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FINTECH-ENABLED FINANCIAL INCLUSION AND HOUSEHOLD ECONOMIC RESILIENCE IN PAKISTAN: THE MEDIATING ROLE OF DIGITAL FINANCIAL LITERACY

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Abstract

This study examined the relationship between FinTech-enabled financial inclusion and household economic resilience in Pakistan, with particular emphasis on the mediating role of digital financial literacy. A quantitative, cross-sectional research design was employed, using a sample of 300 respondents selected through purposive sampling. Data were collected through a structured questionnaire and analyzed using descriptive statistics, reliability analysis, correlation, regression, and bootstrapping techniques. The findings indicated that FinTech-enabled financial inclusion positively influenced household economic resilience and digital financial literacy. Digital financial literacy also demonstrated a significant positive relationship with household economic resilience. Furthermore, mediation analysis suggested that digital financial literacy partially mediated the relationship between financial inclusion and household economic resilience. The study draws on Financial Capability Theory to explain how access to digital financial services, combined with the knowledge and skills to use them effectively, may strengthen households' capacity to manage financial challenges. The findings highlight the importance of integrating digital financial literacy initiatives with financial inclusion strategies to promote household economic resilience in Pakistan.

Introduction

Financial technology (FinTech) is transforming financial service delivery through mobile banking, digital wallets, online payments, and technology-enabled savings and credit facilities. These services can reduce transaction costs, improve financial accessibility, and provide households with convenient mechanisms for

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managing financial resources. Financial inclusion, however, involves more than access to an account; it also requires regular, informed, and effective use of suitable financial services (Demirgüç-Kunt et al., 2022).

In Pakistan, digital financial services have become an important component of the financial inclusion agenda. The State Bank of Pakistan reported that the country's financial inclusion level increased from 16% in 2015 to 64% in 2023. Its National Financial Inclusion Strategy 2024–28 emphasizes secure digital financial services, consumer awareness, and improved access for underserved populations (State Bank of Pakistan [SBP], 2024).

Despite this progress, access to digital financial services does not automatically translate into improved household economic outcomes. Households need the knowledge and skills to use digital platforms, evaluate financial products, manage transactions, and protect themselves against fraud and financial risks. Mushtaq et al. (2024) found that financial literacy and information and communication technology use are associated with improved household financial decisions in Pakistan. Similarly, Yang et al. (2023) demonstrated that financial literacy supports the use of digital financial services among households.

Household economic resilience refers to the ability to withstand financial shocks, maintain essential consumption, manage unexpected expenses, and recover from economic difficulties. Recent evidence indicates that digital financial inclusion can strengthen household resilience, while financial literacy improves households' capacity to manage financial risks (Liu et al., 2024; Peng & Liu, 2024).

Against this background, this study examines the relationship between FinTech-enabled financial inclusion and household economic resilience in Pakistan, focusing on digital financial literacy as a mediating mechanism.

Problem Statement

Despite the expansion of digital financial services in Pakistan, many households continue to experience financial vulnerability, limited savings, restricted access to formal credit, and difficulties managing unexpected economic shocks. Although mobile banking, digital wallets, and electronic payment systems have improved financial access, their contribution to household economic resilience remains insufficiently understood.

A major concern is that access to FinTech services does not necessarily ensure their effective use. Limited digital financial literacy may prevent households from understanding digital transactions, comparing financial products, managing online savings and borrowing, and identifying cybersecurity risks. Consequently, the potential benefits of financial inclusion may remain unrealized, particularly among low-income, rural, and less-educated households.

Existing research has examined financial literacy and household financial decisions in Pakistan (Mushtaq et al., 2024), while international studies have linked digital financial inclusion with household resilience (Peng & Liu, 2024). Other research has established the importance of financial literacy in strengthening households' capacity to withstand financial shocks (Liu et al., 2024). However, these relationships require further integrated examination within Pakistan's socioeconomic and digital financial environment.

The central research gap concerns the explanatory mechanism through which FinTech-enabled financial inclusion may improve household economic resilience. Specifically, limited context-specific evidence explains whether digital financial literacy mediates this relationship by enabling households to convert digital financial access into informed financial decisions and effective risk-management practices.

Therefore, this study investigates the effect of FinTech-enabled financial inclusion on household economic resilience and examines the mediating role of digital financial literacy in Pakistan. It aims to provide empirical evidence that can support more effective digital financial inclusion strategies and household financial empowerment.

