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Knowledge Management Practice on Digital Financial Innovation

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Abstract

The study examines the influence of knowledge management (KM) on digital financial innovation in banks. The research was conducted in Bharatpur, involved surveying 161 bank employees at various management levels through purposive sampling. The study found that digital financial innovations significantly enhance customer satisfaction, with popular trends such as AI, digital platform integration, advanced data analytics, and blockchain technology. Banks effectively manage knowledge sources to improve performance and demonstrate competitive responsiveness. The banking sector actively promotes knowledge integration among employees and external partners, emphasizing the importance of knowledge-sharing cultures. Statistical analysis revealed moderate positive relationship between knowledge utilization, acquisition, and integration with digital financial innovation. The study identified barriers to KM, such as organizational culture, technological infrastructure, regulatory constraints, and worker resistance. It also identified significant KM challenges for digital financial innovation, including internal expertise, resistance to change, integration issues, and security concerns. Regular training, workshops, and internal newsletters were the main methods for disseminating knowledge about innovations. The study concludes that banks should prioritize customer needs and invest heavily in digital financial innovation to maintain competitiveness and enhance customer satisfaction.

Keywords Knowledge management, digital financial innovation, knowledge acquisition, knowledge integration, knowledge utilization

1. Introduction

In recent years, the financial services sector has been significantly impacted by technological advancements, leading to a rise in digital financial innovations (DFI). These innovations, including mobile banking, e-wallets, blockchain technologies, and digital payment systems, have transformed traditional banking practices, offering customers greater convenience, speed, and access to a broader range of services. Nepal, a developing economy, is also experiencing a shift toward digital finance, particularly within the banking sector, as financial institutions aim to enhance their competitiveness and service delivery.

Digital financial innovation has emerged as a critical driver of economic growth and financial inclusion, especially in developing nations. Nepal, a country with unique economic challenges and opportunities, has seen substantial growth in the adoption of mobile banking, digital wallets, and fintech solutions over the past decade. However,

this transformation has not been matched by the effective utilization of knowledge management (KM) practices within financial institutions. According to Davenport and Prusak (2000), KM involves capturing, sharing, and applying organizational knowledge to enhance decision-making and innovation. Globally, KM has been recognized as a critical enabler of organizational performance and adaptability. Yet, in Nepal's financial sector, the application of KM remains fragmented and inconsistent. Nonaka and Takeuchi (1995) argue that knowledge creation and sharing are essential for fostering innovation within organizations, but many Nepali financial institutions struggle to implement these practices effectively, leading to inefficiencies in adopting and scaling digital financial solutions.

Despite technological progress, financial institutions in Nepal face significant challenges in leveraging KM for innovation. Studies by Hislop, Bosua, and Helms (2018) emphasize that a lack of awareness and managerial resistance to KM integration often impedes its adoption in organizations. Similarly, the World Bank (2020) highlights infrastructural limitations, low digital literacy, and an underdeveloped KM culture as major barriers to achieving financial inclusion through digital innovation in Nepal. Nepal Rastra Bank (2021) underscores the importance of enhancing KM practices to align organizational strategies with evolving technological trends, as failing to do so may hinder the competitiveness of Nepal's financial institutions in a rapidly digitalizing economy.

The main objective of this study is to examine how KM practices can enhance digital financial innovation in Nepal's financial sector. This aligns with Nonaka and Takeuchi's (1995) knowledge-creation theory, which posits that tacit and explicit knowledge must be systematically integrated to drive organizational innovation. By identifying challenges faced by managers in incorporating KM into innovation processes, the research aims to propose practical strategies for overcoming these barriers. Additionally, the study highlights the significance of KM in fostering innovation, improving decision-making, and ensuring sustainable growth in Nepal's financial institutions.

2. Literature review

According to Cheng and Leong (2017), KM is crucial for achieving organizational success, as it enables the creation and distribution of knowledge across various levels of an organization, thereby fostering learning and gaining a competitive edge (Kianto et al., 2016). KM is seen as a set of practices aimed at identifying, storing, and utilizing knowledge effectively to support organizational goals and create value, as emphasized by Don-Serge (2019) and Agbim et al. (2014). The key functions within KM include knowledge acquisition, which is the process of gathering information from both internal and external sources, as well as knowledge integration, the synthesis of specialized knowledge into broader systemic knowledge (Hoffmann et al., 2017). The process of knowledge acquisition involves locating, capturing, and organizing knowledge,

which is then transferred within the organization for further use (Jantunen, 2005). Successful knowledge acquisition and integration are essential for driving innovation and maintaining a competitive advantage (Girish et al., 2015; Shujahat et al., 2019). KM fosters a culture of collaboration and enhances decision-making, thereby enabling organizations to leverage their knowledge resources effectively and create sustainable value (Du Plessis, 2007).

