

An Empirical Study on the Role of Fintech in Promoting Financial Inclusion in Rural Areas of Vadodara District, Gujarat, India

Dr. Kalpana¹, Ashish Brahmshatriya²

¹Assistant Professor, Department of Business Economics, Faculty of Commerce, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India.

²Student, M.Com. Semester IV, Department of Business Economics, Faculty of Commerce, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India.

DOI: <https://doi.org/10.47772/IJRISS.2026.1015EC0091>

Received: 14 August 2026; Accepted: 20 August 2026; Published: 24 August 2026

ABSTRACT

The study explores the significance of Financial Technology known as FinTech in the promotion of financial services for the people in rural areas of Vadodara district in Gujarat. Financial inclusion is not just about having a bank account; it refers to actual use of formal financial services, which comprises digital payments, savings, lending, insurance and other social support schemes. The study is designed as a type of survey employing quantitative research methodology. Primary data were collected through a structured survey following and a self-administered questionnaire. A total of 74 valid responses were analyzed.

The study aims to examine the awareness, usage, benefits gained and the challenges involved in accessing FinTech services by the respondents. Descriptive analysis discloses that the majority of the respondents have bank accounts and are familiar with electronic finance models. UPI, ATM/debit cards, and mobile banking are the use of most familiar services.

Chi-square tests were used to determine the relationship between FinTech adoption and various demographic, economic and cognitive factors. The outcome presented that usage of FinTech in one way or the other is related to monthly income levels, knowledge of the existence of digital financial services, the feeling that digital payment is safe, the feeling that banking services are being used efficiently, and the ease of accessing the formal banking system. However, in the aspects of gender and age, receipt of benefits from the government and general issues did not show any significant relationships with the adoption of FinTech.

The study concludes that FinTech plays an important supportive role in promoting financial inclusion among the sampled rural respondents. However, the study is limited to a smaller sample size, which can impact the generalization of the findings to the whole population.

Keywords: FinTech, Financial Inclusion, Rural Gujarat, Digital Payments, UPI, Digital Literacy.

INTRODUCTION

Financial inclusion is the provision of formal financial services to everyone, especially people who are considered part of poor societies, people living in rural areas, and other excluded groups. These services can include, but are not limited to, providing bank accounts, credit, insurance services, savings services, retirement services, and other services that help individuals manage their incomes, save money, receive money, and engage in economic activities (Goswami et al., 2022). In India, the focus of financial intermediation has shifted towards expanding reach and usage across all segments of the economy, away from enforcement. In fact, in most advanced economies, several market-based and regulatory measures ensure that banking services are accessible to almost all households.

Financial technology has changed the way financial services are provided, in a noticeable manner. FinTech refers to the use of digital technology to deliver financial products and services more quickly, cheaply, and conveniently. This includes mobile banking, digital payments, UPI, online lending, digital wallets, micro-insurance, robo-advisory, blockchain-based systems, and data-driven financial services. In rural areas, financial technology is often more relevant because it lowers dependence on physical bank branches (Goswami et al, 2022). For a person with a bank account, a mobile phone, and an internet connection, they can send money, pay bills, receive government benefits, view balances, and access other financial services without needing to travel to a branch. This directly reduces transaction costs, opportunity costs, and time loss.

The rise of FinTech companies in India has been bolstered by government infrastructural support as well. It consists of elements such as computerization of banking, installation of ATMs, NEFT, RTGS, Aadhaar, Accounts Under Jan Dhan Yojana, UPI, mobile wallets, Digital India, and various new initiatives, such as Direct Benefit Transfers, which have enabled the nation to gradually adopt a system of cashless transactions within the country (Mishra & Singh, 2026). In this analysis, UPI is especially attractive because it uses a mobile application, which makes changes reflect more quickly. Customers and economic agents in India also benefit because the Reserve Bank of India has made payments more convenient and secure and has expanded the range of financial products available through regulation and policy (Belgavi & Gandhi, 2021). These factors have provided opportunities to enhance microfinance and broaden access to financial services in rural and other underserved areas of the country, as digital channels help banks reach populations for whom banking is very difficult.

Despite India's very high competitiveness in wealth generation, Gujarat still contains areas that do not have full access to modern technology and the needed finances for development. Vadodara district serves an exemplary purpose in appraising the impact of FinTech, as there are rural areas that are transforming digital finance but are still restricted from doing so by issues related to infrastructure, literacy, and trust (Naik & Selvi, 2025). In this research, we view FinTech as both a technology and a driver of economic activity for everyone.

RATIONALE OF THE STUDY AND RESEARCH QUESTIONS

The purpose of the research is to address the persistent gap in traditional banking access and financial inclusion. In different rural households, some households might have bank accounts due to the payment of government programs. However, they might not actively use e-money transactions or may rely on cash and informal financial transactions. To remedy this, FinTech intervenes, enabling easy access to payments, savings, credit, insurance, and government transfers. Nonetheless, FinTech solutions can suit consumers differently due to education, income, digital literacy, smartphone use, internet access, and other factors.

Several studies examine the relationship between FinTech and financial inclusion at the country and urban levels, but very few report locally from rural Gujarat. Studies addressing issues involving the rural Vadodara region can be an asset to the authorities, financiers, FinTech companies, and local development agencies.

The study also aims to address the following research questions:

- How does FinTech facilitate financial inclusion in the rural areas of Vadodara district?
- What is the status of awareness and usage of FinTech services in the rural areas?
- What government policies are currently in place to assimilate FinTech services in rural areas?
- What are the problems that rural consumers face concerning these services?
- What is the effect of adoption of these services on social and economic status such as age, income, education, and occupation?
- What is the effect of increased reliance on FinTech on the extended accessibility of formal financial services like savings, credit facilities, and insurance?

