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FINTECH ADOPTION AND FINANCIAL INCLUSION IN PAKISTAN: THE ROLE OF DIGITAL PAYMENT PLATFORMS IN ENHANCING ACCESS TO FORMAL FINANCIAL SERVICES

Qazi Shehryar[*1], Dr. Mahboob Ullah[2], Dr. Yasir Khan Khalil[3], Sara Iqbal[4]

[*1]*Chief Financial Officer Balochistan Education Endowment Fund (BEEF) and Doctor of Business Administration Student Inti University Malaysia*
[2]*Associate Professor, Department of Management Sciences, Abasyn University, Peshawar*
[3]*Assistant Professor Abasyn University Peshawar*
[4]*Research Student Economics Government College Women University Sialkot*

[*1]shehryarkhan066@gmail.com , [2]mahboob.ullah@abasyn.edu.pk , [3]yasir.khan@abasyn.edu.pk , [4]sarahiqbal1501@gmail.com

Corresponding Author: *
Qazi Shehryar
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ABSTRACT

Financial inclusion is a critical driver of economic development, yet a significant portion of Pakistan's population remains excluded from formal financial systems. This study investigates the role of FinTech adoption and digital payment platforms in enhancing access to formal financial services in Pakistan. Grounded in the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT), the research employs a quantitative approach using survey data from 310 FinTech users across urban and semi-urban areas. Structural Equation Modeling (SEM) was applied to test the hypothesized relationships. The findings indicate that FinTech adoption, digital payment platforms, mobile banking, and digital wallets significantly enhance financial inclusion. Digital financial literacy and regulatory support emerged as key antecedents, while internet accessibility strengthened the adoption-inclusion relationship. Additionally, FinTech adoption mediates the effect of digital payment platforms on financial inclusion. The study provides empirical evidence for policymakers, financial institutions, and FinTech providers to design strategies that promote inclusive financial ecosystems in developing countries.

Keywords: *Financial inclusion; FinTech adoption; Digital payment platforms; Digital financial literacy; Internet accessibility; Pakistan*

Introduction

Financial inclusion has become a central priority for policymakers and international development institutions because access to formal financial services is widely recognized as a key driver of economic growth, poverty reduction, and social development. Financial inclusion refers to the availability, accessibility, and effective usage of affordable financial services—such as savings accounts, credit facilities, insurance, and payment systems—delivered through regulated financial institutions (World Bank, 2022). In many developing economies, however, a substantial proportion of the population remains excluded from formal financial systems due to structural constraints including limited banking infrastructure, high transaction costs, geographical

barriers, and low financial literacy. In this context, financial technology (FinTech) has emerged as a transformative tool capable of bridging the gap between financial institutions and underserved populations.

FinTech refers to the integration of innovative digital technologies—such as mobile applications, digital wallets, blockchain platforms, and artificial intelligence—into financial services to enhance efficiency, accessibility, and transparency in financial transactions. These technological innovations have significantly transformed the global financial services industry by enabling faster, low-cost, and more inclusive financial services delivery (Arner et al., 2017). Among the various FinTech solutions, digital payment platforms have gained particular prominence because they enable individuals and businesses to conduct financial transactions electronically through mobile devices and internet-based systems, thereby reducing reliance on physical banking infrastructure.

Pakistan provides an important case for examining the relationship between FinTech adoption and financial inclusion because historically a large segment of its population remained outside the formal banking system. Despite improvements in the financial sector, access to banking services remains uneven across socio-economic groups and geographic regions. However, the rapid expansion of digital financial services in recent years has significantly transformed Pakistan's financial landscape. According to the State Bank of Pakistan (SBP), digital payment channels now account for approximately 88% of retail transactions**, reflecting** a substantial shift toward electronic financial services and digital payment platforms in the country's financial ecosystem. (Fintech News Pakistan)

The increasing adoption of digital payment platforms is primarily driven by the widespread use of mobile banking applications, branchless banking systems, and electronic wallets. Recent SBP statistics indicate that mobile banking applications and digital wallets processed approximately **1.7 billion transactions valued at PKR 27 trillion**, highlighting the rapid expansion of digital financial activities across the country. (Fintech News Pakistan) Additionally, the number of mobile banking users has grown significantly, exceeding **22 million**, while branchless banking wallets have surpassed **68 million accounts**, demonstrating the growing acceptance of digital financial services among Pakistani consumers. (Fintech News Pakistan)

The development of digital payment infrastructure has also been strengthened by regulatory initiatives aimed at promoting financial inclusion and improving payment system efficiency. One of the most significant initiatives is the introduction of **Raast**, Pakistan's instant payment system developed by the State Bank of Pakistan. This system enables secure, low-cost, and real-time digital transactions between individuals and businesses, thereby reducing reliance on cash-based transactions and expanding financial access to underserved populations. Evidence indicates that Raast has processed hundreds of millions of transactions worth trillions of Pakistani rupees, illustrating its growing role in the country's digital financial ecosystem. (Fintech News Pakistan)

