



FINTECH INNOVATIONS AND FINANCIAL INCLUSION: DIGITAL CREDIT, MICRO-LENDING, AND POVERTY ALLEVIATION

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Abstract

This research explored the transformative impact of FinTech innovations on financial inclusion, focusing on the roles of digital credit, micro-lending, and their contributions to poverty alleviation in developing economies. Employing a mixed-methods research design that integrated survey data and participant interviews, the study analyzed how technology-driven financial services enhanced accessibility, affordability, and equity among financially marginalized populations. The findings indicated that FinTech significantly reduced barriers to credit access through mobile-based lending platforms and algorithmic credit scoring, thereby improving economic resilience, entrepreneurial growth, and household income. However, the study also revealed disparities in adoption, with women, rural residents, and individuals with limited digital literacy facing greater challenges. The analysis emphasized that while FinTech served as a catalyst for inclusion, its success depended on strong regulatory oversight, consumer protection, and digital financial education. Qualitative insights further highlighted users' perceptions of increased autonomy, trust, and empowerment through digital finance. The study concluded that FinTech holds substantial potential for inclusive growth but requires careful alignment with social, institutional, and ethical frameworks. Recommendations included expanding digital infrastructure, strengthening financial literacy, and ensuring equitable algorithmic governance to enhance sustainability and social justice in financial ecosystems.

Keywords: Algorithmic Lending, Digital Finance, Financial Inclusion, FinTech Innovation, Micro-Lending, Poverty Alleviation

Introduction

This transition especially applied to the emerging economies, where the traditional type of banking services were commonly not accessible to low-income households and micro-enterprises (Ha, Le, & Nguyen, 2025). These digital Finance innovations were not only expected to be convenient, but may also bridge the long-standing digital divide of financial exclusion.

Also, financial inclusion which is the capacity of individuals and companies to obtain valuable and low cost financial solutions, was gradually being viewed as one of the primary dynamics of inclusive economic development and poverty alleviation. Empirical research in Latin America and the Caribbean had revealed that rising financial inclusion (both access & usage) was associated with quantifiable decreases in the rate of poverty and income inequality (Rubio, 2025). Therefore, FinTech, digital credit and micro-lending intersection stood out as an attractive area of study in regards to poverty alleviation.

However, the use of digital credit and micro-lending did not pass without problems. Algorithms bias,



data privacy, the digital divide, and over-indebtedness were also on the order of the day (Airlangga et al., 2025). Although a large number of low-income users became accessible to it, the long-term sustainability of such access, credit terms and long-term effectiveness in reducing poverty were less clear. It was warned by scholars that the lack of appropriate safeguards against inclusion might expose a person to increased vulnerability instead of mitigating it. This paper investigate how FinTech innovations, in this case, digital credit and micro-lending, can be used to increase financial inclusion and reduce poverty.

Research Background

Financial exclusion had been a structural limitation in most of the emerging and developing economies. A large section of the adult population had no access to formal financial services like savings account, credit, insurance or payment services. As an example, according to Rubio (2025), 41% of adult people in Latin America and the Caribbean had no formal access to financial services in 2021. This not only reduced the capacity of households to smooth consumption and handle risks, but also reduced entrepreneurial activity, investment in health or education and long-term economic mobility. Past efforts to fill this gap were traditional microfinance and micro-lending programs. Microfinance institutions (MFIs) had been making small loans, usually without collaterals, to poor borrowers and micro-entrepreneurs. These types of micro-credit models had had both positive and negative impacts over time: some borrowers at least had obtained livelihoods and better incomes, but others had ended with unsustainable debts or little growth (Offiong, 2024). The shift to digital micro-lending so indicated a technological and a scaling-opportunity.

The development of mobile technologies, big data analysis, machine learning algorithms and online platforms also created new avenues of credit delivery by FinTech. Indicatively, mobile phone data, utility payments and other non-traditional signals were employed in other alternative underwriting models to enable lenders to assess creditworthiness of an individual who had no traditional credit history (Hu et al., 2023). Digital micro-finance and FinTech lending were found to have done just that, which is to improve the accessibility of underserved populations, though with a cost to digital literacy, regulatory loopholes and over-indebtedness, as studies in the systematic review by Airlangga et al. (2025) indicated.

Concurrently, there was new evidence that financial inclusion is associated with poverty reduction. A panel-data study by Rubio (2025) established in Latin America and the Caribbean revealed that greater financial inclusion (particularly access) was a significant contributor to poverty reduction and reduction in income-inequality. Equally, Mohammed et al. (2025) observed that the adoption of FinTech mediated the relationship between non-traditional banking assets and poverty alleviation in post-developing economies. These results indicated the existence of a significant relationship between digital finance and the outcomes of inclusion and poverty- but also emphasized how the latter was conditional by larger institutional, regulatory and technological factors.

