International Journal of Web of Multidisciplinary Studies
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
website: https://ijwos.com
Volume 3 Issue 2 , Feb 2026
E-ISSN : 3049-2424
DOI: https://doi.org/10.71366/ijwos03022694783

Information Systems as Enablers of Financial System Transformation in Developing Economies

Olujeda Olakunle Adesanya[1], Abraham Uwaifo Ekpe[2], Rasheed Ayodeji Oshodi[3], Ayomide Michael Ademilua[4]
[1] *Department of Computer Science, Federal Cooperative College, Ibadan, Oyo State, Nigeria*
[2,3] *Department of Banking and Finance, Federal Cooperative College, Ibadan, Oyo State, Nigeria*
[4] *Reni CADORE Nigeria Limited, Nigeria.*

Article Info

Article History:

Published:08 Feb 2026

Publication Issue:
Volume 3, Issue 2
February-2026

Page Number:
117-127

Corresponding Author:
Abraham Uwaifo Ekpe

Abstract:

In developing economies, financial systems continually face major challenges such as inefficiency, limited inclusion, and institutional constraints. In recent years, information systems have emerged as critical enablers of financial system transformation, although recent studies often examine digital finance in fragmented or technology-centric approaches. This paper develops a conceptual framework that explains how information systems drive financial system transformation in developing economies from a structural and policy-oriented perspective. The study identifies important system components, financial functions, and development outcomes by synthesizing research from information systems, finance, and development economics using a literature-based conceptual methodology. The proposed framework illustrates how important digital banking platforms, financial databases, interoperable payment systems, and emerging infrastructures such as Central Bank Digital Currencies (CBDC) reshape core financial functions, including payments, credit allocation, risk management, and regulatory oversight. This transformation, is in turn impacted by financial inclusion, operational efficiency, and systemic stability. The paper goes on to address policy implications, emphasizing the role of institutional quality, regulatory capacity, and governance in mediating technology-driven financial transformation. By integrating information systems and financial system views, the study proposes a structured analytical lens for understanding digital finance in developing economies and provides a foundation for further empirical research and policy evaluation.

Keywords: Information systems, financial system transformation, developing economies, digital finance, financial inclusion, policy framework

1. Introduction

Financial systems are commonly referred to as the network of financial institutions, markets, instruments, and regulatory frameworks that enable the mobilization of savings, allocation of capital, risk management, and execution of payments within an economy (Lapavitsas & Soydan, 2022; He & Wei, 2023). However, the efficient operation of these systems in developing economies have long been impeded by structural inefficiencies, shallow financial markets, inadequate institutional capacity, and unequal access to formal financial services. These limitations have historically undermined financial intermediation and reduced the ability of financial systems to support inclusive and sustainable economic growth.

Many developing economies have responded by implementing waves of financial sector reforms, such as institutional strengthening, regulatory restructuring, and banking liberalization. Empirical evidence has shown that even though these reforms have contributed to varying degrees of financial deepening, there are still large

gaps in service delivery, transparency, system resilience, and inclusion, especially among low-income and informal sector participants (Babajide et al., 2021). As a result of this, there has been a growing focus on the role of digitalization and technology-enabled systems as mechanisms for overcoming long-standing structural and operational limitations.

The architecture of modern financial systems has been fundamentally altered by developments in information systems. The way financial institutions operate and provide financial services has been completely transformed by digital banking platforms, integrated financial databases, payment processing systems, and new infrastructures like blockchain and Central Bank Digital Currencies (CBDC) (Allen et al., 2022). Information technologies reshape financial intermediation and governance structures in developing economies by enabling interoperability, real-time data interchange, and regulatory oversight in addition to acting as operational instruments. Information systems are essential for expanding financial inclusion and enhancing system stability in addition to increasing efficiency. FinTech ecosystems and digital payment infrastructures have been shown to lower transaction costs, reduce information asymmetries, and provide financial services to populations that were previously shut out (Senyo et al., 2022; Ediagbonya & Tioluwani, 2023). At the same time, the growing dependence on digital systems raises important policy concerns related to cybersecurity, institutional preparedness, data governance, and regulatory coordination, especially in environments characterized by weak institutional frameworks (Mpofu, 2024).