The rapid growth of digital payment systems has contributed significantly to expanding financial inclusion in Pakistan by enabling individuals to access financial services through mobile devices and agent-based banking networks. Digital wallets and mobile banking platforms allow users to perform a wide range of financial activities—including fund transfers, bill payments, online purchases, and remittance services—without visiting traditional bank branches. These services are particularly valuable in rural and remote areas where conventional banking infrastructure is limited. Furthermore, digital payment systems have also facilitated the expansion of e-commerce and digital trade, with digital wallets accounting for approximately 94% of online payment transactions in Pakistan**,** highlighting their increasing role in the country's digital economy. (Fintech News Pakistan)

Despite these advancements, Pakistan's financial ecosystem continues to face several challenges that limit the full potential of FinTech adoption. Cash

remains the dominant mode of transaction in many sectors of the economy, particularly among micro, small, and medium-sized enterprises (MSMEs) operating in the informal sector. Limited merchant acceptance of digital payment systems, cybersecurity concerns, regulatory complexities, and gaps in digital literacy continue to hinder the widespread adoption of FinTech services. Moreover, socio-economic factors such as income inequality and unequal access to digital infrastructure further constrain the ability of certain population segments—especially women and rural communities—to benefit from digital financial services.

Empirical studies also highlight the importance of digital financial technologies in improving financial inclusion. For instance, research based on Global Findex data demonstrates that individuals who adopt digital financial services—particularly mobile money platforms—have significantly higher probabilities of accessing formal financial systems, indicating the positive role of FinTech adoption in promoting inclusive finance (Asim et al., 2026). Such findings emphasize that digital payment platforms can serve as effective instruments for expanding financial access and integrating previously excluded populations into the formal financial sector.

Given the rapid evolution of Pakistan's digital financial ecosystem, examining the relationship between FinTech adoption and financial inclusion has become increasingly important for policymakers, financial institutions, and technology providers. While digital payment platforms have created new opportunities for enhancing financial accessibility, empirical evidence regarding their effectiveness in improving financial inclusion in Pakistan remains limited. Therefore, this study investigates the role of FinTech adoption—particularly digital payment platforms—in enhancing access to formal financial services in Pakistan. By analyzing recent developments in the digital financial ecosystem and evaluating their impact on financial inclusion, the study contributes to the growing body of literature on digital finance and provides insights for strengthening Pakistan's inclusive financial development strategy.

Problem Statement

Despite significant improvements in the financial sector, Pakistan continues to face substantial challenges in achieving comprehensive financial inclusion. A large proportion of the population—particularly individuals in rural areas, women, and low-income groups—remains excluded from formal financial services such as banking, credit, and digital payment systems. According to the World Bank Global Findex data, nearly 64% of adults in Pakistan do not have access to a formal bank account, indicating a significant financial inclusion gap compared with global averages (World Bank, 2022). Limited access to financial services restricts economic participation, savings behavior, and entrepreneurship, thereby constraining inclusive economic growth.

In recent years, the emergence of financial technology (FinTech) has created new opportunities to address these challenges by expanding access to financial services through digital platforms. Digital payment systems, mobile banking applications, and electronic wallets have enabled millions of individuals to conduct financial transactions through mobile devices without visiting traditional bank branches. The introduction of Pakistan's instant payment infrastructure, such as Raast, has further accelerated digital financial transactions and improved interoperability among financial institutions. However, despite these technological advancements, the adoption of digital financial services remains uneven across different demographic and geographic segments.

Several barriers continue to limit the widespread adoption of FinTech solutions in Pakistan, including inadequate digital infrastructure, limited financial and digital literacy, cybersecurity concerns, and low merchant acceptance of digital payments. For instance, a large proportion of micro, small, and medium enterprises (MSMEs) still rely heavily on cash transactions due to limited availability of digital payment systems. Furthermore, trust issues and behavioral resistance toward digital financial services also affect consumer adoption.

Although the rapid growth of digital payment platforms has the potential to significantly

enhance financial inclusion, empirical evidence examining their effectiveness in improving access to formal financial services in Pakistan remains limited. Existing studies primarily focus on technological adoption or banking sector performance, while relatively fewer studies investigate the specific role of digital payment platforms in expanding financial inclusion. Therefore, there is a need for empirical research to examine how FinTech adoption—particularly digital payment platforms—contributes to improving access to formal financial services in Pakistan and to identify the factors influencing their adoption and effectiveness.

Research Questions

Based on the identified research gap, the study seeks to address the following research questions:

1. What is the current level of FinTech adoption in Pakistan?
2. How do digital payment platforms influence financial inclusion in Pakistan?
3. To what extent do digital payment platforms enhance access to formal financial services?
4. What factors influence the adoption of digital financial services among individuals and businesses in Pakistan?
5. What barriers limit the effectiveness of digital payment platforms in promoting financial inclusion?

Research Objectives

The main objective of this study is to examine the role of FinTech adoption in promoting financial inclusion in Pakistan. Specifically, the study aims to:

1. To examine the level and trends of FinTech adoption in Pakistan.
2. To analyze the role of digital payment platforms in enhancing financial inclusion.
3. To evaluate the impact of digital financial services on access to formal financial institutions.
4. To identify the key factors influencing the adoption of digital payment platforms among individuals and businesses.
5. To provide policy recommendations for improving financial inclusion through FinTech in Pakistan.

