systems (Grigoriadou, 2023; Meski et al., 2021). Research confirms that knowledge management contributes to increasing the productivity of employees, teams and the entire organization, thereby gaining a competitive advantage. As a result, organizations make better decisions, solve problems more efficiently, build a sense of community and stay aligned with current procedures and technologies (Altintas, 2023; Barbier & Tenengeh, 2023; Good, Halinski & Boekhorst, 2023). A properly defined knowledge management strategy enables the objective and purposeful application of knowledge, its promotion as a

valuable resource, and the encouragement of other departments, such as administrative processes and technological systems, to integrate it (Perez-Soltero et al., 2023b). Knowledge management strategies and tools are essential for ensuring easy access to information, personalized and targeted knowledge, as well as for effective exchange and dissemination of knowledge among users (El-Jardali et al., 2023).

Knowledge management enables organizations to improve efficiency in the creation, categorization and implementation of activities, maximizing their value for collective and individual benefit. The goal of this concept is the acquisition, creation, integration and application of knowledge in order to achieve maximum organizational efficiency (Egwunatum & Oboreh, 2023). Implementing knowledge management supports the development of a knowledge-based society, technological progress and a culture of continuous learning (Paukovic & Bacic, 2018).

The standard of living of societies in which organizations operate largely depends on the level of their productivity, economy and profitability. Therefore, constant improvement of productivity is one of the key factors for improving the material well-being of the entire society (Tica et al., 2023). The organizations of the future must be flexible, focused on innovation and free from unnecessary hierarchical structures. Increasing the productivity and profitability of various organizations directly depends on the improvement of key business factors (Ristanovic & Mirkovic, 2023). From the aspect of strengthening competitiveness, companies should invest significant efforts in building the concept of quality as a basic prerequisite for the development of business productivity. In order for the organization to achieve high productivity, it is necessary that employees should apply adequate knowledge and skills in their work. When the activities of all employees are coordinated and directed towards achieving a common goal, it contributes to achieving better results of the organization, its final products and overall business productivity (Firdaus, 2023).

The competitiveness of companies largely depends on their ability to adapt organizationally and technologically, as well as on strengthening financial, marketing and technological capacities during the process of change and adaptation to the market and sector structure (Argilovski, Vasileska & Jovanovski, 2023). In the context of the role of entrepreneurship in the economy, it is important to ensure favourable conditions for supporting entrepreneurial initiatives. The development of entrepreneurship represents the basis for creating jobs, which directly contributes to the transition and development of the social and economic system (Ilic, 2018). Regarding innovation as a key factor of competitiveness, focusing on innovation represents one of the basic characteristics of a knowledge-based economy. Innovation should be encouraged and developed in all sectors and types of businesses to ensure sustainable growth and development (Beraha, 2019).

Knowledge management dimensions have a significant impact on employee retention, especially in certain industries. Managers should cooperate with the board of directors to provide resources for training employees, enabling them to acquire relevant and necessary knowledge (Zayed, 2022). Motivated and efficient employees are key to increasing organizational effectiveness, with job satisfaction being one of the most important factors in this context (Mali et al., 2022; Tamsah, Nurug & Yusriadi, 2023). Organizations should provide an environment that encourages an entrepreneurial spirit and enables individuals and teams to engage in entrepreneurial activities, with an entrepreneurial orientation being a strategic advantage (Mousavi, 2022). The advantages of knowledge management are reflected in the improvement of the source of motivation, which contributes to the increase of organizational capabilities (Meher & Mishra, 2021).

The development of a knowledge management system can help organizations avoid potential risks and more easily respond to environmental challenges (Mihajlovic, Stanojevic & Tesic, 2018). One of the key challenges in knowledge management is responding to the acquired knowledge, whereby the responsiveness of knowledge implies concrete actions taken on the basis of collected and processed information. Integration and development of knowledge resources are among the most important activities in knowledge management, aimed at achieving organizational goals (Makore & Eresia-Eke, 2022).

Knowledge management strategies focus on a systematic orientation towards processes, employees and technology. The integration of best practices and the connection of different aspects of knowledge enable the development and improvement of products and services. The strategic importance of this concept is reflected in increasing the impact of information technology readiness and knowledge management on business performance, while effective knowledge management contributes to the improvement of organizational results in several ways (Jayanaga & Azaryas Chen, 2023; Lihn, 2022). The main goal of successful knowledge development is the improvement of the overall business, which confirms the existence of a direct positive connection between knowledge management practices and financial results of organizations (Ekradi et al., 2022; Nathan et al., 2019; Ognjanovic & Slavkovic, 2022; Ognjanovic & Simic, 2019; Rafi et al., 2022; Zaid, Alqatrani & Alasadi, 2023).

3. Methodology

This section presents the methodological framework used to examine the relationship between knowledge management and financial performance of enterprises. It outlines the subject and goal of the research, the defined hypotheses, the research framework, the applied instruments, statistical procedures, and the characteristics of the research sample. The methodological approach was designed to ensure a systematic and reliable assessment of the impact of individual knowledge management dimensions on financial performance.

3.1 Subject and problem of research

The main problem posed by this research is the identification and analysis of factors that contribute to the positive impact of knowledge management on the financial performance of companies. Knowledge management allows companies to reduce costs by improving operational efficiency and optimizing business processes, which is achieved by reducing organizational efforts, promoting best practices and improving the overall results of the organization (Bettioli et al., 2022; Widiastuti, 2022). There is a strong connection between knowledge management and organizational performance, given that the differences in performance among the analyzed organizations largely stem from the effects of knowledge management (Markić, Pozega & Crnković, 2022). The practical implications of knowledge management in an organization include teamwork, reward system, performance management, continuous learning and employee empowerment (Atapattu & Huybers, 2022). Based on these findings, the research problem focuses on the analysis of the impact of knowledge management dimensions on the financial performance of companies.

