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DIGITAL FINANCIAL LITERACY AND FINTECH USAGE BEHAVIOUR AMONG RURAL HOUSEHOLDS IN SURAT DISTRICT

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ABSTRACT
The rapid growth of financial technology (FinTech) has transformed financial service delivery in India. However, its adoption in rural areas remains uneven due to limited digital financial literacy. This study examines the impact of digital financial literacy on FinTech usage behaviour among rural households in Surat District, Gujarat. Using primary data collected from rural respondents, the study analyses how digital knowledge, trust, accessibility, and socio-economic factors influence the adoption of FinTech services such as mobile banking, UPI, and digital wallets. The findings reveal that digital financial literacy significantly affects FinTech usage behaviour, while factors such as education, income, and internet accessibility also play a crucial role. The study highlights the importance of digital awareness initiatives for enhancing financial inclusion in rural areas.

KEYWORDS: Digital Financial Literacy, FinTech, Rural Households, Financial Inclusion, Technology Adoption

INTRODUCTION

In recent years, the rapid advancement of digital technologies has significantly transformed the global financial landscape. The emergence of Financial Technology (FinTech) has revolutionized the way financial services are delivered and accessed, making them more efficient, accessible, and user-friendly. In India, initiatives such as Digital India, Jan Dhan Yojana, and the widespread adoption of mobile internet have accelerated the growth of digital financial services, particularly in the form of mobile banking, Unified Payments Interface (UPI), and digital wallets. These developments have played a crucial role in promoting financial inclusion by bringing previously unbanked and underbanked populations into the formal financial system.

Despite these advancements, a substantial gap still exists between urban and rural areas in terms of FinTech adoption. Rural households, especially in regions like Surat District in Gujarat, face multiple challenges such as lack of awareness, limited access to digital infrastructure, low levels of education, and trust deficits in digital platforms. These barriers hinder the effective utilization of digital financial services, thereby limiting the potential benefits of FinTech in rural economies. While technological infrastructure has expanded considerably, the ability of individuals to understand, evaluate, and use these technologies effectively remains uneven.

In this context, the concept of digital financial literacy has gained increasing importance. Digital financial literacy refers to the knowledge and skills required to use digital financial products and services safely and effectively. It encompasses understanding digital payment systems, awareness of online financial risks, ability to navigate mobile applications, and making informed financial decisions in a digital environment. For rural households, digital financial literacy is not only about accessing technology but also about building confidence and trust in using these platforms.

The relationship between digital financial literacy and FinTech usage behaviour is particularly significant in rural settings. Individuals with higher levels of digital financial literacy are more likely to adopt and use FinTech services such as mobile banking, online fund transfers, and digital payment systems. On the other hand, those with limited digital knowledge may hesitate to engage with such technologies due to fear of fraud, lack of technical skills, or perceived complexity. Therefore, digital financial literacy acts as a key enabler in bridging the gap between availability and actual usage of FinTech services.

Furthermore, several socio-economic and demographic factors influence FinTech usage behaviour among rural households. Factors such as education level, income, age, occupation, and access to smartphones and internet connectivity play a critical role in shaping individuals' adoption of digital financial services. Trust in digital platforms, perceived ease of use, and perceived usefulness are also important determinants, as highlighted by established theoretical models such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). These models suggest that individuals are more likely to adopt technology when they perceive it as beneficial, easy to use, and supported by facilitating conditions.

REVIEW OF LITERATURE

Aryan Priyadarshi(2025) has conducted a study on FinTech-Driven Financial Inclusion in Rural India: Barriers, Opportunities, and Behavioral Insights. The study aims to investigate how FinTech can drive f inancial inclusion in rural India by analyzing rural consumers' financial behavior and the factors influencing FinTech adoption. This study employed an empirical, quantitative methodology, data were collected via a standardized online questionnaire from 257 respondents, focusing on financial behavior, digital financial literacy, and overall financial inclusion. Analysis of this data by implying ANOVA and Regression analysis revealed critical insights into the strategies, impacts, and challenges encountered by FinTech initiatives. The findings reveal that societal norms often overlook the gender gap and limit women's involvement in financial decision making.

Mohd Umar Farukh &Mohammad Taqi(2025) has done a research on Fintech Innovations and the Transformation of Rural Financial Ecosystems in India. The main goal of this study is Evaluate the impact of financial technology businesses on increasing financial inclusion for India's under banked and unbanked population. This mixed-methods study examines how FinTech is narrowing the financial gap for unbanked people using quantitative econometric analysis and qualitative case study assessments. Digital financial innovation and regulatory support encourage inclusive growth in underdeveloped economies, whereas rich nations benefit from sophisticated banking institutions.