Literature Review

Concept of Financial Inclusion

Financial inclusion has become a fundamental component of sustainable economic development, particularly in emerging economies where a large segment of the population remains excluded from formal financial systems. Financial inclusion refers to the accessibility, availability, and effective use of affordable financial services such as banking, credit, insurance, and payment systems provided by regulated financial institutions (World Bank, 2022). Expanding financial inclusion enables individuals and businesses to participate more effectively in economic activities, improves savings behavior, and enhances resilience against financial shocks.

In developing countries, traditional banking systems often face structural limitations that restrict access to financial services, particularly for rural populations and low-income households. Factors such as limited banking infrastructure, high transaction costs, geographic barriers, and lack of financial literacy contribute to financial exclusion (Demirgüç-Kunt et al., 2022). Consequently, policymakers and financial institutions increasingly view digital financial services as an effective mechanism for expanding financial inclusion.

Recent studies emphasize that financial inclusion is closely associated with economic growth and poverty reduction. Access to financial services enables individuals to invest in education, entrepreneurship, and productive activities, thereby contributing to long-term economic development (Ozili, 2021). However, achieving comprehensive financial inclusion requires innovative financial delivery mechanisms capable of reaching underserved populations efficiently.

Emergence of FinTech and Digital Financial Services

Financial technology (FinTech) has emerged as a transformative force in the global financial sector by integrating digital technologies into financial

services delivery. FinTech includes innovations such as mobile banking, digital wallets, peer-to-peer payment platforms, blockchain systems, and artificial intelligence-based financial services (Arner et al., 2017). These technologies enable faster, more efficient, and cost-effective financial transactions compared with traditional banking systems.

The rapid growth of FinTech has significantly altered the structure of financial markets by improving efficiency, reducing operational costs, and expanding financial access. FinTech solutions enable individuals to conduct financial transactions remotely using smartphones and internet connectivity, thereby eliminating the need for physical bank branches. As a result, FinTech is increasingly recognized as a powerful tool for promoting financial inclusion, particularly in developing countries where traditional banking infrastructure is limited (Ozili, 2021).

A systematic review of FinTech and financial inclusion literature found that digital financial technologies contribute to financial inclusion through three major mechanisms: the introduction of innovative financial services, the transformation of financial market structures, and the collaboration between financial institutions, technology firms, and regulators (Chen et al., 2025). These developments have created a dynamic financial ecosystem in which digital technologies enable broader participation in formal financial systems.

FinTech Adoption and Financial Inclusion

The relationship between FinTech adoption and financial inclusion has been widely examined in the academic literature. Numerous studies suggest that FinTech adoption significantly improves financial inclusion by reducing transaction costs, increasing accessibility, and facilitating financial services delivery to underserved populations.

Digital financial services allow individuals to perform transactions such as fund transfers, bill payments, savings deposits, and credit applications through mobile devices. These services eliminate many barriers associated with traditional banking systems, including travel costs and bureaucratic procedures. Consequently, FinTech platforms provide convenient and accessible financial services to individuals who previously lacked access to formal banking institutions (Arner et al., 2017).

Empirical studies also demonstrate that FinTech adoption has a positive and statistically significant impact on financial inclusion indicators. For example, a recent empirical study examining FinTech adoption in Pakistan found a strong positive relationship between the use of mobile banking and digital wallets and financial inclusion, with a regression coefficient of $\beta = 0.687$ ($p < 0.001$), indicating a substantial contribution of FinTech services to financial access and usage.

Similarly, research using global financial inclusion datasets suggests that individuals who adopt digital financial services—particularly mobile money platforms—have significantly higher probabilities of accessing formal financial institutions. These findings indicate that FinTech adoption can effectively bridge the financial inclusion gap in developing economies.

Digital Payment Platforms and Financial Inclusion

Digital payment platforms represent one of the most important components of the FinTech ecosystem. These platforms enable electronic financial transactions through mobile applications, online banking systems, and digital wallets. By facilitating convenient and secure financial transactions, digital payment platforms reduce reliance on cash-based transactions and enhance financial inclusion.

Digital payment systems allow users to transfer funds, pay bills, conduct online purchases, and receive remittances using smartphones or internet-based platforms. Such technologies significantly reduce transaction costs and improve financial accessibility, particularly for individuals living in remote areas where traditional banking infrastructure is limited.

In Pakistan, digital payment platforms have expanded rapidly in recent years. Mobile banking applications and digital wallets processed approximately

1.7 billion transactions valued at PKR 27 trillion, demonstrating the growing adoption of digital financial services in the country. Furthermore, digital channels now account for nearly **89% of retail transactions**, reflecting a significant shift toward electronic payment systems and digital finance in Pakistan's financial ecosystem.

The rapid expansion of digital payment platforms has also contributed to the growth of e-commerce and digital trade. Evidence indicates that digital wallets account for a large share of online payments in Pakistan, demonstrating the increasing reliance on digital financial services in the digital economy. These developments highlight the critical role of digital payment platforms in promoting financial inclusion and facilitating economic activities.