The subject of this research is the analysis of the impact of knowledge management on the financial performance of companies. Specifically, the research deals with the study of the relationship between effective knowledge management within an organization and its financial results. The expected results of this research should provide a deeper understanding of the relationship between knowledge management and financial performance of companies.

3.2 Research goal

This paper aims to understand how organizations that apply knowledge management achieve a positive impact on their financial performance. Based on the presented results, the goal is to form a model linking knowledge management and financial performance of companies that will provide a deeper understanding of this impact.

3.3 Research hypotheses

The primary hypothesis in the research is:

H0: The dimensions of knowledge management have a statistically significant impact on the financial performance of enterprises.

Ha: The dimensions of knowledge management do not have a statistically significant impact on the financial performance of enterprises.

Auxiliary hypotheses in the research are:

H1: Organizational structure as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises.

H2: Organizational culture as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises.

H3: T-shaped skills, i.e., people as a dimension of knowledge management have a statistically significant impact on the financial performance of enterprises.

H4: Information technologies as a dimension of knowledge management have a statistically significant impact on the financial performance of enterprises.

H5: The knowledge acquisition process as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises.

H6: The knowledge conversion process as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises.

H7: The knowledge application process as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises.

H8: The knowledge protection process as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises.

H9: Competitive advantage as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises.

3.4 Research framework

The previously noted hypotheses provide a guideline on how to statistically address the obtained survey data. The research framework is presented in Figure 1.

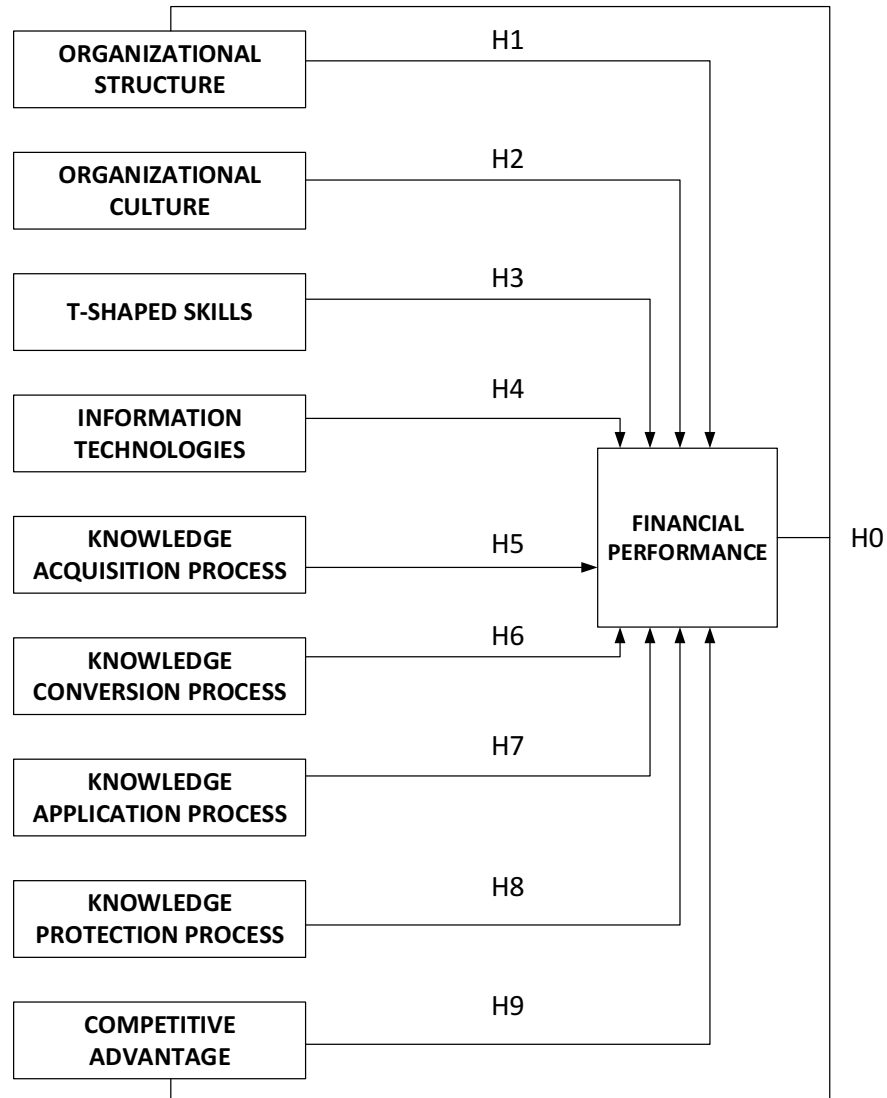


Figure 1: Research framework

3.5 Research instruments

The research was conducted using a survey that included two data collection instruments. The following standardized anonymous questionnaires were used:

Knowledge management assessment instrument – A questionnaire created by Nguyen (2010) was used and represents an independent variable in the research. Respondents rated the statements using a seven-point Likert scale. The questionnaire is standardized and contains 50 items in nine dimensions: organizational structure (OS), organizational culture (OC), T-shaped skills (people) (TSS), information

technology (IT), knowledge acquisition process (KAP), knowledge conversion process (KCP), knowledge application process (KA), knowledge protection process (KPP) and competitive advantage (CA) of the organization thanks to knowledge management. In order to better understand why exactly these dimensions were chosen as part of the instrument, a brief overview of their conceptual connection with the company's financial performance is given. Namely, each of the mentioned dimensions has a theoretical basis and a potential impact on financial performance, as shown by contemporary empirical research:

- The organizational structure enables the efficient distribution of tasks and the flow of knowledge, which contributes to better coordination and cost reduction (Ji & Yan, 2020; Joseph & Sengul, 2024).
- Organizational culture encourages knowledge sharing, innovation and continuous learning, which can lead to better financial results (Liu, Tsui & Kianto, 2021; Yildiz et al., 2025).
- The breadth and depth of employee knowledge (T-shaped skills) affect productivity and profitability (Giamos & Strohle, 2024; Choudhury et al., 2024; Khadir, De Weerd & Peters, 2024).
- Information technologies facilitate access and exchange of knowledge, and their benefit is reflected in speeding up processes and decisions in organizations (Wu & Surangkana, 2024; Barba-Sanchez et al., 2024; Thomas, 2024).
- The knowledge acquisition process, in addition to impacting performance, helps organizations monitor trends and adapt (Argote, 2023; Yin & Xu, 2025).
- The conversion of knowledge in the form of its structuring and transition from tacit to explicit increases the usability of knowledge (Travis et al., 2023).
- The application of knowledge, especially in operational and strategic decisions, affects the performance of organizations (Alharbi & Aloud, 2024; Abou-Moghli, 2025; Ceptureanu et al., 2025).
- Knowledge protection preserves key competencies and reduces organizational risks, in addition to contributing to stability and performance (Kim et al., 2024; Chen & Wang, 2025).
- Competitive advantage is the ultimate outcome of knowledge and the ability to do business in the market in a unique way (Battisti et al., 2022; Nyuga & Tanova, 2024).

The questionnaire was minimally modified, adaptation meant exclusively translation and linguistic adaptation of the original statements to the Serbian language, without changing the content or the theoretical framework of the constructs. In this research, no additional factor analyses (EFA or CFA) were conducted, since the instrument was already validated in the original research, and the adaptation was exclusively linguistic. In this way, conceptual consistency with the original instrument was preserved. Considering the retention of the original structure of the instrument and the confirmed reliability in the original research (Cronbach $\alpha > 0.80$), in this research a reliability analysis was carried out by calculating Cronbach α coefficients by dimensions (see Table 1).

Table 1: Cronbach α coefficients based on knowledge management dimensions

Dimension	Number of items	Cronbach α
Organizational structure	7	0.88
Organizational culture	4	0.89
T-shaped skills (people)	5	0.91
Information technology	5	0.90
Knowledge acquisition process	6	0.93
Knowledge conversion process	5	0.89
Knowledge application process	7	0.90
Knowledge protection process	7	0.92
Competitive advantage	4	0.91

Note: All values are ≥ 0.88 , indicating satisfactory to high internal consistency in accordance with the recommendations of Nunnally & Bernstein (1994).

The reliability analysis showed that all dimensions of the instrument have high values of Cronbach α coefficients (0.88–0.93), which, according to the standards of Nunnally & Bernstein (1994), indicates satisfactory to high internal consistency. The slight variation among dimensions reflects natural differences in item homogeneity, and the absence of extremely high values (>0.95) indicates the absence of redundant redundancy in the statement wording.

The instrument for measuring the level of financial performance - This instrument was used to examine the dependent variable and included seven items related to financial performance: productivity, profitability, market share, sales growth, competitiveness, growth of fixed assets and employee earnings. Respondents also used a seven-point Likert scale to rate the statements (Tan & Litsschert, 1994; Wang, 2003; Wang, 2011).

The research was conducted among employees in middle management and managerial positions in public and private companies of different sizes and activities. Respondents participated in the research by completing online standardized questionnaires. The research was part of the master thesis project and some of the results were presented in the final master thesis of the first author. The master thesis has not been published by other scientific publishers and is not considered to have been published by other publishers.

3.6 Statistical methods for data analysis

The data collected as part of this research were analyzed using the software package SPSS Version 26. The results were obtained using multiple linear regression analysis, which examined the impact of the dimensions of knowledge management (independent variable) on the financial performance of the company (dependent variable).

The regression analysis was chosen because the research variables were clearly defined, without the presence of moderator or mediator relationships - the influence of one complex independent variable (knowledge management, operationalized through 9 dimensions) on one dependent variable (financial performance) was analyzed. Given such a structure of the model and the absence of latent constructs, linear regression analysis was the most appropriate and efficient choice. This method provides a clear insight into the relative contribution of each individual dimension of knowledge management in explaining the total variance of the dependent variable. Also, the method is widely applied and recognizable in the field of organizational performance research, which enables comparison of results with previous studies.

The authors are aware that regression analysis has certain limitations, such as the assumption of a linear relationship between variables, normality of distribution of residuals, and homoscedasticity. These assumptions were checked and satisfied: the distribution of the data was analyzed using P-P diagrams indicating an approximately normal distribution, while multicollinearity and homoscedasticity were checked using VIF values (all < 2) and Tolerance coefficients (all > 0.5), as well as residual scatter plots. Based on that, we believe that the chosen method is adequate and that the results have a high degree of robustness. However, in future research it is possible to consider the application of more advanced statistical techniques, such as structural modeling (SEM), especially in the case of introducing latent constructs or interdependent relationships between variables.

