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Rethinking the Role of Knowledge Sharing on Organizational Performance in Knowledge-Intensive Business Services

Lukáš Danko[1] · **Zuzana Crhová**[1,2]

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Abstract
When implementing the knowledge-based view on organizations, it is crucial to have a comprehensive understanding of the organizational performance. Current research on organizational performance is often fragmented into partial facets leaving the complexity of this domain out of picture. The aim of the paper is to examine the relationship between knowledge sharing and organizational performance, comprising innovativeness, market efficiency, and financial performance. We used partial least squares structural equation modelling on profit-oriented organizations in knowledge-intensive business services (KIBS). The sample consists of 237 observations based on a two-round questionnaire survey, which was distributed to randomly selected companies in the Czech Republic. The results suggest that knowledge sharing between managers and employees enhances organizational performance. Organizations with such kind of knowledge sharing nurture both horizontal and vertical information flow, which in turn fosters innovativeness. Sharing knowledge as a part of work duties are key activities to increase market efficiency and innovativeness. Conversely, the model indicates that despite developing collectivism through sharing best practices and feedback, there is a minimal impact of knowledge sharing on financial performance.

Keywords Knowledge-intensive business services · Knowledge sharing · Financial performance · Innovativeness · Market efficiency

✉ Lukáš Danko
danko@utb.cz

Zuzana Crhová
crhova@utb.cz

[1] Public Sector Administration and Law, Department of Regional Development, Faculty of Management and Economics, Tomas Bata University in Zlín, Mostní 5139, Zlín, Czech Republic

[2] Department of Finance and Accounting, Faculty of Management and Economics, Tomas Bata University in Zlín, Mostní 5139, Zlín, Czech Republic

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Introduction

Knowledge is considered one of the factors leading to higher performance, especially through mutual learning and the discovery of new perspectives and ideas to enhance competitiveness (Andreeva & Kianto, 2011; Roxas et al., 2014). Thus, organizations are concerned about the need for knowledge to be more competitive in the knowledge economy, especially due to rapid changes in demand for knowledge outcomes that require innovativeness. Businesses frequently need to adjust to customer demands in order to stay competitive and implement management changes to maintain expertise. Strategic approaches are needed to balance short-term and long-term goals in order to remain competitive in the knowledge economy and address stakeholder needs. Changing needs and competitiveness underline knowledge sharing as a key process in knowledge management practices (Carayannis et al., 2021). These practices assist employees to receive, absorb, and distribute knowledge to stay competitive (Intezari et al., 2017; Jayasingam et al., 2013). However, it is important to understand that knowledge is not owned by organizations but primarily by employees and their networks.

Hence, we assume knowledge sharing is reflected in the flow of knowledge between individuals or groups within an organization. Knowledge-sharing practices are generally considered beneficial regarding the performance of organizations. Nonetheless, placing knowledge at the centre of activities is a complex task due to its intangible nature, especially in the case of knowledge associated with expertise (Geiger & Schreyögg, 2012). The heftiness of knowledge sharing makes it challenging to measure the complete knowledge flow and the benefits it provides. Furthermore, it is worth investigating how knowledge sharing reflects on creating novelty and enhancing the performance of organizations for competitiveness (Rupietta & Backes-Gellner, 2019). Although some studies have explored the relationship between knowledge sharing and organizational performance, there is a lack of empirical evidence to examine this connection comprehensively (Savolainen, 2017; Chen et al., 2018; Andrej et al., 2023). Another important aspect to consider is the impact of knowledge flow on organizational performance in seemingly distant but associated organizational aspects of innovativeness, market efficiency, and financial performance (Venkitachalam et al., 2023).

While knowledge sharing is widely acknowledged as a key driver of organizational performance, the specific influence of managerial perceptions on the effectiveness of knowledge-sharing practices and their impact on organizational performance in knowledge-intensive business services remains underexplored (Zieba, 2021). Understanding how managers' perceptions align with actual knowledge-sharing behaviours and their subsequent effects on organizational performance can provide deeper insights into optimizing knowledge management strategies. Addressing this gap could add to the discussion regarding the role of managerial perceptions in shaping knowledge-sharing practices and their impact on organizational performance. On a similar basis, the gap reflects on a potential to align managerial strategies with actual behaviours to optimize knowledge management and drive

better performance outcomes in rapidly changing sector of the knowledge economy. Therefore, the paper aims to provide evidence on the role of knowledge sharing and organizational performance, specifically focusing on financial performance, innovativeness, and market efficiency. The rationale to explore this topic is due to insufficient practical evidence linking knowledge sharing and the complexity of the organizational performance (Zhang et al., 2024).

The first section of the paper focuses on the niche of knowledge-based perspectives on organizations and diverse views on organizational performance. Subsequently, the paper outlines key characteristics of research, describing participants, measures, procedures, and data analysis, all summarized in the "Methodological process" section. The "Results" section presents an overview of the knowledge sharing and performance of organizations, based on descriptive statistics and the PLS-SEM model. The last part provides a discussion of previous studies concerning the links between knowledge sharing and performance measures, where similarities and differences are discussed. Additionally, we present certain limitations, and further research focused on rethinking the role of knowledge sharing in enhancing organizational performance.

Knowledge Sharing and Organizational Performance

The current knowledge economy is facing challenges concerning economic and technological changes resulting from globalization, rapid development of new technologies, and augmented reality (Hadad, 2017). Knowledge could be considered the most valuable resource because of its uniqueness and the challenging process of imitating it in other organizations. Assuming the knowledge-based view of organizations (Grant, 1996), knowledge is the foundation of a firm's competitive advantage and, ultimately, the primary source of a firm's value. The focus on knowledge demands constant reinforcement and rethinking, especially considering the volatile competitive advantage (Carayannis et al., 2015). Hence, the shift towards the knowledge-based view represents an efficiency in preserving and protecting knowledge from expropriation and imitation (Ndinguri et al., 2012). This view also underlines the need to achieve a sustainable competitive advantage resulting from the collective diffusion of knowledge (Rupietta & Backes-Gellner, 2019). Nonetheless, too much focus on knowledge sharing can lead to information overload and hinder decision-making processes. As Oliveira et al., (2022) argue, this highlights the need for a balance in organizational processes, primarily between sharing knowledge and managing the flow of information to avoid overloading.