Despite the growing body of literature on digital finance and financial sector reform, existing studies often examine technological adoption, financial inclusion, or policy design in isolation. A comprehensive understanding of how information systems function as integrative mechanisms linking technological infrastructure, financial system functions, and policy outcomes in developing economies is limited by this fragmented approach. Consequently, there remains a need for a coherent conceptual approach that explicitly places information systems at the core of financial system transformation and policy design.

Inspired by this gap, this study develops a literature-based conceptual framework to examine how information systems drive the transformation of financial institutions in developing economies and to derive policy-relevant findings from this framework. The following research questions are specifically addressed by the study:

1. How can information systems be conceptually understood as enablers of financial system transformation in developing economies?
2. What policy lessons emerge from information systems-driven financial transformation for regulators and governments in developing economies?
3. How does the adoption of digital financial systems influence financial inclusion and financial stability in developing economies?

In order to address these questions, this study develops a conceptual framework that places information systems at the core of financial system transformation in developing economies. By synthesizing insights from the financial development and information systems literatures, the study develops an integrative framework that links information systems components, financial system functions, and policy outcomes related to inclusion and stability. By providing a structured explanation of how information systems facilitate systemic transformation rather than discrete technological adoption, the study moves beyond fragmented analyses of digital finance or financial reform. Before introducing the proposed conceptual framework and discussing its policy implications developing for economies, the paper reviews pertinent literature on financial system transformation, information systems in finance, and technology-driven inclusion.

2. Literature Review

Financial systems are broadly conceptualized in literature as interrelated structures made up of financial institutions, markets, instruments, and regulatory arrangements that work together to enable risk management, capital allocation, and payment execution within an economy. Early reform-oriented studies emphasized the significance of policy-led restructuring in strengthening financial intermediation and economic growth, with a primary focus on macro-financial stability and banking sector liberalization (Kozarevic et al., 2017). However,

more recent research, emphasizes that structural reforms alone cannot address persistent inefficiencies, exclusion, and coordination failures in developing financial systems.

Building on these studies, an emerging strand of literature shifts attention toward the role of information systems as foundational enablers of financial system transformation. Rather than viewing technology as a supplementary input, modern studies increasingly acknowledge information systems as integral components of financial system architecture, influencing institutional efficiency, service delivery, regulatory oversight, and system resilience. This evolution in the literature provides the analytical foundation for examining how information systems interact with financial reform processes, the adoption of digital finance, and policy results in developing economies.

2.1 Information Systems as Enablers of Financial System Transformation

The literature on information systems and financial technology has widely acknowledged the fundamental role of information systems in the transformation of the financial system. The digital backbone for the delivery and expansion of financial services in developing economies is made up of distributed ledger technologies, databases, cloud platforms, Application Programming Interfaces (APIs), and core banking software. These technologies ensure interoperability, real-time data processing, and service integration across financial institutions.

Conceptual and empirical research suggest that, digital infrastructures significantly enhance the ability of financial institutions to serve previously underserved populations. Al-Okaily et al. (2023, 2025) argued that in emerging markets, strong financial information systems improve user satisfaction and acceptance of digital financial services. In a similar vein, Senyo et al. (2022) emphasize the significance of FinTech ecosystems in expanding Ghanaians' access to financial services. This FinTech ecosystems are majorly supported by mobile infrastructures and interoperable platforms.

The role of cutting-edge digital infrastructures, such blockchain and Central Bank Digital Currency (CBDC) systems, on emerging financial architecture has also been the subject of recent research. According to Allen et al. (2022) and Rachmad (2025), CBDC infrastructures can enhance payment efficiency, traceability, and the transmission of monetary policy when embedded into existing information systems. Together, these studies collectively position information systems as essential facilitators of financial system transformation, especially in developing economies, rather than as auxiliary tools.