3.7 Research sample

The research was conducted among employees in middle management positions and management positions in public and private companies of different sizes and activities. A total of 126 respondents from companies based in the Republic of Serbia participated in the research. The sample size is representative and defined according to the guidelines of Tabachnick & Fidell (2013). The sampling strategy was based on purposive and convenience sampling, where respondents who meet the criteria of workplace (middle management and management positions) were selected. Industrial sectors represented in the sample include services (30%), IT and telecommunications (20%), manufacturing (20%), trade (15%), financial sector (8%) and other sectors (7%). The response rate was 70%, based on a total of 180 distributed questionnaires.

The analysis of the distribution of the data using a P-P diagram (Figures 2. and 3.) shows that the data are approximately normally distributed. Demographic data on the respondents were also collected, including gender, age, years of work experience in the company, level of professional education, ownership structure of the company and size of the company. There were no large deviations in the obtained data.

4. Results

This section presents the empirical findings obtained through the applied statistical analyses. The results are structured in accordance with the defined research framework and focus on the examination of the impact of knowledge management dimensions on the financial performance of enterprises. Particular attention is

given to the significance, direction, and strength of the identified relationships, as well as to the diagnostic indicators that support the validity and robustness of the model.

4.1 The impact of knowledge management on financial performance

Table 2 shows the results of the multiple linear regression analysis conducted to examine the impact of different dimensions of knowledge management on the financial performance of the company. Unstandardized and standardized coefficients, significance levels, confidence intervals, and multicollinearity indicators are presented in the table, along with key model statistical parameters such as R², adjusted R², and F-test.

Table 2: Results of multiple linear regression analysis: Impact of knowledge management dimensions on financial performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.871 ^a	0.759	0.740	0.561	0.759	40.624	9	116	0.000
2	0.000 ^b	0.000	0.000	1.102	-0.759	40.624	9	116	0.000
a. Predictors: (Constant), Competitive advantage (intensively meets the needs of customers), Information technology, T-shaped skills (people), Knowledge protection process, Knowledge acquisition process, Organizational structure, Organizational culture, Knowledge conversion process, Knowledge application process									
b. Predictor: (constant)									

A summary of the multiple linear regression analysis model is shown in Table 2. The results show that the model is statistically significant and explains a high percentage of the variance of the dependent variable - financial performance. The coefficient of determination is R² = 0.759, which means that the included dimensions of knowledge management explain 75.9% of the total variance in the financial performance of organizations. The adjusted coefficient of determination (Adjusted R² = 0.740) additionally confirms the stability of the model, taking into account the number of predictors in relation to the sample size.

The standard error of the estimate is 0.561, which indicates a relatively low average deviation of the model's predictions in relation to the actual values of the dependent variable. The statistical significance of the model was confirmed by the result F(9, 116) = 40.624, at p < 0.001, which indicates that the model as a whole significantly predicts financial performance.

These results indicate a strong connection between selected dimensions of knowledge management and financial outcomes, confirming the relevance of the theoretical framework and the choice of methodological approach.

Table 3 shows the results of the ANOVA test that was used to assess the overall statistical significance of the regression model.

Table 3: ANOVA analysis for the regression model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	115.215	9	12.802	40.624	0.000 ^b
	Residual	36.555	116	0.315		
	Total	151.770	125			
2	Regression	0.000	0	0.000	.	. ^c
	Residual	151.770	125	1.214		
	Total	151.770	125			
a. Dependent Variable: Financial performance						
b. Predictors: (Constant), Competitive advantage (intensively meets the needs of customers), Information technology, T-shaped skills (people), Knowledge protection process, Knowledge acquisition process, Organizational structure, Organizational culture, Knowledge conversion process, Knowledge application process						
c. Predictor: (constant)						

The results indicate that the model is statistically significant ($F(9, 116) = 40.624; p < 0.001$), which confirms that the set of dimensions of knowledge management significantly predicts the dependent variable - financial performance. The explained variance (regression sum of squares = 115.215) accounts for a significant portion of the total variance (total sum of squares = 151.770), while the remaining unexplained variance (residual = 36.555) is relatively low, further supporting the predictive power of the model.

Table 4 shows the results of the multiple linear regression analysis, which examined the influence of individual dimensions of knowledge management on the financial performance of the company. Unstandardized and standardized coefficients, significance levels, confidence intervals, and multicollinearity indicators are presented.

Table 4: Regression coefficients and diagnostics for the impact of knowledge management dimensions on financial performance

Coefficients ^a										
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.069	0.252		4.239	0.000	0.570	1.568		
	OS	0.095	0.080	0.118	1.184	0.239	-0.064	0.253	0.208	4.800
	OC	-0.157	0.072	-0.215	-2.179	0.031	-0.299	-0.014	0.214	4.675
	TSS	0.291	0.065	0.368	4.454	0.000	0.162	0.420	0.305	3.282
	IT	-0.058	0.047	-0.079	-1.243	0.217	-0.150	0.034	0.519	1.928
	KAP	0.529	0.070	0.693	7.607	0.000	0.391	0.667	0.250	3.994
	KCP	-0.259	0.076	-0.337	-3.398	0.001	-0.409	-0.108	0.211	4.729
	KA	-0.187	0.102	-0.222	-1.827	0.070	-0.390	0.016	0.140	7.127
	KPP	0.185	0.064	0.202	2.888	0.005	0.058	0.311	0.423	2.361
	CA	0.381	0.076	0.421	5.007	0.000	0.230	0.532	0.294	3.400
2	(Constant)	4.981	0.098		50.739	0.000	4.786	5.175		

a. Dependent Variable: Financial performance

The results of the multiple linear regression analysis are presented in Table 3, indicating the different effects of the dimensions of knowledge management on the financial performance of organizations. The model includes nine predictor variables, and the dependent variable is self-assessment of financial performance.

