

DIGITAL FINANCIAL INCLUSION AND HOUSEHOLD FINANCIAL WELL-BEING: A COMPARATIVE STUDY OF URBAN AND RURAL INDIA

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Abstract

Digital financial inclusion has increasingly become a cornerstone of inclusive economic growth, particularly in developing economies like India where regional disparities in financial access remain pronounced. The rapid expansion of digital financial services such as mobile banking, online payments, and digital wallets has transformed the way households’ access and utilize financial resources, thereby influencing their overall financial well-being.

This study examines the impact of digital financial inclusion on household financial well-being, with a specific focus on comparing urban and rural households. It investigates how access to digital financial services, frequency of usage, and levels of financial literacy contribute to improved financial stability and security.

The study is based on primary data collected from 140 households, comprising 70 urban and 70 rural respondents, through a structured questionnaire. Statistical techniques, including descriptive analysis, correlation, and multiple regression, were applied using SPSS software to analyze the data.

The findings reveal that digital financial inclusion has a significant positive effect on household financial well-being. However, the magnitude of this impact is considerably higher among urban households, primarily due to better digital infrastructure, higher awareness, and greater financial literacy. Rural households, in contrast,

face constraints related to accessibility and digital skills, limiting the effective utilization of financial services.

The study concludes that bridging the urban–rural digital divide through targeted policy interventions, improved infrastructure, and financial education is essential for achieving equitable financial inclusion and sustainable economic development.

Keywords: Digital Financial Inclusion; Household Financial Well-Being; Urban–Rural Divide; Financial Literacy; Digital Payments; Financial Access; India

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Introduction

Financial inclusion has long been recognized as a critical driver of economic development and social equity, particularly in developing economies like India. In recent years, the concept has evolved significantly with the integration of digital technologies, giving rise to what is now widely termed as digital financial inclusion. This transformation has enabled individuals and households to access a wide range of financial services—such as savings, payments, credit, and insurance—through digital platforms, thereby reducing traditional barriers related to distance, cost, and documentation.

India has witnessed remarkable progress in expanding digital financial services, supported by policy initiatives, technological advancements, and increased smartphone penetration. The rapid adoption of digital payment systems and online banking platforms has significantly improved the reach of financial services, especially in urban areas. However, despite these advancements, a considerable gap persists between urban and rural regions in terms of access, usage, and effectiveness of digital financial services.

Household financial well-being, which reflects the ability of individuals to manage their financial resources, meet expenses, save for future needs, and withstand economic shocks, is an important indicator of inclusive growth. Access to digital financial services has the potential to enhance financial well-being by promoting savings behaviour, improving financial planning, and reducing transaction costs. However, the extent to which these benefits are realized depends largely on factors such as digital literacy, awareness, infrastructure, and socio-economic conditions.

In the Indian context, rural households often face multiple challenges, including limited internet connectivity, lower levels of financial literacy, and restricted access to digital devices. These constraints hinder the effective utilization of digital financial services, thereby limiting their impact on financial well-being. In contrast, urban households are better positioned to leverage digital platforms due to higher levels of education, awareness, and infrastructure availability.

While existing studies have highlighted the role of financial inclusion in improving economic outcomes, there is limited empirical research that comparatively examines the impact of digital financial inclusion on household financial well-being across urban and rural settings. Most studies tend to focus either on access to financial services or on aggregate outcomes, without adequately capturing the differential effects at the household level.

Against this backdrop, the present study seeks to bridge this gap by analyzing how digital financial inclusion influences household financial well-being, with a comparative focus on urban and rural India. By examining variations in access, usage, and financial outcomes, the study aims to provide deeper insights into the effectiveness of digital financial initiatives and their role in promoting inclusive and sustainable development.

Literature Review

The concept of financial inclusion has evolved significantly over the past decade, particularly with the integration of digital technologies. Financial inclusion broadly refers to access to formal financial services, while digital financial inclusion extends this concept by leveraging digital platforms to enhance accessibility, efficiency, and affordability. Early studies emphasized the role of financial inclusion in reducing poverty and promoting economic growth, highlighting its importance in improving household welfare (Allen et al., 2016).

Recent research has shifted focus toward the impact of digital financial inclusion on financial well-being, recognizing that access alone is insufficient without effective usage. Empirical evidence suggests that financial inclusion, combined with digital financial literacy, significantly enhances household financial

well-being. For instance, a study using Indian data found that both financial inclusion and digital financial literacy positively influence financial well-being, with inclusion playing a dominant role.

Digital financial services, including mobile banking and digital payments, have been shown to improve financial behaviour by encouraging savings, formal borrowing, and investment. Studies indicate that the use of mobile financial services increases participation in formal financial systems and enhances financial security among households. This is particularly relevant in developing economies, where digital platforms help overcome geographical and infrastructural barriers.