2.2 Information Systems and Financial System Functions

Information systems have a direct impact on important financial system operations beyond infrastructure, such as risk management, savings mobilization, credit allocation, payment processing, and financial intermediation. The efficiency of financial markets is strengthened by digital payment platforms. These digital payment platforms lower transaction costs and improve speed and reliability. As documented by Hunia and Krynytsia (2025), electronic trade systems have revolutionized transaction processing in the global financial sector.

Financial institutions can more accurately evaluate borrower risk in the domain of credit allocation, thanks to data-driven systems and automated scoring mechanisms. Because standard credit histories are often unavailable in developing economies, this is especially relevant. Xue and Xi (2025) show how FinTech-driven credit systems support regional financial development by effectively improving resource allocation. Similarly, Tran et al. (2023) demonstrates how the integration of customer data, analytics, and service delivery platforms through digital transformation in banking enhances intermediation functions.

Information systems are also increasingly acting as a mediator between risk management and financial stability. According to Tsindeliani et al. (2022), digital banking systems promote sustainable financial development by improving monitoring, compliance, and transparency. By automating core processes and reducing structural inefficiencies, these studies collectively suggest that information systems operationalize the transformation of the financial system.

2.3 Financial System Transformation and Development Outcomes

A significant body of literature links the change of the financial system to more general development outcomes, such as formal economic integration, macroeconomic stability, financial inclusion, and access to credit. Reforms intended to strengthening markets and financial institutions in developing economies have had mixed results, often constrained by institutional weaknesses. Kozarevic et al. (2017) and Babajide et al. (2021) demonstrated that forms in the banking sector can support economic development when they are in line with institutional preparedness and regulatory capacity. The importance of digital financial systems in promoting inclusiveness is increasingly emphasize in recent studies. According to Ediagbonya and Tioluwani (2023) and Tay et al. (2022), digital financial services significantly increase access for underserved populations, while Khera et al. (2022) offer empirical evidence linking digital financial inclusion to measurable development outcomes across emerging economies. Lapavitsas and Soydan (2022) emphasized the significance of governance and policy alignment by warning that financialization processes must be carefully managed to prevent instability at the macro level.

These results suggest that financial transformation enabled by information systems can lead to favourable development outcomes, but only when it is embedded within supportive institutional and regulatory frameworks.

2.4 Integrative Conceptual Frameworks

Relatively few studies give integrative conceptual models that link information systems, financial processes, and development outcomes, despite the fact that earlier research offers insightful information about individual components of financial transformation. Though they frequently lack explicit linkage across various system layers, conceptual frameworks proposed by Chukwuma-Eke et al. (2022) and Mpofu (2024) highlight the role of digital systems in streamlining financial operations and expanding inclusiveness. Although Rachmad (2025) advances the conversation by emphasizing the systemic implications of CBDCs for financial stability and monetary policy, there is still a lack of research on the broader interaction between information system infrastructure and financial system functions. This gap in the literature motivates this study's framework, which synthesizes previous research into a three-layer model that explicitly links information systems components (enablers), financial system functions (processes), and development outcomes (impact), all situated within an institutional and regulatory environment.

The existing body of literature demonstrates how important information systems are to updating financial systems and increasing financial inclusion in emerging economies. Nevertheless, a large portion of this research remains fragmented, addressing infrastructure, processes, or outcomes in isolation. There is limited conceptual work that systematically integrates these components into a unified explanatory framework.

This study addresses this gap by proposing an information system-driven conceptual framework for financial system transformation in developing economies, thereby providing a structured foundation for policy analysis and future empirical research.

3. Conceptual Analysis / Methodology

3.1 Research Design and Methodological Approach

In order to synthesize existing knowledge on information systems and financial system transformation in developing economies, this study adopts a conceptual, literature-based research design. The study aims to develop an integrated framework that explains how information technologies serve as enablers of financial transformation and development outcomes, as opposed to experimentally evaluating theories.