Objectives of the study:

- To identify the role of FinTech in enhancing financial inclusion in rural areas of Vadodara district,

Gujarat.

- To examine the level of awareness and usage of FinTech services in rural areas.
- To study government schemes and challenges related to FinTech adoption.
- To analyze the influence of socio-economic factors on access to formal financial services through FinTech.

REVIEW OF LITERATURE

Previous studies

As per the literature review, FinTech has emerged as an important tool to foster financial inclusion in many economies, particularly growth economies. In a FinTech analysis of rural India, Goswami et al. (2022) conducted research. They found that mobile banking, digital wallets, and payment mechanisms are channeled toward exclusion reversals for one reason only: to reduce the risk of transaction costs and the costs of time/space disadvantages. Also, their survey proposes that digitization efforts in finance have an effective delivery system for the rural population, which is unable to survive through traditional subsistence agriculture.

While Ediagbonya and Tioluwani (2023) contended that FinTech can improve financial inclusion by mitigating information gaps and minimizing reliance on conventional banking infrastructure, they also noted that low literacy, poor infrastructure, and institutional weaknesses may impede the effectiveness of FinTech in emerging markets. The claim that digital finance can increase access for marginalized populations is a fallacy, because it can be beneficial only if users are equipped with the necessary skills, devices, and connections to access and use these services.

According to Acharya and Bhojak (2024), when studying FinTech adoption among digital natives in Gujarat, adoption occurs as a function of digital literacy, peer influence, security concerns, and awareness of regulation. They also present findings on security perceptions among different age groups and readiness for FinTech use and practices. The notes confirm that digital inclusion is contingent not just on the existence of technology, but also on users' ability and willingness.

Kadaba et al. (2024) examined digital financial inclusion measures attempted within self-help groups. They learned that such measures can go a long way in removing traditional hurdles like limited banking availability, low financial literacy, and the problem of distance. According to Priyadarshi (2025), expanding financial services to rural areas using FinTech can help improve rural service inclusion, but a combination of obstacles, opportunities, and individual behaviors shapes it. Among the aspects the essay gave attention to was the fact that digital financial services will improve access to payments and credit; however, the use of these services by rural audiences will depend on trust in institutions, the availability of user-friendly platforms, the availability of services within specific areas, and financial education. Farukh et al. (2025), on the other hand, identified that mobile networks, internet adoption, and development of digital technology are crucial in turning around India's rural financial sectors. However, they observed that, unlike the urban situation, there has been an unalleviated rural FinTech vacuum, due to low digital literacy and an internet drought.

Agrawal et al. (2025) have thoroughly explored the problems that rural women experienced when trying to turn to FinTech, pinpointing a lack of understanding, low literacy, and poor network connectivity as main barriers. This is crucial, as financial inclusion for women is an aspiration of many development projects. If rural women cannot use digital financial services with confidence, the overall benefits of FinTech incorporation are much less. Besides, Shah and Bhatt (2024) described the benefits of 'e-banking' in terms of improving financial conditions, financial management, and women's empowerment in the state of Gujarat.

Studies also show that FinTech has helped achieve institutional performance and sustainable development in the banking sector (Chauhan, 2023). Yadav et al. (2024) contend that FinTech opens opportunity windows rural bankers can use to enhance performance by working in mobile banking, digital wallets, and online micro-credit channels across distances. Mohapatra and Ghosh (2025) argue that India's financial inclusion strategy cannot focus only on account opening but must also provide accounts that are literate, trusted, accessible, and linked to community structures. This argument is key because the term financial inclusion refers to service usage, not service acquisition.

The literature clearly reveals how FinTech can promote financial inclusion even in rural areas by lowering costs, enhancing ease of doing business, increasing geographical coverage, and taking central services closer to the people than was possible before. One of the constraints that have emerged is that this technology, especially its usage, is hindered by poor networks, its being a preserve of the learned, perceived insecurity, the absence of required smartphones, and limited knowledge of the available services. This paper uses these principles of literature to analyze primary data from a rural area in Vadodara.