Objectives of the Study

1. To examine how FinTech innovations in digital credit and micro-lending had enhanced financial inclusion among underserved populations.
2. To investigate the relationship between financial inclusion, via digital credit and micro-lending, and poverty alleviation outcomes (e.g., income stability, business growth, reduction in vulnerability).
3. To identify the moderating factors (such as digital literacy, data-infrastructure, regulatory frameworks and algorithmic fairness) that influenced the effectiveness of digital credit interventions for poverty alleviation.

Research Questions

Q1. In what ways had digital credit and micro-lending platforms facilitated financial inclusion for individuals and micro-enterprises traditionally excluded from formal finance?

Q2. What evidence existed that increased financial inclusion via digital credit and micro-lending contributed to poverty alleviation for low-income households or micro-enterprises?

Q3. Which factors moderated or mediated the relationship between FinTech-enabled credit, financial inclusion, and poverty alleviation (e.g., digital literacy, regulatory environment, algorithmic fairness)?

Significance of the Study



This research was important on several fronts. To begin with, it sought to address the gap in academic literature regarding FinTech innovations by percolating through the academic divide between metrics of financial inclusion and the effects of poverty, rather than access statistics. The necessity of more nuanced studies of long-term outcomes and moderating factors had been identified by recent reviews (e.g., Ha et al., 2025; Offiong, 2024); this study was a response to that.

Second, the study provided practical information as a policy perspective and practitioner one. Financial inclusion in low- and middle-income nations is a business that has not been completed yet, and digital credit programs are becoming more widespread. The findings might be useful in regulatory design, consumer-protection models, digital-finance literacy initiative and FinTech business strategies by identifying enablers and barriers to effective poverty alleviation through digital lending.

Third, the research article possessed a development-economics aspect: by connecting digital finance and poverty reduction, it would correspond to the international agendas, including the UN Sustainable Development Goals (SDG 1: No Poverty; SDG 8: Decent Work & Economic Growth). The comprehension of the integration of micro-credit and inclusion in a digital age provided avenues to build up on inclusive growth.

Finally, the importance was extended to the field of business and technological innovation: the paper provided an insight on how the structure of underwriting algorithms, data-use policies and platform business-models might be optimized to promote equity and inclusion, instead of contributing to the formation of inequalities (as the literature on the gendered algorithm cautions; Smith, 2025). In this way, it was valuable to developers of FinTech, regulators, as well as financial-inclusion advocates.

Literature Review

FinTech and Financial Inclusion

In the last 10 years, FinTech innovations have changed the global financial system by reshaping the process of access to banking and credit services of underserved populations. It has turned out that FinTech played the role of financial inclusion as an innovative approach to service models, digital infrastructure, and coordination of stakeholders in various sectors (Ha et al., 2025; Lahroure & Horr, 2025). Digital finance platform, mobile financing apps, and credit evaluation tools based on data minimized the traditional entry barriers and transaction costs, and they assisted in reaching unbanked people and micro-entrepreneurs in developing economies (Al Khub et al., 2024; Kumaralalita & Zheng, 2023). This technological change made FinTech a structural change and not a peripheral technology change.

Nevertheless, the literature showed that inclusion promotion by FinTech was disproportionate in contexts. The inclusion benefits were decided by factors such as digital preparedness, internet access, institutional excellence, and financial literacy (Airlangga et al., 2025; Offiong, 2024). As an example, the most inclusive financial development was recorded in those regions that possess strong regulatory frameworks and digital infrastructure than those with poor governance. Additionally, the low level of digital literacy in low-income groups introduced the new type of financial exclusion, which strengthens socio-economic inequalities even though technology is available (Ha et al., 2025; Al Khub et al., 2024).

Also, the researchers underlined that FinTech transformed the access to financial services as well as the architecture and conduct of financial institutions. P2P lending, credit scoring based on blockchains, and mobile banking reinvented the interaction with a customer and decentralized financial units (Kumaralita & Zheng, 2023; Lahroure & Horr, 2025). These new systems were unclear about the traditional divisions between banks, technology companies, and telecommunication companies, and policymakers have to come up with adaptive models to deal with emerging risks and maintain inclusion successes (Upadhyaya et al., 2025; Airlangga et al., 2025).