A conceptual approach was adopted because fragmented theoretical perspectives dominate existing studies across a number of disciplinary domains, including public policy, development economics, information technologies, and finance. Secondly, it is observed that previous empirical studies have largely focused on isolated facets of digital finance, like technology adoption or financial inclusion, without providing a unified

explanatory framework. Also, the conceptual synthesis is particularly useful in emerging research areas because contextual variety and institutional diversity restrict the applicability of empirical findings from a single country.

In line with accepted approaches in information systems research, this study thus establishes conceptual analysis as a basis for theory development and policy-oriented understanding.

3.2 Framework Development Process

A systematic synthesis of peer-reviewed literature on financial system transformation, information systems in finance, digital financial inclusion, and regulatory reform in developing economies was used to develop the conceptual framework. Analytically coherent categories were created by identifying major themes and constructs from all of the reviewed research.

The literature was specifically reviewed in order to determine:

1. The core information systems components that support modern financial services;
2. The important financial system functions that are affected by digitalization and system integration;
3. The observable development outcomes associated with financial system transformation.

These elements were then arranged into a layered structure that reflects causal and functional relationships identified in earlier studies. The resulting framework provides a comprehensive understanding of information systems-driven financial transformation by integrating institutional, technological, and outcome-oriented viewpoints.

3.3 Description of the Conceptual Framework

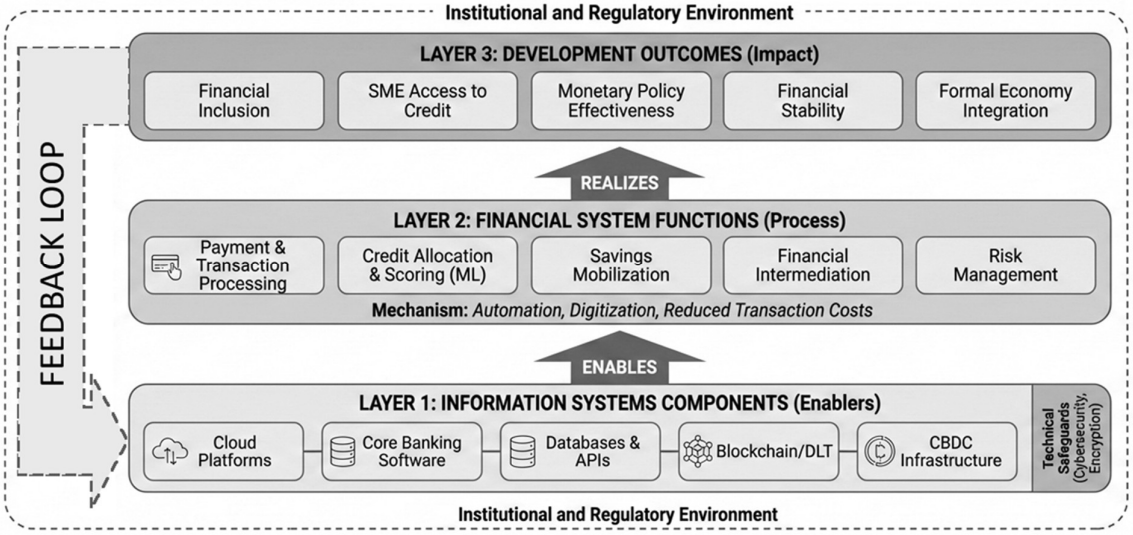

Figure 1: Information System-Driven Financial Transformation Conceptual Framework in Developing Economies

The proposed conceptual framework for information systems-driven financial system transformation in developing economies is shown in Figure 1. The framework is structured around three interconnected layers, with feedback mechanisms linking outcomes back to system design and policy environments.

3.3.1 Information Systems Components (Enabling Layer)

The first layer represents the information systems components that form the technological foundation of modern financial systems. These consist of databases, CBDC infrastructures, blockchain technologies, cloud computing platforms, application programming interfaces (APIs), and core banking software. These components

facilitate real-time information sharing between financial institutions, transaction processing, data storage, and system interoperability.