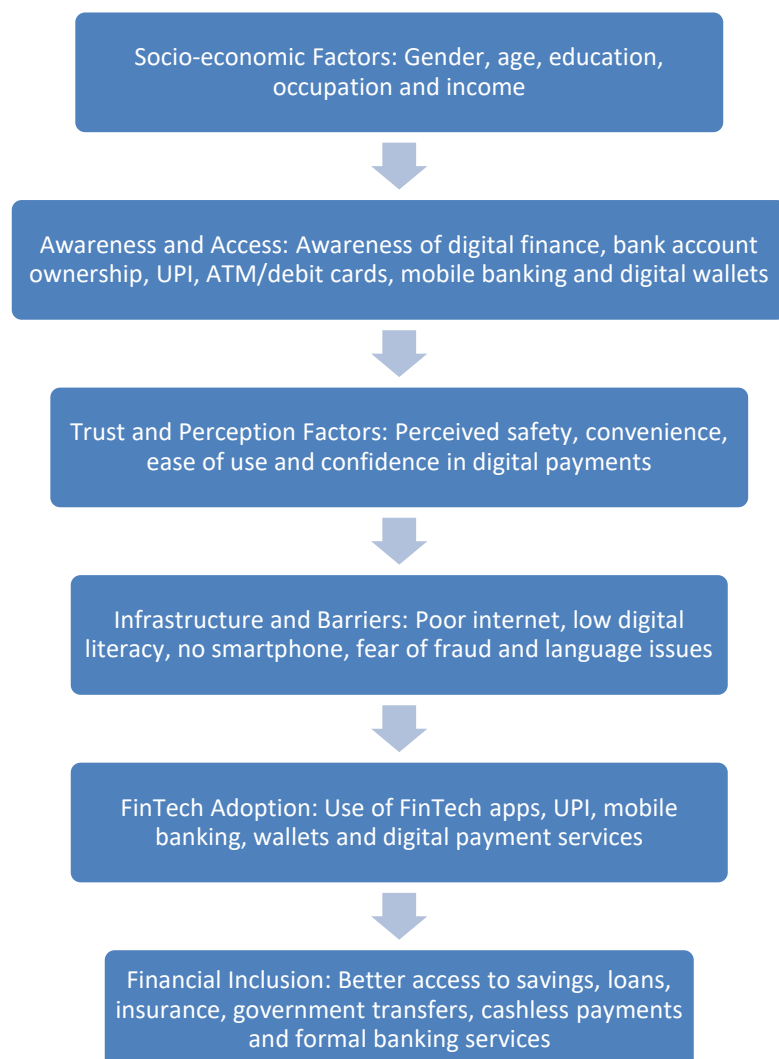
Research Gap

There have been a couple of studies that focus on FinTech and financial inclusion pertaining to India; however, not so many empirical works on Vadodara District, Gujarat have been conducted yet. Several studies are interested in the level of FinTech adoption within the country or in the cities. There are very few, however, who work at the village level and are at great proximity to rural respondents, exploring their awareness, usage, perceived benefits, fear of risk and other adoption hurdles.

Another gap is that while many studies describe the use of digital finance, they do not explicitly investigate the relationship between FinTech adoption and socioeconomic aspects and perception-based determinants. Thus, by combining Chi-square association testing with typical descriptive analysis, this study aims to close this gap. The study does not establish causality; rather, it investigates whether there are statistically significant relationships between the use of FinTech applications and the variables of interest.

Conceptual framework

The conceptual framework of this study ties FinTech uptake to financial inclusion through four broad groups of influences, more or less.



The above diagram identifies the control variables that would be inherent while explaining adoption of FinTech services in rural areas as: Socio-Economic; Awareness, Trust, Perception, Infrastructure and Adoption Barriers. These variables play a role in whether banks in rural areas use any technology-based services like UPI transfers, mobile money, and digital wallet services among digital forms of payments. With that, it may equally assist in enhancing financial inclusion through promoting savings, credit facilities, insurance, direct support such as from the government, debit card usage and bank accounts solicited through mobile banking technologies. The arrangement details an explanation as well as if how these two relate to each other, and not only that, the level of utilization is subsequent and not significantly done as a fact of the causal relationship, as the study would be representing a near sampling.

RESEARCH METHODOLOGY

Research design

This study will adopt a descriptive and exploratory quantitative research design. The descriptive aspect tackles the demographic profile of respondents, awareness levels, attitude towards/usage of FinTech products as well as their benefits and challenges. The exploratory element, on the other hand, identifies the relationships between FinTech usage and the different socio-economic variables and perception-based variables.

Sampling

This research study will focus on those rural areas within the Vadodara District in the state of Gujarat. Its target population consists of residents in those rural areas regardless of whether they are using it or not. For the purpose of the current research paper, primary data was gathered with the help of a structured questionnaire administered through Google Forms. The questionnaire consisted of various sections and sub-sections. The main parts were demographic particulars, bank account ownership, knowledge of digital financial services, usage of FinTech applications, reasons for using them, perceived advantages, security challenges, government subsidy receipt, and barriers limiting usage.

The sample uses responses from 74 individuals who answered correctly. However, gender was missing in one response; hence, for gender-based analysis, 73 valid responses will be used, while other variables will utilize the 74 responses. With this adjustment, the confusion of 73 and 74 respondents raised earlier is done away with.

The sampling strategy employed was convenience sampling. The reference to simple random sampling was dropped from an earlier claim because the online delivery procedures are not the procedures suitable for probability-based random sampling to hold. Given that the sample size is small and the manner of selecting respondents is convenient, the conclusions are valid only to the extent that those people are concerned and should not be extended to cover all rural areas in Gujarat.

Data analysis technique

The content validity of the questionnaire was verified by checking that the questions are relevant to the objectives of the study. Though the majority of the questionnaire had questions of traits, we were not able to apply the interrater reliability tests like Cronbach's alpha to the full length of the instrument. Participants were told that their responses and identity were confidential and sought their consent to use their data only for academic purposes.

Analysis of the data was made by tabulating frequency distributions and percentages and running the Chi-square test for differences between categorical variables. Moreover, Cramer's V was employed to determine a measure of correlation. Also, the use of Financial Technologies by certain demographic variables was tested as a proportion of a two-way contingency table by use of the Chi-square test.

Reliability test: Cronbach's Alpha test

Scale	No. of items	Cronbach's Alpha	Interpretation
FinTech Adoption and Financial Inclusion Scale	7	0.777	Acceptable / Good reliability

The value of Cronbach's Alpha is 0.777, which shows that the internal consistency is acceptable. It implies that the selected items are fairly consistent in evaluating the broader construct of FinTech adoption and financial inclusion. As a result, the questionnaire is deemed trustworthy for exploratory analysis.

One item, 'Digital payments reduced cash usage', had weak consistency with the other scale items. Cronbach's Alpha was 0.720 with this item included, and improved to 0.777 if this item is removed. As a result, this item ought to be either discussed separately as an individual perception item or removed from the reliability scale.