However, the relationship between digital financial inclusion and well-being is not always uniform. Some studies argue that while digital finance expands access to credit and financial services, it may also expose households to financial risks such as over-indebtedness and poor financial decision-making. This highlights the importance of responsible usage and financial awareness in ensuring positive outcomes.

A key determinant of effective digital financial inclusion is digital financial literacy, which encompasses both financial knowledge and the ability to use digital tools. Research consistently shows that individuals with higher digital literacy are better equipped to utilize financial services efficiently, leading to improved financial outcomes. Conversely, low levels of literacy limit the benefits of digital inclusion, particularly among vulnerable populations.

In the Indian context, several studies highlight the role of government initiatives and fintech innovations in promoting financial inclusion. The expansion of digital infrastructure and policy support has significantly increased access to financial services. However, structural challenges such as socio-economic disparities, limited awareness, and technological barriers continue to affect adoption rates.

The urban–rural divide remains one of the most critical issues in digital financial inclusion. Urban households generally exhibit higher levels of access, usage, and financial literacy compared to rural households. Research indicates that rural populations face challenges such as limited internet connectivity, lack of digital skills, and lower levels of education, which restrict the effective use of digital financial services.

Further studies emphasize the role of self-help groups and community-based financial systems in enhancing digital financial inclusion in rural areas. These groups act as intermediaries, facilitating access to credit and promoting financial awareness, thereby contributing to improved financial well-being.

The impact of digital financial inclusion also extends to broader socio-economic outcomes. It has been linked to improved access to healthcare, education, and employment opportunities, thereby contributing to overall well-being. Digitalization of financial services has also been found to enhance banking efficiency and reduce transaction costs, making financial services more accessible to marginalized populations.

Recent literature also explores demographic factors influencing financial inclusion, such as gender, income, and education. Studies suggest that women and low-income groups often face greater barriers to digital financial access, which affects their financial well-being. Addressing these disparities is crucial for achieving inclusive financial development.

Despite the growing body of research, there remains a need for more empirical studies focusing on the comparative impact of digital financial inclusion on urban and rural households. While existing studies have examined financial inclusion and digital literacy independently, limited research has integrated these dimensions to assess their combined effect on household financial well-being.

Overall, the literature highlights that digital financial inclusion has the potential to significantly improve financial well-being, but its effectiveness depends on multiple factors, including literacy, infrastructure, and socio-economic conditions. The present study builds on this foundation by providing a comparative analysis

of urban and rural households in India, thereby contributing to a more nuanced understanding of digital financial inclusion.

Research Gap

Despite the growing body of literature on financial inclusion and digital finance, several important gaps remain unaddressed. First, most existing studies examine financial inclusion and household financial well-being independently, with limited integration of these concepts in a unified analytical framework. As a result, the direct linkage between digital financial inclusion and financial well-being at the household level is not sufficiently explored.

Second, while digital financial services have expanded rapidly in India, empirical evidence comparing their impact across urban and rural households remains scarce. The majority of prior research focuses either on aggregate national-level data or specific regions, without adequately capturing the urban–rural disparities in access, usage, and outcomes.

Third, many studies emphasize access to financial services but do not adequately examine actual usage and effectiveness, which are critical determinants of financial well-being. Simply having access to digital financial tools does not necessarily translate into improved financial outcomes unless they are actively and effectively utilized.

Another key gap lies in the limited use of primary data to capture real-time household experiences. Much of the existing research relies on secondary datasets, which may not fully reflect the behavioural and practical challenges faced by households, particularly in rural areas.

Finally, there is insufficient attention to the role of digital financial literacy as an enabling factor that bridges the gap between access and effective usage. Without adequate literacy, households may not fully benefit from digital financial services, thereby limiting their impact on financial well-being.

In light of these gaps, the present study attempts to provide a comparative, empirical analysis of urban and rural households, focusing on how digital financial inclusion influences financial well-being through access, usage, and literacy dimensions.

Objectives of the Study

The study is designed to achieve the following objectives:

1. To assess the level of digital financial inclusion among urban and rural households.
2. To examine the impact of digital financial inclusion on household financial well-being.
3. To compare the financial well-being of urban and rural households.
4. To analyze the role of digital financial literacy in influencing financial outcomes.
5. To identify key challenges faced by rural households in accessing and utilizing digital financial services.

Hypotheses of the Study

Based on the above objectives, the following hypotheses are formulated:

- ❖ H1: Digital financial inclusion has a significant positive impact on household financial well-being.
- ❖ H2: There is a significant difference in the level of digital financial inclusion between urban and rural households.
- ❖ H3: Household financial well-being is significantly higher in urban areas compared to rural areas.
- ❖ H4: Digital financial literacy significantly influences the effective use of digital financial services.
- ❖ H5: The impact of digital financial inclusion on financial well-being is stronger in urban households than in rural households.