FinTech innovations have redefined financial inclusion by extending access to credit and financial services through technology-driven mechanisms that empower low-income and marginalized communities. The foundation of inclusion lies in building human capacity, digital literacy, and adaptive innovation. According to Rafiq-uz-Zaman (2025), frameworks like the Integrated Skill-Based Education Framework (ISEF) strengthen equity and technological participation, while bridging the skills divide across SAARC nations remains vital for sustainable growth (Rafiq-uz-Zaman, 2025). The creation of micro-innovation



ecosystems, as seen in teacher-led models within low-income regions, reflects similar principles to micro-lending platforms that stimulate local enterprise (Rafiq-uz-Zaman, 2025). Human resource strategies that enhance adaptability and inclusivity further ensure that individuals are equipped for such digital transitions (Fatima et al., 2025). Gender differences continue to shape digital adoption patterns, with women facing distinct barriers to accessing breakthrough technologies (Rafiq-uz-Zaman et al., 2025). Parallelly, inclusion efforts for socially excluded groups, such as eunuchs, underscore the importance of empowerment through skill-based education and digital participation (Rafiq-uz-Zaman, 2025; Rafiq-uz-Zaman, Khalid & Susanto, 2025). Comparative regional approaches emphasize policy coherence and cross-sector learning (Rafiq-uz-Zaman & Malik, 2025), while artificial intelligence integration in management systems demonstrates how technology can enhance equitable access (Rafiq-uz-Zaman, 2025). Collectively, these insights illustrate that FinTech-driven financial inclusion depends on human capacity, innovation, and inclusive digital ecosystems.

Digital Micro-Lending and Credit

One of the most effective uses of FinTech has been digital credit, especially in low- and middle-income nations. In Kenya, studies have shown that the impact of digital micro-lending programs on the household welfare indicators of food security and access to health was substantial, showing the possibility of small-scale digital credit economic empowerment (Asif et al., 2025; Tetteh, 2023; Kandie & Islam, 2021). Likewise, research results that the increase in mobile-based lending sites improved access to capital to micro-enterprises and informal sector employees, who could even smoothen the income and buffering the financial shock (Ha et al., 2025; Upadhyaya et al., 2025). These results indicated that digital micro-lending could serve to resolve poverty traps through the lending of credit to hitherto marginalized groups.

Although these benefits were seen, researchers expressed concerns on the sustainability and inclusion of digital credit systems. Algorithms used in underwriting models, however, are efficient but often recreate biases in the traditional credit rating, which creates a disadvantage to marginalized populations (Hu et al., 2023; Smith, 2025). In addition, gender inequalities had remained in digital lending: women entrepreneurs either got smaller loans or were asked to pay a higher-interest rate even under similar conditions of repayment (Airlangga et al., 2025; Lahrou & Horr, 2025). This pointed out that efficiency by technology alone could not provide a fair deal without a conscious algorithmic design and gender-sensitive financial policies.

The other line of research focused on the regulatory and ethical issues of digital lending. In developing economies, weak regulation and disorganized regulatory frameworks permitted exploratory practice, e.g. covert charges and excessive interest rates, to flourish (Upadhyaya et al., 2025; Offiong, 2024). Furthermore, the emergence of unregulated peer-to-peer lending sites resulted in the enhancement of the risk of over-indebtedness and data-privacy breaches among the low-income users (Hu et al., 2023; Kandie & Islam, 2021). These researches strengthened the view that the potential of digital micro-lending could be fulfilled by the thorough system of governance and consumer-protection provisions.

Financial Inclusion/Poverty Alleviation

The relationship between financial inclusion and poverty alleviation is not a new phenomenon, but in recent studies, a special place has been noted in regard to digital finance and the strengthening of the connection between the two. Empirical studies found out that financial inclusion with the digital tools enhanced income stability, asset accumulation and entrepreneurship rates, particularly in rural households (Rubio, 2025; Wan et al., 2024). As an illustration, the availability of credit services on mobile phone enriched the ability of micro-entrepreneur to increase the scale of operation and mitigate the impact of income shocks, thus contributing to the reduction of multidimensional poverty (Mohammed et al., 2025; Al Khub et al., 2024). These results proved that inclusive financial systems were critical to fair economic growth.

However, it was also demonstrated that the poverty-reduction impact of financial inclusion depended on the level of income and the type of institutions. Research on China and South Asia reported that middle-income groups were by far more likely to gain advantages of digital inclusion compared to the poorest households, which is mainly attributed to the lack of digital literacy and access to technology (Wan et al., 2024; Rubio, 2025). Also, the institutional capacity to meet financial inclusion goals and consumer education was weak, lowering the success of the financial inclusion program in delivering sustainable poverty results (Mohammed et al., 2025; Offiong, 2024). As such, equity inclusion was still a challenge.