Validity test: Descriptive statistics

Variable / Construct	Items included	Mean	Skewness	Kurtosis
Age group	Below 20 to Above 50	2.919	0.162	-0.694
Education level	No formal education to postgraduate	3.095	-0.236	-1.014
Monthly income	Below ₹10,000 to above ₹40,000	2.432	-0.043	-1.161
FinTech application usage	Use of FinTech app	1.662	-0.7	-1.553
Bank account ownership	Bank account: Yes/No	1.986	-8.602	74
Awareness of digital financial services	Heard about digital financial services	1.865	-2.179	2.823
Awareness of any FinTech service	Awareness of UPI/ATM/debit card etc.	1.932	-3.517	10.659
Digital payment usage frequency	Never to daily	3	-0.751	-1.089
Time and travel cost saving	FinTech saves time/travel cost	1.892	-2.577	4.767
Banking convenience	FinTech made banking easier	2.824	-2.62	6.523
Government benefit receipt	Receives government benefits in bank account	1.514	-0.055	-2.053
Access to loans/savings/insurance	Improved access to formal financial services	2.743	-1.797	2.495
Reduced cash usage	Digital payments reduced cash usage	2.797	0.251	-1.305
Safety perception	Digital payments are safe	2.108	-0.131	-0.753

The descriptive validity results suggest that the questionnaire items yielded meaningful response variation for most variables. Average scores indicate that respondents reported high levels of bank account ownership, awareness of digital financial services, FinTech adoption, perceived banking convenience, and perceived financial inclusion benefits. The mean score at the construct level across the entire scale of FinTech and financial inclusion is 4.099, revealing that the pattern of responses is generally positive.

The values of skewness and kurtosis indicated that the distributional properties of most constructs were acceptable for exploratory descriptive analysis. The FinTech Adoption, Perceived Benefits / Financial Inclusion, Trust and Safety Perception, and Overall FinTech and Financial Inclusion Scale are normally distributed. However, because the majority of respondents chose positive answers, Bank Account Ownership, Awareness of Digital Financial Services, and Awareness of Any FinTech Service exhibit high negative skewness and high kurtosis. This indicates that these variables are strongly concentrated in one direction rather than invalidating the items.

Therefore, the descriptive method indicates that the questionnaire is adequate for exploratory analysis. But the findings should be reported as descriptive validity evidence and not as a complete test of statistical validity.

DATA ANALYSIS, INTERPRETATIONS AND FINDINGS

Descriptive Analysis

Demographic profile

The demographics of the selected sample indicate that the distribution across the various segments is fairly balanced.

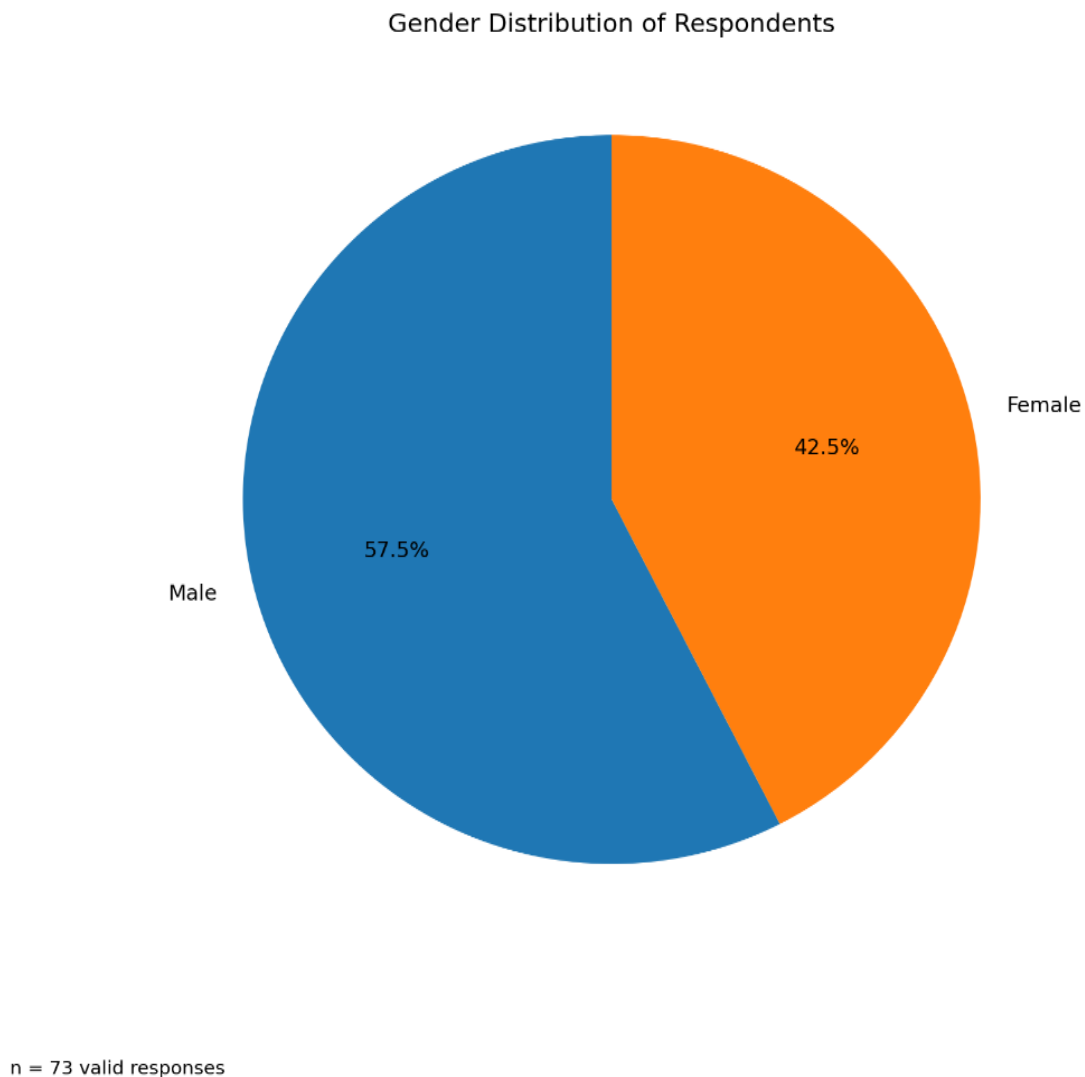


Figure 1: Gender profile of respondents

In the above figure 1 has stated that out of the 73 respondents within the norming age of the sample, approximately 57.5% of the total respondents are male, and the remaining 42.5% represent females. Since one of the respondents has not revealed his/her gender, there are only 73 respondents.