Numerous studies have highlighted the benefits of absorbing and using knowledge to enhance the performance of employees with their responsibilities (Matošková, 2016; Rupietta & Backes-Gellner, 2019; Ibidunni et al., 2023). Moreover, previous research emphasizes the effective absorption and use of knowledge, which contributes primarily to organizational learning and the higher innovativeness of organizations (Chen et al., 2018) and decreases the probability of wasting resources on dealing with the same problem repeatedly. However, organizational knowledge, which is deeply rooted in employees' experiences and beliefs, can be challenging to articulate and share (Fischer, 2024).

Therefore, organizations are proactive in reorganizing and promote collaboration through processes of knowledge sharing that lead to novelty ideas. Collaboration and innovation require favourable conditions in organizational culture, especially with the systematic approaches to knowledge transfer practices in a supply chain to boost innovativeness (Yoo, 2014). Nonetheless, organizations are aware of the interdependencies in knowledge transfers and tend to be proactive in preserving knowledge and skills in organizational settings (Özveren & Gürpinar, 2023). The principle behind knowledge strategies is inclined towards the notion that sharing arranges access to knowledge on a voluntary and conscious basis to enhance organizational performance. As Santouridis and Veraki (2017) argued, the organizational performance is a complex view based on processes to meet customer needs in a resourceful manner. Thus, we believe it is essential to reflect on a complex view of the organizational performance in areas ranging from production to operational excellence. Some conflicting views concerning the role of knowledge sharing in the organizational performance revolve around conflicts within the workplace that can hinder employees' willingness to share knowledge. Additionally, we assume there are unintentional knowledge leaks that may undermine the benefits of sharing knowledge. These aspects highlight organizational settings that are often skewed towards reliance on tangible rewards to share knowledge, which could backfire (Jordão & Novas, 2022). Although previous research recognizes the connection between knowledge sharing and innovation, further empirical evidence on mechanisms of knowledge sharing that enhances innovation results is scarce.

Thus, we assume knowledge sharing requires organizational cohesion and engagement to enhance organizational performance (Chen et al., 2018; Jayasingam et al., 2013). We consider aspects of knowledge sharing and their links to studies of organizational performance from a variety of perspectives, especially due to the knowledge-based view of organization (Rupietta & Backes-Gellner, 2019). Promoting collectivism in knowledge sharing leads to a greater focus on performance (Ibidunni et al., 2023). We assume knowledge sharing is about combining and distributing individual knowledge between employees to innovate more rapidly than competitors (Chen et al., 2018). These studies underline the scarcity of evidence on the mechanisms through which knowledge sharing translates into improved organizational performance (Zhang et al., 2024).

Furthermore, we acknowledge the view of organizational performance as a purpose to implement growth strategies and encourage financial sustainability. Financial sustainability and organizational performance highlight the role of financial measurement, primarily giving attention to goals and opportunities for improvement, using both internal and external standards (Kim et al., 2018). Some critical aspects reflect on measuring organizational performance with financial indicators such as profit, return on assets, or return on investment, while it is challenging to associate these indicators with knowledge-sharing strategies reflecting financial performance (Ibidunni et al., 2023). Luu (2014) explains that sharing knowledge leads to improved products, ultimately enhancing market efficiency for organizations. Links between knowledge sharing and market efficiency are evident in market share organization as well as in reputation among customers and competitors (Jordão & Novas, 2022).

The paper dives deep into the relationship between knowledge sharing and diversity of organizational performance, comprising innovativeness, market efficiency, and financial performance. Furthermore, the current research on knowledge sharing primarily emphasizes theoretical aspects and lacks empirical evidence to support the suggested relationships. The novelty is reflected in its examination of three performance dimensions simultaneously, unlike most studies that focus on knowledge sharing with specific performance indicators. We aim to establish a path for measuring the advantages of sharing knowledge by referencing prior research that has demonstrated the influence of knowledge management on overall organizational performance (Tarn & Yen, 2023). The paper acknowledges that studies dealing with financial performance are mainly considering market sales or profits (Kim et al., 2018) and their relation to competitors (Wang & Wang, 2012).

The rationale behind the main aim is reflected in limited evidence on knowledge sharing and its implications for gaining competitive advantage (Ibidunni et al., 2023). Latilla et al. (2018) argue that the relationship between knowledge and performance should be further explored, considering an overview of quantifying the benefits of knowledge sharing for organizations. By addressing this research gap, the paper provides valuable insights into the role of managerial perceptions in shaping knowledge-sharing practices and their impact on organizational performance. This research underlines managerial strategies and actual behaviours to optimize knowledge management and drive better performance outcomes. After examining the previous literature, this paper presents the following hypotheses:

- **H1:** Knowledge sharing in the organization has a positive effect on the innovativeness of the organization.
- **H2:** Knowledge sharing in the organization has a positive effect on the financial performance of the organization.
- **H3:** Knowledge sharing in an organization has a positive effect on the market efficiency of the organization.

The theoretical research framework is presented in Fig. 1.