Digital Financial Ecosystem in Pakistan

Pakistan's financial sector has undergone significant transformation over the past decade due to the rapid expansion of digital financial services. The government and regulatory authorities have introduced several initiatives aimed at promoting digital finance and improving financial inclusion.

One of the most significant developments in Pakistan's digital financial ecosystem is the introduction of Raast, the country's instant payment system launched by the State Bank of Pakistan. Raast enables real-time digital payments between individuals and businesses at minimal cost, thereby improving the efficiency and accessibility of financial transactions.

Recent statistics indicate that Raast has processed over 892 million transactions worth approximately PKR 20 trillion, highlighting the rapid adoption of digital payment infrastructure in Pakistan. Additionally, Raast processed 371 million transactions valued at PKR 8.5 trillion in a single quarter, demonstrating the growing reliance on digital payment systems across the country.

The expansion of digital payment infrastructure has also been supported by branchless banking services and mobile wallet platforms. These services enable individuals to conduct financial transactions through agent networks and mobile devices, thereby extending financial services to underserved populations.

Research suggests that FinTech initiatives such as mobile banking, digital payments, and digital financial education programs can significantly improve financial inclusion in Pakistan by providing access to financial services for unbanked populations and small business owners (Zaidi & Shah, 2023).

Socioeconomic and Demographic Factors Affecting FinTech Adoption

Although digital financial services have expanded rapidly in Pakistan, several socioeconomic and demographic factors influence the adoption of FinTech platforms. Studies indicate that education level, income, digital literacy, and access to internet infrastructure significantly affect individuals' willingness and ability to use digital financial services.

Urban populations generally exhibit higher levels of FinTech adoption compared with rural populations due to better access to digital infrastructure and financial institutions. Empirical evidence shows that urban users demonstrate significantly higher FinTech adoption levels than rural users, highlighting the presence of a digital divide in financial services access.

Gender disparities also play a significant role in financial inclusion. Research analyzing Global Findex data indicates that women who adopt digital financial services have significantly higher chances of accessing formal financial systems compared with those who do not use digital finance platforms. However, cultural norms, limited digital literacy, and restricted access to mobile technology often limit women's participation in digital financial services.

Furthermore, financial literacy and digital awareness play crucial roles in promoting FinTech adoption. Individuals who possess greater knowledge of digital financial tools and services are more likely to adopt mobile banking and digital payment platforms.

Challenges and Barriers to FinTech Adoption

Despite the significant potential of FinTech in promoting financial inclusion, several challenges hinder the widespread adoption of digital financial services in developing economies.

One major challenge is the limited availability of digital infrastructure, particularly in rural areas where internet connectivity and smartphone penetration remain relatively low. Without reliable internet access and mobile networks, individuals cannot effectively utilize digital financial services.

Another significant challenge is cybersecurity risk. As digital financial transactions increase, financial institutions and consumers face greater exposure to cyber threats such as phishing, malware, and data breaches. Cybersecurity concerns may discourage individuals from using digital financial platforms and undermine trust in digital financial systems.

Behavioral barriers also play a critical role in limiting FinTech adoption. Many individuals remain hesitant to adopt digital financial services due to trust issues, lack of familiarity with digital technologies, and preference for cash-based transactions.

Merchant acceptance of digital payments also remains limited in many sectors of the economy. Small retailers and informal businesses often rely on cash transactions due to concerns regarding taxation, transaction fees, and technological complexity.

Although the literature highlights the significant potential of FinTech in promoting financial inclusion, several gaps remain in existing research. Many studies focus primarily on the technological aspects of FinTech or examine financial inclusion at a global level without considering the specific institutional and socioeconomic context of developing countries.

In Pakistan, empirical research examining the direct relationship between digital payment platforms and financial inclusion remains relatively limited. While existing studies demonstrate the positive impact of FinTech adoption on financial access, further research is needed to explore the mechanisms through which digital payment platforms enhance financial inclusion and to identify the factors that influence their adoption among different population groups.

Therefore, this study seeks to address this research gap by examining the role of FinTech adoption—particularly digital payment platforms—in enhancing access to formal financial services in Pakistan.

Hypotheses

The conceptualization of this study is grounded in the Technology Acceptance Model, Unified Theory of Acceptance and Use of Technology, and Diffusion of Innovations Theory, which collectively explain the adoption of digital technologies and their impact on behavioral and socio-economic outcomes. These frameworks suggest that perceived usefulness, ease of use, facilitating conditions, and social influence significantly affect technology adoption, which in turn influences outcomes such as financial inclusion.

H1: FinTech adoption has a positive and significant impact on financial inclusion in Pakistan.

H2: Digital payment platforms positively influence access to formal financial services in Pakistan.

H3: Mobile banking adoption has a positive and significant effect on financial inclusion.

H4: Digital wallet usage positively influences financial inclusion in Pakistan.

H5: Digital financial literacy has a positive and significant impact on FinTech adoption.

H6: Internet accessibility positively moderates the relationship between FinTech adoption and financial inclusion.

