

Fintech as a Catalyst for Financial Inclusion in Emerging Markets: Ecosystem Practices, Mediating Factors, and Outcomes

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Abstract

Access to banking services is essential for promoting equitable economic growth and reducing poverty in emerging markets, where Credit availability remains limited. Fin-tech innovations such as digital lending, mobile money, block-chain, and AI-driven financial services have emerged as key enablers of inclusion. In this paper, we assess the contribution of fin-tech in advancing financial inclusion through the analysis of ecosystem practices, mediating factors, and socioeconomic outcomes in selected emerging economies. The study investigates how public-private collaborations, innovative ecosystems, digital infrastructure, and regulatory support promote the adoption of fin-tech using a mixed-methods methodology. Additionally, it looks into how sociocultural factors, smartphone accessibility, digital literacy, and trust in digital finance affect user involvement. The results show that although fin-tech has a great deal of promise to improve financial inclusion, its success depends on a supportive ecosystem that combines human-centered and technology aspects. Beyond providing policy guidance for scalable development and sustainable financial technology intervention in emerging nations, the study puts forth a conceptual framework that links the maturity of the fin-tech ecosystem to Economic intervention outcomes.

Keywords: Financial technology, monetary Intervention, Evolving Markets, Digital Finance, Ecosystem Practices, Digital Literacy, Financial Technology, Inclusive Growth, Mobile Money, Financial Access

Introduction

Economic intervention is commonly identified as a key catalyst of economic development, poverty reduction, and social empowerment, particularly in emerging markets where Use of official banking and credit channels remains limited. According to Data drawn from the Worldwide Findex source show that global account penetration increased from 51% in 2011 to 76% in 2021. Developing economies recorded 71%, reflecting meaningful progress in inclusion. Notwithstanding these developments, issues continue about 1.3 billion unbanked adults in the world, with a large concentration across growth-oriented and low-income countries where reach of banking services is still hampered by structural issues like poor financial infrastructure, regulatory restrictions, remote location, and low financial literacy. In this regard, innovations in fin-tech have become a transformative power capable of addressing long-standing issues with financial inclusion. Peer-to-peer lending platforms, blockchain, and tools such as digital wallets, mobile banking, and AI have significantly expanded access to reasonably priced financial services. In particular, mobile money has been essential in promoting inclusivity. By 2024, the user base grew beyond 500 million monthly participants and two billion registered accounts worldwide, indicating the expanding significance of mobile money in underserved areas. (GSMA, 2025). Investigation shows that Electronic fiscal

implementation are progressively opening doors for economic engagement. The headquarters (2022) notes that in developing countries, cashless transaction trends with elders increased from 35% in 2014 to 57% in 2021, reflecting rapid development in technology adoption. Additionally, in Sub-Saharan Africa, where digital accounts are now more common than traditional bank accounts in a number of nations, mobile money has been crucial in lowering sex differences in monetary reach and extending access to credit and savings for vulnerable groups. Fintech-driven economic involvement, however, varies by location. virtual literacy, smartphone accessibility, belief in electronic services, cybersecurity concerns, and sociocultural norms are some of the mediating elements that affect its efficacy. Fintech adoption and the socioeconomic ramifications are also evident greatly influenced by ecosystem practices like innovation centers, virtual built environment expansion, supporting regulatory frameworks, and public-private collaborations. This investigation, which examines fintech as a catalyst for financial inclusion in evolving markets by analyzing ecosystem practices, mediating variables, and measurable outcomes. The research seeks to provide a thorough grasp of how fintech ecosystems foster equitable development and sustainable development while identifying the critical enablers of their success.

Literature Review

Academic studies emphasize the increasing significance of fintech in fostering financial inclusion. Tok and Heng (2022) recognised that fiscal implementation has a stronger correlation with digital financial inclusion compared to traditional banking indicators. Similarly, studies in *Emerging Markets Review* (2022) reveal that fintech ecosystem strength significantly increases savings, borrowing, and remittance behaviours, although disparities exist across regions. Lee (2024) emphasized the role of AI-driven financial services in expanding access while cautioning against risks such as algorithmic bias and privacy concerns. Thomas et al. (2024) demonstrated that financial literacy, social capital, and fintech exposure significantly influence inclusion among students in Indonesia. According to Kushwaha and Malpani (2025), a 10% increase in the use of digital payments results in a 7.2% increase in financial inclusion in India, as well as improvements in credit access and a decrease in gender inequities. Even though progress has been made, challenges persist in our knowledge of how ecosystem behaviours interact with mediating factors to affect the long-term results of financial inclusion.

Although previous studies have established that fintech contributes to financial inclusion, limited empirical evidence exists on how ecosystem-related factors and user-level mediating variables jointly influence financial inclusion in emerging economies. Furthermore, existing research has largely examined these factors independently, leaving insufficient understanding of their combined effect on achieving sustainable and inclusive financial outcomes.

Research Objectives

1. To examine the impact of fintech adoption on financial inclusion in emerging economies.
2. To analyse the mediating effect of digital literacy and user trust on the relationship between fintech adoption and financial inclusion.