In developing economies, the deployment of these systems addresses long-standing infrastructural limitations by reducing transaction costs, enhancing scalability, and enabling digital access to financial services. This layer emphasizes software architectures, system integration, and digital infrastructure, thereby reflecting the study's focus on computer science and information systems.

3.3.2 Financial System Functions (Process Layer)

The second layer captures the financial system functions that are transformed through the application of information systems. Some of these functions include; digital payments, credit distribution, savings mobilization, financial intermediation, risk management, and regulatory supervision.

Information systems automate and optimize these functions by enabling faster transaction processing, data-driven credit evaluation, enhanced monitoring, and improved compliance mechanisms. For example, digital payment systems increase efficiency and accessibility, while integrated databases provide more accurate risk evaluation and supervisory oversight. By converting technology capabilities into useful financial results, this layer operationalizes the transformation process.

3.3.3 Development Outcomes (Impact Layer)

The third layer shows the development outcomes resulting from the information systems' enabled financial system transformation. These outcomes include expanded financial inclusion, improved operational efficiency, enhanced financial stability, increased access to services for underserved populations, and improved effectiveness of monetary and financial policies.

The framework acknowledges that positive outcomes are dependent on the alignment of institutional capability, technology infrastructure, and regulatory frameworks. Therefore, by affecting user trust, adoption rates, and policy support, development outcomes feed back into the system, thereby shaping future system design and implementation.

3.4 Institutional and Policy Context

The framework clearly places information systems and financial transformation within a broader institutional and regulatory environment. The success of information systems deployment is largely dependent on the quality of governance, regulatory capability, cybersecurity preparedness, and digital literacy. While favourable policy environments can increase the impact of digital systems, weak institutional arrangements may limit their benefits. This contextual emphasis strengthens the policy relevance of the framework and aligns it with the study's objective of deriving actionable and/or practical insights for developing economies.

The proposed framework makes three significant contributions to the body of literature. First, it creates a unified conceptual model by integrating components from the financial system and information systems. Second, it addresses the fragmentation in previous research by explicitly linking technology components to financial processes and development outcomes. Third, it offers a methodical framework for future empirical studies and policy evaluation about the digital financial transformation in developing economies.

4. Policy Implications and Discussion

To contextualize the proposed framework, Table 1 presents a comparative overview of selected digital finance initiatives in developing economies, illustrating how the effectiveness of information systems-driven financial transformation varies according to institutional capacity, regulatory design, and system interoperability.

Table 1: Comparative Overview of Digital Finance Initiatives in Selected Developing Economies

Country	Major Digital Finance/Information System Initiatives	Core Information Systems Components	Financial System Outcomes	Major Challenges	Studies
Ghana	Mobile money platforms; national payment interoperability systems	Mobile payment platforms, real-time transaction processing systems, interoperable databases	Expanded financial inclusion; improved payment efficiency; increased formalization of transactions	Cybersecurity risks; regulatory coordination; rural connectivity gaps	Senyo et al. (2022); Azumah et al. (2023); Kamasa et al. (2023)
Nigeria	FinTech-driven digital banking; electronic payment systems; financial sector reforms	Core banking software, FinTech applications, payment gateways, customer data management systems	Increased access to financial services; enhanced transaction speed; improved banking reach	Digital literacy gaps; trust deficits; infrastructure reliability	Babajide et al. (2021); Ediagbonya & Tioluwani (2023); Telukdarie & Mungar (2023)
India	Digital banking reforms; national digital payments infrastructure	Integrated banking information systems, large-scale payment processing platforms, digital identity-linked databases	Broader financial inclusion; improved banking efficiency; reduced transaction costs	System scalability; data privacy concerns; uneven adoption	Srinivasan et al. (2024); Khera et al. (2022)
China	FinTech ecosystems; Central Bank Digital Currency (CBDC); digital payment platforms	Blockchain infrastructure, distributed ledgers, digital currency platforms, advanced financial databases	Structural financial transformation; enhanced payment traceability; strengthened monetary control	Governance complexity; data surveillance concerns; regulatory adaptation	Allen et al. (2022); He & Wei (2023); Tsindeliani et al. (2022)
Cross-Country (Developing Economies)	Digital financial services; Industry 4.0–enabled finance; CBDC experimentation	Financial information systems, digital platforms, blockchain-based architectures	Financial deepening; inclusion expansion; system modernization	Institutional capacity; interoperability; regulatory readiness	Lapavitsas & Soydan (2022); Mpofu (2024); Rachmad (2025)

The comparison highlights how variations in information system maturity and regulatory capacity shape financial system outcomes across developing economies, hence reinforcing the layered structure of the proposed framework.