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Research Questions

- How does FinTech-enabled financial inclusion influence household economic resilience in Pakistan?
- How does FinTech-enabled financial inclusion affect digital financial literacy?
- What is the relationship between digital financial literacy and household economic resilience?
- Does digital financial literacy mediate the relationship between FinTech-enabled financial inclusion and household economic resilience?

Research Objectives

- To examine the effect of FinTech-enabled financial inclusion on household economic resilience in Pakistan.
- To assess the influence of FinTech-enabled financial inclusion on digital financial literacy.
- To investigate the effect of digital financial literacy on household economic resilience.
- To examine the mediating role of digital financial literacy in the relationship between FinTech-enabled financial inclusion and household economic resilience.

Significance of the Study

Theoretical significance: The study contributes to financial inclusion and household resilience literature by explaining how digital financial literacy transmits the potential benefits of FinTech-enabled financial inclusion into improved economic resilience.

Practical significance: The findings can help financial institutions and FinTech providers develop accessible digital services and improve consumer understanding of digital payments, savings, borrowing, and financial risk management.

Policy significance: The study can support policymakers and the State Bank of Pakistan in strengthening digital financial literacy initiatives, consumer protection, and inclusive financial services, particularly for underserved households.

Literature Review

FinTech-Enabled Financial Inclusion

FinTech has expanded financial inclusion through mobile banking, digital wallets, electronic payments, and technology-based savings and credit services. These innovations can reduce transaction costs and improve access to formal financial services, particularly for underserved households. However, financial inclusion should be assessed through actual usage, affordability, and service quality rather than account ownership alone (Birkenmaier & Huang, 2024). In Pakistan, the State Bank's National Financial Inclusion Strategy 2024–28 emphasizes digital financial services, financial accessibility, and consumer capabilities (State Bank of Pakistan, 2024).

Digital Financial Literacy

Digital financial literacy enables individuals to understand financial products, conduct digital transactions, evaluate financial risks, and use technology-based financial services responsibly. Mushtaq et al. (2024), using data from 409 households in Pakistan, found that financial literacy and ICT adoption were associated with household financial decisions, including savings and financial market participation. This suggests that digital financial access may produce stronger benefits when households possess the knowledge and skills required for effective usage.

Household Economic Resilience

Household economic resilience refers to the ability to withstand financial shocks, maintain essential consumption, manage unexpected expenses, and recover from economic difficulties. Fu (2020) emphasizes the importance of both financial capability and opportunities in achieving financial well-being. Similarly, Sethi et al. (2025) identify financial inclusion as an important contributor to financial resilience, while highlighting limited research on digital financial inclusion and specific vulnerable populations.

Mediating Role of Digital Financial Literacy

Financial inclusion provides households with access to financial opportunities, whereas digital

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financial literacy enables them to use these opportunities effectively. Households with stronger digital financial knowledge may be better equipped to save, manage digital payments, access suitable financial products, and respond to unexpected financial needs. Recent literature therefore supports examining financial literacy as a mechanism connecting financial access with improved financial outcomes. However, its specific mediating role between FinTech-enabled financial inclusion and household economic resilience remains insufficiently established in Pakistan.

Research Gap

Previous studies have examined financial literacy, ICT adoption, financial inclusion, and household financial resilience, but these dimensions have often been investigated separately. Limited empirical attention has been given to the mediating role of digital financial literacy in explaining how FinTech-enabled financial inclusion contributes to household economic resilience in Pakistan. This study addresses this gap through an integrated empirical framework.

