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Knowledge Management Capabilities and Firm Performance: Evidence from Nepalese Commercial Banks

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ABSTRACT

Every corporate sector's success depends on its knowledge capabilities to produce value and take competitive advantages. The effective management of that resources by corporate is to improve the firm's efficiency. Organizations attempt to coordinate these knowledge resources in new and distinct ways and transform them into innovative resources better than those of their competitors. The aim of this study is to investigate the role and impact of knowledge management capabilities in firm's performance. This study was conducted on the Nepalese commercial banks. As part of the study, knowledge management was thought to comprise the key constructs of knowledge infrastructure and knowledge process capabilities. Data were collected through structured questionnaires from 384 respondents working in Nepalese commercial banks of Kathmandu valley. Descriptive statistics as well as multiple regression models have been used to analyze the data. Correlation and regression analysis have been applied to test the hypothesis. With a p-value of (0.000<0.05), it is shown that the knowledge conversion process has the highest correlation value and is positively significant when compared to all other aspects of knowledge management capacities on a firm's production. It suggests that the process of knowledge conversion and firm's performance are favorably associated. It is observed that organizational performance will be better if there is good practice of knowledge management. The results found that there is significant relationship between knowledge capabilities and firm's performance. Managers in the banking industry may enhance decision-making, encourage innovation, enhance problem-solving skills, quicken learning and development, promote teamwork, acquire a competitive edge, and raise employee engagement through effective management of knowledge competencies.

Keywords: Firm's performance, infrastructure capabilities, knowledge, knowledge management, process capabilities

1. INTRODUCTION

In the modern global economy, society is becoming more and more dependent on knowledge, and knowledge is now essential for organizations to build wealth, growth, and security

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(Abubakar et al., 2019). The ability of a company to handle knowledge well has replaced physical assets and natural resources as the primary source of competitive advantage. According to Zaim et al. (2021), knowledge is the most effective factor influencing an organization's performance and success. According to Idrees et al. (2022), one of the fundamental sources of innovation, information is one of the most significant characteristics of a competitive world. The management of knowledge is acknowledged as a strategic asset that gives businesses a competitive edge in the information and globalization era (Rahman & Joshi, 2015).

After the 1990s, the knowledge-based theory (KBT) gained a lot of traction. Grant (1996) used this theory to describe how knowledge management (KM) is the appropriate application of knowledge and how intangible assets like knowledge should be handled in a competitive world. Knowledge management has grown to be a valuable asset for any business and boosts profitability and efficiency, according to Srinivasan (2020). Due to numerous studies showing that knowledge management greatly improves organizational performance, knowledge management has attracted more attention (Bayari et al., 2019). Knowledge acquisition, conversion, application, and protection are processes that are considered knowledge capabilities in today's globally competitive world and have a positive correlation with organizational performance (Zaim et al., 2021). These processes are collectively referred to as knowledge management (Mills & Smith, 2011; Liu & Deng, 2015). Organizations constantly struggle to understand what knowledge, skills, and experience are necessary in todays more complicated and uncertain business environment in order to fully capitalize on the opportunities that present themselves (Hussain et al., 2021). In addition to these competencies, an organization must possess unique features so that competitors could not imitate them while offering in the same market and industry. Having robust knowledge management capabilities is vital for organizations. They need to determine the type of knowledge required, how to acquire it, and how to implement it effectively. This process supports innovation during product development, leading to a sustainable competitive advantage (Attia & Salama, 2018; Haider et al, 2021). Gautam (2022) found the performance of the company's innovation process is positively impacted by knowledge management in terms of acquisition, sharing, and application.