Budiasih (2024) discusses the transformative role of digital technology in financial management, improving efficiency, accuracy, decision-making, transparency, compliance, and customer experience, while acknowledging challenges like cybersecurity, data privacy, and the need for upskilling. Similarly, Hashem et al. (2024) highlight how proactive organizations, leveraging knowledge management (KM) capabilities, can improve efficiency and agility in digital supply chains. Durst et al. (2023) explore how knowledge risk management (KRM) enhances bank resilience by addressing risks like knowledge loss and data breaches. Naeem et al. (2023) emphasize the role of fintech innovations in boosting productivity, investment, and financial inclusion for economic growth. Okouret et al. (2021) apply the Diffusion of Innovation (DOI) theory to identify factors influencing Knowledge Management System (KMS) adoption, focusing on attributes like relative advantage and compatibility. Dmour et al. (2020) further link KM practices to fintech innovation, stressing the importance of organizational culture, leadership, and technological infrastructure in fostering financial innovation. Khanal and Paudyal (2017) further strengthen these perspectives, demonstrating that KM processes such as obtaining, organizing, and applying knowledge are positively correlated with organizational performance in financial institutions. Their study, conducted in Nepal, revealed that KM significantly affects performance metrics, including financial and market results, organizational effectiveness, employee satisfaction, and customer satisfaction. This underscores the transformative potential of KM in driving sustainable organizational growth.

3. Conceptual framework

The study uses a conceptual framework to analyze the relationship between knowledge management practices and digital financial innovation among bank managers. It identifies knowledge management practices as the independent variable and digital financial innovation as the dependent variable, with demographics as a moderating factor.

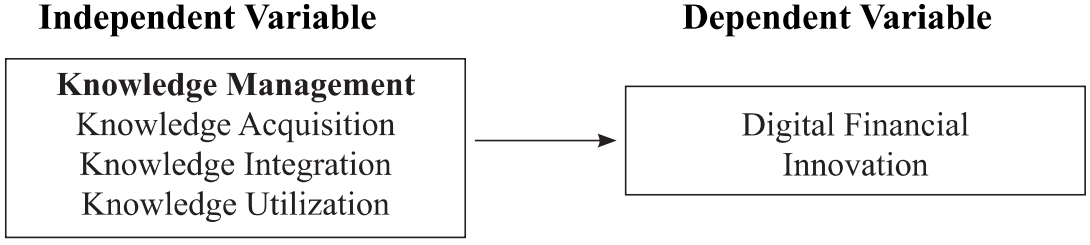

Figure 1. Source: Al-Dmour & Rababeh, 2021

4. Research methodology

The study employed a descriptive research and causal design, focusing on the characteristics and challenges associated with the variables under investigation. The population of the study consisted of all bank employees in Bharatpur, from which a sample of 161 respondents was selected using purposive sampling. The sample included employees from various management levels: top, middle, and lower—who possessed relevant knowledge about the subject matter. Data was collected exclusively through primary sources, with the main data coming from the responses of the respondents to a structured questionnaire. After distributing the questionnaires and receiving the completed responses, the data was compiled for analysis. The data was then analyzed using SPSS software, and the results were presented graphically to enhance clarity. To measure respondents' agreement with the research goals, a 5-point Likert scale was employed, with responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) for all variables.

5. Results and discussion

The results section of a research paper presents the study's findings in text, tables, and figures, focusing on key observations and statistical significance. The discussion section interprets the results, explaining their implications, relevance, and connection to existing knowledge. It connects findings to the research question, evaluates the study's limitations, and suggests areas for future research.

5.1. Correlation analysis

It measures the relationship between changes in one variable and changes in another, indicating whether they tend to move together (positive correlation), move in opposite directions (negative correlation), or have no systematic relationship (zero correlation).

Table 1. Correlation analysis

		Digital Financial Innovation	Knowledge Utilization	Knowledge Acquisition	Knowledge Integration
Digital Financial Innovation	Pearson Correlation	1	.544**	.366**	.534**
Knowledge Utilization	Pearson Correlation		1	-0.013	.534**
Knowledge Acquisition	Pearson Correlation			1	0.084
Knowledge Integration	Pearson Correlation				1

**. Correlation is significant at the 0.01 level (2-tailed).

Above correlation analysis between Digital Financial Innovation and three independent variables: Knowledge Utilization, Knowledge Acquisition, and Knowledge Integration.

Knowledge Utilization has a moderate positive correlation with Digital Financial Innovation (r = 0.544), indicating it increases Digital Financial Innovation. Knowledge Acquisition shows a weak positive correlation (r = 0.366), but it significantly boosts Digital Financial Innovation (p = 0.000). Knowledge Integration also has a moderate positive correlation (r = 0.534) with Digital Financial Innovation, and this relationship is statistically significant (p = 0.000). Overall, Knowledge Utilization and Knowledge Integration show stronger correlations with Digital Financial Innovation compared to Knowledge Acquisition.