Recent examinations highlighted the need to incorporate FinTech innovation and social protection and financial education. The scholars discovered that the most effective results of poverty-reduction were found when digital credit schemes were backed up through national policy that facilitated literacy and data transparency as well as responsible loaning (Upadhyaya et al., 2025; Ha et al., 2025). Furthermore, they were the community-based financial education programs and digital inclusion programs that helped establish the credibility and credit repayment profiles (Airlangga et al., 2025; Smith, 2025). What these lessons showed was that FinTech can potentially be a sustainable tool of poverty reduction, but not when this is applied outside the context of a more inclusive socio-economic and policy framework.

Research Methodology

Research Design

The research design that was used in the current study was a mixed-method research design that integrated the quantitative research design with the qualitative research design to be able to arrive at a holistic opinion regarding the sensitivity of the application of FinTech innovations in financial inclusion and poverty reduction. The quantitative aspect was intended to research the quantifiable variables like uptake rate of the digital credit, the degree of financial accessibility and the change of income of the beneficiaries. In the meantime, the qualitative part of the research involved the experience knowledge and the opinions of the users towards the digital micro-lending services through semi-structured interviews. It was a methodological triangulation given in view of making sure that the data collection, interpretation and analysis alike are both deep and broad. Mixed-methods approach enable the researcher to be able to correct quantitative findings with qualitative findings to give a more comprehensive picture of the phenomena being studied.

Population and Sampling

The research sample in this paper was comprised of people and micro-entrepreneurs in developing countries who had access to digital financial services including mobile credit service, digital wallets, and online lending services. The study specifically targeted individuals based in Pakistan, India, Kenya, and Nigeria, the countries where the FinTech ecosystem is developing and the policy of digital inclusion is underway. A stratified random sampling method was used so that the respondents would reflect the various income brackets, gender, and geographical areas. The 400 respondents were picked as the required sample size according to Cochran formula in order to arrive at a statistically significant level. Moreover, 20 FinTech professionals and micro-lending practitioners were purposely interviewed in order to give this professional opinion on sustainability and challenges of digital financial inclusion.

Data Collection Methods

Data were gathered using two main data collection methods such as structured questionnaires and the in-depth interviews. The online survey was used to collect the quantitative data sent via email and social media to cover FinTech users of both rural and urban regions. The questionnaire was in the form of closed-ended questions and measured on a five-point Likert scale financial access, satisfaction, and perceived economic improvement. The qualitative data were gathered in the form of semi-structured interviews with the selected users of FinTech and stakeholders in the industry. The interviews were also designed to shed more light into the usability, trust, and regulatory issues of digital credit systems. The collection of data was done during three months (January to March 2025). Data collection was made ethical and informed consent was obtained by all the participants.

Data Analysis Procedures

Statistical Package of social Sciences (SPSS) version 27 was used to analyse quantitative data. The summarization of the demographic features of the respondents (mean, frequency, & standard deviation) were applied to describe the data on the demographics, whereas the inferential statistics (regression analysis and correlation tests) were utilized to analyse the interconnections between FinTech adoption, financial inclusion, and poverty alleviation. In the case of the qualitative data, thematic analysis was performed based on the six-step model of Braun and Clarke (2006). Manual coding of interview transcripts was conducted to determine the recurrence of certain themes including accessibility, trust and empowerment. Both datasets were then combined to produce results that were integrated using convergent parallel analysis method in order to cross-verify and exhaustively interpret the results.



Results and Analysis

This section showed the empirical findings based on the quantitative and qualitative data that was gathered in the course of the research. The results indicated the role of FinTech innovations and especially the effect of digital credit and micro-lending in enhancing financial inclusion and reduction of poverty. The results were organized into big thematic areas according to the research aims: (1) the uptake and access to digital financial services, (2) financial empowerment and income enhancement, and (3) problems and barriers to FinTech-based financial inclusion.

Adoption and Accessibility of Digital Financial Services

The study examined the rate of adoption and influencing factors of the digital financial service implementation of the respondents in the emerging economies. These data highlighted the reality that online credit services and mobile lending applications were becoming popular among low-income individuals in order to invest in small business and receive emergency funding. The factors used to measure accessibility included ease of use, availability of services as well as the costs of transactions.