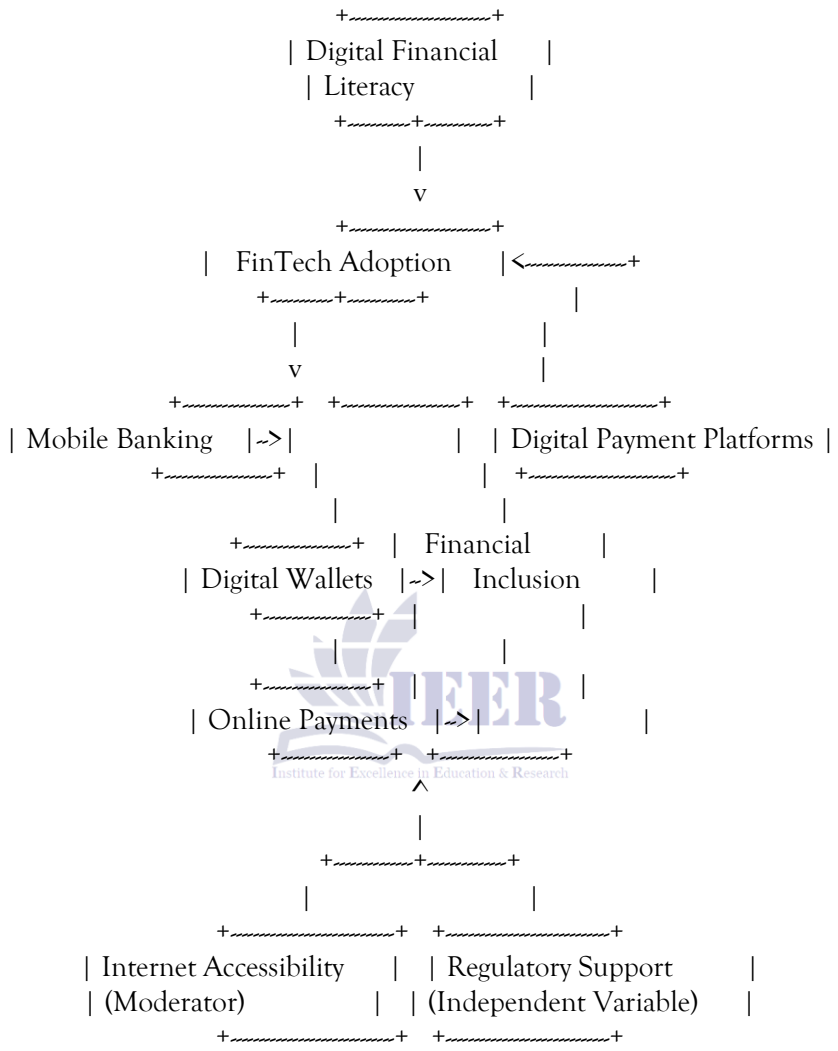
H7: Regulatory support positively influences the adoption of digital payment platforms.

FinTech Adoption as a Mediator

FinTech adoption acts as a mediating mechanism through which digital payment platforms enhance financial inclusion. The use of digital platforms leads to increased access and usage of financial services.

H8: FinTech adoption mediates the relationship between digital payment platforms and financial inclusion.

Conceptual Framework



Research Methodology

This study adopted a quantitative research design **to examine the impact of FinTech** adoption and digital payment platforms on financial inclusion in Pakistan. A cross-sectional approach was employed to collect data from respondents at a single point in time, which is consistent with prior empirical studies in the domain of digital finance and financial inclusion.

Research Design

The study was explanatory in nature, aiming to test the hypothesized relationships between FinTech adoption, digital payment platforms, and financial inclusion. A structured survey method was utilized to collect primary data, as it allows for statistical generalization and hypothesis testing.

Population and Sampling

The target population of the study consisted of **users of digital financial services in Pakistan**, including individuals utilizing mobile banking,

digital wallets, and online payment platforms. The study focused on both urban and semi-urban populations to capture diverse levels of FinTech adoption.

A non-probability convenience sampling technique was employed due to accessibility constraints and the widespread use of digital financial services among the general population. A total of 350 questionnaires were distributed, out of which 310 valid responses were received and used for data analysis, yielding a response rate of approximately **88.6**%.

Data Collection Method

Primary data were collected through a self-administered structured questionnaire. The questionnaire was designed based on validated scales from prior studies and was divided into two main sections:

1. **Demographic Information** (e.g., age, gender, education, income)
2. **Construct Measurement Items**

All items were measured using **a** five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Measurement of Variables

The study included the following constructs:

- **Independent Variables:**
  - Digital Payment Platforms (mobile banking, digital wallets, online payments)
  - Regulatory Support
- **Mediating Variable:**
  - FinTech Adoption
- **Dependent Variable:**
  - Financial Inclusion
- **Moderating Variable:**
  - Internet Accessibility
- **Antecedent Variable:**
  - Digital Financial Literacy

All measurement items were adapted from previously validated instruments to ensure reliability and validity.