Methodological Process

Sample

Participants in the paper were reached via a questionnaire survey. The methodology for survey distribution was based on random selection that was designated to avoid volunteer bias in the sample. To select the companies, the online Bisnode database was used. This database allowed us to collect empirical data on a description of the companies' size and specialization in four-digit NACE codes for KIBS. The criteria for selection were being active for at least 3 years, having a minimum of 10 employees and being assigned to the private sector. Based on these criteria, 6000 companies were randomly selected. Then, the questionnaire was distributed in an electronic form using Google Forms via email. Two rounds

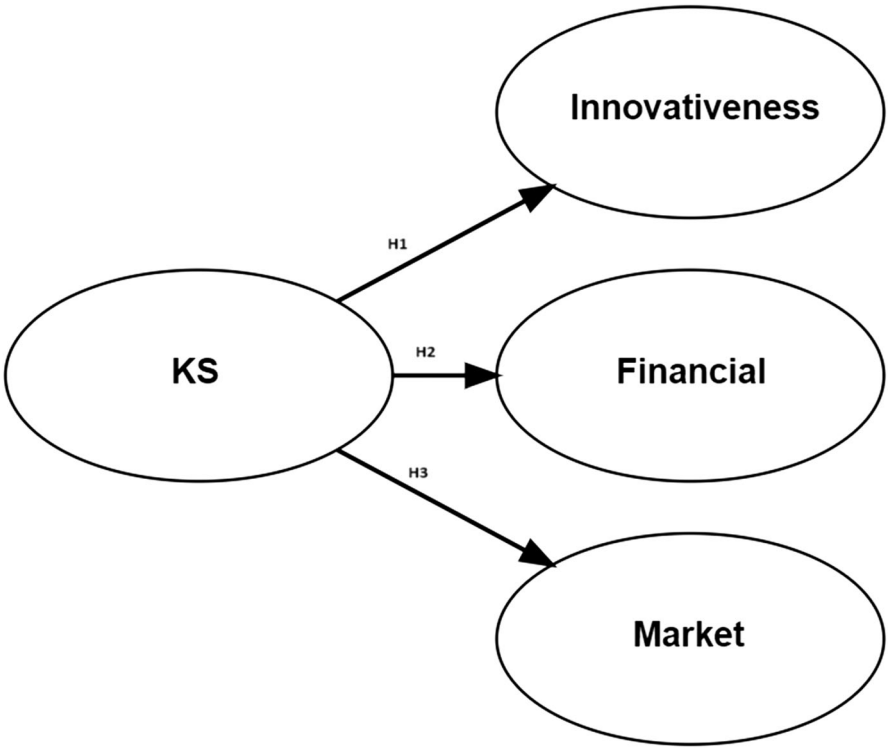

Fig. 1 Theoretical framework. Source: Authors

of the survey were specifically planned and implemented to reach the number of participants in the sample. To encourage response, the topic of knowledge sharing and its principles were briefly introduced in the text. Additionally, the research project and purpose were explained to motivate respondents to follow through the sections and complete the survey. When 683 questionnaires were filled out by respondents, the return rate was 11%. Given that the respondent should have a good knowledge of what is happening in the company, its results, and competitors, only questionnaires filled out by executives were selected for further analysis. Then, the final sample consists of 237 observations of for-profit organizations in knowledge-intensive business services. Descriptive statistics of respondents (gender, age, highest educational attainment, undo, and duration of their employment in the organization) are given in Table 1. The table also contains information about the organization in terms of its focus and size in KIBS.

Measures

The measurement of knowledge sharing is based on an instrument developed by Crhová and Matošková (2019) that consists of 15 questions that were determined on the basis of a content analysis of literary sources (see Appendix Table 8).

Table 1 Summary of respondents' demographics. Source: Authors

Demographic variable	Category	Frequency	Percentage
Gender	Male	168	70.9%
	Female	68	28.7%
	Missing	1	0.4%
Age	Less than 25 years	3	1.3%
	25 to 40 years	74	31.2%
	41 to 60 years	134	56.5%
	More than 60 years	26	11.0%
Education	Elementary/vocational school	7	3.0%
	High school	66	27.8%
	University	164	69.2%
Experience in the company	Less than 2 years	14	5.9%
	2 to 5 years	42	17.7%
	6 to 10 years	38	16.0%
	More than 10 years	142	60.0%
	Missing	1	0.4%
Type of industry	C — Information service activities	64	27.0%
	F — Architectural and engineering activities	30	12.6%
	G — Creative, arts, and entertainment activities	36	15.2%
	S — Education	22	9.3%
	J — Telecommunications	17	7.2%
	M — Scientific research and development	17	7.2%
	Other	51	21.5%
Size of the organization	Micro	19	8.0%

Table 1 (continued)

Demographic variable	Category	Frequency	Percentage
	Small	122	51.5%
	Middle	72	30.4%
	Large	23	9.7%
	Missing	1	0.4%

Furthermore, the measures in the paper consist of financial, market, and innovation performance, representing aspects of competitive advantage to other competitors in the respondent's industry (Table 2).

Procedure

Items were measured using 5-point Likert scales (1 = definitely disagree, 5 = definitely agree). To reduce the possibility of common method bias, we assured respondents that the questionnaire is anonymous, that only researchers will have access to individual answers, and that the results will be used only for research purposes. The terms that could be understood differently (for example in the area of financial performance) were explained to the respondents. Finally, the questionnaire was pilot-tested. The reliability of factors was then assessed using Cronbach's alpha (financial performance = 0.89, innovativeness = 0.9, market efficiency = 0.83, and extension of knowledge sharing = 0.91 for the set of 15 questions) prior to data collection for this paper.

Data Analysis

As our data comes from a primary survey, a common-method variance test was performed. Based on Harman's one-factor test, the total variance extracted by one factor is 0.28. A substantial amount of common method variance is not present (Podsakoff

Table 2 Items regarding the organizational performance

Item	Source
Financial performance	
FIN1: Profit per employee is higher in our organization compared to our main competitor in recent years	Wang & Wang, 2012
FIN2: Profitability of our organization is better compared to our main competitor in recent years	Wang & Wang, 2012
FIN3: Profit growth rate in our organization is more rapid compared to our main competitor in recent years	Wang & Wang, 2012
Innovativeness	
INN1: Level of development of new products, technologies, methods, and procedures	Soto-Acosta et al., 2017
INN2: Level of improvement of existing products, technologies, methods, and procedures	Soto-Acosta et al., 2017
INN3: Level of ability to respond to changes in the ecosystem	Kaynak & Kara, 2004
Market efficiency	
MARK1: WE offer a better product/service than our main competitor	Kaynak & Kara, 2004
MARK2: We have a better reputation with customers/clients than our main competitor	Kaynak & Kara, 2004
MARK3: We can adapt to the needs of customers/clients better than our main competitor	Kaynak & Kara, 2004