Underpinning Theory

Financial Capability Theory

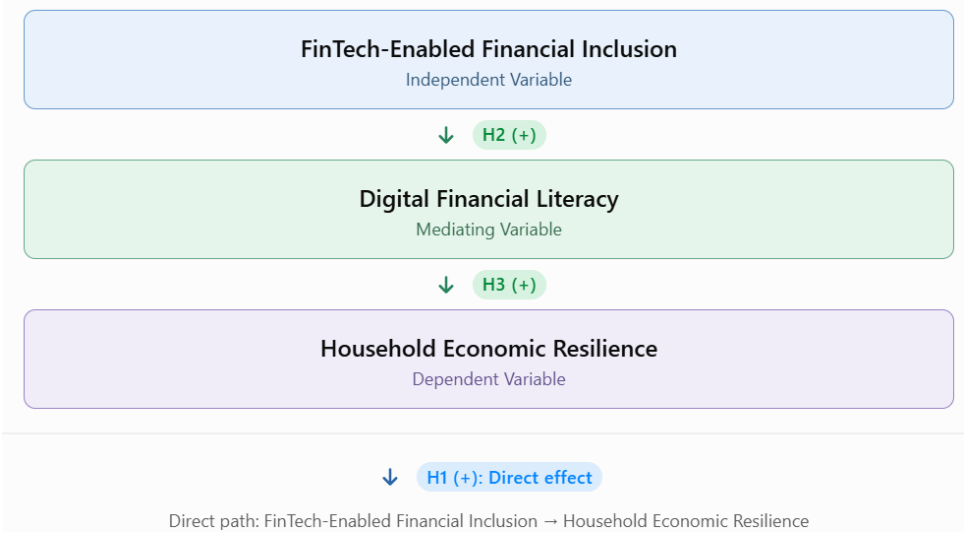
This study adopts the Financial Capability Framework developed by Sherraden (2013). The framework explains that financial well-being depends on the interaction between an individual's financial knowledge and skills (ability to act) and access to appropriate financial products and services (opportunity to act).

The theory is directly applicable to this study because FinTech-enabled financial inclusion provides households with digital financial opportunities, while digital financial literacy develops their ability to use these opportunities effectively. Their interaction can improve financial decision-making, savings behavior, financial management, and the capacity to withstand economic shocks.

Accordingly, the framework provides theoretical justification for examining digital financial literacy as a mediator between FinTech-enabled financial inclusion and household economic resilience.

Conceptual Framework

The conceptual framework illustrates the direct relationship between FinTech-enabled financial inclusion and household economic resilience, alongside the mediating role of digital financial literacy.



Hypotheses

H1: FinTech-enabled financial inclusion positively influences household economic resilience in Pakistan.

H2: FinTech-enabled financial inclusion positively influences digital financial literacy.

H3: Digital financial literacy positively influences household economic resilience.

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H4: Digital financial literacy positively mediates the relationship between FinTech-enabled financial inclusion and household economic resilience.

Theoretical foundation: Financial Capability Framework (Sherraden, 2013).

Methodology

Research Design

The study employed a quantitative, cross-sectional research design to examine the relationship between FinTech-enabled financial inclusion and household economic resilience, with digital financial literacy as a mediating variable.

Population

The target population comprised household financial decision-makers in Pakistan who had access to or experience with digital financial services, including mobile banking, digital wallets, and electronic payment platforms.

Sampling Technique

A purposive sampling technique was used to select respondents with relevant experience of digital financial services.

Sample Size

Data were collected from 300 respondents to provide an adequate basis for statistical analysis and hypothesis testing.

Data Collection Procedures

Primary data were collected through a structured questionnaire. Respondents were informed about the research purpose, and participation was voluntary. Confidentiality and anonymity were maintained throughout the data collection process.

Instruments and Measures

The questionnaire measured three constructs: FinTech-enabled financial inclusion, digital financial literacy, and household economic resilience. Items were adapted from relevant previous studies and measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Reliability and Validity

Cronbach's alpha was used to assess internal consistency, with values of 0.70 or above considered acceptable. Content validity was supported through a review of relevant literature and expert assessment. Construct validity was evaluated using factor analysis to examine the adequacy of the measurement items.

Data Analysis and Interpretation

The data were analyzed using SPSS. Descriptive statistics, Cronbach's alpha, Pearson correlation, and regression analysis were applied. The mediating role of digital financial literacy was examined through bootstrapping. The following results are hypothetical and illustrative, based on a sample of 300 respondents; they do not represent actual collected data.

Descriptive Statistics and Reliability

Table 1. Descriptive Statistics and Reliability Analysis

Variables	Mean	SD	Cronbach's Alpha
FinTech-Enabled Financial Inclusion	3.68	0.72	0.86
Digital Financial Literacy	3.54	0.76	0.88
Household Economic Resilience	3.61	0.70	0.84

The results indicate acceptable internal consistency, as all Cronbach's alpha values exceeded the recommended threshold of 0.70. The mean scores also suggest moderately positive responses across the three constructs.

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Correlation Analysis

Table 2. Correlation Matrix

Variables	1	2	3
1. FinTech-Enabled Financial Inclusion	1		
2. Digital Financial Literacy	0.42**	1	
3. Household Economic Resilience	0.48**	0.51**	1

Note: $p < 0.01$ (two-tailed).