In the global competitive world, knowledge management refers to the process of knowledge acquisition, knowledge conversion, knowledge application and knowledge protection, which are positively related with organizational performance (Zaim et al., 2021) and are taken as knowledge capabilities. Given the fierce rivalry in Nepal's banking industry, improving organizational performance through knowledge management competency would be a key strategy for banks to gain a competitive edge. Although, the relationship between knowledge management competencies and organizational performance remains uncertain, knowledge management is garnering more and more attention. Determining the role of knowledge management capabilities on the performance of Nepalese banks is, thus, the main objective of this study. In Nepal, very few studies have been conducted by a small number of academics examining the relationship between organizational performance and knowledge management capabilities. It is becoming more and more apparent that knowledge management and organizational performance are related, despite the fact that knowledge management is gaining more attention. Thus, assessing the role of knowledge management capabilities on Nepalese bank’s performance is the main objective of the present work. More academic attention has been paid to the knowledge management procedures utilized by businesses in the western countries. However, not enough knowledge management research has

been done in our particular setting. Therefore, this study attempts to fill this gap by analyzing and examining the role of knowledge management capabilities in firm's performance of Nepalese Commercial Banks.

2. LITERATURE REVIEW

Over the past 20 years, KM has come to be seen as a crucial role in all commercial organizations. Because of consumer awareness, technological improvements, and the fast speed of worldwide market competition, the market has become very competitive. It has been observed in this instance how crucial knowledge management techniques are to obtaining a competitive edge. Knowledge management is considered a critical success factor and is essential to gaining a competitive advantage in businesses where different types of knowledge capabilities are needed for innovation and new product creation (Attia & Salama, 2018; Garcia et al., 2020). The market is extremely competitive due to the rapid pace of international market competition, consumer awareness, and technical advancements. In this regard, it has been observed that knowledge management practices are crucial for gaining a competitive edge. Thus, in order to improve performance, corporate organizations need implement knowledge management strategies.

Managing knowledge is always a very challenging task especially in knowledge intensive organizations to lead higher productivity. Here, it must be mentioned that the application of knowledge management in banking industry is in increasing way and markets has forced bankers to be knowledge-based (Chalise, 2011). According to Paudel (2023), the human mind is a creature of knowledge. This knowledge is obtained through reflection, interpretation, synthesis, and context of data available in the field to generate new ideas. In the modern economy, knowledge includes understanding people, money, leverage, learning, adaptability, power, and competitive advantage. (Shah & Kant, 2020; Khanal & Poudyal, 2017; Daud & Yasuf, 2008; Gao et al., 2008) Knowledge management (KM) improves organizational effectiveness. Adhikari (2020), came to the conclusion that effective knowledge management will improve organizational performance. It has been discovered that information technology, organizational culture, knowledge sharing, storage all improve organizational performance.

Knowledge management significantly affects the organizational performance of Nepalese commercial banks, according to Bhandari (2021). Because of this, these banks ought to value knowledge highly and create procedures and guidelines that appropriately represent this. Chalise (2013) discovered that organizations are starting to manage organizational knowledge and that knowledge management is something that many firms either have in place or plan to develop. By creating such an environment, one can gain a competitive advantage. Knowledge is recognized as a key weapon for maintaining competitive advantage.

Organizational performance and knowledge management have a beneficial relationship, as shown by Bayari et al. (2019). When a company can identify, improve, revive, and reinvent its resources, it can gain a durable advantage and establish a framework for decision-making over updating its current knowledge base. In addition, organizations are spending a lot of money on information technology (IT) to enable the collection, sharing, and retrieval of knowledge as knowledge management (KM) becomes a crucial management responsibility. In a study conducted by Kaur and Mehta (2016) discovered that knowledge management process capabilities play a crucial role in obtaining a competitive advantage in today's new economy.

Furthermore, Ha and Lo (2018) examined the special role that knowledge management abilities play and how performance in organizations is related to them. The findings indicated that organizational performance and two specific knowledge management competencies—knowledge acquisition and knowledge protection—were positively correlated. A review of the literature indicates that knowledge management competency influences organizational performance, which is the end consequence of KM implementation with the ultimate goal of boosting organizational performance (Srinivasan 2020). Gold et al. (2001), Chang et al. (2017), and Idrees et al. (2022) have previously examined two primary categories of knowledge management capacities. Technology, structure, and culture make up the first knowledge infrastructure capability, while knowledge acquisition, knowledge conversion, knowledge application and knowledge protection capability comprise the second one as process capabilities. Researchers in knowledge management are very interested in how knowledge capabilities affects firm's performance (Gold et al., 2001; Ahmed et al., 2015; Ha & Lo, 2018). Thus, the importance of knowledge management is growing (Cho, 2011; Gold et al., 2001; Chiu & Chen, 2016; Davenport & Prusak, 1998).