et al., 2003). To group the questions on the extent of knowledge sharing into factors and reduce the number of variables, explanatory factor analysis is used (Hair et al., 2011). To assess the suitability of factor analysis, the Kaiser–Meyer–Olkin measure is used, which takes values of 0.85, which means that the data are suitable for factor analysis (Field, 2013). According to Kaiser's rule (eigenvalue value greater than 1), factor analysis is chosen for four factors. Orthogonal varimax rotation is used for factor analysis using the maximum likelihood method, which can be used to reduce variables where subsequent data analysis is expected (Hair et al., 2011). Items with a factor load higher than 0.4 are left as significant, which is a suitable value for samples with more than 200 observations (Hair et al., 2011). Other items are discarded. Table 3 shows the factor loads after rotation. From the items grouped into the given factors, it can be concluded that factor 1 represents sharing knowledge to help colleagues, factor 2 is internal communication, factor 3 is sharing knowledge from developmental activities, and factor 4 is sharing knowledge as a part of work duties. Sharing knowledge to help colleagues means documenting knowledge, helping others to manage the knowledge and skills needed for their work, or providing colleagues with feedback. These four factors explain 52% of the total variance, higher than the rule of thumb of 50%. One question is excluded (s1). To verify the reliability of the factors, Cronbach's alpha (standardized) was used for each of the factors separately (Table 3). An acceptable Cronbach's alpha value of 0.7 is met for all factors. All four factors achieve SS loadings greater than 1.

Data analysis was focused on examining the relationship between the extent of knowledge sharing, innovativeness, market efficiency, and financial performance. A method is chosen that allows us to identify the relationships between latent variables, in the case of those that cannot be measured directly. Thus, we selected the partial least square structural equation modelling (PLS-SEM). In this paper, PLS-SEM is used to explain the variance of dependent variables through the coefficient of determination, size, and signification of path coefficients (Cepeda-Carrion et al., 2019). Moreover, PLS-SEM is a modelling technique requiring no distributional assumption of data (Monecke & Leisch, 2012) and therefore deals well with non-normal data. PLS-SEM works with relatively small sample sizes (Urbach & Ahlemann, 2010).

PLS path modelling is a two-step technique where the measuring model (outer model) is evaluated first and followed by the structural model (inner model). The bootstrap method is employed to measure the significance of path coefficients (Lee & Wong, 2015). The SEM method is employed as a combination of factor analysis and multivariate regression, which is captured using a measurement model (factor analysis capturing the relationships between measured variables and the latent variable it measures) and a structural model (Hatcher & O'Rourke, 2013). In our case, latent variables are measured with observed variables in a reflective way — mode A (Monecke & Leisch, 2012). The structural model is determined on the basis of the literature review and presents the relationships between individual latent variables and the direction of these relationships. Thus, these are multiple interrelated relationships (Hair et al., 2011). The analysis was performed using R, SEMinR package (Ray et al., 2024).

Table 3 Summary of the results of the factor analysis for knowledge sharing issues. Source: Authors

Item	Sharing knowledge to help colleagues (Help)	Internal communication (Internal)	Sharing knowledge from developmental activities (Development)	Sharing knowledge as a part of work duties (Work_Duties)
	Cronbach alpha = 0.8, SS loadings = 2.57	Cronbach alpha = 0.78, SS loadings = 2.19	Cronbach alpha = 0.77, SS loadings = 1.61	Cronbach alpha = 0.84, SS loadings = 1.48
s1	0.36	0.15	0.18	0.16
s2	**0.41**	0.21	0.20	0.18
s5	**0.47**	0.25		0.30
s6	**0.60**	0.16		0.11
s7	**0.58**	0.30	0.23	0.25
s11	**0.54**	0.18	0.35	0.15
s13	**0.66**	0.34		
s3	0.35	**0.61**		0.11
s4	0.16	**0.62**		0.21
s8	0.20	**0.57**	0.23	0.22
s12	0.30	**0.69**		
s9		0.15	**0.84**	
s10	0.31		**0.74**	0.17
s14	0.44	0.39	0.16	**0.52**
s15	0.28	0.27	0.17	**0.90**

Results

The first step was to evaluate the measurement model in terms of the convergent validity and reliability of the measures representing each construct (Chin, 2010). Convergent validity was evaluated through factor loadings and average variance extracted (AVE). Two items with factor loadings lower than 0.7 were deleted from the model (s5 and s6 from the construct sharing knowledge to help colleagues). Other items have factor loadings higher than 0.708. The AVE values of the indicators exceed the minimum acceptable AVE of 0.50. Jöreskog's composite reliability (rhoC), Cronbach's alpha, and construct reliability (rhoA) were employed to test internal consistency reliability. The reliability values exceed the value of 0.7. The discriminant validity was tested with heterotrait-monotrait (HTMT) ratio (presented in Table 4). The HTMT values are lower than the threshold 0.9 which indicates that discriminant validity problems are not present (Hair et al., 2019). Thus, the measurement model is acceptable in terms of validity and reliability. The results are summarized in Table 5.

The second step was to evaluate the structural model. VIF values were used to examine collinearity to evaluate whether the regression results are not biased. The results presented in Table 6 indicate that the VIF values are lower than recommended maximum value of 3 (Hair et al., 2019).