The following dimensions have a positive and statistically significant impact on financial performance:

- T-shaped skills ($\beta = 0.368; p < 0.001$) – indicates that employees’ ability to combine in-depth expertise with cross-functional collaboration significantly contributes to financial outcomes.
- Knowledge acquisition process ($\beta = 0.693; p < 0.001$) – the strongest predictor, emphasizes the importance of efficient collection of relevant knowledge from internal and external sources.
- Knowledge protection process ($\beta = 0.202; p = 0.005$) – confirms the importance of preserving organizational knowledge for the purpose of sustainable business.
- Competitive advantage ($\beta = 0.421; p < 0.001$) – clearly indicates that effective knowledge management contributes to the improvement of market position and long-term results.

A negative and statistically significant impact was noted for the following dimensions:

- Organizational culture ($\beta = -0.215; p = 0.031$) and
- Knowledge conversion process ($\beta = -0.337; p = 0.001$), which may indicate possible weaknesses in the transformation of knowledge into concrete business practices, as well as organizational norms that potentially slowdown financial efficiency.

The three dimensions did not show a statistically significant effect:

- Organizational structure ($p = 0.239$),
- Information technology ($p = 0.217$) and
- Knowledge application process ($p = 0.070$).

Their absence of statistical significance may indicate the need for additional examination of the context of their application or possible indirect effects.

It is important to emphasize that the obtained patterns confirm the findings in the author’s previous research (Gluvakov et al., 2023), which further strengthens the theoretical consistency and cumulative value of research in this domain.

Multicollinearity was not identified as a problem, given that all VIF values are below 10 and Tolerance coefficients are above 0.10, which confirms the stability and reliability of the model. Confidence intervals for all significant predictors do not include zero, which further confirms the robustness of the findings.

Table 5 shows the results of the additional diagnostic analysis of multicollinearity in the regression model, based on eigenvalues, condition index and variance proportions by dimensions.

Table 5: Diagnostics of multicollinearity - eigenvalues and condition indices for predictor variables

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions									
				(Constant)	OS	OC	TSS	IT	KAP	KCP	KA	KPP	CA
1	1	9.745	1.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.070	11.802	0.10	0.01	0.00	0.00	0.20	0.06	0.02	0.00	0.02	0.01
	3	0.058	12.992	0.15	0.02	0.09	0.05	0.04	0.03	0.00	0.00	0.02	0.04
	4	0.037	16.239	0.37	0.00	0.01	0.14	0.23	0.00	0.02	0.00	0.04	0.04
	5	0.027	19.130	0.01	0.00	0.13	0.00	0.27	0.09	0.09	0.00	0.19	0.10
	6	0.020	22.322	0.20	0.23	0.03	0.24	0.02	0.02	0.01	0.01	0.31	0.05
	7	0.014	26.450	0.02	0.17	0.09	0.00	0.22	0.32	0.42	0.02	0.13	0.05
	8	0.013	27.579	0.01	0.13	0.03	0.18	0.00	0.26	0.07	0.00	0.26	0.58
	9	0.010	31.067	0.13	0.45	0.57	0.28	0.02	0.00	0.36	0.00	0.01	0.05
	10	0.007	36.888	0.00	0.00	0.06	0.10	0.00	0.21	0.01	0.97	0.01	0.10
2	1	1.000	1.000	1.00									

a. Dependent Variable: Financial performance

Based on the presented results, it can be concluded that there are no serious multicollinearity problems among the predictor variables. Although one latent dimension has a condition index greater than 30 (36.888), which may indicate potential multicollinearity, in that row, a high proportion of variance (0.97) has only one variable - the knowledge application process. Given that this variable showed statistical insignificance in the regression model anyway ($p = 0.070$), its potential contribution to multicollinearity has no effect on the validity of the overall model or on the significance of the other predictors.

Other dimensions and variables do not simultaneously show high proportions of variance at high condition indices, which further confirms that the model is not threatened by multicollinearity. These findings are also consistent with the previously presented VIF and Tolerance values, which are within acceptable limits, thus confirming the robustness and stability of the regression analysis.

An additional diagnostic check using a P–P normality plot and a scatterplot of residuals indicated an approximately normal distribution and the absence of pronounced heteroscedasticity patterns. Visual inspection supports the assumptions of the regression analysis and confirms that heteroskedasticity is not a significant problem in this model.

In order to assess the validity of the regression model, in accordance with the standard requirements of multiple regression analysis, a check of the normality of the distribution for the dependent variable (financial performance) was carried out. A visual check of the normality of the distribution of standardized residuals was performed using the Normal P–P plot (Figure 2) and the detraind P–P plot (Figure 3).

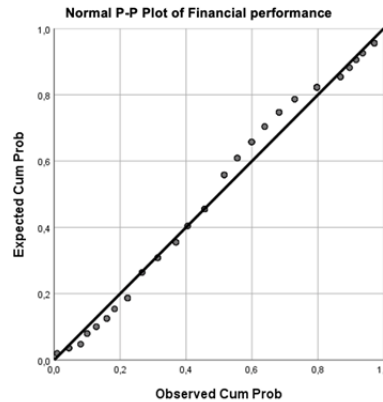


Figure 2: Normal P–P plot of standardized residuals for the dependent variable *Financial performance*

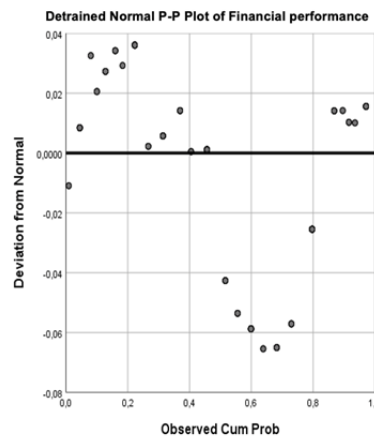


Figure 3: Detraind P–P diagram of standardized residuals for the dependent variable *Financial performance*

Based on the diagram in Figure 2, it can be seen that most of the points lie along the diagonal, which indicates an approximately normal distribution of the residuals. Figure 3 further confirms these findings, i.e., deviations from normality oscillate around the zero line and do not show a systematic pattern. Although there are minor deviations at the ends of the distribution, they do not seriously threaten the validity of the assumption of normality. Accordingly, it can be concluded that the assumption of a normal distribution of residuals is largely satisfied, which additionally confirms the robustness and reliability of the regression model.