This section discusses the policy implications of the proposed conceptual framework, with explicit reference to the three framework layers and the study's research questions. The discussion highlights how governments and regulators in developing economies can strategically leverage information systems to facilitate financial system transformation while mitigating associated risks.

4.1 Policies for Strengthening Information Systems Infrastructure

(Framework Layer: Information Systems Components | RQ1)

The framework highlights information systems infrastructure as the foundational layer of financial system transformation. From a policy perspective, this suggests that governments should give top priority to investments in robust digital infrastructure, such as core banking systems, interoperable payment platforms, secure databases, and national digital identity systems.

By using regulatory standards that encourage interoperability across banks, fintech companies, and non-bank financial institutions, public policy should focus on enabling scalable and secure financial information systems. Policy initiatives aimed at improving digital identification coverage and payment system integration have shown potential in reducing transaction costs and increasing access to financial services in developing economies like Ghana and Nigeria.

A systems-oriented approach that prioritizes cybersecurity, data governance, and system resilience is also necessary for central banks exploring CBDCs. Without adequate institutional capacity and technical standards, the implementation of advanced financial information systems may worsen systemic vulnerabilities rather than improve stability.

4.2 Policies Targeting Financial System Functions and Market Processes

(Framework Layer: Financial System Functions | RQ1 & RQ3)

The framework illustrates how information systems transform important financial system operations at the process level, such as credit allocation, payments, risk management, and regulatory supervision. Therefore, policymakers must align regulatory frameworks with digitally enabled financial processes rather than relying on outdated regulatory models. For example, digital transaction platforms and data-driven credit assessment systems can improve efficiency and reduce informational asymmetries, particularly in credit markets serving small and medium-sized enterprises. However, as observed in nations like China and India, regulatory frameworks need to be updated to accommodate new forms of financial intermediation, such as platform-based lending and mobile money ecosystems.

Information systems can also be used by supervisory authorities for compliance enforcement and real-time monitoring. Financial organizations can save compliance costs and enhance regulatory effectiveness by utilizing RegTech and SupTech applications. This emphasizes the importance of regulatory innovation is to the adoption of new technologies.

4.3 Financial Inclusion, Stability, and Development Outcomes

(Framework Layer: Development Outcomes | RQ2 & RQ3)

The outcome layer of the framework emphasizes financial inclusion, system stability, and sustainable development as key goals of information system-driven financial transformation. In order to achieve these goals, policy interventions must address adoption challenges like digital literacy, trust issues, and unequal access to digital infrastructure in addition to technology deployment. Evidence from developing economies suggests that digital financial services can significantly increase financial inclusion when supported by inclusive policy design. To guarantee that vulnerable populations benefit from financial digitalization, targeted interventions such as subsidized digital access, consumer protection laws, and financial education initiatives are essential.

Policymakers must strike a balance between innovation and prudential control from the perspective of stability. Without sufficient risk management frameworks, the rapid expansion of digital financial services could make them more vulnerable to operational failures, market concentration, and cyber risks. Thus, the framework emphasizes the necessity of outcome-oriented regulation that balances systemic resilience and innovation.

4.4 Governance, Institutional Capacity, and Feedback Effects

(Cross-Cutting Policy Dimension | All RQs)

An important contribution of the framework is the presence of feedback loops linking development outcomes back to information systems design and policy support. While positive outcomes such as increased trust and adoption can reinforce system effectiveness, negative experiences can erode public confidence and stall transformation efforts.