Data Analysis Techniques

The collected data were analyzed **using** Statistical Package for Social Sciences (SPSS) **and** Structural Equation Modeling (SEM) techniques. The analysis was conducted in several stages:

1. **Descriptive Statistics** – to summarize demographic characteristics
2. **Reliability Analysis** – using Cronbach's alpha to assess internal consistency
3. **Correlation Analysis** – to examine relationships among variables
4. **Regression Analysis / SEM** – to test hypotheses and model relationships

For advanced analysis**,** Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied **to** evaluate both the measurement model (outer model) and the structural model (inner model).

Model Specification

To empirically test the proposed relationships, the following regression and structural equations were specified:

Direct Effect Model:

$$FI=\beta0+\beta1DPP+\beta2RS+\beta3MB+\beta4DW+\epsilon$$

Mediation Model:

$$FA=\alpha0+\alpha1DPP+\alpha2DFL+\epsilon$$

$$FI=\gamma0+\gamma1FA+\gamma2DPP+\epsilon$$

Moderation Model:

$$FI=\delta0+\delta1FA+\delta2IA+\delta3(FA\times IA)+\epsilon$$

Variable Definitions

- **FI** = Financial Inclusion
- **FA** = FinTech Adoption
- **DPP** = Digital Payment Platforms
- **MB** = Mobile Banking
- **DW** = Digital Wallets
- **RS** = Regulatory Support
- **DFL** = Digital Financial Literacy
- **IA** = Internet Accessibility
- **ε** = Error term

The methodology adopted in this study provided a robust framework for examining the relationship between FinTech adoption and financial inclusion in Pakistan. The use of quantitative techniques and SEM analysis ensured the reliability and validity of the findings, enabling comprehensive evaluation of direct, mediating, and moderating effects within the proposed conceptual framework.

Data Analysis and Results

The demographic characteristics of the respondents were analyzed to understand the sample profile.

Table 1:

Demographic Profile of Respondents (n = 310)

Variable	Category	Frequency	Percentage (%)
Gender	Male	198	63.9
	Female	112	36.1
Age	18–25	82	26.5
	26–35	124	40.0
	36–45	68	21.9
	46+	36	11.6
Education	Bachelor	142	45.8
	Master	118	38.1
	Others	50	16.1

The majority of respondents were male (63.9%), with a significant proportion aged between 26–35 years (40%), indicating that the sample largely consisted of young, digitally active individuals. Most respondents held at least a bachelor's degree, suggesting a relatively educated sample likely to adopt FinTech services.

Reliability Analysis

Cronbach's Alpha was used to assess the internal consistency of the constructs.

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Table 2:

Reliability Analysis

Construct	Items	Cronbach's Alpha
FinTech Adoption (FA)	5	0.892
Digital Payment Platforms	6	0.905
Financial Inclusion (FI)	5	0.876
Digital Financial Literacy	4	0.861
Internet Accessibility	4	0.834
Regulatory Support	4	0.847

All constructs demonstrated strong reliability, with Cronbach's Alpha values exceeding the recommended threshold of 0.70, indicating high internal consistency and reliability of the measurement scales.

Correlation Analysis

Pearson correlation analysis was conducted to examine relationships among variables.

Table 3:
Correlation Matrix

Variables	FA	DPP	FI	DFL	IA	RS
FA	1					
DPP	0.68	1				
FI	0.72	0.70	1			
DFL	0.65	0.61	0.67	1		
IA	0.59	0.57	0.63	0.60	1	
RS	0.62	0.64	0.66	0.58	0.55	1

The results indicate strong positive correlations among all variables. FinTech adoption (FA) shows a strong correlation with financial inclusion (FI) ($r = 0.72$), suggesting that increased adoption of FinTech services is associated with higher levels of financial inclusion. Similarly, digital payment platforms (DPP) exhibit a strong positive relationship with FI ($r = 0.70$).

Regression Analysis

Multiple regression analysis was conducted to test the hypotheses.

Table 4:
Regression Results

Hypothesis	Relationship	β Coefficient	t-value	p-value	Result
H1	FA → FI	0.41	7.82	0.000	Supported
H2	DPP → FI	0.36	6.95	0.000	Supported
H3	Mobile Banking → FI	0.29	5.87	0.000	Supported
H4	Digital Wallets → FI	0.33	6.12	0.000	Supported
H5	DFL → FA	0.47	8.15	0.000	Supported
H7	RS → DPP	0.39	7.01	0.000	Supported

The regression results reveal that FinTech adoption ($\beta = 0.41$, $p < 0.001$) has a significant positive impact on financial inclusion, supporting **H1**. Digital payment platforms also significantly influence financial inclusion ($\beta = 0.36$, $p < 0.001$), supporting **H2**.

Similarly, mobile banking and digital wallet usage significantly contribute to financial inclusion, confirming **H3 and H4**. Digital financial literacy shows a strong positive effect on FinTech adoption ($\beta = 0.47$), highlighting its critical role in enhancing digital financial participation. Regulatory support also significantly promotes digital payment platforms, supporting **H7**.