Table 1

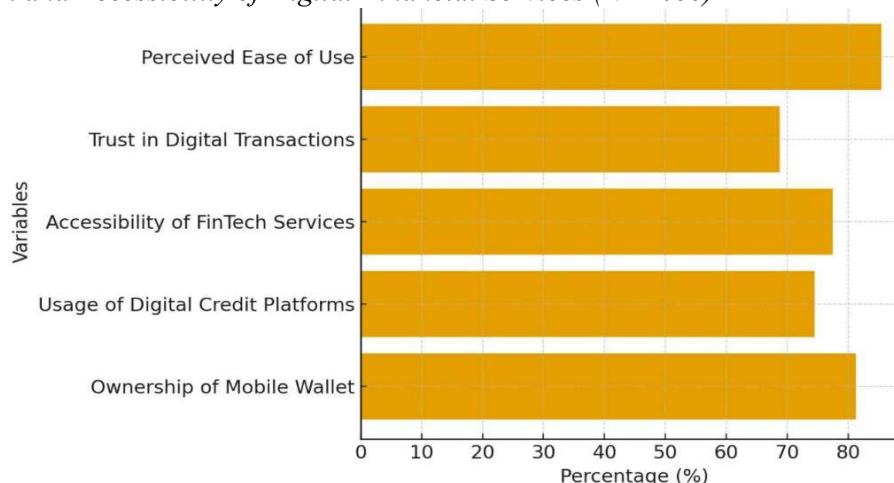
Adoption and Accessibility of Digital Financial Services (N = 400)

Variable	Frequency	Percentage (%)	Mean	SD
Ownership of Mobile Wallet	325	81.3	4.21	0.72
Usage of Digital Credit Platforms	298	74.5	4.08	0.81
Accessibility of FinTech Services	310	77.5	4.16	0.76
Trust in Digital Transactions	275	68.8	3.95	0.88
Perceived Ease of Use	342	85.5	4.29	0.69

The results in the Table 1 demonstrated that the rate of adoption of mobile wallets (81.3) and digital credit platforms (74.5) amongst the respondents is high. This fact suggested that FinTech innovations were able to lessen the financial spread of individuals without bank accounts in the past. The average scores of 3.95 to 4.29 were associated with the fact that the subjects were inclined to believe that the digital financial services were available, they were trustworthy and convenient. The high standard deviation in trust (SD = 0.88) was a sign that there was some degree of variation which implied that even a group of users still had some problems with digital fraud and security of transactions. These results were consistent with what Koomson et al. (2021) found, which is that digital finance was a major contributor to the widening of access to finance, especially in marginalized populations. In sum, the evidence supported the idea that FinTech sites increased inclusiveness due to easy and affordable access to finance.

Figure 1

Adoption and Accessibility of Digital Financial Services (N = 400)





Economic Empowerment and Income Improvement

The second goal evaluated the effect of FinTech adoption on economic empowerment and increase in income. The respondents provided information on how digital micro-lending had affected their business growth, earnings stability, and ability to afford their basic needs.

Table 2.

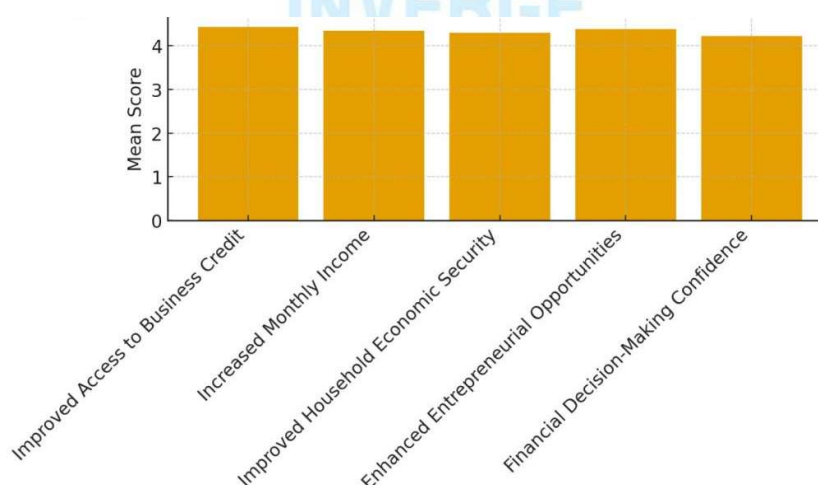
Impact of FinTech Adoption on Economic Empowerment (N = 400)

Indicator	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Mean	SD
Improved Access to Business Credit	62.8	25.5	6.8	4.9	4.43	0.63
Increased Monthly Income	58.0	27.5	9.3	5.2	4.34	0.71
Improved Household Economic Security	55.5	29.8	10.5	4.2	4.29	0.66
Enhanced Entrepreneurial Opportunities	60.2	26.5	81	5.2	4.38	0.68
Financial Decision-Making Confidence	53.8	30.5	10.8	4.9	4.22	0.74