Then, the relevance and significance of the indicator weights were evaluated. In terms of relevance, the indicator weights show a weak positive effect of internal communication of organizational performance. On the other hand, there is almost zero impact of knowledge sharing on market efficiency, with the exception of impact of internal communication on market efficiency. To test the significance of the indicator weights, the bootstrap technique was used. Table 7 shows the path coefficients and the bootstrap results. Based on the percentile method, the indicator weight is significant at a 5% level, when the confidence interval does not include zero (Hair et al., 2019). The results show significant impact of internal communication on innovativeness ($\beta = 0.250$, $T = 2.893$), sharing knowledge as a part of work duties on innovativeness ($\beta = 0.147$, $T = 2.106$), internal communication on financial performance ($\beta = 0.184$, $T = 2.234$), sharing knowledge to help colleagues on financial

Table 4 Discriminant validity (HTMT ratio)

Construct	Internal	Help	Development	Work_Duties	Innovativeness	Financial	Market
Internal							
Help	0.731						
Development	0.315	0.548					
Work_Duties	0.663	0.760	0.420				
Innovativeness	0.509	0.497	0.347	0.452			
Financial	0.260	0.298	0.191	0.093	0.487		
Market	0.486	0.349	0.154	0.270	0.574	0.509	

Table 5 Validity and reliability of the measurement model

Construct	Item	Factor loadings	Alpha	AVE	rhoC	rhoA
Sharing knowledge to help colleagues	HELP1 (s6)	0.689	0.719	0.542	0.826	0.720
	HELP2 (s7)	0.740				
	HELP3 (s11)	0.764				
	HELP4 (s13)	0.751				
Internal communication	INT1 (s3)	0.795	0.782	0.603	0.858	0.808
	INT2 (s4)	0.755				
	INT3 (s8)	0.709				
	INT4 (s12)	0.841				
Sharing knowledge as a part of work duties	DUT1 (s14)	0.955	0.847	0.863	0.927	0.936
	DUT2 (s15)	0.902				
Sharing knowledge from developmental activities	DEV1 (s9)	0.909	0.741	0.793	0.885	0.754
	DEV2 (s10)	0.872				
Innovativeness	INN1	0.871	0.831	0.748	0.899	0.831
	INN2	0.912				
	INN3	0.810				
Financial performance	FIN1	0.858	0.855	0.773	0.911	0.872
	FIN2	0.907				
	FIN3	0.871				
Market efficiency	MARK1	0.872	0.819	0.734	0.892	0.821
	MARK2	0.864				
	MARK3	0.834				

Table 6 VIF values

Construct			
Innovativeness			
Internal	Help	Development	Work_Duties
1.591	1.870	1.210	1.759
Financial			
1.591	1.870	1.210	1.759
Market			
1.591	1.870	1.210	1.759

performance ($\beta = 0.203$, $T = 2.358$) and internal communication of market efficiency ($\beta = 0.362$, $T = 4.121$).

In the prediction-oriented PLS-SEM approach, the main target is to explain the variance of endogenous latent variables and to establish the significance of all path estimates, and thus, R^2 values are used (Chin, 2010). R^2 values for endogenous latent variables show weak dependence on their endogenous variables (financial $R^2 = 0.091$, market $R^2 = 0.165$, and innovativeness $R^2 = 0.237$) as presented in

Table 7 Path estimates with bootstrap results. Source: Authors

Hypothesis	Path	Original estimate	Bootstrap mean	Bootstrap SD	T. stat	2.5% CI	97.5% CI
H1a	**Internal → innovativeness**	**0.250**	**0.248**	**0.087**	**2.893**	**0.070**	**0.405**
H1b	Help → innovativeness	0.112	0.122	0.080	1.405	− 0.027	0.284
H1c	Development → innovativeness	0.120	0.123	0.062	1.949	− 0.002	0.240
H1d	**Work_Duties → innovativeness**	**0.147**	**0.143**	**0.070**	**2.106**	**0.014**	**0.278**
H2a	**Internal → financial**	**0.184**	**0.185**	**0.083**	**2.234**	**0.031**	**0.344**
H2b	**Help → financial**	**0.203**	**0.210**	**0.086**	**2.358**	**0.033**	**0.382**
H2c	Development → financial	0.088	0.092	0.075	1.171	− 0.057	0.242
H2d	Work_Duties → financial	− 0.160	− 0.165	0.078	− 2.047	− 0.313	− 0.006
H3a	**Internal → market**	**0.362**	**0.361**	**0.088**	**4.121**	**0.182**	**0.528**
H3b	Help → market	0.078	0.090	0.085	0.911	− 0.075	0.266
H3c	Development → market	0.012	0.012	0.069	0.175	− 0.122	0.149
H3d	Work_Duties → market	− 0.011	− 0.016	0.075	− 0.152	− 0.168	0.130

Significant indicator weights appear in bold

Table 7. The results show the weak in-sample predictive power. The path estimates and R^2 are displayed in Fig. 2.

Discussion

The results provide evidence on the role of knowledge sharing and organizational performance, specifically focusing on financial performance, innovativeness, and market efficiency. The rationale to explore this topic is due to insufficient practical evidence linking knowledge sharing and the complexity of the organizational performance. Managers play a crucial role in facilitating or hindering knowledge sharing. Their perceptions can significantly influence how knowledge-sharing initiatives are implemented and supported within the organization.

The findings indicate that the role of managers and their internal communication is eminent in increasing financial performance and innovativeness. Additionally, this communication signifies the knowledge flow in both directions when employees communicate with managers as part of innovation networks as presented in Venkitachalam et al. (2023). Furthermore, their role is crucial for the dissemination of knowledge to achieve higher market efficiency. More importantly, the findings provide an insight into the changing role of managers, who have an influence on all streams of