Research Methodology

The present study adopts a quantitative research approach to examine the impact of digital financial inclusion on household financial well-being, with a comparative focus on urban and rural India. The research design is descriptive and analytical, enabling both the description of existing conditions and the testing of relationships among key variables.

Data Source and Collection

The study is based on primary data collected through a structured questionnaire. The instrument was carefully designed to capture information related to digital financial access, usage patterns, financial literacy, and indicators of household financial well-being. The questionnaire consists of two sections:

- (i) demographic profile of respondents, and
- (ii) perception-based statements measured using a five-point Likert scale (ranging from “strongly disagree” to “strongly agree”).

A pilot study was conducted to ensure clarity, relevance, and reliability of the questionnaire items before full-scale data collection.

Sample Design

The target population comprises households in both urban and rural areas. A comparative sampling framework was adopted to ensure balanced representation. The study includes a total sample of 140 households, consisting of:

- ❖ 70 Urban Households
- ❖ 70 Rural Households

A convenience sampling technique was used due to accessibility and practical constraints. Efforts were made to include respondents from diverse socio-economic backgrounds to improve the representativeness of the sample.

Variables of the Study

- ❖ Independent Variable: Digital Financial Inclusion
(Measured through access, usage, and availability of digital financial services)
 - ❖ Dependent Variable: Household Financial Well-Being
(Measured through savings behaviour, financial security, and ability to manage expenses)
 - ❖ Mediating Variable: Digital Financial Literacy
- Control Variables: Age, income level, education, occupation, and location (urban/rural)

Tools and Techniques Used

Data analysis was carried out using the Statistical Package for Social Sciences (SPSS). The following statistical tools were employed:

- ❖ Descriptive Statistics (mean, percentage, standard deviation) to summarize respondent characteristics
- ❖ Independent Sample t-test to compare urban and rural households
- ❖ Correlation Analysis to examine relationships between digital inclusion and financial well-being
- ❖ Multiple Regression Analysis to assess the impact of digital financial inclusion on financial well-being
- ❖ Reliability Analysis (Cronbach’s Alpha) to test internal consistency of the scale

Validity and Reliability

The reliability of the measurement scale was tested using Cronbach’s Alpha, and all constructs recorded values above the acceptable threshold of 0.70, indicating good internal consistency. Content validity was ensured through a thorough review of existing literature and expert consultation during questionnaire design.

Scope of the Study

The study focuses on examining the role of digital financial inclusion in influencing household financial well-being, with a comparative perspective between urban and rural households in India. It does not include institutional or corporate-level analysis.

Limitations of the Methodology

- ❖ The use of convenience sampling may limit the generalizability of findings
- ❖ The study is based on self-reported responses, which may involve subjective bias
- ❖ The sample size is limited to 140 households

Data Analysis and Interpretation

Reliability Analysis

Variable	Cronbach's Alpha
Digital Financial Inclusion	0.82
Financial Literacy	0.79
Financial Well-Being	0.84

Interpretation:

All Cronbach's Alpha values are above 0.70, indicating strong internal consistency and reliability of the measurement scale. This confirms that the questionnaire is suitable for further statistical analysis.

Descriptive Statistics (Urban vs Rural Comparison)

Variable	Urban Mean	Rural Mean
Digital Financial Inclusion	4.12	3.41
Financial Literacy	4.00	3.22
Financial Well-Being	4.08	3.35

Interpretation:

The results clearly show that urban households score higher in all three dimensions compared to rural households. The largest gap is observed in digital financial inclusion, indicating unequal access and usage of digital financial services. Financial well-being is also significantly higher in urban areas, suggesting that better financial access and literacy contribute to improved household financial outcomes.

Independent Sample t-Test (Urban vs Rural Differences)

Variable	t-value	p-value	Result
Digital Financial Inclusion	5.62	0.000	Significant
Financial Literacy	4.88	0.000	Significant
Financial Well-Being	5.10	0.000	Significant

Interpretation:

The t-test results confirm a statistically significant difference between urban and rural households across all variables. This indicates that location plays a crucial role in determining access to digital financial services and overall financial well-being.

Correlation Analysis

Variables	DFI	Financial Literacy	Financial Well-Being
Digital Financial Inclusion	1	0.62**	0.71**
Financial Literacy	0.62**	1	0.68**
Financial Well-Being	0.71**	0.68**	1

Note: $p < 0.01$

Interpretation:

The results indicate a strong positive relationship between digital financial inclusion and household financial well-being. Financial literacy also shows a significant positive correlation, suggesting that households with higher literacy levels are more likely to benefit from digital financial services.

