



Organizational Learning and Operational Performance in Vietnamese Banking

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ABSTRACT

This study provides a systematic literature review on the relationship between organizational learning (OL) and operational efficiency within the Vietnamese banking sector, with a specific focus on the digital transformation era. Utilizing the PRISMA framework and content analysis on a corpus of 50 highly relevant academic papers, the research synthesizes how learning mechanisms enable banks to adapt to rapid technological disruptions. The findings underscore that organizational learning serves as a pivotal strategic capability, integrating knowledge-based resources—most notably intellectual capital and human capital—to optimize operational performance. The analysis reveals that digital transformation is not merely a technological shift but an intensive organizational learning process; the ability to acquire and apply new knowledge regarding Fintech and ICT is a decisive factor for sustaining competitive advantage. However, the review identifies critical research gaps, including a lack of integrated theoretical models linking digital strategies with OL frameworks and a predominance of quantitative methodologies that overlook internal behavioral mechanisms. Finally, the study proposes a new conceptual framework and outlines a future research agenda to enhance the adaptive capacity of commercial banks in a rapidly evolving financial ecosystem.

Keywords: Organizational learning, Operational efficiency, Digital transformation, Vietnamese banking sector, Intellectual capital.

Introduction

Research Background

The banking industry has undergone a significant transformation in recent years due to rapid technological development, increasing competition, and changing customer expectations. In particular, the advancement of digital technologies has accelerated the digital transformation of financial services, leading banks to continuously adapt their business models and operational processes. Digital technologies such as online banking systems, data analytics, and automated service delivery platforms have fundamentally changed how financial institutions operate and interact with customers (Trinh & Vo, 2020; Grant & Wallace, 2024; Kunie *et al.*, 2025).

In this evolving environment, improving operational efficiency has become a critical objective for commercial banks. Operational efficiency reflects the ability of banks to utilize their resources effectively in order to maximize outputs such as financial performance, service quality, and productivity. Previous studies examining the Vietnamese banking sector have emphasized the importance of improving efficiency as a key determinant of bank competitiveness and sustainability (Vu *et al.*, 2019; Osluf *et al.*, 2024; Morgan *et al.*, 2025). Similarly, research on productivity and technological progress in Vietnamese banks indicates that improvements in technological capabilities and management practices significantly influence bank performance and productivity growth (Wang *et al.*, 2021).

At the same time, the rapid adoption of digital technologies has created new opportunities as well as challenges for banks. Digital transformation strategies are increasingly being implemented in the banking sector in order to enhance service delivery, improve operational processes, and strengthen competitiveness. Empirical studies have shown that

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digital transformation can significantly influence the performance of commercial banks, particularly in emerging economies where the financial sector is undergoing rapid modernization (Lindstrom *et al.*, 2025; Trung & Duong, 2025). In Vietnam, the adoption of digital technologies has become a strategic priority for many banks seeking to expand digital banking services and improve operational effectiveness (Tuán, 2024).

However, the successful implementation of digital transformation strategies requires more than technological investment alone. Banks must develop internal capabilities that allow them to adapt to technological changes, integrate new knowledge, and continuously improve organizational processes. In this regard, organizational learning plays an important role in enabling financial institutions to acquire, share, and apply knowledge effectively within the organization. Through learning mechanisms such as knowledge sharing, employee development, and experience-based learning, banks can improve decision-making processes and enhance operational performance.

Organizational learning is particularly important in knowledge-intensive sectors such as banking, where decision-making depends heavily on information processing and the effective use of organizational knowledge. By strengthening learning capabilities, banks can improve their ability to respond to environmental changes, adopt new technologies, and enhance innovation capacity. These capabilities are essential for maintaining competitiveness in a rapidly evolving financial ecosystem.

In the Vietnamese context, the banking sector has experienced significant reforms and restructuring in recent years. The increasing diversification of banking activities and the expansion of non-traditional services have created both opportunities and challenges for commercial banks. Studies have shown that diversification strategies and the development of non-traditional activities can influence the technical efficiency of banks, highlighting the importance of effective management and organizational capabilities (Anunziata & Cussa, 2024; Csep *et al.*, 2024; Trang & Le, 2025). As banks expand their service offerings and adopt new technologies, the ability to learn and adapt becomes increasingly important for improving operational efficiency.

Given these developments, examining the role of organizational learning in improving operational efficiency within the banking sector has become an important area of research. Understanding how learning processes contribute to performance improvement and digital transformation can provide valuable insights for both scholars and practitioners in the financial services industry.