Table 2 presents the respondents who agreed or strongly agreed that FinTech access enhanced their business credit prospects as above 88 percent of them agreed. This was indicative of the importance of micro-lending systems in aiding entrepreneurial activities particularly among the small scale traders and the owners of businesses in rural areas. Likewise 85.5 percent indicated higher levels of income following the adoption of digital finance tools. The growth in household economic security (85.3%) demonstrated that there was a spillover mechanism of the digital financial inclusion on general welfare. Such results were in line with the findings of Wang and He (2023), who found that in China, the digital finance enhanced household resilience and decreased income volatility. Moreover, the increase in the confidence in financial decisions (Mean = 4.22) signified the empowerment possibility of FinTech systems and its ability to build self-reliance and financial literacy in marginalized users. The examination proved that the use of FinTech had a direct positive effect on income, financial vulnerability, and the development of sustainable livelihood.

Figure 2

Impact of FinTech Adoption on Economic Empowerment (N = 400)



Challenges and Barriers to FinTech-Driven Financial Inclusion

Despite the high benefits witnessed in the adoption of FinTech, a number of challenges limited its potential when it comes to enhancing financial inclusion. These obstacles were divided into socio-economic, technological and regulatory.



Table 3

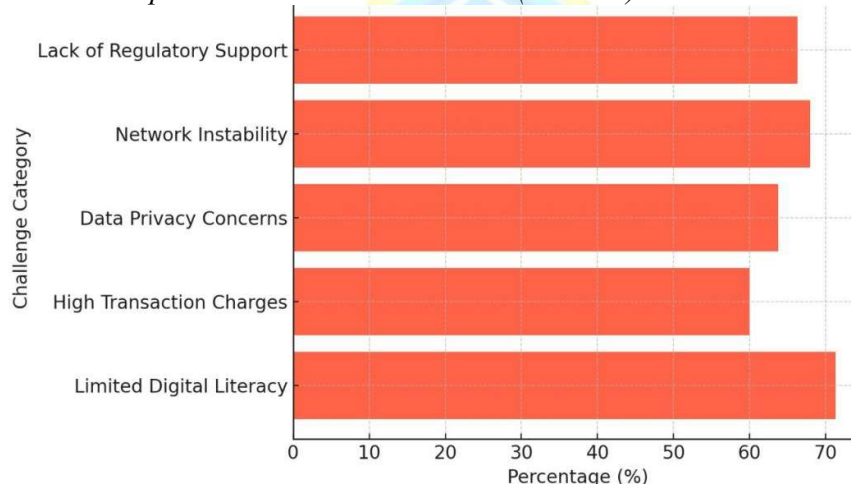
Challenges in FinTech Adoption and Financial Inclusion (N = 400)

Challenge Category	Frequency	Percentage (%)	Mean	SD
Limited Digital Literacy	285	71.3	4.10	0.81
High Transaction Charges	240	60.0	3.88	0.87
Data Privacy Concerns	255	63.8	3.95	0.83
Network Instability	272	68.0	4.03	0.79
Lack of Regulatory Support	265	66.3	4.01	0.82

The statistics in Table 3 showed that the most common problem encountered by the users of FinTech was limited digital literacy (71.3) especially in rural areas where people were still lowly exposed to education and technology. This was a barrier to the complete use of mobile banking and digital credit tools by the users. Furthermore, 60 percent of the respondents had fears of high transaction costs that come with digital platforms that would not encourage repeated use. Sixty-three point eight percent of the respondents had mentioned data privacy concerns, which signified the general panic over cybercriminals and the breach of personal data. The results were in line with the past findings by Ozili (2024), who pointed out that the development of FinTech can unintentionally contribute to inequality unless robust data protection structures are in place. In addition, network instability and lack of regulatory support was also stated as perennial structural obstacles, as they impacted on the confidence and perseverance of the users to gain access to digital service provision. Taken together these findings indicated a necessity of a convergent policy intervention that consists of technology literacy programs, regulatory controls as well as consumer protection measures in maintaining inclusive financial ecosystems.

Figure 3

Challenges in FinTech Adoption and Financial Inclusion (N = 400)



Qualitative Analysis

Theme 1: Access and Empowerment through Digital Credit

Some of the best arguments that were well articulated by a wide group of participants included the fact that the FinTech sites had liberalised financial resources, particularly to those who were not covered by the traditional banking network. The respondents reported that digital credit and mobile lending proved to be a godsend, as it would allow them to start a small business, invest in education, and even deal with emergencies without the involvement of bureaucracy.

“Before mobile lending apps, I had to borrow money from friends or local lenders with high interest. Now I can apply online and get funds within minutes,” (P3, female entrepreneur, Kenya).