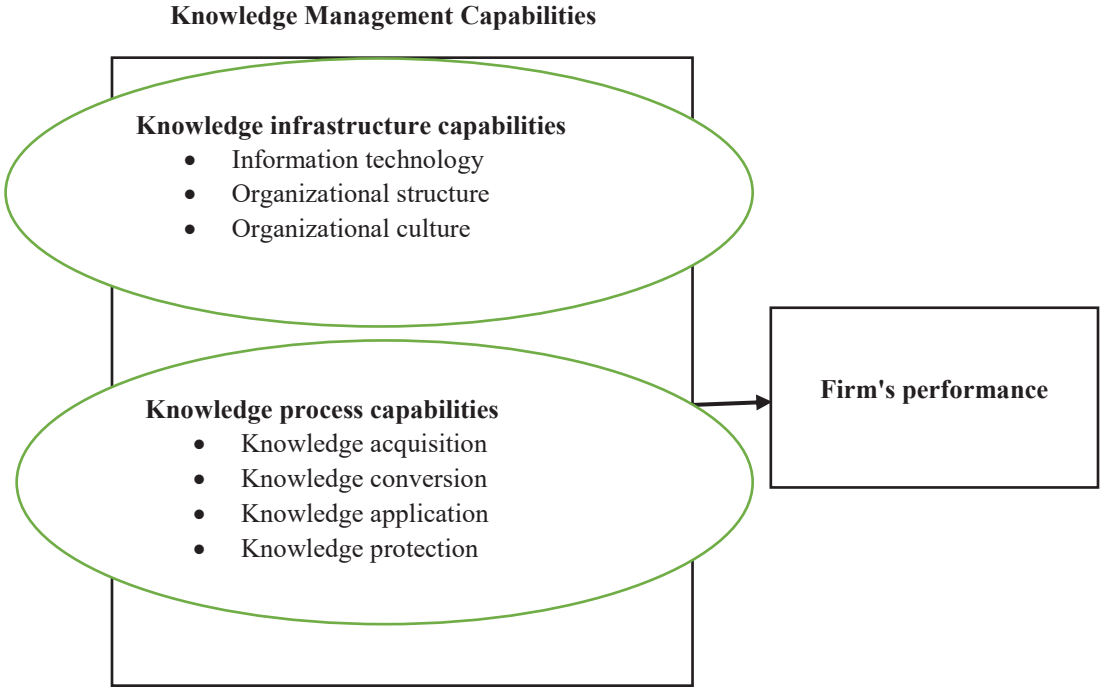
In addition to several research, it has been shown that knowledge management is a process that improves organizational performance by transforming individual knowledge into organizational knowledge. Thus, this study conceptualizes knowledge management capabilities based on seven main infrastructural and process capabilities (infrastructure capabilities such as technology, structure, culture, and knowledge acquisition, knowledge conversion, knowledge application, and knowledge protection as a process capability) in order to assess and examine the potential interrelationship between the knowledge management capabilities and organizational performance.

Numerous studies have found that strong and efficient knowledge management boosts an organization's performance and innovation (Mills & Smith, 2011; Ha & Lo, 2018; Gold et al., 2001). In accordance with the scholarly work of previous authors, this study takes into account the knowledge management capabilities and examine the role for firm’s performance. Numerous studies have found strong and efficient knowledge management boosts an organization's performance through innovation and new product development (Mills & Smith, 2011; Ha & Lo, 2018; Gold et al., 2001; Idrees et al, 2022). Based on prior research, organizational performance is considered as a dependent variable, while knowledge management capabilities such as knowledge infrastructure and process capabilities are considered as an independent variable.