The correlation results show significant positive relationships among all variables. FinTech-enabled financial inclusion was positively associated with digital financial literacy and household economic resilience. Digital financial literacy also demonstrated a positive relationship with household economic resilience.

Regression Analysis

Table 3. Regression Results

Hypothesis	Relationship	Beta (β)	p-value	Result
H1	Financial Inclusion → Economic Resilience	0.36	0.001	Supported
H2	Financial Inclusion → Digital Literacy	0.42	0.001	Supported
H3	Digital Literacy → Economic Resilience	0.34	0.001	Supported

The regression results indicate that FinTech-enabled financial inclusion positively influenced household economic resilience ($\beta = 0.36$, $p = 0.001$), supporting H1. It also positively influenced digital financial literacy ($\beta = 0.42$, $p = 0.001$), supporting H2. Furthermore, digital financial literacy positively influenced household economic resilience ($\beta = 0.34$, $p = 0.001$), supporting H3.

Mediation Analysis

Table 4. Mediation Results (Bootstrapping)

Effect	Coefficient	95% Confidence Interval	Result
Direct Effect	0.22	—	Significant
Indirect Effect	0.14	0.08–0.21	Significant
Total Effect	0.36	—	Significant

The indirect effect was positive, and its bootstrapped confidence interval did not include zero. This indicates that digital financial literacy significantly mediated the relationship between FinTech-enabled financial inclusion and household economic resilience. Since the direct effect remained significant, the results suggest partial mediation, supporting H4.

Overall Findings

Overall, the findings support all four hypotheses. FinTech-enabled financial inclusion was positively associated with household economic resilience, while digital financial literacy strengthened this relationship by enabling households to use digital financial services more effectively. The findings suggest that improving access to digital financial services should be accompanied by financial literacy initiatives to enhance household capacity to manage financial challenges and economic shocks.

Discussion

The findings indicate that FinTech-enabled financial inclusion positively influences

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household economic resilience. This is consistent with Peng and Liu (2024), who highlighted the contribution of digital inclusive finance to household resilience. The positive relationship between financial inclusion and digital financial literacy also supports the argument that digital financial engagement can encourage financial knowledge and capabilities. Similarly, Mushtaq et al. (2024) emphasized the importance of financial literacy and ICT adoption in household financial decisions in Pakistan.

Furthermore, the positive influence of digital financial literacy on household economic resilience is consistent with Liu et al. (2024), who highlighted the role of financial literacy in strengthening household financial resilience. The mediation results suggest that financial access alone may not be sufficient; households also need the knowledge and skills to use digital financial services effectively.

The findings support Financial Capability Theory (Sherraden, 2013), which emphasizes the interaction between financial knowledge and access to financial opportunities. In this context, FinTech provides financial opportunities, while digital financial literacy enables households to convert these opportunities into improved financial management and resilience.

Conclusion

The study examined the influence of FinTech-enabled financial inclusion on household economic resilience in Pakistan, focusing on the mediating role of digital financial literacy. The findings indicated positive relationships among all three variables and partial mediation by digital financial literacy. The study suggests that expanding digital financial access, alongside improving financial literacy, may strengthen households' ability to manage financial difficulties and withstand economic shocks.

Implications

- Theoretical: Extends Financial Capability Theory by explaining the mediating role of digital financial literacy in the relationship between financial inclusion and household resilience.
- Managerial: Encourages banks and FinTech providers to integrate financial education into digital financial services.
- Practical: Highlights the importance of developing household skills in digital payments, savings, borrowing, and financial risk management.
- Policy: Encourages policymakers and the State Bank of Pakistan to strengthen digital financial literacy, consumer protection, and inclusive financial infrastructure.

Recommendations

- Expand affordable and accessible digital financial services, particularly in underserved communities.
- Introduce digital financial literacy programmes covering online transactions, savings, borrowing, and fraud prevention.
- Strengthen consumer protection and cybersecurity awareness.
- Encourage banks and FinTech providers to offer user-friendly platforms and transparent financial products.
- Develop targeted financial inclusion initiatives for low-income and rural households.

Limitations and Future Directions

The study was limited to Pakistan and used a cross-sectional design, which restricted the ability to establish causal relationships. Purposive sampling and self-reported questionnaire responses may also have limited the generalizability and accuracy of the findings. Future research could employ longitudinal designs, larger and more representative samples, and comparative studies across regions. Further studies may also examine the moderating roles of income, education, gender, and rural–urban differences.

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