5. Model of the Impact of Knowledge Management on the Financial Performance of Enterprises

Based on the research hypotheses and presented results, a model was formed to improve knowledge management with the aim of increasing the level of financial performance of the organization and is shown in Figure 4. The model is presented as a way to provide a graphic and comprehensive view of the data analysis so far and serve as a potential guideline for future analyses of knowledge management and the creation of certain sub-models. The model shows those dimensions of knowledge management that, according to the research results, have an impact on the dimension of financial performance.

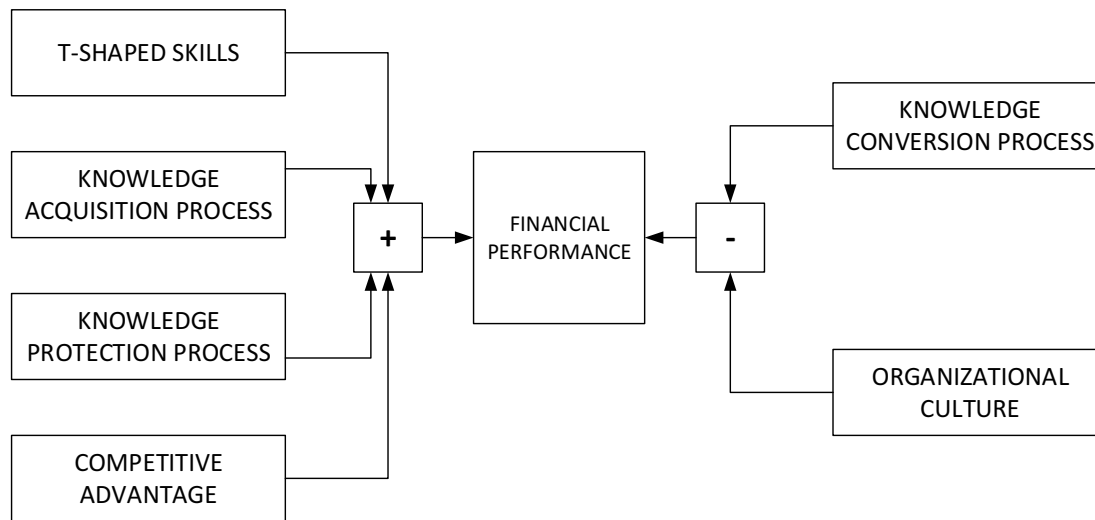


Figure 4: Model of the impact of knowledge management on the financial performance of enterprises

The proposed model shows how the positive and negative impacts of knowledge management dimensions affect the financial performance of the organization. Research and analysis confirm the existence of a strong connection between knowledge management and financial performance of companies. Effective knowledge management significantly contributes to the success of organizations at various levels. However, the implementation of this concept in domestic organizations may encounter obstacles, such as the resistance of employees to training, education, sharing their own knowledge and skills. The lack of interest of individual employees in the improvement of organizational performance and rejection of organizational learning can complicate the process of introducing knowledge management, requiring additional efforts from top management.

Although Figure 4 clearly shows which dimensions of knowledge management have a positive and negative impacts on financial performance, there is room for theoretical supplementation of the model with literary concepts such as dynamic processes, organizational learning and feedback loops. Namely, in organizations, especially those that apply digital and AI-supported knowledge sharing systems, it has been confirmed that dimensions such as knowledge acquisition and conversion operate in complex process patterns, that is, they are interdependent and change their effect over time (Cui, 2025). Similarly, organizational learning mediates between knowledge management and business performance through the formation of dynamic capabilities (Dangosu, 2024), and the concept of continuous feedback loops shows that organizations that regularly analyse and apply employee feedback achieve greater adaptability and change efficiency (Akbar, Baruch & Tzokas, 2017). Additionally, in order to provide a clearer overview of empirical findings in relation to theoretical expectations, Table 6 summarizes the impact of each dimension of knowledge management on financial performance.

Table 6: Comparative presentation of theoretical expectations and empirical impact of knowledge management dimensions on financial performance

Knowledge management dimension	Theoretical expectation	Empirical impact	Significance
Organizational structure	Positive	Insignificant	Not confirmed
Organizational culture	Positive	Negative	Significant
T-Shaped Skills (People)	Positive	Positive	Significant
Information technology	Positive	Insignificant	Not confirmed
Knowledge acquiring process	Positive	Positive	Significant
Knowledge conversion process	Positive	Negative	Significant
Knowledge application process	Positive	Insignificant	Not confirmed
Knowledge protection process	Positive	Positive	Significant
Competitive advantage (intensely meets customer needs)	Positive	Positive	Significant

Table 6 shows the expected theoretical direction of the influence of each dimension of knowledge management on financial performance, compared to the empirically obtained results of the regression analysis. The table also shows statistically significant findings.