Research Gap

Although a growing body of research has examined bank performance, technological adoption, and digital transformation in the Vietnamese banking sector, several important gaps remain in the existing literature. Previous studies have primarily focused on measuring banking efficiency using quantitative approaches such as parametric and non-parametric methods (Vu *et al.*, 2019; Ganea *et al.*, 2024; Clark & Foster, 2025) or analyzing technological progress and productivity growth in financial institutions (Wang *et al.*, 2021; Ming *et al.*, 2025; Raza *et al.*, 2025). While these studies provide valuable insights into the performance of commercial banks, they mainly emphasize financial and operational indicators rather than the organizational capabilities that drive performance improvement.

In addition, research on digital transformation in banking has largely focused on technological adoption and its direct impact on bank performance. For example, studies have examined the influence of service delivery technologies on banking performance (Trinh & Vo, 2020; Ribeiro *et al.*, 2024) and the impact of digital transformation strategies on bank performance in emerging economies (Cuenca-Martínez *et al.*, 2025; Trung & Duong, 2025). However, these studies often overlook the role of internal organizational mechanisms—such as learning processes—that enable banks to effectively adopt and utilize new technologies.

Furthermore, although several studies have analyzed factors affecting bank efficiency in Vietnam, relatively little attention has been given to the role of organizational learning as a strategic capability that supports operational efficiency and innovation. The expansion of non-traditional banking activities and digital services requires banks to continuously develop new knowledge and adapt organizational processes (Mickevičius *et al.*, 2024; Jabin & Guthrie, 2025; Trang & Le, 2025). Yet the relationship between organizational learning and operational efficiency in the banking sector remains insufficiently explored in the literature.

Another important limitation is the lack of systematic literature reviews that synthesize research on organizational learning and banking efficiency. Existing studies are scattered across different research areas, including banking

efficiency, digital transformation, and financial innovation. As a result, there is currently no comprehensive overview that integrates these research streams and examines how organizational learning contributes to improving operational efficiency in the banking sector, particularly in the context of digital transformation.

These gaps highlight the need for a systematic literature review that synthesizes existing research on organizational learning, operational efficiency, and digital transformation in the banking sector. Such a review can provide a clearer understanding of the current state of research and identify promising directions for future studies.

Research Objective

In response to the research gaps identified above, this study aims to provide a comprehensive review of the literature examining the role of organizational learning in improving operational efficiency in the banking sector, with a particular focus on the context of digital transformation.

Specifically, the objectives of this study are as follows:

1. To review and synthesize the existing literature on operational efficiency and organizational capabilities in the banking sector.
2. To analyze how organizational learning contributes to improving operational efficiency and organizational performance in financial institutions.
3. To examine the relationship between organizational learning and digital transformation in the banking industry.
4. To identify key research themes and emerging trends in studies related to banking efficiency and organizational learning.
5. To highlight research gaps and propose directions for future research, particularly in the context of Vietnamese commercial banks.

Through these objectives, the study aims to contribute to a better understanding of how learning processes within organizations support innovation, technological adoption, and operational performance in the banking sector.

Structure of the Paper

The remainder of this paper is organized as follows. Section 2 describes the research methodology used in this literature review, including the search strategy, database selection, inclusion and exclusion criteria, and the screening process based on the PRISMA framework. Section 3 presents a descriptive analysis of the selected studies, including publication trends, journal distribution, and methodological approaches adopted in previous research. Section 4 provides a thematic synthesis of the literature by identifying major themes related to organizational learning and operational efficiency in the banking sector. Section 5 discusses key research gaps and proposes a future research agenda for scholars and practitioners. Section 6 presents a broader discussion of the theoretical and managerial implications of the findings. Finally, Section 7 concludes the paper by summarizing the main contributions and outlining directions for future research.

Materials and Methods

This study adopts a systematic literature review approach to synthesize existing research on the relationship between organizational learning and operational efficiency in the banking sector, particularly in the context of Vietnamese commercial banks. A systematic literature review enables the identification, evaluation, and synthesis of prior studies in a transparent and replicable manner, thereby providing a comprehensive understanding of the current state of knowledge in the field (Briner *et al.*, 2009; Alhossan *et al.*, 2024; Wong *et al.*, 2025). To categorize the collected works, the study employs content analysis—a methodology defined by Weber (1990) as a systematic approach to examining various texts through the application of rigorous coding standards. As noted by Holsti (1969), this process serves as a "technique for making inferences by objectively and systematically identifying specified characteristics of messages." Utilizing this method enables investigators to accurately determine and clarify the primary objectives of their research (Weber, 1990; Solmell *et al.*, 2024; Novak & Dvorak, 2025).