Regression Analysis

Model Summary

R	R ²	Adjusted R ²
0.74	0.55	0.53

ANOVA

F-value	Sig.
85.32	0.000

Coefficients

Variable	Beta	t-value	Sig.
Digital Financial Inclusion	0.45	7.12	0.000
Financial Literacy	0.38	6.44	0.000

Interpretation:

The regression results indicate that the model is statistically significant, with an R² value of 0.55, meaning that 55% of the variation in household financial well-being is explained by digital financial inclusion and financial literacy. Digital financial inclusion has a stronger impact ($\beta = 0.45$) compared to financial literacy ($\beta = 0.38$), confirming its central role in improving household financial outcomes.

Discussion

The findings of this study strongly support existing literature on digital financial inclusion and household financial well-being. The results confirm that digital financial inclusion has a significant positive impact on financial well-being, which is consistent with earlier studies emphasizing that access to financial services enhances savings behaviour, financial security, and economic stability.

The observed urban–rural disparity aligns with previous research indicating that urban households benefit more from digital financial services due to better infrastructure, higher education levels, and greater financial awareness. Rural households, on the other hand, face structural barriers such as limited internet connectivity, low digital literacy, and inadequate awareness, which restrict the effective use of financial services.

The strong positive relationship between financial literacy and financial well-being supports earlier findings that financial knowledge plays a critical role in enabling individuals to effectively utilize financial services. Studies have consistently shown that without adequate financial literacy, the benefits of digital financial inclusion remain limited, particularly in rural regions.

Furthermore, the regression results highlight that digital financial inclusion is a stronger predictor of financial well-being compared to financial literacy alone. This finding is consistent with modern financial inclusion literature, which argues that access and usage of digital platforms are primary drivers of financial empowerment, while literacy acts as a supporting factor.

The study also reinforces the argument that digital financial inclusion contributes not only to financial access but also to improved financial behaviour, including better savings habits and financial planning. However, the persistence of the urban–rural gap suggests that the benefits of digital finance are not evenly distributed, highlighting the need for targeted policy interventions.

Overall, the findings extend existing literature by providing empirical comparative evidence from urban and rural India, demonstrating that while digital financial inclusion improves financial well-being, its impact is moderated by literacy and infrastructure disparities.

Conclusion

This study examined the impact of digital financial inclusion on household financial well-being with a comparative focus on urban and rural India. The empirical evidence clearly demonstrates that digital financial inclusion plays a significant role in enhancing household financial well-being by improving access to financial services, strengthening financial decision-making, and promoting better financial management practices.

The findings reveal a marked disparity between urban and rural households, with urban respondents exhibiting higher levels of digital financial inclusion, financial literacy, and overall financial well-being. This urban–rural divide highlights the persistent structural inequalities in access to digital infrastructure and financial awareness, which continue to limit the full benefits of digital transformation in rural India.

The statistical analysis confirms that both digital financial inclusion and financial literacy significantly influence household financial well-being, with digital inclusion emerging as the stronger predictor. This indicates that while financial knowledge is important, actual access to and usage of digital financial services play a more dominant role in shaping financial outcomes.

Overall, the study concludes that digital financial inclusion is a key enabler of inclusive economic development. However, its effectiveness is contingent upon supportive infrastructure, user awareness, and financial literacy. Without addressing these enabling factors, the benefits of digital finance may remain unevenly distributed across different population segments.

The study contributes to the growing body of literature by providing empirical evidence from a comparative urban–rural perspective in the Indian context, thereby offering valuable insights for policymakers and financial institutions.

Managerial and Policy Implications

- ❖ Policymakers should prioritize the expansion of reliable digital infrastructure in rural areas, including internet connectivity, mobile network coverage, and access to digital banking platforms. Improved infrastructure is essential to bridge the urban–rural divide in financial inclusion.
- ❖ Financial institutions and government agencies must implement targeted financial literacy campaigns, especially in rural regions. These programs should focus on educating households about digital payment systems, online banking safety, and effective financial planning.
- ❖ Banks and fintech companies should design simplified, multilingual, and user-friendly digital financial tools to ensure accessibility for individuals with limited education and digital skills.
- ❖ There is a need to strengthen the presence of banking correspondents, microfinance institutions, and fintech agents in rural areas to improve last-mile delivery of financial services.
- ❖ Government policies such as Digital India and financial inclusion missions should be better integrated with rural development programs to ensure holistic socio-economic growth.
- ❖ Building trust is critical for adoption. Awareness campaigns highlighting security features, grievance redressal mechanisms, and consumer protection policies can help increase confidence in digital financial systems.
- ❖ Regular assessment of digital financial inclusion initiatives should be conducted using measurable indicators such as usage frequency, transaction volume, and improvement in household financial well-being.

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