Applying knowledge management strategies enables organizations to make optimal use of internal and external knowledge, increase innovation and efficiency and improve decision-making. Creation of a learning and knowledge sharing culture becomes an integrated part of daily activities, while employees are encouraged to engage in continuous professional development. This synergy between knowledge management and financial performance provides a strong foundation for achieving competitive advantage.

6. Discussion

The aim of this paper was to investigate the impact of knowledge management on the financial performance of companies and to develop a model that enables a deeper understanding of this relationship. The results indicate the impact of different dimensions of knowledge management on financial performance. The results show that dimensions such as T-shaped skills, knowledge acquisition process, knowledge protection process and competitive advantage have a positive influence as independent variables on the financial performance of the organization. However, although these dimensions of knowledge management have shown a positive impact on financial performance, some results indicate counterintuitive relationships. The negative impact of the knowledge conversion process may indicate insufficient integration of converted knowledge into business processes, i.e. knowledge is not used effectively enough in practice. Also, it is possible that the conversion process is carried out mechanically, which leads to the existence of only formal frameworks of knowledge, without practical application. In the domestic economic environment, this result can be a consequence of the lack of a culture of open communication, the weak connection of business units, as well as the resistance of employees to knowledge management procedures. On the other hand, the negative impact of organizational culture on financial performance may mean that existing cultural norms have a demotivating effect on employees. Namely, although knowledge is promoted in some organizations, they may favour hierarchical authority over employees and innovation, which may affect resistance to the adoption and sharing of knowledge, and thus the final performance. These results may also indicate certain methodological limitations, such as errors in respondent perception or insufficient sample variability. Future research should include qualitative analyses, such as interviews with employees, to better understand the dynamics of these relationships.

The obtained results can be compared with previous empirical and theoretical insights. The positive impact of the dimension of T-shaped skills on financial performance confirms the findings of the authors Giamos and Strohle (2024), who maintained that diverse competencies of employees have a positive effect on productivity and profitability. Similarly, Choudhury et al. (2024) point out that human capital management and external mobility of managers play an important role in creating organizational capabilities. The results related to the knowledge acquisition process and its positive impact on financial performance are consistent with the findings of Argote (2023), who emphasizes the importance of knowledge transfer mechanisms for organizational adaptability, as well as Yin and Xu (2025), who confirmed the contribution of intellectual capital to financial performance. Also, the confirmed positive role of knowledge protection is in accordance with the research of Kim et al. (2024) and Chen & Wang (2025), who indicate that adequate protection of knowledge reduces risks, preserves competitive advantage and contributes to the stability of financial performance. The positive impact of the dimension of competitive advantage is in accordance with the findings of Battisti et al. (2022), who showed that companies that use knowledge to create a unique market position achieve better financial performance. When it comes to the negative impact of the dimensions of knowledge conversion and organizational culture, the findings are contrary to expectations and require additional explanations. However, these results are consistent with the findings of Travis et al. (2023), who showed that a formal conversion structure may have limited reach if not practically implemented, and Liu, Tsui and Kianto (2021), who showed that a knowledge-promoting culture must be functional in practice in order to contribute to the performance of organizations. Additionally, the absence of a significant influence of organizational structure, information technology and knowledge application processes implies that these dimensions may be formally present, but insufficiently applied in practice, which is in line with the research of Joseph and Sengul (2024) and Wu and Surangkana (2024), who showed that organizational design and technology must be integrated into everyday knowledge management, in order to have an appropriate effect on performance.

The social value of the proposed model is reflected in confirming the importance of knowledge management for improving company performance. The scientific relevance of the research lies in the precise analysis of the impact of knowledge management on financial results, which is clearly demonstrated in the paper. These

findings emphasize the need for modern organizations to pay more attention to the importance of organizational knowledge in order to improve operations and increase their performance. The model provides a practical framework for theoretical considerations, emphasizing the importance of developing individual and organizational knowledge, improving employee skills, nurturing intellectual capital and its application in business. These elements enable organizations to achieve a high level of business practice and ensure a sustainable competitive advantage.

Based on the presented results and model, it can be concluded that the additional hypotheses H1: „Organizational structure as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises“, H4: „Information technologies as a dimension of knowledge management have a statistically significant impact on the financial performance of enterprises“ and H7: „Knowledge application process as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises“ have not been confirmed. These hypotheses refer to the dimensions of knowledge management, where the organizational structure refers to finding, creating and transferring new knowledge, as well as the exchange of knowledge across functional boundaries. Information technologies as a dimension of knowledge management refer to the learning of people in multiple locations such as a group from a single source in time, as well as uninterrupted operations in case of emergencies. The knowledge application process refers to the use of knowledge in solving new problems and challenges, as well as the use of knowledge to improve efficiency. On the other hand, additional hypotheses H2: „Organizational culture as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises“, H3: „T-shaped skills as a dimension of knowledge management have a statistically significant impact on the financial performance of enterprises“, H5: The knowledge acquisition process as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises“, H6: „The knowledge conversion process as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises“, H8: „The knowledge protection process as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises“ and H9: „Competitive advantage as a dimension of knowledge management has a statistically significant impact on the financial performance of enterprises“ have been confirmed, regardless of whether that impact is positive or negative. These hypotheses relate to different dimensions of knowledge management. Organizational culture refers to activities such as training, continuous learning and knowledge evaluation, while T-shaped skills represent the abilities of employees who recognize the importance of knowledge within the organization. The processes of knowledge acquisition and conversion include acquisition, distribution and integration of knowledge, while the process of knowledge protection implies mechanisms for preserving knowledge and preventing its inappropriate use inside and outside the organization. Finally, competitive advantage, as one of the dimensions of knowledge management, focuses on knowledge-based innovation as well as product and service improvement. The confirmation of six additional hypotheses, out of a total of nine, shows the confirmation of the primary hypothesis H0: „The dimensions of knowledge management have a statistically significant impact on the financial performance of enterprises“.