Varun Kesavan & Aruna Polisetty (2025) has donr a research on an extensive examination of the influence of financial technology (Fintech) on advancing financial inclusion: a bibliometric investigation. This study indicates that successful fintech innovation enhances financial inclusion by bridging the divide between urban and rural communities, eventually contributing to sustainability. Likewise, effective f inancial innovation fosters increased growth in green investments, green initiatives, and green finance, transitioning economies from a linear to a circular model.

Prashasti Keshari and Awadhesh Kumar Tiwari(2026) has done a research on Financial inclusion in rural region—a review and research agenda This article systematically reviews the state of financial inclusion in rural regions to consolidate fragmented knowl edge, identify research gaps, and propose a future research agenda. Following the SPAR-4-SLR (Scientific Procedures and Rationales for Systematic Literature Reviews) protocol, 107 peer-reviewed articles indexed in Web of Science between 2010 andApril 2025 were selected and analysed. The review shows a sharp rise in financial inclusion research after 2020, with a strong concentration of studies in a few emerging economies and a predominant focus on access and usage, while availability and adoption of financial technology remain relatively underexplored.

Chun-Teck Lye and Lee-Ying Tay(2025) has done a research on these articles were published in 136 indexed journals before 2025, involving 160 authors and affiliations from 64 countries. Descriptive statistics show that research focusing on women, poverty and rural communities has received much attention, whereas research concerning the elderly and people with disabilities remains limited. The literature generally suggests that while fintech has the potential to facilitate financial inclusion for vulnerable groups, persistent challenges remain, particularly in addressing geographic, demographic and socio-economic inequalities.

Dogan Basar and Halit Keskin(2025) has done a research on Digital financial literacy and savings behavior: A comprehensive cross-country analysis of FinTech adoption patterns and economic outcomes across 12 nations. This study explores how financial technology (FinTech) and the level of financial literacy come together to shape savings behavior across 12 countries, spanning advanced, fast-developing, and emerging economies. Based on a large-scale survey of over 30,000 individuals, we employed a multi-level analytical approach that accounts for differences between individuals and across regions and national contexts. The findings revealed a consistent pattern: individuals who actively use FinTech tools tend to save more, particularly when supported by robust financial literacy.

Muhammed Basid Amnas and Murugesan Selvam (2024) has done a research on FinTech and Financial Inclusion: Exploring the Mediating Role of Digital Financial Literacy and the Moderating Influence of Perceived Regulatory Support. This study concentrated on understanding why people use FinTech and how it affects their access to financial services by taking into account the mediating role of digital financial literacy and the moderating effect of perceived regulatory support. This study used partial least squares structural equation modeling (PLS-SEM) for testing the research model by collecting data from 608 FinTech users in India. The results revealed the role of trust, service quality, and perceived security are essential in promoting the utilization of FinTech services.

Maheswar Sethi and Chandrika Prasad Das(2025) has done a research on Financial inclusion and financial resilience: insights from current literature and future research agenda through bibliometric and content analysis approach. This study uses bibliometric and content analysis to identify influential characteristics of published literature, research streams, and future research issues. The present study has been administered to elucidate the knowledge map and information gap in the field of financial inclusion and financial resilience. The study highlights the combined development in the financial inclusion and financial resilience literature and their connected research areas. The study demonstrates several areas that can be taken as part of the future research agenda.

Nothera R Marak and Lakshmana Rao Ayyagari(2025) has done a research on Artificial intelligence for financial inclusion and sustainable development: a systematic literature review. The study examines how Artificial Intelligence

(AI) enhances financial inclusion and contributes to the United Nations Sustainable Development Goals (SDGs), focusing on fostering equitable development in low-income and underserved regions. The paper employs a Systematic Literature Review (SLR) approach, guided by the PRISMA framework, to analyse peer-reviewed research published between 2017 and 2025. The findings from this study confirm that AI holds transformative potential to promote financial inclusion and support sustainable development. However, realising this potential requires a holistic approach, one that integrates technological innovation with ethical safeguards, contextual understanding, and developmental priorities.

Research Objectives:
1. To assess the level of digital financial literacy among rural households in Surat District.
2. To analyse the extent of awareness and usage of FinTech services among rural households.
3. To identify the key factors that influencing the adoption of FinTech services in rural areas.
4. To evaluate the role of digital platforms (such as mobile applications and internet services) in facilitating FinTech adoption in rural areas.

Hypothesis Of The Study:

H1: There is a significant difference in Digital Financial Literacy across demographic groups of rural households in Surat District.

H2: There is a significant relationship between awareness and usage of FinTech services among rural households.

H3: Factors such as education, income, and accessibility significantly influence the adoption of FinTech services in rural areas.