In terms of Figure 2, respondents by age group, the largest share is 31–40 years with 32.4%, followed by 21–30 years with 27.0%. This results in 59.4% of the sample consisting of individuals who are members of the workforce and also belong to the age bracket of 21–40 years. Respondents aged 41–50 make up 18.9%, with those below 20 and those above 50 making up 10.8%. The age distribution suggests that younger and middle-aged respondents will participate more in internet surveys and will be more likely to use FinTech services.

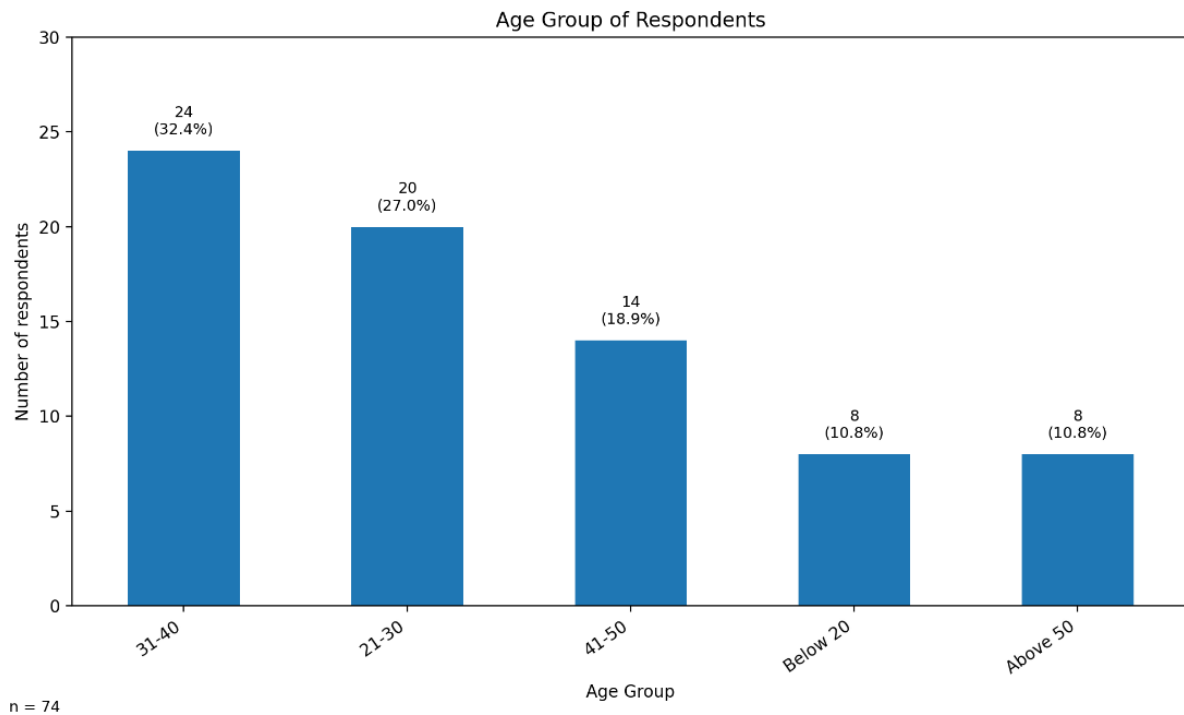


Figure 2: Respondents by age group

Educational level (Figure 3) is a strong motivator for FinTech usage among organizations. For example, 36.5% and 9.5% of the respondents are graduates and post-graduates, respectively, with 24.3% having attended primary school, 18.9% secondary school, and 10.8% no school at all. The overall competence of stakeholders regarding education level for adoption is not a fixed concept, as the results show. However, educated respondents may feel more comfortable possessing certain skills in financial intelligence and organization of financial losses. Many scholars claim that pursuing education, largely digital literacy, adds value to FinTech (Acharya & Bhojak, 2014; Priyadarshi, 2015).