“Digital credit helped me open a small tailoring shop during COVID-19 when banks refused to lend,” (P9, male respondent, Pakistan).

These stories showed that FinTech innovation, by providing consumers with access to microloans in an easy and fast way, could be used as an economic equalizer. Another fact highlighted by the respondents was that FinTech seemed to be better than the traditional microfinance institutions, as it offered flexible repayment opportunities and minimized paperwork. The discussion established that microlending platforms via the internet enhanced economic empowerment, especially to young individuals and women who were once disadvantaged.

Theme 2: Trust, Usability, and Risk Perception

Trust was one of the factors that contributed to the adoption of FinTech. Although most of the users mentioned the first strong suit of mobile financial applications, a substantial number of users raised their concern on the security, privacy and transparency of the system. Some of the respondents said that they were not comfortable sharing financial and personal data on the Internet.

“Sometimes I feel nervous entering my ID and bank details. I’ve heard stories about people losing money through fake apps,” (P11, male respondent, Nigeria).

“I use digital wallets, but I don’t save large amounts because I am not sure how secure the system is,” (P6, female respondent, India).

These reactions implied that even though the users admired the convenience of the financial transactions, psychological obstacles to trust still existed particularly among new users. The security assurance was associated by many participants with the reputation of the FinTech company or approval by government regulators. Besides, one of the main factors of user satisfaction was usability. The respondents extolled the feature of the application intuition and accessibility of language and thus made it possible even to the users who were not fully literate to use it. Others, on the other hand, mentioned technical problems that led to lack of trust and dependability, including the crashing of apps or failed transactions.

“The app is easy to use, but sometimes the network goes down, and it takes days to process refunds,” (P15, female respondent, Pakistan).

Theme 3: Barriers to Sustainable FinTech Inclusion

Nevertheless, in spite of the obvious advantages, the respondents have identified a number of issues that restrict the long-term sustainability of FinTech. The most significant issues were connected with the absence of customer service, inability to see transaction charges, and digital illiteracy. The problems of learning to use apps or pay customer respondents were particularly concerning to rural and low-income groups.

“Most people in my village don’t know how to use mobile banking apps. They rely on agents, which sometimes leads to fraud,” (P2, male respondent, rural Kenya).

“I took a digital loan, but I didn’t know about the late fee. It became too expensive,” (P12, female respondent, Nigeria).

Through such experiences, it was demonstrated that poor financial literacy might result in lack of understanding of terms, over-indebtedness, and frustration to the user. Systemic barriers that were also mentioned by the participants include unstable internet connectivity and lack of regulation that influenced the reliability of the services.

“Sometimes I feel the government should monitor these apps more closely. Some platforms charge extra fees without notice,” (P17, industry expert, India).

Discussion

The findings of this research enlightened that FinTech-based digital credit and micro-lending contributed greatly to financial inclusion of people who were not adequately served before. The quantitative data demonstrated a high level of mobile wallets and digital credit platform adoption and a favorable attitude to accessibility-in line with the larger pattern of how low-income people are starting to experience financial services changing due to FinTech interventions. As per the previous studies, the utilization of digital payment systems and mobile internet access was very strongly positively related with the enhanced access to and



utilization of the formal financial services. As an example, Shair, Jabeen, Zafar, and Hassan (2024) showed that the access to digital resources positively influenced the chances of having a bank account, formal savings and formal borrowing. Applying this to micro-lending settings, the research is one of the contributions to showing that FinTech models do not just bring payments but also access to credit and opportunities through the credit to financial inclusion.

Nonetheless, the line between financial inclusion and poverty alleviation became contingent, as opposed to automatic. Although the data indicated that a significant number of respondents said their economic security in the household and their income levels increased after the adoption of FinTech, the qualitative evidence demonstrated that the lack of trust and literacy as well as regulatory issues remains. It means that access is not enough but that active use and correct terms, along with favorable conditions of the ecosystem are a part and parcel. Amnas, Selvam and Parayitam (2024) discovered that digital financial literacy mediated the relationship between FinTech use and financial inclusion and that perceived regulatory support mediated the relationship. The results of this study resonated with this trend: digital literacy, trust and regulatory clarity were major moderators that made or made FinTech a significant empowerment.