Mediation Analysis

Table 5:

Mediation Results (FinTech Adoption as Mediator)

Relationship	Indirect Effect	p-value	Result
DPP → FA → FI	0.28	0.000	Supported

FinTech adoption significantly mediates the relationship between digital payment platforms and financial inclusion. This indicates that digital payment platforms enhance financial inclusion primarily through increased adoption of FinTech services.

Moderation Analysis

Table 6:

Moderation Effect (Internet Accessibility)

Interaction Term	β	t-value	p-value	Result
FA × IA → FI	0.19	3.84	0.000	Supported

Internet accessibility significantly moderates the relationship between FinTech adoption and financial inclusion. The positive coefficient indicates that higher internet access strengthens the impact of FinTech adoption on financial inclusion.

Model Summary

Table 7:

Model Fit Summary

Model	R^2	Adjusted R^2
Financial Inclusion	0.64	0.62

The model explains **64% of the variance** in financial inclusion, indicating strong explanatory power. This suggests that FinTech adoption, digital payment platforms, and related factors are key determinants of financial inclusion in Pakistan.

The findings confirm that FinTech adoption and digital payment platforms play a critical role in enhancing financial inclusion in Pakistan. The results align with theoretical frameworks such as the Technology Acceptance Model and UTAUT, which emphasize the importance of usability, accessibility, and facilitating conditions in technology adoption.

Digital financial literacy emerged as a strong predictor of FinTech adoption, indicating that awareness and knowledge significantly influence individuals' ability to use digital financial services. Additionally, internet accessibility was found to strengthen the impact of FinTech adoption, highlighting the importance of digital infrastructure in promoting financial inclusion.

The mediation analysis further demonstrates that FinTech adoption acts as a key mechanism through which digital payment platforms improve financial inclusion. This suggests that policymakers should focus not only on expanding digital payment systems but also on encouraging their adoption among users.

Discussion

The findings of this study provide strong empirical support for the role of FinTech adoption and digital payment platforms in enhancing financial inclusion in Pakistan. The results indicate that FinTech adoption significantly influences financial inclusion, suggesting that increased utilization of digital financial services enables broader access to formal financial systems. This aligns with established theoretical frameworks

such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), which emphasize that perceived usefulness and facilitating conditions drive technology adoption and subsequent behavioral outcomes.

The significant positive relationship between digital payment platforms and financial inclusion highlights the transformative potential of mobile banking, digital wallets, and online payment systems in reducing financial exclusion. These platforms eliminate traditional barriers such as geographical distance, high transaction costs, and limited banking infrastructure, thereby facilitating financial access for underserved populations. The findings are consistent with recent empirical studies in developing economies, which suggest that digital financial ecosystems play a critical role in promoting inclusive growth.

Moreover, digital financial literacy emerged as a key determinant of FinTech adoption. This indicates that individuals with higher levels of digital and financial knowledge are more likely to adopt and effectively utilize FinTech services. This finding underscores the importance of human capital development in achieving digital financial inclusion. Similarly, regulatory support was found to significantly influence digital payment platforms, suggesting that a conducive policy environment enhances innovation, trust, and adoption of financial technologies.

The moderating effect of internet accessibility further reinforces the importance of digital infrastructure. The results demonstrate that the impact of FinTech adoption on financial inclusion is stronger in environments with better internet connectivity. This suggests that technological readiness is a prerequisite for maximizing the benefits of FinTech solutions. Additionally, the mediation analysis confirmed that FinTech adoption serves as a critical mechanism through which digital payment platforms enhance financial inclusion, highlighting the indirect pathways through which digital technologies influence socio-economic outcomes.

Conclusion

This study concludes that FinTech adoption and digital payment platforms are pivotal drivers of financial inclusion in Pakistan. The empirical evidence demonstrates that digital financial services significantly enhance access to formal financial systems, particularly for underserved and unbanked populations. The study further establishes that digital financial literacy, regulatory support, and internet accessibility play crucial roles in facilitating FinTech adoption and maximizing its impact on financial inclusion.

The findings contribute to the growing body of literature on digital finance by providing empirical insights from a developing country context. The study also validates key theoretical models, including TAM and UTAUT, in explaining FinTech adoption behavior and its outcomes. Overall, the research highlights that the integration of technology, policy support, and user capability is essential for achieving sustainable financial inclusion.

Implications

Theoretical Implications

This study extends the application of technology adoption theories by integrating TAM and UTAUT within the context of financial inclusion. It contributes to the literature by introducing a comprehensive model that incorporates mediating and moderating mechanisms, thereby offering a more nuanced understanding of the relationship between FinTech adoption and financial inclusion.

Practical Implications

For financial institutions and FinTech companies, the findings emphasize the need to design user-friendly and accessible digital payment solutions. Enhancing user experience and reducing complexity can significantly increase adoption rates. Additionally, investment in digital literacy programs can improve users' ability to engage with financial technologies effectively.

Policy Implications

Policymakers should focus on strengthening regulatory frameworks that promote innovation

while ensuring security and consumer protection. Expanding internet infrastructure, particularly in rural and underserved areas, is critical for enabling widespread adoption of digital financial services. Government-led initiatives to enhance financial and digital literacy can further accelerate financial inclusion.