The literature selection process follows several stages, including the development of a search strategy, database retrieval, the application of inclusion and exclusion criteria, and a structured screening process. The methodological procedure was designed to ensure the comprehensiveness and relevance of the studies included in the review.

Search Strategy

The literature search began with the formulation of a primary research query focusing on the relationship between organizational learning and operational efficiency in the banking sector. To improve the comprehensiveness of the search process, this initial query was transformed into several more specific search statements. Expanding the initial query into multiple targeted queries allows the review to capture different aspects of the research topic and avoid overlooking studies that may use different terminologies or conceptual perspectives.

The transformed search queries include: (1) Organizational learning in the banking industry, Vietnam academic study of operational efficiency. (2) Impact of digital transformation and knowledge management on operational efficiency in the Vietnamese banking sector. (3) The influence of digital banking innovations on operational efficiency and organizational learning in Vietnam's banking sector. By using these expanded queries, the literature search was able to capture studies addressing organizational learning, knowledge management, digital transformation, and operational performance in the banking sector. This approach ensured that the search covered both traditional organizational learning research and emerging studies related to digital banking and fintech developments.

Database Selection

The literature search was conducted using a large academic research database that contains an extensive collection of scholarly publications. The database used in the search includes an integrated academic repository containing over 1050 research documents, including peer-reviewed journal articles, conference papers, book chapters, and working papers, which allows for a broad and comprehensive search of the existing literature.

The use of a large-scale academic database ensures that the review captures a wide range of studies related to organizational learning, banking efficiency, and digital transformation. The search strings included combinations of the following keywords: "organizational learning", "knowledge management", "intellectual capital", "banking efficiency", "operational efficiency", "bank performance", "digital transformation", "financial technology" or "fintech", "banking sector". These keywords were combined using Boolean operators such as AND and OR to capture different variations of relevant studies. The search was further refined by focusing on publications that specifically address banking institutions, financial services, or financial systems in emerging economies, particularly Vietnam and comparable developing markets.

Following the initial search, a multi-stage screening process was conducted to ensure the relevance and quality of the selected studies. The literature screening process was conducted through multiple stages to ensure that only relevant and high-quality studies were included in the final review.

First, titles and abstracts were reviewed to remove publications that were not directly related to the core themes of the study, including organizational learning, banking efficiency, intellectual capital, or digital transformation. Studies focusing on unrelated industries or purely technical topics outside the scope of banking management were excluded. Second, the remaining publications were evaluated through full-text screening to determine their relevance to the research objectives. Priority was given to peer-reviewed journal articles that provide empirical or theoretical insights into the relationship between knowledge development, digital transformation, and banking performance. Third, additional filtering criteria were applied to ensure the academic quality of the selected literature. These criteria included: publication in peer-reviewed academic journals, relevance to banking, finance, or management research, empirical or conceptual contributions to organizational learning or efficiency studies, citation impact, and recognition within the academic literature. Finally, backward and forward citation tracking was conducted to identify additional relevant studies that may not have appeared in the initial database search. This process helped ensure that influential and frequently cited works in the field were included in the final literature corpus.

Final literature corpus: After applying the screening and selection criteria, a refined set of academic publications was identified for detailed analysis. These studies form the basis of the descriptive and thematic analyses presented in the subsequent sections of this review. The selected literature provides comprehensive coverage of research examining



organizational learning, intellectual capital, digital transformation, and operational efficiency in the banking sector. Combining the results of the database search and citation chaining resulted in a total of 278 candidate papers: 216 papers from the initial search queries, 62 additional papers from citation chaining. This study focuses on 50 highly relevant papers.

Inclusion and Exclusion Criteria

To ensure that the selected studies were relevant to the objectives of the review, a set of inclusion and exclusion criteria was applied during the screening process, as shown in **Table 1**.

Inclusion Criteria

Studies were included in the review if they met the following conditions: (1) The study examines issues related to organizational learning, knowledge management, or learning capability within organizations. (2) The study focuses on banking institutions or the financial services sector, particularly commercial banks. (3) The study discusses operational efficiency, banking performance, productivity, or innovation outcomes. (4) The study provides conceptual or empirical insights relevant to the research topic. (5) The publication contributes to understanding the relationship between learning processes, digital transformation, and bank performance.

Exclusion Criteria

Studies were excluded if they met any of the following conditions: (1) The study focuses on industries unrelated to banking or financial services. (2) The research does not address organizational learning, banking performance, or operational efficiency. (3) The publication provides insufficient theoretical or empirical discussion relevant to the research topic. (4) Duplicate records appearing in multiple search results. Applying these criteria helped narrow the literature to studies that provide meaningful insights into the role of organizational learning in improving banking performance.