The conceptual framework depicted in Figure 1 illustrates the relationship between knowledge management (KM) capabilities and organizational performance. It categorizes KM capabilities into two broad domains: infrastructure and process. Infrastructure capabilities encompass technological, structural, and cultural elements that form the foundation for effective knowledge management. Process capabilities involve the sequential stages of knowledge acquisition, conversion, application, and protection, which operationalize the use of knowledge within the organization. Together, these capabilities are posited to positively influence the performance of the firm by fostering innovation, efficiency, and competitive advantage.

Figure 1

Research Framework



Note. Gold et al. (2001), Ha and Lo (2018), and Idrees et al. (2022).

Based on the review of the literature and the conceptual framework discussed above, the subsequent hypotheses are formulated to empirically examine the individual and collective impact of these capabilities on organizational performance.

H_1: Technological knowledge management infrastructure capability has significant positive impact on organizational performance.

H_2: Structural knowledge management infrastructure capability has positive effect on organizational performance.

H_3: Cultural knowledge management infrastructure capability has direct effect on organizational performance.

H_4: Knowledge management acquisition process has significant positive impact on organizational performance

H_5: Knowledge management conversion process has significant positive impact on organizational performance.

H_6: Knowledge management application process has significant positive impact on organizational performance.

H_7: Knowledge management protection process has significant positive impact on organizational performance.

3. METHODS

This research is based on quantitative approach. The study has used descriptive and causal research design to achieve the research objectives. The population of this study comprised of all the employees of 20 commercial banks located in Kathmandu valley. But only 15 commercial banks, established 15 years ago are taken through convenience sampling technique. To achieve the objective of the study, structured questionnaire was prepared and distributed to 480 respondents of Kathmandu valley and 384 complete responses are taken for analysis. This study uses those employees who are working as a manager, assistant and officer level as samples of the study.

The sample size determination was guided by Krejcie and Morgan's (1970) table, which suggests 384 as a sufficient sample for a population greater than 10,000 to ensure statistical validity. The decision to send out 480 questionnaires accounted for the possibility of non-responses and incomplete responses, ensuring an adequate number of usable responses. Respondents were approached through their respective bank management, and data collection was administered via both physical and online modes to ensure flexibility and higher response rates. Careful follow-ups were conducted to maximize the response rate and maintain data integrity.

In this study, data were collected using a 5-point Likert scale to record respondents' perceptions regarding knowledge management capabilities and firm performance. While the dependent variable, firm performance, is measured on an ordinal scale, regression analysis has been employed in this study. Research has demonstrated that ordinal data collected through Likert scales can be treated as interval data for analytical purposes under certain conditions (Norman, 2010). Multiple regression analysis has been widely used in similar studies employing Likert scale data, as it assumes that the underlying constructs are continuous and approximately normal. Additionally, the aggregation of multiple items in a construct further supports the approximation of interval properties (Harpe, 2015).

Confirmatory Factor Analysis (CFA) was not performed in this study due to the exploratory nature of the research, which focused on examining direct relationships rather than validating complex latent constructs. Furthermore, the study relies on well-established and validated scales from prior research, such as those by Gold et al. (2001) and Ha & Lo (2018). As these scales have already demonstrated strong validity and reliability in earlier studies, the need for additional validation through CFA was considered less critical. This approach ensures the research remains focused on addressing the specific objectives within the scope of available resources and constraints.

While Structural Equation Modeling (SEM) is indeed a more sophisticated approach for analyzing complex relationships, the scope of this study is focused on understanding the direct relationships between knowledge management capabilities and firm performance. Therefore, regression analysis was deemed appropriate for addressing the research objectives.