Knowledge management can and should be applied in organizations of all sizes and different ownership structures. The applicability of the developed model is reflected in the education and awareness raising of employees, especially top managers, about the importance and implementation of knowledge management. When top managers adopt the principles of knowledge management, this can bring significant and positive change for all levels of employees, as it also includes a change in the financial perspective of the organization. Knowledge management becomes applicable when employees, guided by top managers, accept a new financial perception and focus on developing and applying knowledge, improving internal communication, involving employees in the decision-making process, encouraging leadership and using information technologies to create knowledge bases. The results of the research show that highlighting the knowledge and skills of employees does not reduce the financial performance of the organization. On the contrary, knowledge management positively contributes to increasing the level of knowledge and skills. Based on the results of the regression analysis, it was determined that the dimensions of knowledge management within the organization have a significant impact on financial performance. The obtained results are in accordance with previous research (Altindag & Ongel, 2021; Meher & Mishra, 2021; Barbier & Tengeh, 2023; Good, Halinski & Boekhorst, 2023; Altintas, 2023).

This study highlighted the complexity of the impact of knowledge management on financial performance, highlighting the importance of T-shaped skills. This points to the need for businesses to develop a workforce that combines deep specialized knowledge with broad interdisciplinary understanding. In addition, the different effects of individual knowledge management practices suggest that a tailored approach, which aligns these practices with the specific needs of the organization, may yield better results. Special emphasis

in the study was placed on the acquisition of strategic knowledge, which underlines the importance of systematic collection and use of knowledge, both internal and external, in order to improve business performance. This suggests that the correlation between knowledge management and financial performance may vary by industry, particularly between sectors that rely on knowledge and those that do not. Finally, these conclusions provide an important basis for future research, especially for the analysis of complex relationships between different dimensions of knowledge management, business models and organizational structures.

From a theoretical standpoint, this research contributes to a deeper understanding of how knowledge management can be an important leverage for financial success in organizations. It challenges and refines the existing models by specifying specific knowledge management practices that deliver tangible financial benefits. Practically, businesses can draw from these insights to adjust their knowledge management strategies, focusing on the areas most likely to improve financial performance. For example, investing in staff training to develop T-shaped skills can be a strategic focus for organizations looking to maximize the return on their knowledge management initiatives.

7. Suggestions and guidelines

Based on the presented research results and the presented model, the following suggestions and guidelines for improving competitiveness of companies were given:

- Focus on T-shaped skills development: This dimension showed a statistically significant and positive impact on financial performance, which includes a combination of professional knowledge and competencies that enable better cooperation and knowledge exchange in teams.
- Alignment of knowledge management strategies: Alignment of knowledge management practices with organizational goals and industry specifics, which requires adapting knowledge sharing approaches and creating unique company needs and structure.
- Monitoring and evaluation: Regular assessment of the effectiveness of knowledge management practices against financial performance, using metrics and KPIs to monitor progress and make adjustments as necessary.
- Invest in the systematic collection and integration of knowledge from external and internal sources: The results show that the process of acquiring knowledge has a strong positive impact on financial performance.

In the context of transition economies, including Serbia, the results of this research indicate the necessity or a systematic approach to knowledge as a resource that compensates for the lack of financial capital. The dimensions of knowledge management, especially dimensions such as the process of acquiring knowledge and developing competitive advantage through knowledge can help companies in resource-constrained environments to improve financial performance. It is recommended that policymakers in these countries encourage organizations to invest in employee training, develop internal knowledge bases, and share good practices. The application of these strategies allows companies to use knowledge management as an effective tool for improving their financial performance and strengthening their competitive position in the market. When it comes to the limitations of the research, one of the limitations refers to the method of data collection, that is, the method of self-reporting through questionnaires, which can lead to subjective assessments of the respondents and potential bias in the answers. Also, although the sample included different sectors, there is a possibility of sectoral imbalance, whereby some sectors are represented to a greater extent, which may affect the generality of the findings. It is important to note that the research refers to the context of Serbia, that is, a country in transition with specific institutional and economic conditions, which may limit the applicability of the results to developed economies or countries with a different management culture. Therefore, it is recommended that future research should include mixed methods of data collection that can balance sectoral representation and include international samples to determine the reliability of the model in different contexts.

Conclusion

The main direction of further research is to repeat the analysis of the impact of knowledge management on the financial performance of domestic companies in the established time frame and in the foreseen organizational conditions. Directions for further research may include covering a wider business territory, such as the countries of the region. Successful knowledge management leads to cost reduction, increased revenue, better risk management and improved relations with consumers, i.e., users. Increasing productivity, innovation, reducing errors and better decision-making are just some of how effective knowledge management can contribute to the growth of an organization. Therefore, organizations should invest in the development of knowledge management systems in order to achieve competitive advantage and achieve better financial results. Through effective use of internal resources and experience, organizations can achieve better results and increase competitiveness in the market. However, it is important to note that the success of knowledge management requires strong leadership that supports a culture of knowledge and supports employees in the knowledge sharing process.

Finally, knowledge management has a significant impact on the financial performance of enterprises. Establishing knowledge management strategies, supporting leadership and promoting a culture of knowledge and learning organizations are key factors for success in this area. Enterprises that successfully implement knowledge management can expect to improve efficiency, innovation and competitive advantage, which will result in improved financial performance.

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