Table 1. Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Research Themes	Studies examining organizational learning (OL), knowledge management, intellectual capital, or learning capabilities.	Research focusing on industries unrelated to banking or financial services.
Industry Focus	Research specifically targeting banking institutions, financial services, or commercial banks.	Studies that do not address banking performance, efficiency, or organizational learning.
Operational Outcomes	Studies discussing operational efficiency, banking performance, productivity, or innovation outcomes.	Publications provide insufficient theoretical or empirical discussion relevant to the core topics.
Contribution Type	Articles providing conceptual or empirical insights into the relationship between learning and performance.	Duplicate records appear across multiple search results.
Quality & Format	Peer-reviewed journal articles, conference papers, and book chapters from reputable repositories.	Newspaper articles, textbooks, or non-academic editorials with limited empirical evidence.
Language	Full-text available in English or Vietnamese (academic versions).	Full-text unavailable or non-relevant technical manuals.

Descriptive Analysis of Literature

Journal Distribution

The reviewed literature is distributed across a wide range of academic journals, reflecting the interdisciplinary nature of research on organizational learning and banking performance. Studies relevant to this topic appear in journals



spanning several academic disciplines, including management, organizational studies, banking and finance, innovation management, and information systems, as shown in **Table 2**.

Table 2. Journal-wise breakdown of studies

Field of Study	Representative Journals	Research Focus
Banking & Finance	Journal of Banking Regulation, Pacific-Basin Finance Journal, Banks and Bank Systems, Journal of Asian Finance, Economics and Business.	Quantitative analysis of bank efficiency, Malmquist productivity index, and DEA/SFA models
Management & Organizational Studies	International Journal of Business Performance Management, Asian Academy of Management Journal of Accounting and Finance.	Theoretical and conceptual developments in organizational learning, intellectual capital, and knowledge management
Innovation & Information Systems	Economics and Finance Letters, International Journal of Bank Marketing, and International Journal of Innovative Research and Scientific Studies.	Impact of digital transformation, fintech innovations, and ICT adoption on bank performance and learning capabilities

A significant portion of the literature is published in journals specializing in banking and financial services. These journals primarily focus on empirical analyses of bank efficiency, financial performance, and technological innovation in financial institutions. Studies published in this stream often employ quantitative methods to examine the determinants of banking efficiency and productivity (Vu *et al.*, 2019; Nguyen & Pham, 2020; Miciak & Jurkiewicz, 2024; Shukur & Sufian, 2024; Schneider & Krüger, 2025).

Another important body of research appears in management and organizational behavior journals, where scholars examine organizational learning, knowledge management, and intellectual capital from theoretical and conceptual perspectives. These studies provide the theoretical foundation for understanding how knowledge-based resources contribute to organizational performance (Iriti *et al.*, 2024; Martens, 2024; Martens & Bui, 2024; Rani & Gehrke, 2025).

Additionally, a growing number of studies are published in journals focusing on innovation management and information systems. These studies frequently explore how digital technologies, fintech innovations, and digital transformation initiatives influence the learning capabilities and operational performance of banking institutions (Pham *et al.*, 2023; Jaafar *et al.*, 2024; Nguyen *et al.*, 2024; Alnabulsi *et al.*, 2025; Trung & Duong, 2025).

The distribution of studies across multiple disciplines highlights the complexity of the research topic. Understanding the relationship between organizational learning and operational efficiency requires integrating perspectives from management theory, banking studies, and digital innovation research.

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A substantial proportion of the reviewed studies are published in journals specializing in banking and financial services, which examine operational efficiency, financial performance, and technological innovation in banking institutions. These journals typically focus on empirical analyses of banking performance and the impact of managerial practices on efficiency outcomes.

Another significant group of studies appears in management and organizational behavior journals, where the emphasis is placed on theoretical and conceptual developments related to organizational learning, knowledge management, and learning organizations. These studies provide the theoretical foundations for understanding how learning processes influence organizational performance.

In addition, research on organizational learning in the banking sector is increasingly published in journals focusing on innovation management and information systems. These publications often explore the role of digital technologies, fintech innovations, and digital transformation in shaping the learning capabilities of financial institutions.



The distribution of studies across multiple academic disciplines highlights the complexity of the research topic. Understanding the relationship between organizational learning and operational efficiency requires integrating insights from management theory, banking studies, and digital innovation research.

Methodological Distribution

The methodological approaches used in the reviewed studies vary considerably, reflecting the diverse research traditions within the fields of management and banking research. Overall, three main methodological approaches can be identified: quantitative empirical studies, qualitative research, and conceptual or theoretical analyses.