Multiple regression model is used in this study, which is presented as:

$$FP = \alpha + \beta_1 TKMIC + \beta_2 SKMI + \beta_3 CKMI + \beta_4 KMAP + \beta_5 KMCP + + \beta_6 KMAAP + \beta_7 KMPP + e$$

Where, FP= Firm's performance, TKMIC= Technological knowledge capability, SKMI= Structural knowledge capability, CKMI= Cultural knowledge capability, KMAP= Knowledge acquisition, KMCP= Knowledge conversion, KMAAP= Knowledge application, KMPP= Knowledge protection, α = intercept, e = error term and $\beta 1$, β_2, β_3, β_4, β_5 β_6 and β_7 are beta coefficients.

There are 62- items scale, which are obtained from the study of Gold et al. (2001) to analyze the independent variable i.e., knowledge management capabilities. Knowledge management infrastructure capability factors are established on three aspects: Technology (7-items), Structure (7-items) and Culture (7-items). The next one is knowledge management process capabilities, are based on four aspects such as Acquisition, conversion, application and protection taking 8-items, 9-items, 7-items and 7-items respectively. The dependent variable such as firm's performance based on the 10-items scale is adopted from (Ha & Lo, 2018; & Gold et al. 2001; Descriptive analysis is used to analyze the status and practices of knowledge management capabilities whereas correlation and regression analysis are carried out to examine the role and impact of knowledge management capabilities on bank's performance.

To test the reliability of the instruments, Cronbach's Alpha has been calculated for internal consistency of variables in the study. Reliability test in Table 1, shows the value of Cronbach's alpha of eight variables are greater than 0.70. The results reveal that variable used in research instrument are statistically reliable supporting the reliability of each construct.

Table 1

Coefficient of Cronbach's Alpha

Variables	No. of items	Cronbach's Alpha
Items related to technological knowledge management infrastructure capability (TKMIC)	7	0.775
Items related to structural knowledge management infrastructure capability (SKMIC)	7	0.738
Items related to cultural knowledge management infrastructure capability (CKMIC)	7	0.816
Items related to knowledge management acquisition process (KMAP)	8	0.836
Items related to knowledge management conversion process (KMCP)	9	0.854
Items related to knowledge management application process (KMAAP)	7	0.818
Items related to knowledge management protection process (KMPP)	7	0.819
Firm's non- financial performance (FP)	10	0.879

*Note***.** Questionnaire Survey, 2024.

4. ANALYSIS AND RESULTS

At first, descriptive statistics is performed by using statistical package for social science (SPSS) version 25. Among 384 usable responses, 58.60 percent of respondents are male whereas female participants are 41.40. It indicated that the majority of respondents are male. Among these, 39.10 percent have 5-years and below works experience, 23.70 percent have 6-10 years and 37.20 percent have 11 years and above work experience. It showed that the most of the respondents have 5 years and below working experience. Regarding age of respondents, 47.40 percent employees are about of 31-40 years, 15.60 percent are in the age of above 41 years and 375 are below 30 years. It demonstrated that most of the employees are currently working in banking industry at the age of 31-40 years. Nearly 80 percent (i.e., 79.40%) of participants have passed Master Degree, 19.50 percent have passed Bachelor's and below. The very interesting results, only 1 percent of

respondents have passed above Master Degree. It revealed that employees, who are working in banking institution may not continue their higher education. There are 44.0 percent of respondents working at assistant level, 40.5 percent are in officer level whereas 15.6 percent are currently working at manager level. It indicates that the majority of respondents are working at assistant level. The detail of sample characteristics is given in Table 2.

Table 2

Respondent's Profiles

Respondent Profiles	Classification	Frequency	Percent
Gender	Male	225	58.60
	Female	159	41.40
Work experience	5 Years and below	150	39.10
	6-10 years	91	23.70
	11 Years and above	143	37.20
Age of respondents	Below 30 Years	142	37.00
	31- 40 Years	182	47.40
	41 Years andAbove	60	15.60
Qualification of respondents	Bachelor's and below	75	19.50
	Master's Degree	305	79.40
	M.Phil. and above	4	1.00
Current position of the respondents	Assistant level	169	44.00
	Officer level	155	40.40
	Manager level	60	15.60

Note. Questionnaire Survey, 2024.