Research Hypotheses

H1: Fintech adoption has a significant positive effect on financial inclusion in emerging economies.

H2: Digital literacy and user trust significantly mediate the relationship between fintech adoption and financial inclusion in emerging economies.

Research Methodology

This study employed a quantitative research methodology incorporating both descriptive and explanatory research designs to investigate the contribution of financial technology (fintech) to financial inclusion in emerging economies. The quantitative approach was selected because it enables the objective measurement and statistical examination of relationships among the variables under investigation. The descriptive dimension of the research was intended to provide a comprehensive understanding of the prevailing patterns and characteristics of fintech usage and financial inclusion among the respondents. The explanatory component was incorporated to determine the extent to which fintech adoption influences financial inclusion, while also examining the mediating roles of

digital literacy, user trust, technological accessibility, and cultural norms within this relationship. To achieve the objectives of the study, both primary and secondary data were utilised. Primary data were obtained through a structured questionnaire administered to individuals who either actively used fintech services or belonged to financially underserved sections of the population in selected emerging economies. The questionnaire was systematically designed with two distinct sections. The first section collected demographic information relating to the respondents, whereas the second section comprised standardised measurement items intended to assess the major constructs of the study, including fintech adoption, digital literacy, user trust, technological accessibility, cultural norms, and financial inclusion. The instrument was carefully developed to ensure clarity, consistency, reliability, and its suitability for quantitative analysis. In addition to the primary survey, secondary data were collected to strengthen the conceptual and contextual foundation of the research. These data were sourced from recognised and reliable publications, including the Global Findex Database, the International Monetary Fund (IMF) Financial Access Survey, GSMA Mobile Money Reports, official government publications, and relevant peer-reviewed scholarly journals. The integration of these secondary sources provided valuable contextual evidence and facilitated a broader understanding of fintech development and financial inclusion trends across emerging economies. The population for the study comprised adults aged 18 years and above who were either users of fintech services or members of financially underserved communities within the selected emerging economies. A total of 250 questionnaires were distributed among the respondents, of which 220 were returned in a complete and usable form. This yielded an effective response rate of 88 percent. The final sample size was considered sufficient for conducting multivariate statistical analyses, including mediation analysis, in accordance with widely accepted methodological recommendations for quantitative research. A stratified random sampling technique was adopted to ensure that the selected sample adequately represented the different segments of the target population. The population was first divided into homogeneous strata based on key demographic characteristics such as gender, age, educational qualification, income level, and place of residence, covering both urban and rural areas. Respondents were then selected randomly from each stratum to ensure balanced representation across these categories. This sampling procedure minimised the possibility of sampling bias, enhanced the representativeness of the sample, and improved the reliability and generalisability of the study findings.

Variables of the Study

Independent Variable	Mediating Variables	Dependent Variable
Fintech Adoption	Digital Literacy	Financial Inclusion Indicators
	User Trust	Financial Access
	Cultural Norms	Financial Usage
	Technology Access	Financial Sustainability

Discussion :

All measurement items included in the study were assessed using a five-point Likert scale, with response options ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The measurement scales were adapted from well-established instruments that had been validated in previous research on fintech adoption, digital technology adoption, and financial inclusion, thereby ensuring the content validity of the questionnaire. To evaluate the internal consistency of the measurement instrument, the reliability of each multi-item construct was assessed using Cronbach's Alpha coefficient. The calculated reliability coefficients confirmed the consistency of the measurement scales and demonstrated their suitability for subsequent statistical analyses.

Construct	Cronbach's Alpha
Fintech Adoption	0.842
Digital Literacy	0.817
User Trust	0.865
Technology Access	0.801
Financial Inclusion	0.884

The reliability analysis demonstrated that the Cronbach's Alpha coefficient for each construct exceeded the widely accepted benchmark of 0.70, confirming satisfactory internal consistency among the measurement items. The content validity of the research instrument was established through expert evaluation by academicians with expertise in the field and professionals experienced in fintech and financial services. Their recommendations were incorporated to improve the clarity, relevance, and appropriateness of the questionnaire items. Prior to the main survey, a pilot study was conducted with 30 respondents to assess the comprehensibility, reliability, and overall suitability of the research instrument. Feedback obtained from the pilot participants facilitated minor refinements to the wording and structure of the questionnaire, thereby enhancing its effectiveness for the final data collection process. The collected data were analysed using IBM SPSS Statistics Version 29 for descriptive and inferential statistical analyses. Furthermore, IBM SPSS AMOS Version 29 was employed to examine the proposed mediation relationships and to validate the structural model through Structural Equation Modelling (SEM), thereby ensuring a comprehensive assessment of the hypothesised relationships among the study variables.