Future Research Directions

Future studies can build upon this research by employing longitudinal designs to examine changes in FinTech adoption and financial inclusion over time. This would provide deeper insights into causal relationships and long-term impacts. Additionally, future research may explore the role of emerging technologies such as blockchain, artificial intelligence, and digital currencies in shaping financial inclusion.

Comparative studies across different developing countries can also provide valuable cross-cultural insights into the effectiveness of FinTech solutions. Furthermore, qualitative research approaches could be used to explore user perceptions, behavioral barriers, and trust issues associated with digital financial services. Incorporating additional variables such as cybersecurity concerns, trust, and perceived risk may further enhance the explanatory power of the model.

Recommendations

Based on the findings, several recommendations are proposed. First, financial institutions should expand their digital offerings and ensure that services are accessible, affordable, and user-friendly. Second, government and regulatory bodies should develop supportive policies that encourage FinTech innovation while maintaining financial stability and security.

Third, there is a need to invest in digital infrastructure, particularly in rural and remote areas, to bridge the digital divide. Fourth, educational institutions and policymakers should collaborate to promote digital financial literacy through targeted awareness campaigns and training programs. Finally, public-private partnerships can play a significant role in accelerating the adoption of digital financial services and enhancing financial inclusion.

Limitations

Despite its contributions, this study has several limitations. First, the use of a cross-sectional research design limits the ability to establish causality between variables. Second, the reliance on convenience sampling may affect the generalizability of the findings to the broader population. Third, the study focused primarily on quantitative data, which may not fully capture the complexity of user behavior and perceptions.

Additionally, the study was conducted within the context of Pakistan, which may limit the applicability of the findings to other countries with different socio-economic and technological environments. Future research should address these limitations by employing more diverse sampling techniques, mixed-method approaches, and cross-country analyses.

REFERENCES

Ahmed, F., Younus, H., & Sadiq, W. (2026). The impact of fintech on financial inclusion in Pakistan: An empirical analysis. *Journal of Business and Management Research, 5*(1), 171–187.

Arner, D. W., Barberis, J., & Buckley, R. P. (2017). FinTech and regtech in a nutshell, and the future in a sandbox. *Research Foundation of CFA Institute, 3*(4), 1–20.

Asim, A. W., Zafar, K., & Raees, M. (2026). Gendered digital financing adoption and women's financial inclusion in Pakistan. *arXiv Preprint*. https://arxiv.org/abs/2602.23465

Chen, M., Wu, Q., & Yang, B. (2025). Financial inclusion and fintech: A systematic literature review. *Financial Innovation, 11*(69).

Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2022). *The Global Findex database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19*. World Bank.

Fintech News Pakistan. (2025). Pakistan's digital payment channels process 88% of retail transactions in Q2-FY25.

Fintech News Pakistan. (2025). Pakistan's digital payment ecosystem sees robust growth in Q3 FY25.

INP WealthPK. (2025). Surge in digital transactions fuels Pakistan's economic momentum.

Khan, K. M., Khan, A. M., Ullah, M., Usman, A., & Farhat, S. (2020). Closing price determination; extent of manipulation and deterrent strategy formulation: A case of Pakistan Stock Exchange. *Journal of Critical Reviews, 7*(14), 2689–2705.

Ozili, P. K. (2021). Financial inclusion research around the world: A review. *Forum for Social Economics, 50*(4), 457–479.

Pakistan Today. (2025). Digital payments surge as mobile apps and Raast drive growth in third quarter.

Shaikh, S., Channar, P., Shaikh, M., & Ullah, M. (2021). Financial constraints and listed sugar mills on Pakistan Stock Exchange. *International Journal of Management, 12*(3), 70–76.

State Bank of Pakistan. (2024). *Quarterly payment systems review*. State Bank of Pakistan.

State Bank of Pakistan. (2025). *Digital financial services statistics and payment systems review*. State Bank of Pakistan.

The Express Tribune. (2024). Raast payments hit Rs1 trillion in 16 days.

Ullah, M., Afghan, N., & Afridi, A. S. (2019). Effects of corporate governance on capital structure and financial performance: Empirical evidence from listed cement corporations in Pakistan. *Global Social Sciences Review, 4*(3), 273–283.

Ullah, M., Alam, W., Khan, Y., Joseph, V., Farooq, M. S., & Noreen, S. (2022). Role of leadership in enhancing employees performance: A case of Board of Intermediate and Secondary Education, Peshawar. *Journal of Contemporary Issues in Business and Government, 28*(1), 183–193.

Ullah, M., Hamdard, M. N. (2019). CEO duality and risk: A case of textile firms listed on Pakistan Stock Exchange. *North American Academic Research, 2*(11), 122–131.

Ullah, M., Shaikh, M., Channar, P., & Shaikh, S. (2021). Financial forecasting: An individual perspective. *International Journal of Management, 12*(3), 60–69.

World Bank. (2022). *The Global Findex database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19*. World Bank.

Zaidi, S. A. M., & Shah, S. A. A. (2023). Fintech contribution towards economic prosperity in Pakistan. *Pakistan Review of Social Sciences, 4*(1), 1–14.