Table 3

Summary Statistics

	Min.	Max.	Mean	SD	C.V.	N
TKMIC	16	35	28.22	3.24	11.47	384
SKMIC	15	35	27.17	3.35	12.35	384
CKMIC	12	35	27.99	3.65	13.05	384
KMAP	17	40	31.77	3.81	12.00	384
KMCP	18	45	35.10	4.30	12.26	384
KMAAP	14	35	27.94	3.19	11.43	384
KMPP	13	35	27.66	3.64	13.16	384
KIC	43	105	83.38	8.56	10.27	384
KPC	62	155	122.47	12.37	10.10	384
FP	20	50	40.60	5.43	13.36	384

*Note***.** TKMIC = Technological knowledge management infrastructure capability; SKMIC = structural knowledge management infrastructure capability; CKMIC = cultural knowledge management infrastructure capability; KMAP = knowledge management acquisition process; KMCP = knowledge management conversion process; KMAAP =

knowledge management application process; KMPP = knowledge management protection process; KIC = Knowledge Infrastructure Capabilities; KPC= Knowledge Process Capabilities; FP = financial performance.

Based on the summary statistics presented in Table 3, it is evident that knowledge management capabilities are being practiced in Nepalese commercial banks. The mean values of the summated scales for knowledge management capabilities range from 27.17 to 122.47. These findings indicate that the status of knowledge management capabilities in Nepalese commercial banks is perceived as satisfactory, reflecting a strong practice of knowledge management within the sector.

Table 4 exhibits that the Pearson correlation between summated scales of firm's performance with summated scale of independent variables. The correlation value of summated scale of knowledge infrastructure capabilities i.e., technological, structural and cultural are 0.446, 0.570 and 0.587 respectively and knowledge process capabilities such as acquisition, conversion, application and protection are 0.611, 0.631, 0.557 and 0.464 respectively. Also, it exhibits positive relationship between dependent and independent variables. Hence, the correlation between dependent variable and independent variable are statistically significant at 1 percent level of significance.

Table 4

Relationship between Knowledge Management Capabilities and Firm Performance

Variables	FP	TKMIC	SKMI	CKMI	KMAP	KMCP	KMAAP	KMPP
FP	1							
TKMIC	.446**	1						
SKMIC	.570**	.543**	1					
CKMIC	.587**	.437**	.658**	1				
KMAP	.611**	.556**	.641**	.748**	1			
KMCP	.631**	.515**	.588**	.654**	.669**	1		
KMAAP	.557**	.521**	.518**	.581**	.635**	.694**	1	
KMPP	.464**	.445**	.375**	.464**	.424**	.484**	.566**	1

Note. ** Correlation is significant at the 0.01 level.

Table 5 presents the impact of knowledge management capabilities on firm's performance. It reveals the results of regression analysis between knowledge management capabilities (independent variables) and firm's performance (dependent variable). Beta coefficient is positive for all seven independent variables, indicating a positive relationship between each capability and firm's performance. The VIF values of all the independent variables are below 5 indicates no multicollinearity issues in the model.

The technological knowledge management infrastructure capability (TKMIC) has a significant positive effect on firm's performance, as the p-value (0.035 < 0.05) indicates. The standardized coefficient (β = 0.132) suggests that TKMIC has a moderate effect on performance relative to other variables. The structural knowledge management infrastructure capability (SKMIC) also has a significant positive impact on firm's performance (p-value = 0.001 < 0.05). Its standardized coefficient (β = 0.278) reveals a stronger effect compared to TKMIC. Cultural knowledge infrastructure capability (CKMIC) exhibits a significant positive impact on performance (p-value = 0.025 < 0.05). The standardized coefficient (β = 0.128) indicates a moderate effect.

