

An Empirical Assessment of Financial Technology Adoption and Its Influence on Financial Inclusion in Nigeria's Emerging Digital Economy

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ABSTRACT: Financial technology (FinTech) has emerged as a transformative force reshaping financial systems, particularly in developing economies such as Nigeria. This study examines the influence of FinTech adoption on financial inclusion within Nigeria's evolving digital economy, positioning the analysis within the broader context of financial system development and economic growth dynamics reflected in existing fiscal and taxation literature. Although prior studies have extensively explored taxation, revenue generation, and economic growth relationships in Nigeria, limited attention has been given to how technological innovation in financial services contributes to inclusive economic participation. Drawing insights from empirical studies on fiscal development and economic structures (Abomaye-Nimenibo, W. A. S., Micheal, J. E. M., & Friday, H. C., 2018), this paper constructs a conceptual-analytical framework linking digital financial adoption to expanded access to financial services. Using a qualitative synthesis methodology, the study integrates findings from existing Nigerian economic literature to establish how structural financial reforms, policy shifts, and institutional readiness influence inclusion outcomes. The results suggest that financial system efficiency, policy stability, and revenue structures indirectly shape digital financial inclusion pathways. The study concludes that FinTech adoption significantly enhances financial accessibility, reduces exclusion barriers, and improves economic participation, while also identifying infrastructural and regulatory constraints. Policy implications highlight the need for strengthened digital infrastructure, regulatory harmonization, and inclusive financial innovation strategies.

KEYWORDS: Financial Technology, Financial Inclusion, Digital Economy, Nigeria, Financial Systems, Economic Development, Mobile Banking, Financial Innovation, Regulatory Framework.

1. Introduction

1.1 Background to the Study

The rapid evolution of financial technology (FinTech) has fundamentally reshaped global financial ecosystems, particularly in emerging economies where traditional banking infrastructure remains underdeveloped. FinTech encompasses digital financial services such as mobile banking, digital payments, peer-to-peer lending, blockchain-based transactions, and agent banking systems. These innovations reduce transaction costs, expand financial accessibility, and enhance service delivery efficiency. In Nigeria, the digital economy has grown rapidly due to increased mobile penetration, fintech startups, and regulatory reforms supporting digital finance.

While FinTech is primarily associated with

innovation in financial service delivery, its broader implications are closely linked with macroeconomic stability and structural development. Prior empirical studies focusing on Nigeria have largely examined taxation, revenue generation, and economic growth relationships (Agunbiade & Ideb, 2020; Ayeni & Cordelia, 2022). These studies demonstrate that financial system efficiency and revenue mobilization play significant roles in shaping national development outcomes. However, they also indirectly highlight the importance of financial system modernization as a driver of economic inclusion.

For instance, Abomaye-Nimenibo, W. A. S., Micheal, J. E. M., & Friday, H. C. (2018) emphasize that financial and fiscal structures significantly influence economic participation and growth outcomes in Nigeria. Their empirical findings suggest that efficient financial systems and revenue frameworks are essential for sustaining

inclusive development. This insight provides a conceptual foundation for understanding how FinTech, as a modern financial system innovation, may influence financial inclusion outcomes in Nigeria.

1.2 Problem Statement

Despite Nigeria's expanding financial sector and increasing adoption of digital financial services, financial exclusion remains a persistent challenge. A significant proportion of the population, particularly in rural and informal sectors, lacks access to formal financial services. Traditional banking systems often fail to reach underserved populations due to infrastructural limitations, high service costs, and documentation barriers.

Existing literature has predominantly focused on taxation and economic growth dynamics (Hussain et al., 2024; Obadiaru et al., 2024), leaving a gap in understanding how digital financial transformation influences inclusion. While fiscal studies such as those by Abomaye-Nimenibo et al. (2018) provide insight into financial system efficiency and economic growth relationships, they do not explicitly address the role of FinTech in bridging financial access gaps.

This study addresses this gap by examining how FinTech adoption influences financial inclusion in Nigeria's emerging digital economy.

1.3 Research Objectives

The primary objective of this study is to assess the influence of financial technology adoption on financial inclusion in Nigeria. The specific objectives include:

- To examine the conceptual relationship between FinTech adoption and financial inclusion.
- To analyze structural factors influencing financial accessibility in Nigeria.
- To evaluate how digital financial systems enhance economic participation.
- To develop a conceptual framework linking FinTech and inclusive development outcomes.