A large proportion of the literature employs quantitative research methods, particularly econometric analyses and frontier efficiency models. These studies frequently apply techniques such as Data Envelopment Analysis (DEA), Stochastic Frontier Analysis (SFA), and productivity indices to evaluate banking performance and efficiency. For example, Nguyen and Pham (2020) compare DEA and SFA approaches in measuring cost efficiency in Vietnamese banks, while To and Le (2020) analyze productivity changes in the banking sector during restructuring periods. More recent studies continue to use frontier efficiency techniques to evaluate operational performance and scale efficiency in the Vietnamese banking sector (Shukur & Sufian, 2024).

Another group of studies adopts qualitative research methods, including case studies and interview-based analyses. These approaches provide deeper insights into how learning processes occur within banking organizations, how knowledge is shared among employees, and how managerial practices facilitate organizational learning.

In addition to empirical research, several publications offer conceptual or theoretical analyses of organizational learning in banking. These studies focus on developing theoretical frameworks that explain how learning processes influence innovation, knowledge management, and organizational performance.

The diversity of methodological approaches enriches the literature by providing both theoretical insights and empirical evidence. At the same time, it suggests the need for further integrative research that combines different methodologies to provide a more comprehensive understanding of organizational learning in the banking sector.

Publication Trends

The analysis of publication trends indicates a steady increase in academic interest in the relationship between organizational learning and operational efficiency in the banking sector, as shown in **Table 3**. Early research primarily focused on the theoretical foundations of organizational learning and knowledge management, emphasizing how organizations acquire, share, and utilize knowledge to enhance performance. However, these studies were largely conceptual and rarely examined the application of learning mechanisms in financial institutions.

Over time, scholars began to extend organizational learning frameworks to industry-specific contexts, including banking. This shift reflects the growing recognition that banks operate in highly dynamic environments characterized by regulatory changes, technological disruptions, and increasing competition. In such contexts, the ability of organizations to continuously learn and adapt has become a critical determinant of long-term performance.

In recent years, research interest has grown significantly due to the rapid digital transformation of the financial sector. Technological innovations such as digital banking platforms, fintech applications, artificial intelligence, and data analytics have fundamentally reshaped banking operations. Consequently, banks must continuously develop new knowledge and capabilities to remain competitive in an increasingly digital financial ecosystem. Recent studies therefore emphasize the importance of organizational learning in supporting digital transformation initiatives and improving operational efficiency within banking institutions (Nguyen *et al.*, 2024; Uneno *et al.*, 2024; Hòa *et al.*, 2025; Shen & Bao, 2025).

Consequently, recent studies have increasingly examined the role of organizational learning in supporting digital transformation, improving operational efficiency, and enhancing innovation in banking institutions. These developments indicate that organizational learning is no longer viewed solely as an internal management practice but also as a strategic capability that enables banks to respond effectively to technological disruption and changing market conditions.



Table 3. Trend of nature of studies and type of data

Research Phase / Theme	Nature of Study	Type of Data	Key Methodologies
Early Research (Theoretical Foundation)	Conceptual	Qualitative/Theoretical	Framework development, Knowledge management theory.
Restructuring Period (Performance Focus)	Empirical	Quantitative	DEA, SFA, Malmquist Index .
Modern Era (Digital Transformation)	Empirical	Quantitative/Mixed	Econometric models, ICT/Fintech impact analysis.
Organizational Dynamics (Deep Insights)	Empirical/Conceptual	Qualitative	Case studies, In-depth interviews.

Thematic Literature Review

The existing literature on the Vietnamese banking sector provides valuable insights into how organizational capabilities influence operational outcomes. Through a synthesis of prior studies, three dominant research themes emerge in relation to organizational learning and operational efficiency: (1) organizational learning and knowledge-based resources in banking organizations, (2) the relationship between organizational learning and operational efficiency, and (3) organizational learning in the context of digital transformation. These themes collectively illustrate how knowledge development, institutional capabilities, and technological change shape the performance of banking institutions in an emerging financial market.

Organizational Learning and Knowledge-Based Resources in Banking Organizations

A significant stream of research highlights the role of knowledge-based resources in improving bank performance and efficiency. In knowledge-intensive industries such as banking, organizational learning is closely linked to the development and effective utilization of intellectual capital, human capital, and governance capabilities.

Several empirical studies emphasize the importance of intellectual capital in enhancing operational performance in the Vietnamese banking sector. For example, Le *et al.* (2022) demonstrate that intellectual capital plays a crucial role in improving bank efficiency by strengthening internal knowledge processes and organizational capabilities. Similarly, Lu (2024) finds that intellectual resources significantly contribute to operational cost-effectiveness, suggesting that banks that effectively manage knowledge assets can achieve higher efficiency levels. Supporting these findings, Martens and Bui (2024) provide empirical evidence that intellectual capital positively affects firm efficiency in Vietnamese banks, reinforcing the view that knowledge-based resources are critical drivers of organizational performance.