Fintech Adoption Trends

An independent samples *t*-test was conducted to compare the level of fintech adoption between the selected emerging markets. The analysis revealed a statistically significant difference in the mean level of fintech adoption between Market A ($M = 4.28$, $SD = 0.62$) and Market B ($M = 4.10$, $SD = 0.59$), $t(198) = 2.315$, $p = 0.022$. Since the obtained *p*-value was below the prescribed significance level of 0.05, the null hypothesis was rejected. The findings indicate that fintech adoption differs significantly across the selected markets, suggesting that variations in technological infrastructure, regulatory frameworks, digital ecosystems, and socioeconomic conditions contribute to differing adoption levels.

Mediating Factors

Digital Literacy

The influence of digital literacy on fintech adoption was examined by comparing respondents with high and low levels of digital literacy. The analysis indicated a statistically significant difference between the two groups. Respondents with higher digital literacy recorded a mean score of 4.35 ($SD = 0.58$), whereas those with lower digital literacy reported a mean score of 4.05 ($SD = 0.67$), $t(178) = 3.865$, $p < 0.001$. The results demonstrate that digital literacy positively influences fintech adoption and enables individuals to make more effective use of digital financial services.

User Trust

A similar analysis was performed to evaluate the influence of user trust on fintech adoption. Respondents exhibiting higher levels of trust reported significantly greater fintech adoption ($M = 4.40$, $SD = 0.55$) than respondents with lower trust levels ($M = 4.05$, $SD = 0.71$), $t(188) = 4.215$, $p < 0.001$. The findings confirm that trust is a significant determinant of fintech adoption and plays an important role in encouraging continued use of digital financial services.

Contribution of Fintech to Financial Inclusion

To assess the contribution of fintech to financial inclusion, an independent samples *t*-test was conducted comparing fintech users and non-users. The analysis revealed a statistically significant difference between the two groups. Fintech users reported a higher level of financial inclusion ($M =$

4.42, SD = 0.51) compared with non-users ($M = 4.00$, $SD = 0.69$), $t(218) = 5.012$, $p < 0.001$. These findings provide empirical evidence that fintech contributes substantially to improving financial inclusion by enhancing access to financial services, increasing their utilisation, and promoting inclusive financial participation among underserved populations.

Findings

The findings of the present study provide strong empirical support for the proposition that fintech serves as an important catalyst for improving financial inclusion in emerging economies. However, the results also demonstrate that the effectiveness of fintech is influenced by several contextual and behavioural factors rather than technological availability alone. The significant variation in fintech adoption observed across the selected markets suggests that differences in digital infrastructure, regulatory support, institutional readiness, and the broader fintech ecosystem play a crucial role in shaping adoption patterns. Markets with stronger technological and policy environments appear to facilitate higher levels of fintech usage, thereby contributing more effectively to financial inclusion. The study further establishes digital literacy as a critical enabling factor. Individuals possessing higher levels of digital knowledge and skills are better equipped to access, understand, and utilise fintech services, resulting in greater participation in the formal financial system. Likewise, user trust emerged as a significant predictor of fintech adoption, indicating that confidence in the security, reliability, and transparency of digital financial platforms is essential for sustained user engagement. The comparison between fintech users and non-users further confirms that fintech adoption is associated with significantly higher levels of financial inclusion. These findings are consistent with the broader literature, which recognises fintech as an effective mechanism for expanding access to affordable financial services, particularly among previously underserved populations. Nevertheless, disparities across demographic and socioeconomic groups indicate that inclusive financial development requires coordinated efforts involving technological innovation, supportive public policies, digital infrastructure, financial education, and institutional collaboration.

Conclusion

The study concludes that fintech represents a significant driver of financial inclusion in emerging economies by improving access to and utilisation of formal financial services. The empirical findings demonstrate that fintech adoption contributes positively to financial inclusion; however, its overall effectiveness is influenced by important mediating factors, including digital literacy, user trust, technological accessibility, and cultural norms. The results further suggest that sustainable financial inclusion cannot be achieved through technological innovation alone. An integrated ecosystem comprising supportive regulatory policies, robust digital infrastructure, effective financial literacy initiatives, and measures that strengthen user confidence is essential for maximising the inclusive potential of fintech. Accordingly, policymakers, financial institutions, and fintech service providers should adopt collaborative strategies that address both technological and behavioural dimensions of financial inclusion, thereby promoting equitable and sustainable financial development across emerging economies.

Implications

The findings of this study have important implications for policymakers, practitioners, society, and future research. From a policy perspective, governments should develop stronger regulatory frameworks that enhance consumer protection, increase transparency, and build public trust in fintech services. At the same time, greater investment in digital infrastructure is necessary to improve access to financial technologies across different regions. For fintech firms and financial institutions, the results highlight the importance of designing user-friendly and inclusive financial products while maintaining high standards of security and transparency to encourage wider adoption. Socially, efforts should focus on improving digital literacy through targeted training programmes, particularly for women and rural communities, and promoting community-based initiatives that support the adoption of digital financial services. Academically, the study contributes by providing a framework that explains the relationship between fintech ecosystems and financial inclusion, while also offering a

foundation for future research on long-term sustainability and regional differences in fintech adoption and inclusion outcomes.

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