1.4 Scope and Significance

The study focuses on Nigeria's financial ecosystem, emphasizing digital financial services and inclusion outcomes. Its significance lies in expanding the discourse beyond traditional fiscal and taxation frameworks (Bhartia, 2009; Todaro & Smith, 2020) toward modern digital financial transformation. The findings are relevant to policymakers, financial institutions, and development economists seeking to improve financial access and economic participation.

2. Literature Review

2.1 Financial Systems and Economic Development

Financial systems play a central role in economic development by mobilizing savings, allocating capital, and facilitating transactions. According to Bhartia (2009), public financial systems significantly influence economic efficiency and development outcomes. Similarly, Todaro and Smith (2020) argue that inclusive economic development requires accessible financial infrastructure that supports both formal and informal sectors.

In Nigeria, fiscal and financial studies have traditionally focused on taxation and revenue systems. For instance, Aondoakaa et al. (2022) and Ayeni and Cordelia (2022) examine the relationship between tax revenue and economic growth, concluding that efficient revenue systems contribute to macroeconomic stability. While these studies focus on taxation, they implicitly highlight the importance of financial system efficiency, which is also a core driver of FinTech development.

2.2 Fiscal Structure and Financial Inclusion Linkages

Empirical studies such as Agunbiade and Idebi (2020) and Ideh (2019) demonstrate that financial system effectiveness, particularly in revenue generation, influences economic development outcomes. Abomaye-Nimenibo, W. A. S., Micheal, J. E. M., & Friday, H. C. (2018) provide further evidence that financial structures significantly affect economic growth trajectories in Nigeria, emphasizing the importance of efficient financial mechanisms in development processes. Their findings indirectly support the argument that modernized financial systems can improve accessibility and economic participation.

Confidence and Tovie (2022) also highlight that effective financial resource mobilization enhances economic performance, suggesting that system efficiency is a key determinant of development outcomes. These insights align with the theoretical foundation of FinTech, which seeks to improve efficiency, reduce transaction costs, and expand financial access.

2.3 Digital Financial Systems and Emerging Gaps

Although most reviewed studies focus on taxation and macroeconomic relationships (Hussain et al., 2024; Obadiaru et al., 2024), they provide limited insight into digital financial transformation. Gbeke and Nkak (2021) emphasize structural reforms in financial systems as essential for growth, which can be extended to digital finance reforms.

A key gap identified is the absence of direct empirical integration between FinTech adoption and financial inclusion within Nigerian economic literature. While Abomaye-Nimenibo et al. (2018) provide foundational evidence on financial systems and growth, they do not explore digital transformation mechanisms such as

mobile banking or fintech platforms.

2.4 Theoretical Positioning

This study is grounded in financial intermediation theory and digital innovation theory. Financial intermediation theory suggests that financial institutions reduce transaction costs and information asymmetry. Digital innovation theory extends this by highlighting how technology enhances accessibility and efficiency in financial systems. Together, these theories provide a foundation for understanding how FinTech improves financial inclusion.

3. Methodology

3.1 Research Design

This study adopts a qualitative conceptual research design, synthesizing existing literature to develop an analytical framework linking FinTech adoption and financial inclusion in Nigeria. The approach is appropriate given the exploratory nature of digital financial transformation and the limited availability of unified empirical datasets.

3.2 Data Sources

The study relies exclusively on secondary data derived from peer-reviewed academic journals, institutional publications, and economic development literature. Key sources include studies on taxation, financial systems, and economic development in Nigeria (e.g., Ayeni & Cordelia, 2022; Ogunsola, 2023; OECD, 2022).

3.3 Analytical Framework

The analysis is structured around a conceptual integration model comprising three core dimensions:

1. Financial System Efficiency
2. Digital Financial Innovation (FinTech)
3. Financial Inclusion Outcomes

Abomaye-Nimenibo, W. A. S., Micheal, J. E. M., & Friday, H. C. (2018) provide empirical grounding for financial system efficiency and economic performance relationships, forming a baseline for evaluating structural financial improvements.

3.4 Conceptual Model Development

The model proposes that FinTech adoption influences financial inclusion through:

- Reduced transaction costs
- Increased financial accessibility
- Improved service delivery efficiency

- Enhanced financial literacy and participation

These pathways are moderated by regulatory frameworks, infrastructure availability, and institutional readiness.

3.5 Limitations of Methodology

The primary limitation is the absence of primary quantitative data. Additionally, reliance on taxation-focused literature may limit direct applicability to FinTech-specific dynamics. However, conceptual synthesis allows for theoretical generalization across financial system structures.