These feedback effects are significantly shaped by the quality of the institution. Strong governance structures, transparent regulatory processes, and inter-agency coordination enhance the capacity of governments to manage digital financial transformation. On the other hand, even well-designed information systems may be limited in their efficacy by weak institutions.

Therefore, policies must address governance and institutional capacity as essential components of financial system transformation. This includes making investments in cross-sector cooperation, regulatory skills, and continuous system evaluation.

4.5 Synthesis of Policy Implications

It is observed that the framework suggests that a successful financial system transformation in developing economies requires a multi-layered and coordinated policy approach. Policies targeting information systems infrastructure must be aligned with reforms in financial system functions and reinforced by outcome-oriented governance mechanisms. Fragmented or technology-only approaches are unlikely to deliver sustained developmental benefits.

This study provides policymakers a structured basis for designing cogent digital finance strategies that promote inclusivity, stability, and long-term economic development by clearly connecting information systems to financial processes and development outcomes.

5. Conclusion

This study investigated information systems-driven financial system transformation in developing economies from a conceptual and policy perspective. Drawing on interdisciplinary literature from information systems, financial development, and public policy, the paper proposed an integrative framework that positions information systems as foundational enablers of financial system functionality rather than peripheral technological add-ons. The framework clarifies how digital infrastructures, software platforms, and data systems interact with financial institutions and regulatory frameworks to influence outcomes related to financial inclusion and system stability.

Theoretically, this study makes three major contributions. First, it goes beyond conventional institution- and regulation-centric explanations by explicitly incorporating information systems as core structural components of modern financial systems, hence extending financial system transformation theory. Second, it provides a unified analytical lens that allows for the joint examination of digital finance, financial inclusion, and systemic stability, thereby bridging the gap between information systems research and financial development literature. Third, the proposed framework provides a coherent conceptual foundation that unifies fragmented strands of study on FinTech, digital banking, and financial reform into a single explanatory model applicable to developing economies.

Practically and from a policy standpoint, the study contributes by translating conceptual insights into actionable guidance. In order to facilitate successful information system-driven financial transformation, it emphasizes the importance of interoperable digital infrastructures, robust data governance, cybersecurity

protections, and institutional capabilities. The framework also emphasizes the role of integrated regulatory design and digital literacy initiatives in ensuring that technology adoption leads to inclusive and stable financial outcomes rather than systemic risk or exclusion. Policymakers, regulators, and financial organizations looking to harness information systems as instruments for sustainable financial development will find these insights particularly relevant.

The study also provides a number of avenues for future research. The proposed framework must be tested and validated empirically utilizing cross-country, sectoral, or institution-level data in a variety of developing economy scenarios. Micro-level dynamics within digital financial ecosystems, such as interactions between financial institutions, FinTech companies, regulators, and users, may also be explored as a subject of future research. As digital infrastructures continue to evolve, further research could examine the role of sophisticated decision-support systems and analytics-driven regulatory technologies in enhancing financial governance and resilience. Understanding how institutional quality and policy design influence the outcomes of information systems-driven financial system transformation would also be improved by comparative and longitudinal analyses.