H4: Digital platforms (mobile applications and internet services) significantly facilitate FinTech adoption in rural areas.

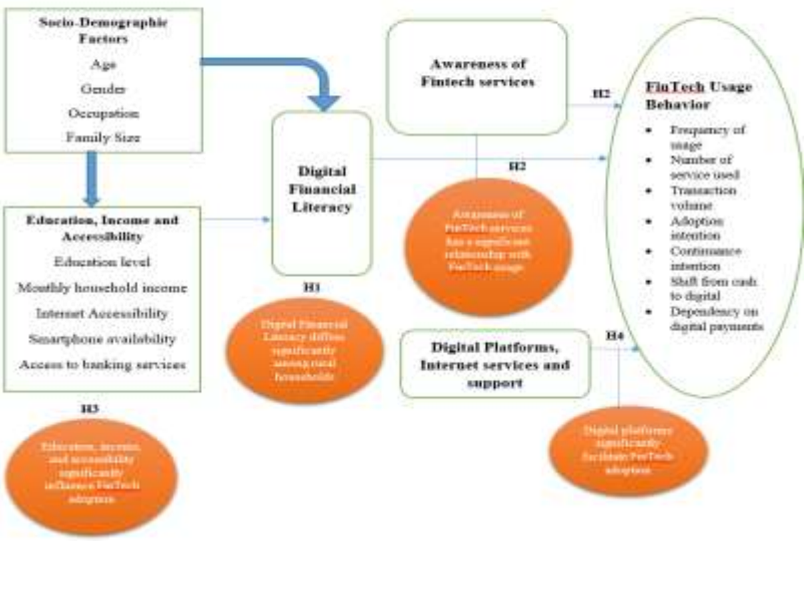
RESEARCH METHODOLOGY

The research methodology of this study is rooted in a quantitative research paradigm supported by descriptive and analytical strategies. The present study adopted a descriptive and analytical research design to examine Digital Financial Literacy and FinTech Usage Behaviour among Rural Households in Surat District, Gujarat. The study is based on primary data gathered from 150 rural household respondents residing in the rural areas of Surat District. The sampling technique employed is non-probability convenience sampling, primarily due to the accessibility of respondents across various rural localities. A structured questionnaire designed on a 5-point Likert Scale served as the primary data collection tool, covering demographic profile, digital financial literacy, awareness and usage of FinTech services, factors influencing FinTech adoption, and the role of digital platforms in facilitating usage. Prior to the main survey, a pilot study was conducted to validate the questionnaire for clarity, reliability, and content accuracy, and feedback obtained was utilized to refine the final instrument.

In addition to primary data, secondary data was collected from peer-reviewed research journals, academic books, government policy documents, Reserve Bank of India (RBI) publications, National Bank for Agriculture and Rural Development (NABARD) reports, and Scopus-indexed scholarly articles to build the theoretical foundation of the study. The geographical scope of the study was limited to rural areas of Surat District, which serves as a suitable context for studying FinTech adoption due to its economically vibrant yet digitally diverse landscape.

For statistical analysis, the study utilized IBM SPSS Statistics for processing descriptive and inferential data. Statistical tools such as Percentage Analysis, Cronbach's Alpha, Independent Sample t-test, Pearson Correlation, Multiple Regression Analysis, and Simple Regression Analysis were applied to test the formulated hypotheses and examine the relationships between demographic variables, socio-economic factors, digital platforms, and FinTech usage behaviour among rural households in Surat District

Conceptual Framework



Data Analysis & Interpretation:

HYPOTHESIS	PREDICTOR	Test Used	Statistical value	p-value	R square
H1	Digital Financial Literacy among rural households	Independent Sample t-test	t = 0.049	0.961	-
H2	Awareness ↔FinTech Usage	Pearson Correlation	r = 0.066	0.421	-
H3	Education, Income & Accessibility → FinTech Adoption	Multiple Regression	F = 0.704	0.551	0.014
H4	Digital Platforms → FinTech Adoption	Simple Regression	β = -0.210, F = 6.859	0.010	0.044

The t-test results indicate no significant difference in Digital Financial Literacy among rural households ($p = 0.961 > 0.05$). Therefore, the hypothesis proposing a significant difference is not supported statistically, and the null hypothesis is accepted.

Pearson correlation analysis shows a very weak positive relationship between awareness and FinTech usage ($r = 0.066$), but this relationship is statistically insignificant ($p = 0.421 > 0.05$). Hence, H2 is rejected.

Multiple regression results reveal that education, income, and accessibility do not significantly influence FinTech adoption, as the model is statistically insignificant ($F = 0.704$; $p = 0.551$) with very low explanatory power ($R^2 = 0.014$). Therefore, H3 is rejected.