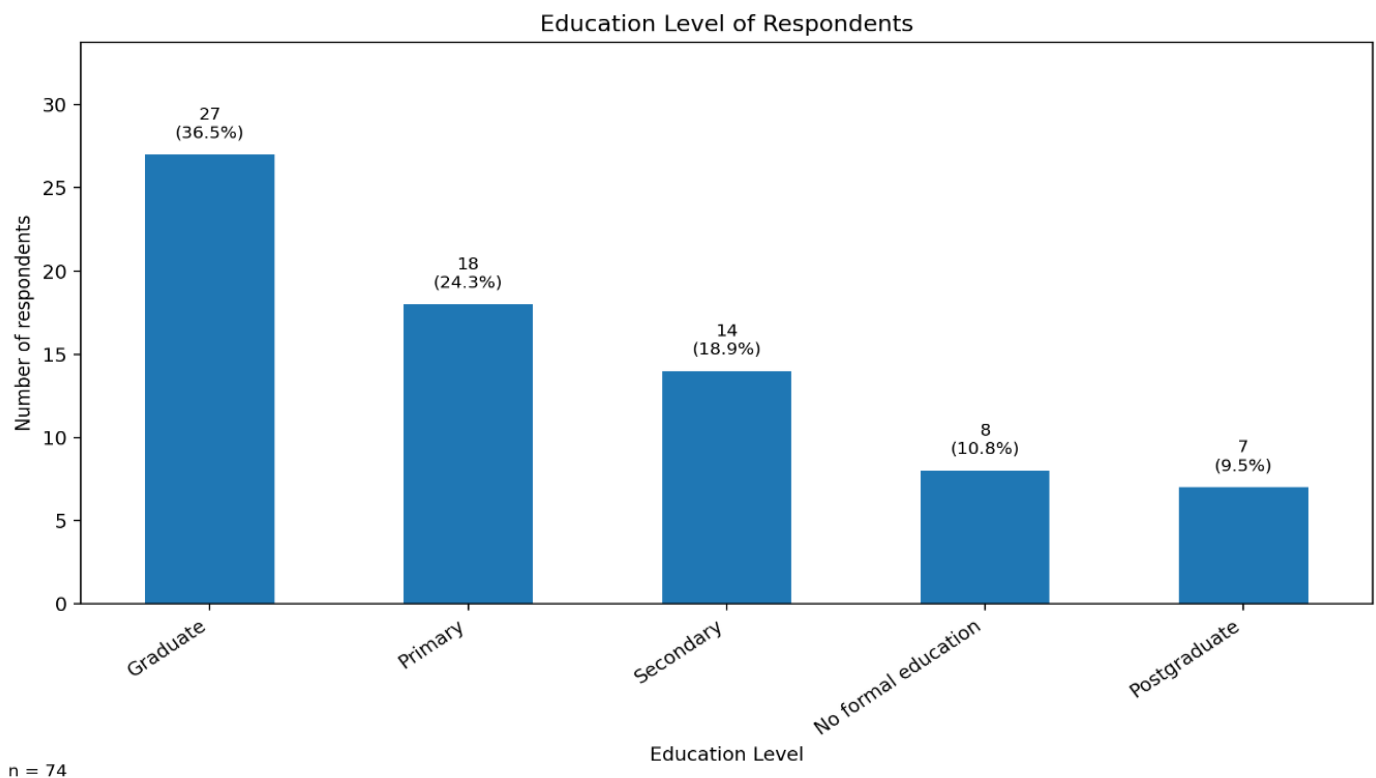


Figure 3: Respondents by education level

The occupational demographics (Figure 4) are similarly variegated. In this case, private employees constitute the highest share at 18.9%, with students and self-employed individuals following closely at 14.9% each. Farmers and homemakers represent 12.2%, government employees 9.5%, laborers 8.1%, business people 6.8%, and unemployed individuals 2.7%.