References

1. Allen, F., Gu, X., & Jagtiani, J. (2022). FinTech, cryptocurrencies, and CBDC: Financial structural transformation in China. Journal of International Money and Finance, 124, 102625.
2. Al-Okaily, M., Al-Kofahi, M., Shiyyab, F. S., & Al-Okaily, A. (2025). Determinants of user satisfaction with financial information systems in the digital transformation era: Insights from emerging markets. Global Knowledge, Memory and Communication, 74(3–4), 1171–1190.
3. Al-Okaily, M., Alqudah, H., Al-Qudah, A. A., Al-Qadi, N. S., Elrehail, H., & Al-Okaily, A. (2023). Does financial awareness increase the acceptance rate for financial inclusion? An empirical examination in the era of digital transformation. Kybernetes, 52(11), 4876–4896.
4. Azumah, C. Y., Owusu-Ansah, A., Amewu, G., & Ohemeng, W. (2023). The effect of banking sector reforms on interest rate spread: Evidence from Ghana. Cogent Economics & Finance, 11(1), 2175463.
5. Babajide, A. A., Ishola, L. A., Adekunle, A. K., Achugamonu, B. U., & Akinjare, V. B. (2021). Financial sector reform and economic development in Nigeria. Asian Economic and Financial Review, 11(2), 160–176.
6. Chukwuma-Eke E. C., Ogunsola O. Y., Isibor N. J. A. (2022). Conceptual Framework for Financial Optimization and Budget Management in Large-Scale Energy Projects. International Journal of Multidisciplinary Research and Growth Evaluation.; 2(1):823-834.
7. Ediagbonya, V., & Tioluwani, C. (2023). The role of FinTech in driving financial inclusion in developing and emerging markets: Issues, challenges and prospects. Technological Sustainability, 2(1), 100–119.
8. He, Z., & Wei, W. (2023). China's financial system and economy: a review. Annual Review of Economics, 15(1), 451–483.
9. Hunia, S., & Krynytsia, S. (2025). Evolution of electronic trade in the global financial environment. Social Development: Economic and Legal Issues, 7–8.
10. Kamasa, K., Owusu, L., & Nkansah Asante, G. (2023). Stock market growth in Ghana: Do financial sector reforms matter? Cogent Business & Management, 10(1), 2180843.
11. Khera, P., Ng, S., Ogawa, S., & Sahay, R. (2022). Measuring digital financial inclusion in emerging market and developing economies: A new index. Asian Economic Policy Review, 17(2), 213–230.
12. Kozarevic, E., Polić, N., & Perić, A. (2017). To liberate or to regulate: Balanced approach to bank-oriented financial system transformation in developing countries. Banks & Bank Systems, 12(1), 60–66.

13. Lapavitsas, C., & Soydan, A. (2022). Financialisation in developing countries: Approaches, concepts, and metrics. International Review of Applied Economics, 36(3), 424–447.
14. Mpofu, F. Y. (2024). Industry 4.0 in finance, digital financial services and digital financial inclusion in developing countries: Opportunities, challenges, and possible policy responses. International Journal of Economics and Financial Issues, 14(2), 120.
15. Rachmad, Y. E. (2025). Development of CBDC in developing countries: Potentials and barriers. The United Nations and the Nobel Peace Prize Awards.
16. Rachmad, Y. E. (2025). Digital Transformation: The Role of CBDC in the Global Financial System. The United Nations and the Nobel Peace Prize Awards.
17. Senyo, P. K., Karanasios, S., Gozman, D., & Baba, M. (2022). FinTech ecosystem practices shaping financial inclusion: The case of mobile money in Ghana. European Journal of Information Systems, 31(1), 112–127.
18. Srinivasan, K., Ramesh, K., Gunasekaran, K., & Sivasubramanian, K. (2024). Reforms in Indian banking sector: a paradigm shift in growth and financial inclusion in India. In Technology-Driven Business Innovation: Unleashing the Digital Advantage, Volume 1 (pp. 433–439). Cham: Springer Nature Switzerland.
19. Telukdarie, A., & Mungar, A. (2023). The impact of digital financial technology on accelerating financial inclusion in developing economies. Procedia Computer Science, 217, 670–678.
20. Tran, P. T. T., Le, T. T. H., & Hang, N. P. T. (2023). Digital transformation of the banking industry in developing countries. International Journal of Professional Business Review, 8(5), 8.
21. Tay, L. Y., Tai, H. T., & Tan, G. S. (2022). Digital financial inclusion: A gateway to sustainable development. Heliyon, 8(6).
22. Tsindeliani, I. A., Proshunin, M. M., Sadovskaya, T. D., Popkova, Z. G., Davydova, M. A., & Babayan, O. A. (2022). Digital transformation of the banking system in the context of sustainable development. Journal of Money Laundering Control, 25(1), 165-180.
23. Xue, T., & Xi, X. (2025). The impact of FinTech on global regional financial development: Spatial econometric analysis based on Tobit-SDM model. Applied Economics, 1–15.