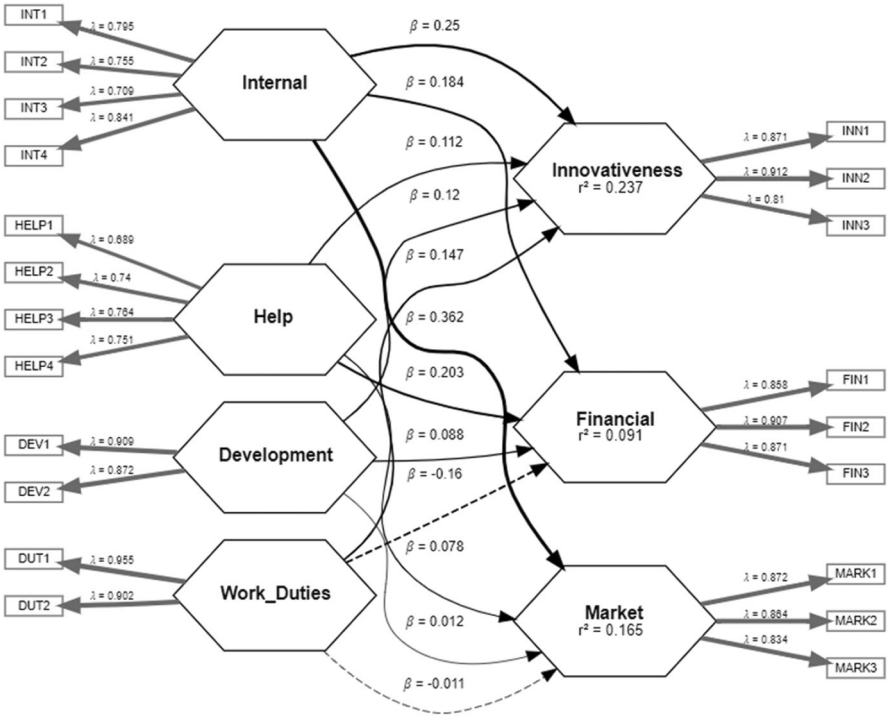

Fig. 2 Structural model with path coefficients. Source: Authors

organizational performance as an addition to Andrej et al. (2023). This adds to the discussion by Oliveira et al., (2022) about the importance of cultivating a communication climate with horizontal and vertical information flow to enhance organizational performance.

Furthermore, the results highlight that knowledge-sharing practices by managers are supplemented with sharing knowledge as a part of work duties (e.g. sharing knowledge via meetings). This was identified as a key activity to increase both market efficiency and innovative performance to stay ahead of competitors, as discussed by Chen et al. (2018). The results shed some light on managers' perceptions which align with actual knowledge-sharing behaviours and their subsequent effects on organizational performance. We corroborate the findings by Ibidunni et al. (2023) by underlining that managers should promote a culture of collectivism in knowledge sharing. The findings further extend the role of knowledge sharing in innovation performance when employees use meetings to share knowledge about options and opportunities to resolve existing issues in organizations.

The paper emphasizes that specialized meetings create a platform to aid employees and provide effective absorption of knowledge in organizations (Oliveira et al., 2022). This aspect reflects on managerial strategies to optimize knowledge management and drive better performance outcomes. On the other hand, the results highlighted that sharing best practices and giving feedback do not significantly contribute to innovativeness or financial performance, as opposed to findings by Wijaya (2023). In his paper, Wijaya (2023) found out that sharing tacit knowledge significantly contributes both to financial performance and market effectiveness. Hence, we assume meetings gain relevancy in their mediating role in organizational performance and provide a basis for innovativeness and achieving a competitive advantage as presented by Jordão and Novas (2022).

Development activities have positive effects on knowledge-sharing practices in general. More importantly, we recognized that regular participation in workshops to learn from each other and systematic efforts to disseminate these outcomes among employees are considered insignificant in financial performance. However, they are significant in innovativeness regarding overcoming barriers and resistance discussed by Oliveira et al. (2022). However, more evidence is needed to demonstrate the role of development activities in organizational performance.

We deduced that organizational performance might increasingly rely on employees and their communication with colleagues. This is specifically reflected in behaviour that encourages sharing work-related information among employees that could benefit from it and providing feedback to praise or point out inefficiencies. Nevertheless, the results suggest sharing knowledge to help colleagues is the least influential on organizational performance, contrasting findings by Intezari et al. (2017). This factor is estimated to be minor, especially when we divide the concept of organizational performance into three dimensions concerning financial performance, innovativeness, and market efficiency (Tarn & Yen, 2023; Andrej et al., 2023). We assume that this might be related to ethical issues that can have a negative effect on knowledge-sharing cultures and institutional arrangements (Özveren & Gürpinar, 2023).

Conclusion

The paper addresses the research gap concerning knowledge-sharing practices and their impact on organizational performance in knowledge-intensive business services. Furthermore, it provides evidence on the role of managerial perceptions in shaping knowledge-sharing practices and their impact on organizational performance. The findings of this paper have several implications concerning knowledge-sharing practices that support organizational performance, especially due to rapid changes that require innovative approaches to gain a competitive advantage. The empirical part examined the role of knowledge-sharing practices in organizational performance, considering financial performance, innovativeness, and market efficiency. On the contrary, Massingham and Massingham (2014) conclude that both sharing knowledge as a part of work duties and sharing knowledge to help colleagues were identified as less significant in enhancing organizational performance. This might be attributed to differences in multi-generational workforce dynamics with a variety of approaches towards knowledge and performance in knowledge-intensive organizations (Venkitachalam et al., 2023).

The paper adds to Ibidunni et al. (2023) by recognizing that knowledge-sharing practices by managers and sharing knowledge through meetings are crucial components of collective efforts to increase market efficiency and innovativeness. Meetings may mediate communication between employees, leading to a more complex organizational culture towards innovation. Educational activities have positive effects on knowledge-sharing practices, but more evidence is needed to demonstrate their role. Organizational performance relies on employees and their communication with colleagues, but sharing knowledge to help colleagues was identified as the least influential factor. This factor is estimated to have a minor influence when dividing organizational performance into financial performance, innovativeness, and market efficiency.

Managerial implications are reflected in the need for effective knowledge sharing to support organizational performance. These implications underscore active role and strategic trajectory in knowledge sharing and facilitate meetings as evidence linking knowledge sharing and the complexity of the organizational performance (Carayannis et al., 2021; Zhang et al., 2024). More importantly, it signifies the innovation culture, when meetings can mediate communication between employees, leading to a more complex organizational culture towards innovation. Furthermore, organizational performance relies on employees and their communication with colleagues. This is specifically reflected in sharing work-related information among employees that could benefit from it and in providing feedback to praise or point out inefficiencies. Adapting these activities for development purposes can enhance knowledge-sharing practices. Regular participation in workshops to learn from each other and systematic efforts to disseminate outcomes among employees are significant for overcoming barriers and resistance in knowledge-sharing practices focused on enhancing organizational performance.

The paper has certain limits concerning the sample size and period of the questionnaire survey that could potentially cause flaws in the sample structure.