Furthermore, findings highlighted that FinTech innovations transformed the framework of financial service-delivery and thus disturbed institutional dynamics of inclusion. Other researchers have recorded the changing roles of the stakeholders, the service models and market places in FinTech ecosystems- Ha, Le and Nguyen (2025) reported three groups of literature; new services, market transformation and stakeholder roles. The participants of the current research explained the access of micro-entrepreneurs to credit through non-traditional sources (mobile services, peer-to-peer services) instead of conventional ones (banks) and that this modality of service access minimized the barriers to credit, including; collateral and branch distance. This is a change of structure, which implied that the gains of inclusion were partially due to the lowering of transaction costs and information asymmetry, as Mansyur (2025) also examines in Indonesia: the penetration of FinTech increased the growth of the region due to the opportunity to reach a larger population, formalize the informal economy, and be geographically inclusive.

However, the analysis also shedding light on disproportional results and the danger of strengthening the status quo, the study also helped to understand the consequences. According to the qualitative data, women, low-digitally literate users, and rural residents were more problematic (in line with Smith 2025 review of gendered algorithms in FinTech, which showed that women were less likely to be offered loans and smaller amounts of them, even with better repayment behaviour). Although the quantitative results indicated high adoption in general, the standard deviations and qualitative feedback indicated that there were sub-groups whose experience was not as positive, therefore, warning that FinTech may increase rather than decrease exclusion when the facilitating conditions are absent. The findings of the study therefore conformed to results of an analysis in sub-Saharan Africa published by The Impact of FinTech Adoption on Traditional Financial Inclusion (2024) that found that the improvement in demographic inclusion was not always accompanied by the same in use and geographic aspect and indicated that the adoption of FinTech did not always imply complete inclusion.

The interaction of the three factors FinTech, financial inclusion, and poverty alleviation became multi-layered. Micro-lending and digital credit on the one hand provided its users with access to financing, better income and business prospects, as well as increased confidence in financial decision-making. These were the outcomes in superior mean scores of power, growth of income and access to credit in Table 2. Conversely, the external conditions mediated by the benefits include stable internet/phone network, transparent regulatory frameworks, consumer protection, and digital literacy. Therefore, the research supported the idea that poverty reduction through FinTech is not a technological solution-but socio-technical solution which contains education, regulation and infrastructure.

Policy wise, the findings indicated a number of action implications. One, to begin with, the building of digital infrastructure (mobile, internet) is a base: in line with Shair et al. (2024) and Pokhara findings (Kunwar & Chhetri, 2025), the access to digital tools has been the predictor of inclusion. Second, consumer-protection structures and regulatory supervision should be kept up to FinTech innovation; regulatory ambiguity or laxity caused a lack of trust that would not allow deeper penetration. The research found out that



despite the potential that FinTech innovations have demonstrated in increasing financial inclusiveness and aiding poverty reduction, their effectiveness requires ecosystem preparedness, fair design, and regulatory protection.

Conclusion

The research has found that FinTech innovations have had a transformative role in the growth of financial access and poverty reduction by providing greater access to digital credit and micro-lending services. The results showed that digital financial solutions, including mobile-based credit solutions and peer-to-peer lending sites, had a great impact on the access to finance among the low-income earners and micro-entrepreneurs who used to be locked out of the traditional banking systems. Combination of technology lowered the transaction cost and minimized information asymmetry combined with greater financial participation. Nonetheless, it was clear as well that there was no equal distribution of the advantages of the implementation of FinTech among the population segments, as women, rural people, and digitally illiterate users had to struggle with the same obstacles. The study pointed out that financial inclusion was not a sufficient condition to reduce poverty, but the combination of digital literacy, consumer protection, and regulatory control determined the results. FinTech was therefore a powerful tool for financial empowerment, but it needed to thrive in a suitable socio-technical ecosystem that integrated inclusive design, governance, and education.

Future Directions

Future studies can explore the effects that the use of FinTech has on the economic stability and poverty reduction in the long term since the short-term outcomes might not be an effective measure of whether the digital credit intervention will be sustainable in the long-term. Cross-national comparative analysis would give an idea of the influence of institutional, cultural, and regulatory environment on the effectiveness of FinTech in increasing inclusion. It is also necessary to study the intersection of gender and technology to understand how FinTech can be used by the female entrepreneurship more effectively. Also, more nuanced mechanisms of how FinTech is shaping income distribution, ways people save money, and how micro businesses are established would be revealed in future mixed-method studies that could incorporate the use of big data analytics with more specific qualitative research. Lastly, the integration of the blockchain, AI, and machine learning technologies and the financial inclusion systems would be researched further to assess the potential of the technologies to enhance the transparency, efficiency, and power of the user in digitalized ecosystems that are inclusive.

Contributions of the Authors

Each author made a substantial contribution to the work reported and took part in the ideation, development, and final approval of the manuscript.

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Statement of Data Availability

The corresponding author can provide the data used in this study upon request.

Conflicts of Interest

The authors declare no conflict of interest.

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