In addition to intellectual capital, human capital development represents another important mechanism through which organizational learning occurs. Research indicates that the effective utilization of human capital significantly improves banking performance and operational efficiency (Phuoc *et al.*, 2023; Luân, 2024). Training programs and internal knowledge development initiatives have also been shown to enhance employee competencies and organizational capabilities in financial institutions (Khanh, 2024).

Corporate governance structures further contribute to organizational learning by shaping decision-making processes and knowledge integration within banks. For instance, board capital has been found to positively influence bank efficiency by improving strategic oversight and governance quality (Kontesa *et al.*, 2020). Similarly, governance-related resources support knowledge sharing and strategic alignment within banking organizations.

Despite the growing recognition of knowledge-based resources in the banking sector, existing studies largely examine these factors from the perspective of intellectual capital or human resource efficiency. Limited research explicitly explores how organizational learning processes integrate these knowledge resources into broader strategic capabilities that enhance operational outcomes.

Organizational Learning and Operational Efficiency in the Banking Sector



Another prominent theme in the literature focuses on operational efficiency and its determinants within the banking sector. Numerous studies have attempted to measure and explain efficiency differences among Vietnamese banks using various econometric and frontier analysis techniques.

A large body of research evaluates banking efficiency through quantitative methodologies such as Data Envelopment Analysis (DEA), Stochastic Frontier Analysis (SFA), and productivity index models. For example, Nguyen and Pham (2020) compare DEA and SFA approaches to measure cost efficiency in Vietnamese banks and highlight methodological differences in estimating efficiency scores. Similarly, Shukur and Sufian (2024) examine scale efficiency in the Vietnamese banking sector, providing new evidence on the operational performance of financial institutions.

Several studies also investigate productivity growth and structural changes in the banking industry. To and Le (2020) analyze productivity changes during the restructuring period of Vietnamese banks, demonstrating that institutional reforms significantly influence operational efficiency. Likewise, Wang *et al.* (2021) examine technological progress and productivity growth in commercial banks, indicating that improvements in technological capability contribute to enhanced performance.

Beyond methodological assessments, researchers have also explored various determinants of banking efficiency. Financial liberalization and ownership structures have been found to influence bank performance in transitional economies such as Vietnam (Le *et al.*, 2019). Additionally, competition dynamics and scale expansion strategies can significantly affect operational efficiency across banks (Le *et al.*, 2020).

Operational factors such as income diversification, credit risk management, and non-performing loans have also received attention in the literature. For instance, income diversification has been shown to positively influence bank efficiency by expanding revenue sources and reducing reliance on traditional lending activities (Minh, 2017). Similarly, credit operation efficiency and non-performing loan management significantly affect bank productivity and operational performance (Phung & Dao, 2024).

Although these studies provide valuable insights into the determinants and measurement of bank efficiency, most focus primarily on financial, structural, or institutional factors. Consequently, the role of organizational learning as a dynamic capability that enables banks to adapt and improve operational performance remains relatively underexplored.

Organizational Learning in the Context of Digital Transformation

A rapidly expanding research stream examines how digital transformation reshapes banking operations and organizational capabilities. The adoption of digital technologies, fintech applications, and online financial services has fundamentally transformed the way banks create value and deliver services.

Empirical studies increasingly demonstrate that digital transformation significantly improves operational efficiency and profitability in the Vietnamese banking sector. For example, Nguyen *et al.* (2024) show that digitalization enhances bank profitability by improving service efficiency and operational processes. Similarly, Hòa *et al.* (2025) find that digital transformation initiatives positively influence the operational efficiency of commercial banks.

Digital banking development has also been linked to improvements in customer experience and business performance. Studies indicate that the expansion of digital banking services contributes to higher operational efficiency and competitive advantage in financial institutions (Nga & Thanh, 2023). Moreover, digital transformation strategies have been found to positively affect overall organizational performance in emerging banking markets (Trung & Duong, 2025).

The growing integration of financial technology (fintech) into banking operations further accelerates this transformation. Fintech adoption enables banks to improve financial service delivery, streamline operational processes, and enhance innovation capabilities (Pham *et al.*, 2023). Similarly, technological investment and ICT adoption have been identified as key determinants of banking efficiency and productivity growth (Le *et al.*, 2022; Oanh, 2024).