Regression analysis confirms that digital platforms significantly influence FinTech adoption ($p = 0.010 < 0.05$). Although the coefficient is negative ($\beta = -0.210$), the relationship is statistically significant. Hence, H4 is accepted.

The hypothesis testing results provide a comprehensive understanding of the factors influencing FinTech usage behaviour among rural households in Surat District. The findings reveal that Digital Financial Literacy does not significantly differ among respondents, indicating a relatively similar level of digital financial knowledge across the sample population. Further, the relationship between awareness of FinTech services and actual usage behaviour was found to be positive but statistically insignificant, suggesting that awareness alone is not sufficient to drive adoption or regular usage of digital financial services in rural areas. Similarly, education level, monthly household income, and accessibility factors did not show a significant influence on FinTech adoption, implying that socio-economic characteristics alone may not be strong determinants of usage behaviour in the present context. However, the study found that digital platforms such as mobile applications and internet services significantly influence FinTech adoption, highlighting the critical role of technological infrastructure, usability, and digital service delivery in encouraging rural households to engage with FinTech services. Overall, the results suggest that while individual awareness and socio-economic factors have limited impact, the availability, effectiveness, and accessibility of digital platforms emerge as the most important driver of FinTech adoption among rural households, thereby emphasizing the need for stronger digital infrastructure and user-friendly financial technologies to enhance financial inclusion in rural regions.

CONCLUSIONS

The present study examined the relationship between Digital Financial Literacy and FinTech Usage Behaviour among Rural Households in Surat District, with special emphasis on awareness, socio-economic factors, and the role of digital platforms in influencing adoption behaviour. The findings indicate that the level of digital financial literacy among rural households is relatively similar across demographic groups, suggesting that differences in age, gender, occupation, and family background do not create major variations in digital financial understanding. Further, the study found that although awareness regarding FinTech services exists among respondents, awareness alone does not significantly translate into actual usage behaviour, indicating that knowledge without practical motivation or trust may not lead to adoption. The analysis also revealed that traditional socio-economic determinants such as education, income, and accessibility have limited influence on FinTech adoption in rural settings. However, the most significant finding of the study is that digital platforms, including mobile applications, internet connectivity, and digital service accessibility, play a crucial role in facilitating FinTech adoption. This demonstrates that technological convenience, ease of access, and platform usability are stronger determinants of adoption than awareness or demographic factors. Overall, the study concludes that improving digital infrastructure, platform reliability, digital trust, and user-friendly financial technologies is essential for strengthening financial inclusion and encouraging wider FinTech adoption among rural households in Surat District.

Recommendations

Based on the findings of the study, it is recommended that the government, telecom providers, and financial institutions collaboratively strengthen digital infrastructure in rural areas of Surat District by expanding internet connectivity, mobile network coverage, and affordable smartphone access. Regular digital financial literacy programmes and awareness campaigns should be conducted at the village level in local languages to bridge the gap between awareness and actual usage of FinTech services. FinTech companies and banks should develop simple, intuitive, and vernacular-language-

supported mobile applications tailored for rural users, while simultaneously integrating cybersecurity awareness and fraud prevention education to build trust and confidence among rural households in using digital financial platforms.
Furthermore, policymakers should design inclusive and gender-sensitive digital financial interventions specifically targeting women, elderly individuals, and other vulnerable groups who remain underserved in FinTech adoption. Existing government schemes such as Jan Dhan Yojana and Digital India should be more effectively leveraged through collaboration with self-help groups (SHGs), local community leaders, and NGOs to accelerate last-mile delivery of digital financial services. Since digital platforms emerged as the strongest driver of FinTech adoption in this study, continuous improvement in platform reliability, usability, and service quality must be prioritized to sustain rural user engagement and ultimately enhance financial inclusion across rural communities in Surat District.

Scope For Future Research

The present study opens several avenues for future research. Future studies may extend the geographical coverage to other rural districts across Gujarat and India to examine whether the patterns observed in Surat District hold across diverse socio-economic and cultural contexts, and a larger probability-based sample would further strengthen the generalizability of findings. A mixed-methods approach incorporating qualitative techniques such as in-depth interviews and focus group discussions could provide deeper insights into the motivations and barriers experienced by rural FinTech users, while longitudinal studies tracking changes over time would offer a dynamic understanding of adoption trends and the impact of policy interventions. Future researchers may also investigate the moderating roles of digital trust, perceived security, and social influence, the mediating role of financial self-efficacy, and may apply established theoretical frameworks such as UTAUT2 or the Diffusion of Innovation theory to build a more robust conceptual understanding of FinTech adoption behaviour in rural India.

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