5.2. Multiple Regression analysis

Multiple regression analysis compares one dependent variable to two or more independent variables. It shows how independent variables affect dependent variables. Multiple regression fits a linear equation to observed data to predict and analyze independent variable coefficients.

Table 2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.705[a]	0.498	0.488	0.2698

a. Predictors: (Constant), Knowledge Integration, Knowledge Acquisition, Knowledge Utilization

Table 2 shows model, which predicts knowledge integration, acquisition, and utilization, has a strong relationship with the dependent variable, explaining 49.8% of the variance. The adjusted R Square is 0.488, slightly reducing the explained variance to account for model complexity. The standard error of the estimate (0.2698) represents the average distance between observed and predicted values, indicating the model's accuracy in predicting outcomes based on these predictors.

Table 3. ANOVA Results

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.323	3	3.774	51.839	.000[b]
	Residual	11.431	157	0.073		
	Total	22.754	160			

a. Dependent Variable: Digital Financial Innovation

b. Predictors: (Constant), Knowledge Integration, Knowledge Acquisition, Knowledge Utilization

Table 3 shows ANOVA result that knowledge integration, acquisition, and utilization significantly impact digital financial innovation. The regression model, with a mean square of 3.774 and an F-statistic of 51.839, effectively explains the variance in digital financial innovation. However, there is an unexplained variance of 11.431, indicating

a low probability value (p = 0.000). The model's effectiveness is evident in the residual sum of squares, indicating the significant influence of these factors on digital financial innovation.

Table 4. Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.130	0.307		0.423	0.673
	Knowledge utilization	0.397	0.068	0.391	5.833	0.000
	Knowledge Acquisition	0.263	0.043	0.347	6.090	0.000
	Knowledge Integration	0.309	0.070	0.296	4.391	0.000

a. Dependent Variable: Digital Financial Innovation

Table 4 shows the regression coefficients for a model examining the impact of knowledge utilization, acquisition, and integration on digital financial innovation. The unstandardized coefficients indicate the extent of change in the dependent variable (digital financial innovation) for each unit change in the predictors. The constant term is not statistically significant, while knowledge utilization has a strong positive and statistically significant impact. Knowledge acquisition has a significant positive effect, while knowledge integration has a positive and statistically significant influence. The model includes unstandardized coefficients, standard errors, standardized coefficients, t-values, and significance levels.

6. Findings

The findings underscore the significant role of KM practices in driving digital financial innovation. The model revealed a strong relationship between KM practices and digital financial innovation, as shown by the correlation coefficient (R=0.705) and an R-square value of 0.498, indicating that 49.8% of the variance in digital financial innovation is explained by KM practices. The adjusted R-square of 0.488 further confirms the predictors' relevance, accounting for model complexity. ANOVA results demonstrated the model's statistical significance, with an F-statistic of 51.839 and a p-value of 0.000, indicating that knowledge utilization, acquisition, and integration significantly influence digital financial innovation. Among the KM practices, knowledge utilization had the highest impact followed by knowledge acquisition and knowledge integration. These results highlight the critical importance of implementing effective KM practices in banks to foster innovation. Banks can improve their digital financial innovation skills and stay competitive in a changing financial landscape by putting an emphasis on the strategic use, acquisition, and integration of knowledge.

7. Conclusion

Budiasih (2024), demonstrating that digital financial innovations enhance customer satisfaction and operational efficiency in banks. It highlights the role of digital platforms in improving decision-making and workflows. Unlike Durst et al. (2023), which focuses on knowledge risk management, this study emphasizes the positive impact of knowledge acquisition, integration, and utilization on digital financial innovation. While Lungu (2019) shares thematic overlap in knowledge-driven innovation, the study stands apart in its focus on the banking sector. Talat (2018) also shares the view on knowledge management driving innovation, with the study reinforcing that effective knowledge management is crucial for digital financial innovation.

The study confirms that knowledge management practices, particularly knowledge utilization, are essential for digital financial innovation in banks. By improving knowledge processes and overcoming barriers like organizational culture and technological infrastructure, banks can enhance their competitiveness and customer service. This research provides valuable insights for academics, banking executives, and policymakers to navigate digital transformation and foster innovation within the financial sector.

Practically, it offers actionable insights for Nepali financial institutions to optimize their KM practices and enhance their innovation capabilities. Policymakers can also benefit from these findings by designing targeted initiatives to promote KM adoption, enabling financial institutions to leverage technological advancements effectively for economic development. In conclusion, this study seeks to bridge the gap between KM practices and DFI within Nepal's financial institutions. By addressing the challenges faced by managers and offering evidence-based recommendations, it aims to contribute to the sustainable growth and competitiveness of Nepal's banking sector in the era of digital transformation.

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