However, digital transformation also introduces new challenges related to cybersecurity risks, technological integration, and legacy system constraints. As banks invest heavily in digital infrastructure, they must simultaneously develop new organizational capabilities and learning mechanisms to effectively manage technological change.



Taken together, these studies suggest that digital transformation is not merely a technological shift but also an organizational learning process. Banks must continuously develop new knowledge, skills, and adaptive capabilities to successfully implement digital strategies and sustain competitive advantages.

Synthesis and Implications for Research

The reviewed literature demonstrates that operational efficiency in the Vietnamese banking sector is shaped by a complex interaction among knowledge resources, institutional factors, and technological innovation. Intellectual capital and human resources contribute to the development of organizational capabilities, while efficiency measurement studies provide insights into the performance dynamics of banks. Meanwhile, digital transformation introduces new opportunities and challenges that require continuous learning and adaptation within banking institutions.

Despite the growing body of research on banking efficiency and digital transformation, relatively limited attention has been given to the role of organizational learning as an integrative mechanism that connects knowledge resources, technological capabilities, and operational performance. Most existing studies examine individual determinants of efficiency rather than exploring how organizational learning processes enable banks to integrate knowledge, technology, and strategic capabilities.

This gap suggests the need for further research examining organizational learning as a strategic capability that influences innovation and operational performance in the banking sector, particularly in emerging economies undergoing rapid digital transformation. Based on the literature reviewed, the study presents a conceptual framework of organizational learning and banking efficiency, as shown in **Figure 1**.

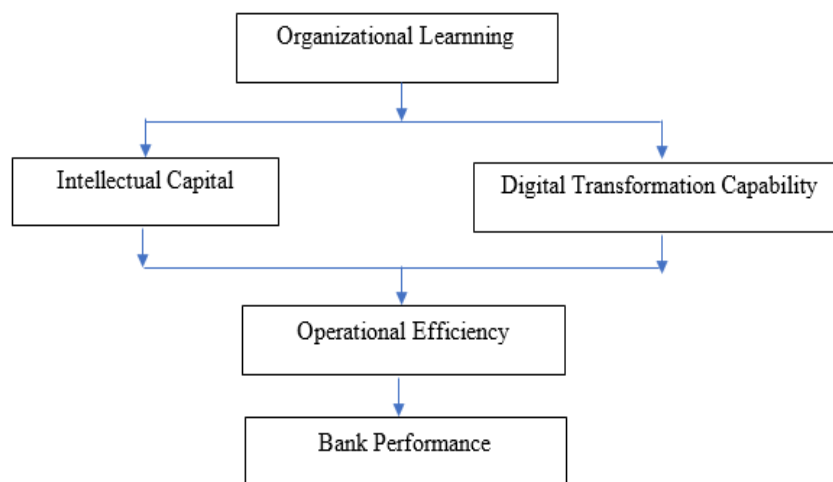


Figure 1. A conceptual framework of organizational learning and banking efficiency

Research Gaps and Future Research Agenda

Key Research Gaps

Despite the growing body of research on banking efficiency and digital transformation, several important gaps remain in the literature.

First, existing studies rarely integrate organizational learning theory explicitly into empirical analyses of banking efficiency. Most research focuses on financial, technological, or structural determinants of performance, while the internal learning processes that enable banks to adapt and innovate receive limited attention.

Second, the mechanisms linking intellectual capital, knowledge management, and operational efficiency remain insufficiently understood. While prior studies confirm that human capital and knowledge resources contribute positively to bank performance, the dynamic processes through which knowledge is created, shared, and applied within banking organizations require further investigation.



Third, although digital transformation has been widely studied, relatively little research examines the role of organizational learning in facilitating successful technological adoption. Understanding how banks develop digital capabilities and integrate new technologies into existing organizational routines remains a critical research challenge. Fourth, the predominance of quantitative econometric approaches limits the understanding of the organizational and behavioral dimensions of learning within banks. Greater methodological diversity, including qualitative studies, case analyses, and mixed-method approaches, would provide richer insights into how learning processes influence organizational performance.

Future Research Agenda

Based on the identified research gaps, several promising directions for future research can be proposed. Future studies should develop integrated theoretical frameworks that link organizational learning with knowledge management, intellectual capital, digital transformation, and banking performance. Such integrative perspectives would help clarify how learning capabilities function as strategic mechanisms that mediate the relationship between knowledge resources, technological innovation, and operational efficiency within banking institutions.

In addition, further research is needed to examine the role of organizational learning in enabling banks to adapt to rapid technological disruption. As digital transformation continues to reshape the financial sector, understanding how banks acquire digital knowledge, develop technological capabilities, and integrate new technologies into existing organizational processes remains a critical research priority.