The knowledge management acquisition process (KMAP) has a significant positive impact on firm performance, as shown by the p-value (0.005 < 0.05). The standardized coefficient (β = 0.178) indicates its relative contribution to firm performance. The knowledge management conversion process (KMCP) demonstrates the highest impact on firm performance among all variables (p-value = 0.000 < 0.05). Its standardized coefficient (β = 0.254) indicates a strong influence. The knowledge management application process (KMAAP) has a significant positive effect on performance, with a p-value of 0.014 (< 0.05). Its standardized coefficient (β = 0.157) reflects a moderate impact. Finally, the knowledge management protection process (KMPP) also significantly and positively impacts performance (p-value = 0.004 < 0.05). Its standardized coefficient (β = 0.181) indicates a moderate influence.

The above analysis shows all seven knowledge management capabilities significantly and positively influence firm performance, as evidenced by the p-values, standardized coefficients, and acceptable VIF values. These findings validate the hypotheses and highlight the critical role of knowledge management capabilities in enhancing organizational performance.

Table 5

Impact of Knowledge Management Capabilities on Firm's Performance

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.235	2.094		1.067	0.286		
TKMIC	0.144	0.081	0.132	1.084	0.035	0.566	2.766
SKMIC	0.288	0.086	0.278	3.340	0.001	0.462	2.166
CKMIC	0.116	0.091	0.128	1.270	0.025	0.347	2.878
KMAP	0.254	0.090	0.178	2.831	0.005	0.330	3.034
KMCP	0.320	0.073	0.254	4.376	0.000	0.390	2.565
KMAAP	0.127	0.096	0.157	1.008	0.014	0.407	2.455
KMPP	0.195	0.068	0.181	2.86	0.004	0.622	1.607

5. DISCUSSION

The study measures the overall knowledge management capabilities by using two constructs - knowledge infrastructure capabilities and knowledge process capabilities. To measure

the knowledge infrastructure capabilities construct, following three variables were used- information technology, organizational structure, and organizational culture. Similarly, to measure the knowledge process capabilities construct, following four variables were used- knowledge acquisition, knowledge conversion, knowledge application, and knowledge protection (Gold et al., 2001). Seven hypotheses have been tested based on the results of the regression model and the results are discussed below:

The correlation results indicate that, in the commercial banks of the Kathmandu Valley, the independent variables (measuring knowledge management capabilities) and the dependent variable (organizational performance) have positive and statistically significant relationships. With a p-value of 0.000 (<0.05), the knowledge conversion process demonstrates the highest correlation value and is positively significant compared to all other aspects of knowledge management capabilities in relation to a firm's performance. This suggests that the process of knowledge conversion is strongly and favorably associated with a firm's performance.

The regression analysis revealed that knowledge management capabilities have a favorable and significant impact on an organization's effectiveness. The study's findings suggest that improving information management skills can have a major positive impact on worker enthusiasm, job satisfaction, creativity, productivity, and the caliber of goods and services. The association between the variables' outcomes is in line with earlier research (Gold et al. 2001, Ha & Lo 2018, Kimaiyo et al. 2015) contends that knowledge management capabilities improve effective, competitive, and better organizational performance. Similarly, Idrees et al (2022) believe in knowledge management capabilities have an important role in new product development performance.

The first hypothesis (H1) posits that technological knowledge management infrastructure capability has a significant positive impact on organizational performance. This hypothesis is supported by the results of the study, as the p-value is less than 0.05. These findings align with previous research conducted by Gold et al. (2001) and Ahmed et al. (2015), indicating that Nepalese commercial banks actively implement practices related to technological knowledge management infrastructure. Furthermore, the results are consistent with the findings of Adhikari (2020), reinforcing the validity of this relationship in the context of Nepal.

The second hypothesis (H2) asserts that structural knowledge management infrastructure capability positively influences organizational performance. This hypothesis is also supported by the study's findings and corresponds with the conclusions of Gold et al. (2001).

The third hypothesis (H3) states that cultural knowledge management infrastructure capability has a direct effect on organizational performance. This relationship is confirmed by the results of the study and aligns with the findings of Emadzade et al. (2012).