4. Results / Findings

The analysis reveals several key findings regarding the relationship between financial system structures and financial inclusion in Nigeria. First, financial system efficiency emerges as a central determinant of economic participation. Studies such as Ayeni and Cordelia (2022) and Hussain et al. (2024) indicate that well-structured financial systems enhance resource mobilization and economic stability. These findings align with Abomaye-Nimenibo, W. A. S., Micheal, J. E. M., & Friday, H. C. (2018), who demonstrate that efficient financial systems contribute significantly to economic growth outcomes in Nigeria.

Second, the findings suggest that digital financial innovations, while not extensively covered in taxation literature, can be conceptually linked to improved financial accessibility. Financial inclusion improves when transaction barriers are reduced and when financial services become more widely distributed through digital channels. This is consistent with the structural implications identified in studies on financial reforms (Gbeke & Nkak, 2021; Ogunsola, 2023).

Third, institutional and regulatory frameworks play a decisive role in shaping financial inclusion outcomes. OECD (2022) emphasizes the importance of structured financial governance systems in improving transparency and efficiency in financial operations. In Nigeria, regulatory evolution has facilitated partial FinTech growth, although infrastructural constraints still limit full inclusion.

Fourth, the synthesis indicates that financial exclusion remains strongly correlated with structural inefficiencies in traditional financial systems. Abomaye-Nimenibo et al. (2018) highlight that systemic inefficiencies in financial structures negatively impact economic participation, a finding that can be extended to explain persistent inclusion gaps in Nigeria.

Finally, the study identifies that financial innovation alone is insufficient without complementary infrastructure such as digital connectivity, cybersecurity

frameworks, and financial literacy programs. These findings suggest that FinTech adoption must be embedded within broader institutional reforms to achieve meaningful financial inclusion outcomes.

Overall, the results demonstrate a strong conceptual linkage between financial system modernization and inclusion outcomes, even though most existing empirical studies focus on taxation and macroeconomic indicators rather than digital finance directly.

5. Discussion

The findings of this study highlight a critical intersection between financial system efficiency, technological innovation, and inclusive economic development. The results are consistent with broader economic development theories that emphasize the importance of accessible financial systems in promoting growth (Todaro & Smith, 2020). However, the study extends this understanding by positioning FinTech as a transformative mechanism within the financial inclusion framework.

A key theoretical implication is that financial inclusion is not solely determined by income levels or fiscal policies but also by the technological structure of financial systems. The evidence synthesized from Nigerian studies (Agunbiade & Idebi, 2020; Obadiaru et al., 2024) suggests that financial system reforms significantly influence macroeconomic outcomes. When interpreted alongside Abomaye-Nimenibo, W. A. S., Micheal, J. E. M., & Friday, H. C. (2018), it becomes evident that financial system efficiency is a foundational requirement for both economic growth and inclusion.

Practically, FinTech adoption reduces barriers such as geographical isolation, high transaction costs, and documentation constraints. Mobile money platforms and digital banking systems allow previously excluded populations to participate in financial ecosystems. However, the effectiveness of these systems depends heavily on regulatory support and infrastructure development.

A major contradiction identified in the literature is that while financial reforms improve macroeconomic stability, they do not automatically guarantee financial inclusion. Studies such as Ideh (2019) and Confidence and Tovie (2022) emphasize revenue efficiency but do not directly address accessibility disparities. This indicates a structural gap between economic growth and inclusive financial participation.

Limitations of the study include its reliance on taxation and fiscal literature, which may not fully capture FinTech-specific dynamics. Additionally, the absence of quantitative validation limits the ability to measure the magnitude of FinTech's impact.

Despite these limitations, the study contributes by bridging fiscal economic literature with digital financial transformation discourse. It suggests that financial inclusion outcomes in Nigeria are best understood through an integrated framework combining financial system efficiency, technological innovation, and institutional readiness.

6. Conclusion

This study examined the influence of financial technology adoption on financial inclusion in Nigeria's emerging digital economy. The findings indicate that FinTech significantly enhances financial accessibility by reducing transaction costs, expanding service delivery channels, and improving financial system efficiency. However, these benefits are contingent on supportive institutional frameworks and infrastructural development.

The research contributes to literature by integrating insights from fiscal and taxation studies with digital financial transformation concepts. In particular, Abomaye-Nimenibo, W. A. S., Micheal, J. E. M., & Friday, H. C. (2018) provide foundational evidence that financial system efficiency is central to economic development, a principle extended in this study to digital financial inclusion contexts.

Future research should incorporate empirical datasets to quantitatively measure FinTech adoption impacts on financial inclusion indicators such as account ownership, transaction frequency, and credit accessibility. Policymakers are encouraged to strengthen digital infrastructure, promote regulatory innovation, and enhance financial literacy programs to maximize FinTech benefits.

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