Future research should also adopt interdisciplinary perspectives by combining insights from organizational learning theory, innovation management, information systems, and banking studies. Integrating these research streams would allow scholars to develop more comprehensive theoretical explanations of how learning processes support digital innovation and operational performance in financial institutions.

Moreover, adopting multi-level research approaches could provide deeper insights into the dynamics of learning within banking organizations. Examining learning processes at the individual, team, and organizational levels would contribute to a better understanding of how knowledge is created, shared, and applied to improve operational outcomes.

Finally, comparative and cross-country studies across emerging financial markets would be valuable for identifying institutional and contextual factors that shape the relationship between organizational learning and banking efficiency. Such studies could reveal how regulatory environments, ownership structures, and market conditions influence the effectiveness of learning capabilities in different banking systems.

Overall, advancing research along these directions would significantly enrich the literature on organizational learning and banking performance, while also providing practical insights for financial institutions seeking to enhance operational efficiency and competitiveness in an increasingly digitalized financial environment.

Results and Discussion

The findings of this literature review provide a comprehensive understanding of how organizational learning contributes to operational efficiency in the Vietnamese banking sector. By synthesizing existing studies, several important insights emerge regarding the role of knowledge development, intellectual capital, and digital transformation in shaping banking performance.

First, the literature consistently emphasizes the importance of human capital and knowledge-based resources as key drivers of operational efficiency in banking institutions. Studies examining intellectual capital demonstrate that human capital efficiency significantly improves bank performance by enhancing managerial decision-making, service quality, and operational productivity. These findings support the broader theoretical perspective that organizational learning enables firms to develop and deploy knowledge resources more effectively, thereby improving their competitive advantage in knowledge-intensive industries such as banking.

Second, the review highlights the increasingly critical role of digital transformation in shaping organizational learning processes within banks. The adoption of digital technologies—including fintech applications, mobile banking platforms, and data analytics systems—has significantly transformed the operational environment of financial



institutions. In this context, organizational learning becomes essential for enabling banks to acquire new technological knowledge, adapt internal processes, and effectively integrate digital innovations into their operational strategies. Digital transformation, therefore, functions not only as a technological change but also as an organizational learning process that requires continuous capability development.

Third, the literature reveals that the relationship between digital transformation and operational efficiency is not always straightforward. While many studies report positive effects of technological adoption on banking performance, others identify inconsistencies such as delayed efficiency gains or implementation challenges. These findings highlight the complexity of technological transformation in financial institutions and underscore the importance of aligning digital strategies with organizational learning capabilities and human capital development.

Another important observation concerns the heterogeneity across different types of banks in Vietnam. Ownership structures, governance mechanisms, and institutional contexts influence how banks develop and utilize knowledge resources. For example, state-owned banks may benefit from stronger relational capital and government support, whereas joint-stock or private banks often rely more heavily on internal innovation and digital capabilities to improve efficiency. These differences suggest that organizational learning processes may operate differently depending on institutional and structural characteristics.

Finally, the methodological patterns identified in the literature indicate that most studies rely heavily on quantitative econometric analyses and efficiency measurement techniques. While these approaches provide valuable insights into banking performance, they often overlook the internal organizational processes through which knowledge is created, shared, and applied. As a result, a deeper understanding of the learning mechanisms underlying banking efficiency remains limited.

Overall, the discussion highlights that organizational learning plays a pivotal role in connecting intellectual capital, digital transformation, and operational efficiency in the banking sector. However, the literature also demonstrates that these relationships are complex and context-dependent, requiring further integrative research to fully explain how banks develop sustainable competitive advantages in rapidly evolving financial environments.



Conclusion

This study provides a comprehensive synthesis of the relationship between organizational learning and operational efficiency in the Vietnamese banking sector, highlighting that learning processes facilitated through knowledge sharing, internal training, and human capital development serve as critical strategic capabilities for adaptation in technology-driven environments. The analysis underscores that human capital is the most influential component of intellectual capital in enhancing operational outcomes, while digital transformation initiatives, such as fintech adoption and ICT development, significantly improve service delivery, speed, and cost efficiency. However, the review identifies significant research gaps, particularly the lack of integration between organizational learning frameworks and digital strategies, alongside a predominance of quantitative methods that limit the understanding of internal learning mechanisms. To address these limitations, the study proposes a future research agenda focused on developing integrated theoretical models, adopting interdisciplinary approaches, and conducting comparative studies across emerging markets. Ultimately, the literature suggests that the effective integration of learning capabilities with technological innovation is vital for sustaining long-term competitiveness and operational efficiency in the evolving financial landscape.

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