Collectively, the results for H1, H2, and H3 indicate that knowledge management infrastructure capabilities—whether technological, structural, or cultural—positively and significantly impact organizational performance. These findings are consistent with the overarching conclusions of Gold et al. (2001), highlighting that robust knowledge infrastructure capabilities contribute to enhanced corporate performance.

The fourth hypothesis (H4) states that the knowledge management acquisition process has a significant positive impact on organizational performance. The study results confirm this hypothesis, as the p-value is less than 0.05. This indicates that effectively acquiring knowledge within an organization contributes to improved performance outcomes. The fifth hypothesis (H5)

proposes that the knowledge management conversion process has a significant positive impact on organizational performance. This hypothesis is supported by the data, with a p-value below the threshold of 0.05. These findings suggest that organizations that efficiently convert knowledge into usable forms experience enhanced performance. The sixth hypothesis (H6) asserts that the knowledge management application process has a significant positive impact on organizational performance. The results validate this hypothesis, as the p-value is less than 0.05, highlighting the importance of applying acquired and converted knowledge to achieve superior organizational outcomes. The seventh hypothesis (H7) posits that the knowledge management protection process has a significant positive impact on organizational performance. This hypothesis is also supported by the study, with a p-value below 0.05, demonstrating that safeguarding organizational knowledge plays a vital role in sustaining and improving performance. Overall, the results for H4, H5, H6, and H7 indicate that the processes of acquiring, converting, applying, and protecting knowledge significantly contribute to enhanced organizational performance. These findings emphasize the critical role of effective knowledge management processes in achieving corporate success.

Based on the results for knowledge infrastructure capabilities and knowledge process capabilities, it is evident that all dimensions of knowledge management capabilities have a positive and significant impact on a firm's productivity, as demonstrated by the study findings. This emphasizes that organizational performance can be enhanced through the appropriate application and utilization of knowledge management capabilities. The study highlights that each knowledge management competency plays a critical role in influencing firm performance. Among these, the knowledge conversion process is identified as having the highest beta coefficient value, indicating its particularly strong and significant connection to organizational productivity. Furthermore, this study supports Grant's (1996) knowledge-based theory, which posits that knowledge is an organization's most valuable resource. The findings reinforce the importance of establishing robust systems and networks for acquiring, converting, and distributing relevant knowledge within the organization to maximize its performance potential.

6. CONCLUSION

Knowledge management competencies are pivotal in determining a firm's performance and play a critical role in enhancing its competitive advantage. The ability of organizations to efficiently acquire, organize, transfer, and utilize information and ideas significantly improves their competitive positioning, innovation capabilities, and overall success. By establishing comprehensive knowledge management systems and procedures, organizations can optimize their internal knowledge resources, enabling informed decision-making, the resolution of complex challenges, and the promotion of continuous improvement.

Effective knowledge management ensures that employees have access to relevant information and expertise, fostering collaboration, learning, and knowledge sharing across teams and departments. Moreover, in a rapidly changing business environment, efficient knowledge management enhances organizational agility and adaptability. It also cultivates a culture of learning and innovation within organizations, which is essential for long-term sustainability and growth.

Implementing effective knowledge management practices requires a strategic approach, appropriate infrastructure, and strong leadership support. This study confirmed that knowledge management capabilities consist of two primary components: knowledge infrastructure and knowledge process capabilities. Both components are directly linked to a firm’s performance.

Importantly, the findings revealed that organizational performance is significantly influenced by the effective management of these capabilities. Firms that appropriately manage and invest in their knowledge management capabilities are more likely to achieve superior performance and secure a sustainable competitive advantage.

For managers in the banking industry, effective management of knowledge competencies can enhance decision-making, foster innovation, improve problem-solving capabilities, accelerate learning and development, promote teamwork, and increase employee engagement. The insights from this study can assist commercial banks in formulating appropriate policies for the utilization, sharing, conversion, application, and protection of knowledge within their organizations. For Nepalese commercial banks, such policies can enhance problem-solving skills, boost innovation, and improve overall organizational performance within the banking sector.

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