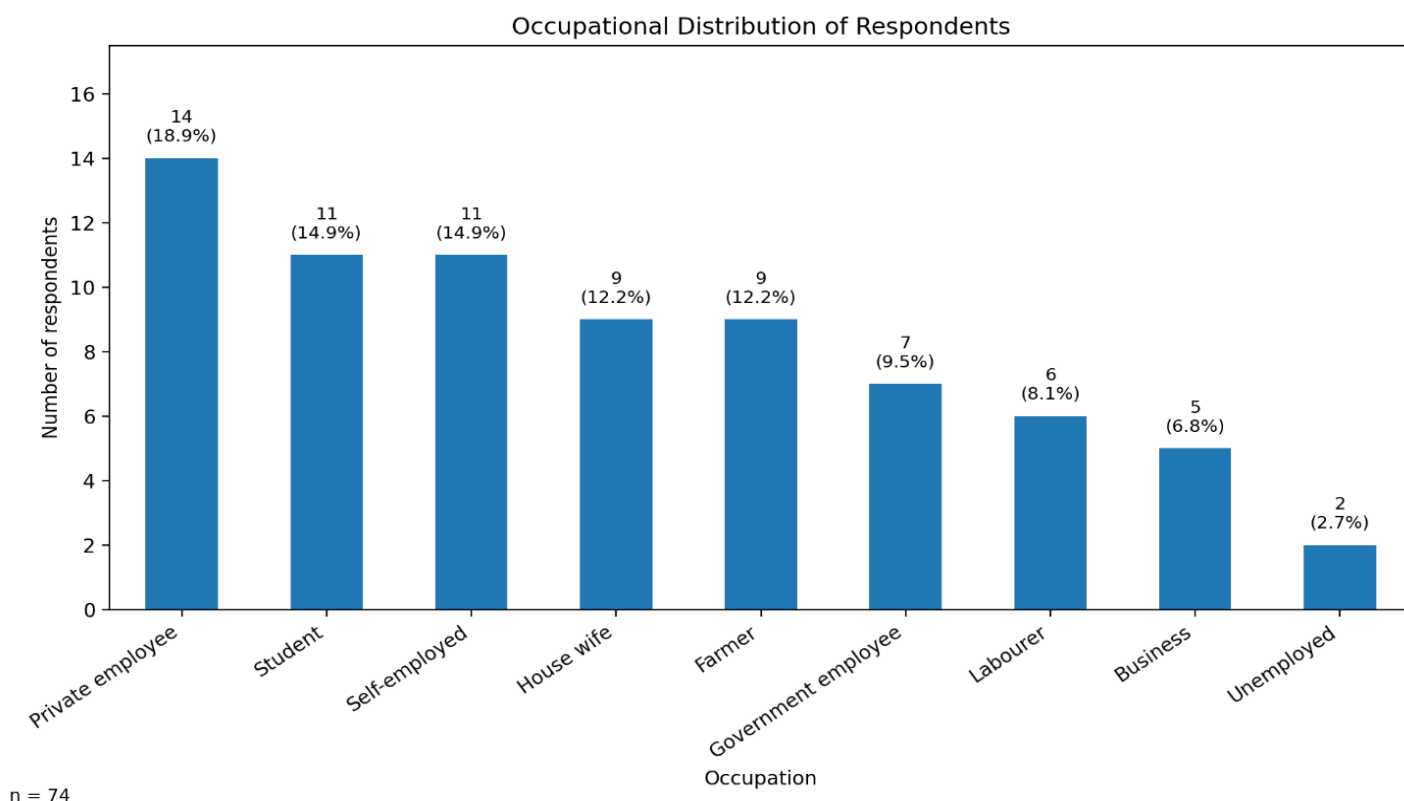


Figure 4: Occupation profile of respondents

According to Figure 5, income distribution, typical members would mostly be low- and average-income demographics, mostly residing in rural areas. 35.1% earn between ₹20,000 and ₹40,000 per month, 24.3% fall in the category that earns below ₹10,000, and another 24.3% fall in a category that earns ₹10,000-₹20,000. This shows the importance of financial inclusion for low- to middle-income households, as they require financial services that are cheap and located nearby.

Awareness and Usage of FinTech

Most participants own bank accounts and are linked to a level of financial inclusion that suggests sufficient formal banking access in the given survey. In addition, the impact of awareness of digital financial services was considerably high in the surveyed areas.

In terms of practical FinTech services, out of 74 respondents, 49 use the same while 25 do not. Illustrating the fact that FinTech is accepted but not widespread throughout the country. They are the most common forms of digital money services, which include UPI, ATM or debit cards and mobile banking.

Many respondents use digital payments daily, but a significant portion never do. This hints at a gap between knowledge and everyday use. The primary reason for using FinTech is to send and receive money, followed by shopping, paying bills, government benefits, and financial services.

Perceived Benefits

The respondents widely acknowledge the practical advantages of FinTech. About 89.2% concur that FinTech reduces travel expenses and time. Rural residents frequently encounter distance-related obstacles when trying to access bank branches, making this a significant finding. Digital services that reduce the need to travel

increase convenience and economic efficiency. Similarly, 85.1% of respondents claim that FinTech has made banking simpler, compared to 2.7% who disagree and 12.2% who are unsure. This is in line with Goswami et al. (2022), who argue that FinTech minimizes spatial barriers and typical transaction expenses.

FinTech also seems to promote bank accounts. Already, three-quarters of respondents agree that FinTech enhances financial services by helping provide loans, savings, and insurance, with a bit over half admitting improvement. On the other hand, the reluctance of 20.3% of respondents to say they do not know about FinTech shows that many users still associate FinTech mainly with money transfers and thus may not capture its financial-inclusion features.

Access to government benefits in India is almost fifty-fifty. On average, 51.4% of the fellow citizens polled benefit from the transfers into their bank accounts, with only 48.6% not getting a positive response. This indicates that direct benefit transfer systems especially benefit the underprivileged, but not all surveyed are end users. For instance, schemes like PMJDY, DBT, UPI, Digital India, and Aadhaar-enabled payment services help enhance coverage by linking banking, identification, and digital transactions.

The results indicate that users find FinTech a convenient and useful tool for access to financial services.

Challenges in FinTech Usage

Most challenges lie in the investigation. Poor network is at the top of the list, as 73.0% of the respondents identified it as the chief obstacle. 14.9% were concerned about digital skills, 9.5% about the absence of a smartphone, and 2.7% were fearful of scammers. These findings underscore previous research that a lack of basic systems and knowledge affects the application of FinTech services in the countryside (Agrawal et al., 2025; Ediabonyia & Tioluwani, 2023; Farukh et al., 2025). For instance, even if they have bank accounts and the UPI app, people are still likely to avoid using it if the internet in their area is unstable. Similarly, a lack of digital skills results in a lack of confidence and overreliance on others, creating security threats.