Respondents represent companies with a variety of economic activities in knowledge-intensive business services, and other sectors might have different views on the topic of interest. Further research activities should examine the mediating effects of organizational culture on knowledge sharing and innovation networks. Additionally, we suggest investigating the role of digital transition and the use of artificial intelligence in knowledge sharing and organizational performance (Venkitachalam et al., 2023). Additionally, there is a room to explore the long-term impacts of knowledge-sharing practices in organizational performance and to conduct comparative studies across different sectors. Future research could potentially tackle the aspect of remote/teleworking and their knowledge-sharing practices. These flexible work arrangements could significantly affect how and why employees engage in knowledge sharing and how organizations enhance performance with remote workers.

Appendix

Table 8 Items of knowledge sharing

Item
S1: I contribute through ideas and inspiration to the knowledge archive of the organization, e.g. the organizational knowledge database on intranet
S2: I am involved in the documentation of important knowledge, e.g. elaborates instructions from the project, knowledge about clients, and their needs
S3: I think that proposals are collected in the organization from other employees, clients, partners and vendors and are considered during decisions
S4: I am sufficiently informed of the turnover, revenue, and economic and strategic issues in the organization (i.e. about that how the organization went well, how it is going now, what are the plans for the future)
S5: Any time I have important work-related information, I try to pass it to those who could benefit from it
S6: I provide others with feedback (I praise, point out mistakes)
S7: I help others to manage the knowledge and skills needed for their work
S8: I think that during decisions, e.g. about investment into organization, the proposals of employees are taken into consideration
S9: I regularly participate in seminars and workshops to share knowledge and learn from others
S10: I share knowledge acquired from education or a development programme with other members of the organization
S11: I share stories of success and procedures that are well established
S12: I have a feeling that communication in our organization is bilateral (i.e. from the supervisor to subordinates and vice versa)
S13: I communicate my most recent work-related errors and mistakes, as well as procedures that were not well established in order to prevent others from making the same mistakes and errors
S14: I regularly meet my co-workers to resolve problems and review the options and opportunities in our area
S15: A standard part of my work is to pass on information, e.g. within meetings

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Declarations

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References

Andreeva, T., & Kianto, A. (2011). Knowledge processes, knowledge-intensity and innovation: A moderated mediation analysis. *Journal of Knowledge Management, 15*(6), 1016–1034. https://doi.org/10.1108/13673271111179343

Andrej, N., Breznik, K., & Natek, S. (2023). Managing knowledge to improve performance: The impact of leadership style and knowledge management on organizational performance with moderation effects via PLS-SEM. *Journal of the Knowledge Economy, 14*(2), 1672–1701.

Carayannis, E. G., Campbell, D. F., & Rehman, S. S. (2015). "Happy accidents": Innovation-driven opportunities and perspectives for development in the knowledge economy. *Journal of Innovation and Entrepreneurship, 4*(1), 1–16. https://doi.org/10.1186/s13731-015-0021-9

Carayannis, E. G., Ferreira, J. J., & Fernandes, C. (2021). A prospective retrospective: Conceptual mapping of the intellectual structure and research trends of knowledge management over the last 25 years. *Journal of Knowledge Management, 25*(8), 1977–1999.

Cepeda-Carrion, G., Cegarra-Navarro, J.-G., & Cillo, V. (2019). Tips to use partial least squares structural equation modelling (PLS-SEM) in knowledge management. *Journal of Knowledge Management, 23*(1), 67–89. https://doi.org/10.1108/JKM-05-2018-0322

Chen, M. H., Wang, H. Y., & Wang, M. C. (2018). Knowledge sharing, social capital, and financial performance: The perspectives of innovation strategy in technological clusters. *Knowledge Management Research & Practice, 16*(1), 89–104. https://doi.org/10.1080/14778238.2017.1415119

Chin, W. W. (2010). How to write up and report PLS analyses. In V. V. Esposito, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of Partial Least Squares: Concepts* (pp. 655–690). Methods and Applications in Marketing and Related Fields: Springer.

Crhová, Z., & Matošková, J. (2019). The link between knowledge sharing and organizational performance: Empirical evidence from the Czech Republic. *International Journal of Knowledge Management, 15*(3), 1–23. https://doi.org/10.4018/IJKM.2019070101

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage.

Fischer, C. (2024). Motivated to share? Development and validation of a domain-specific scale to measure knowledge-sharing motives VINE. *Journal of Information and Knowledge Management Systems, 54*(4), 861–895. https://doi.org/10.1108/VJIKMS-09-2021-0200

Geiger, D., & Schreyögg, G. (2012). Narratives in knowledge sharing: Challenging validity. *Journal of Knowledge Management, 16*(1), 97–113. https://doi.org/10.1108/13673271211198963

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal, 17*(2), 109–122.

Hadad, S. (2017). Knowledge economy: Characteristics and dimensions. *Management Dynamics in the Knowledge Economy, 5*(2), 203–225. https://doi.org/10.25019/MDKE/5.2.03

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139–152. https://doi.org/10.2753/MTP1069-6679190202

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hatcher, L., & O'Rourke, N. (2013). *A step-by-step approach to using SAS for factor analysis and structural equation modelling*. Sas Institute.

Ibidunni, A. S., Agbi, B. D., & Kehinde, B. E. (2023). Interacting effects of tacit knowledge and learning orientation in improving firm performance. *Journal of the Knowledge Economy, 14*(3), 2539–2560. https://doi.org/10.1007/s13132-022-00978-z

Intezari, A., Taskin, N., & Pauleen, D. J. (2017). Looking beyond knowledge sharing: An integrative approach to knowledge management culture. *Journal of Knowledge Management, 21*(2), 492–515. https://doi.org/10.1108/JKM-06-2016-0216

Jordão, R. V. D., & Novas, J. C. (2022). Information and knowledge management, intellectual capital, and sustainable growth in networked small and medium enterprises. *Journal of the Knowledge Economy*, 1–33. https://doi.org/10.1007/s13132-022-01043-5

Jayasingam, S., Ansari, M. A., Ramayah, T., & Jantan, M. (2013). Knowledge management practices and performance: Are they truly linked? *Knowledge Management Research & Practice, 11*(3), 255–264.

Kaynak, E., & Kara, A. (2004). Market orientation and organizational performance: A comparison of industrial versus consumer companies in Mainland China using market orientation scale (MARKOR). *Industrial Marketing Management, 33*(8), 743–753. https://doi.org/10.1016/j.indmarman.2004.01.003

Kim, K. H., Kim, M., & Qian, C. (2018). Effects of corporate social responsibility on corporate financial performance: A competitive-action perspective. *Journal of Management, 44*(3), 1097–1118. https://doi.org/10.1177/0149206315602530

Latilla, V. M., Frattini, F., Petruzzelli, A. M., and Berner, M. (2018). Knowledge management, knowledge transfer and organizational performance in the arts and crafts industry: A literature review, *Journal of Knowledge Management*, *23*(7). https://doi.org/10.1108/JKM-11-2018-0699

Lee, C. S., & Wong, K. Y. (2015). Development and validation of knowledge management performance measurement constructs for small and medium enterprises. *Journal of Knowledge Management, 19*(4), 711–734. https://doi.org/10.1108/JKM-10-2014-0398

Luu, T. (2014). Knowledge sharing and competitive intelligence. *Marketing Intelligence & Planning, 32*(3), 269–292. https://doi.org/10.1108/MIP-05-2013-0077

Massingham, P. R., & Massingham, R. K. (2014). Does knowledge management produce practical outcomes? *Journal of Knowledge Management*, *18*(2), 221–254. https://doi.org/10.1108/JKM-10-2013-0390

Matošková, J. (2016). Measuring knowledge. *Journal of Competitiveness, 8*(4), 5–29. https://doi.org/10.7441/joc.2016.04.01

Monecke, A. and Leisch, F. (2012). SemPLS: Structural equation modeling using partial least squares, *Journal of Statistical Software*, *48*(3), 1–32. Retrieved from http://www.jstatsoft.org/v48/i03/.

Ndinguri, E., Prieto, L., & Machtmes, K. (2012). Human capital development dynamics: The knowledge based approach. *Academy of Strategic Management Journal, 11*(2), 121–169.

Oliveira, M., Pinheiro, P., Lopes, J. M., & Oliveira, J. (2022). How to overcome barriers to sharing tacit knowledge in non-profit organizations? *Journal of the Knowledge Economy, 13*(3), 1843–1874.

Özveren, E., & Gürpinar, E. (2023). More a commons than a fictitious commodity: Tacit knowledge, sharing, and cooperation in knowledge governance. *Journal of the Knowledge Economy*, 1–20. https://doi.org/10.1007/s13132-023-01159-2

Podsakoff, P., MacKenzie, S., Lee, J.-Y., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *The Journal of Applied Psychology., 88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Ray, S., Danks, N., & Calero Valdez, A. (2024). _seminr: Building and estimating structural equation models_. R package version 2.3.3. Retrieved from: https://CRAN.R-project.org/package=seminr. Accessed Jul 2024.

Roxas, B., Battisti, M., & Deakins, D. (2014). Learning, innovation and firm performance: Knowledge management in small firms. *Knowledge Management Research & Practice, 12*, 443–453.

Rupietta, C., & Backes-Gellner, U. (2019). How firms' participation in apprenticeship training fosters knowledge diffusion and innovation. *Journal of Business Economics, 89*(5), 569–597. https://doi.org/10.1007/s11573-018-0924-6

Santouridis, I., & Veraki, A. (2017). Customer relationship management and customer satisfaction: The mediating role of relationship quality. *Total Quality Management & Business Excellence, 28*(9–10), 1122–1133. https://doi.org/10.1080/14783363.2017.1303889

Savolainen, R. (2017). Information sharing and knowledge sharing as communicative activities. *Information Research: An International Electronic Journal, 22*(3), 1–20.

Soto-Acosta, P., Popa, S., & Palacios-Marqués, D. (2017). Social web knowledge sharing and innovation performance in knowledge-intensive manufacturing SMEs. *The Journal of Technology Transfer, 42*(2), 425–440. https://doi.org/10.1007/s10961-016-9498-z

Tarn, D., & Yen, D. (2023). Task characteristics and knowledge management performance: Model development and scale construction. *Knowledge Management Research & Practice, 21*(2), 259–276.

Urbach, N., & Ahlemann, F. (2010). Structural equation modeling in infromation systems rsearch using partial least squares. *Journal of Information Technology Theory and Application, 11*(2), 5–40.

Venkitachalam, K., Ganesh, L. S., & Löwstedt, J. (2023). Relevance and importance of KM dynamics–A primer for future research directions. *Knowledge Management Research & Practice, 21*(2), 211–215.

Wang, Z., & Wang, N. (2012). Knowledge sharing, innovation and firm performance. *Expert Systems with Applications, 39*(10), 8899–8908. https://doi.org/10.1016/j.eswa.2012.02.017

Wijaya, A. (2023). How to improve business performance of MSMEs in the Covid-19 pandemic through knowledge sharing. *International Journal of Science, Technology & Management, 4*(1), 39–43.

Yoo, D. K. (2014). Substructures of perceived knowledge quality and interactions with knowledge sharing and innovativeness: A sensemaking perspective. *Journal of Knowledge Management, 18*(3), 523–537. https://doi.org/10.1108/JKM-09-2013-0362

Zhang, J., Jehangir, F. N., Yang, L., Tahir, M. A., & Tabasum, S. (2024). Competitive advantage and firm performance: The role of organizational culture, organizational innovation, and knowledge sharing. *Journal of the Knowledge Economy*, 1–27. https://doi.org/10.1007/s13132-024-01910-3

Zieba, M. (2021). Knowledge flows in KIBS companies: Theoretical framework and study description. *Understanding Knowledge-Intensive Business Services: Identification, Systematization, and Characterization of Knowledge Flows* (pp. 123–151). Springer International Publishing.