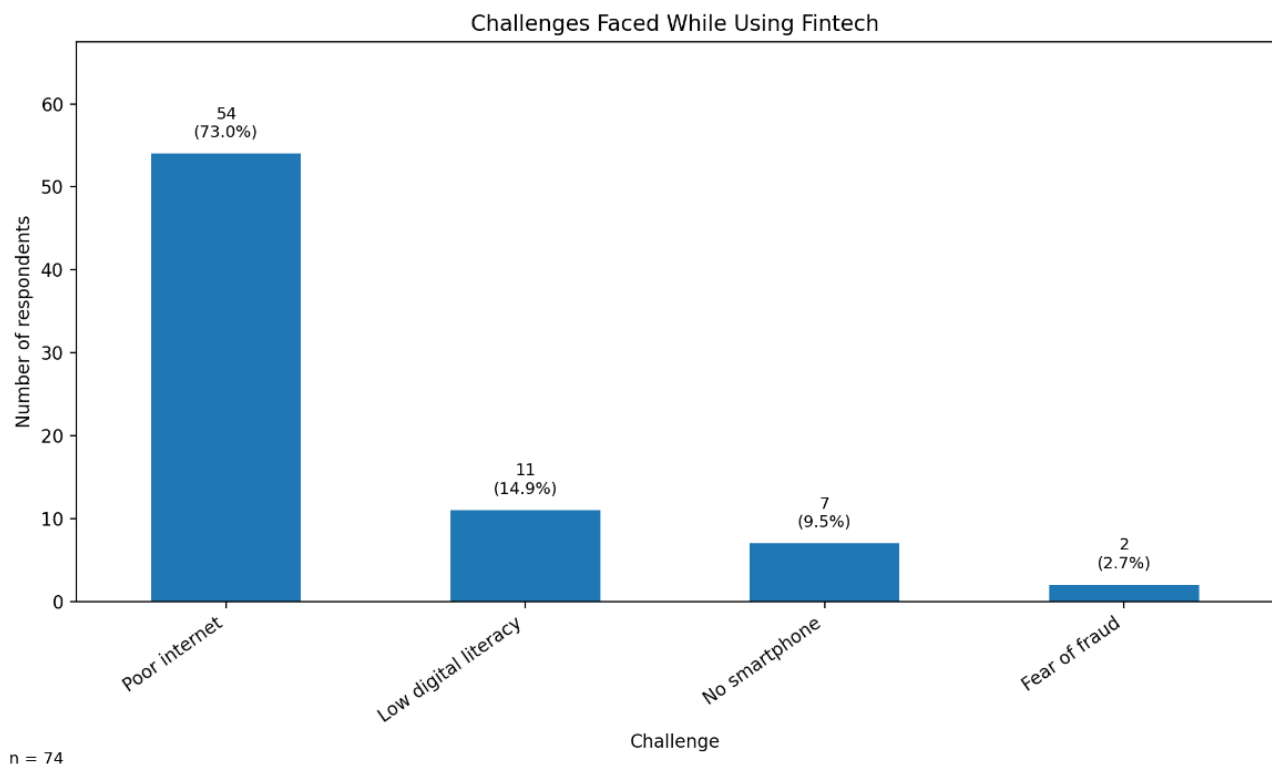


Figure 5: Challenges faced while using Fintech profile of respondents

Safety perception is also an issue. Only 28.4% and 17.6% think digital payment is safe. In 54.1% of cases, people did not have an opinion. Lack of clarity is an issue. This means there must be a relationship of trust for digital payments to be more widely accessible. Fraud, wrong transfers, OTP scams, failed transactions, and

money disappearing are some concerns that rural users may have. Courses on consumer rights, dispute resolution issues, how to prevent scams, and simple-to-use devices are tools that more advanced states use to build confidence among their people.

Overall, the results show that FinTech is supporting financial inclusion in rural Vadodara by heightening awareness, improving the ease and frequency of digital payment transactions, and increasing the availability of formal financial institutions for the rural population. Contrarily, however, not everyone is included. The statistics suggest that younger, literate, and digitally literate economically active people are more likely to engage with FinTech regularly. Consequently, FinTech is a powerful driver for rural financial inclusion, although it does not solve all problems alone.

Inferential Analysis

Chi-square test

Pearson Chi-square test of independence has been applied using FinTech application usage as the main dependent variable:

Dependent variable: Do you use any FinTech service application?

Responses: Yes / No

Sample: 74 responses, except for Gender, where one value was missing, so $n = 73$.

Independent Variable	n	χ^2 value	Df	p-value	Cramer's V	Result
Gender	73	0.009	1	0.923	0.011	Not significant
Age group	74	0.762	2	0.683	0.101	Not significant
Education level	74	2.957	1	0.086	0.200	Not significant at 5%
Monthly income	74	6.097	2	0.047	0.287	Significant
Awareness of digital financial services	74	11.040	1	0.001	0.386	Significant
Perceived safety of digital payments	74	8.942	2	0.011	0.348	Significant
FinTech made banking easier	74	5.147	1	0.023	0.264	Significant
FinTech improved access to loans/savings/insurance	74	17.977	1	<0.001	0.493	Significant
Government benefits received in bank account	74	0.006	1	0.936	0.009	Not significant
Challenges faced while using FinTech	74	1.541	1	0.214	0.144	Not significant

According to the results of the chi-square test, it can be deduced that the difference in socioeconomic status, constituents of some of the rural areas, for the people is positively correlated to the adoption of Mobile Commerce. A few of those factors include income, digital awareness levels, perception of security, the convenience of carrying out bank transactions and increased access to regulated financial services. Yet interestingly, gender, age, taxation of the citizenry and the general challenges failed to show such a relationship with the use of Mobile Commerce.

DISCUSSION

Based on the research findings, FinTech is important for widening access to financial services that help reduce poverty among rural respondents in Vadodara District. Many respondents indicated that they had bank accounts, knew what digital financial services were and had used login credentials for FinTech, most especially for money transfer. Such results resemble what Goswami et al. (2022) have stated, that the problem of transaction cost and geography is reduced with the employment of FinTech applications in rural India. There are many areas where FinTech can be seen as helpful, and in this regard, the same is true of the present investigation among several other respondents.

The strong link between awareness of digital financial services and FinTech usage corroborates the results of Chauhan, who found that awareness, income, education, and technological literacy affect FinTech adoption in Gujarat. The current study confirms that awareness is an important factor, as respondents who knew about internet-based financial services were more prone to use FinTech applications. Likewise, the strong relationship between perceived safety and FinTech usage is consistent with Acharya and Bhojak (2024), who suggested that trust, security perception, and technological literacy affect FinTech adoption. This demonstrates that rural consumers only embrace FinTech when they feel secure and comfortable making digital payments.

The result showing a direct relationship between income and FinTech usage is consistent with studies examining how socio-economic status relates to e-transaction accounts. People in higher-quality employment might have more convenient access to using cellphones, the internet, and financial services regularly. However, levels of education were not found to have any statistical significance at the 5% level in the study. This is contrary to sources that consider education as one of the most important determinants of the adoption of FinTech. One possible rationale is the distinction between physical education and any given level of digital competence; since the former may be non-existent, the less educated respondents might as well use UPI or mobile banking with the aid of family or friends.

The research further discovered that weak internet coverage was the primary impediment, which aligns with Farukh et al. (2025) and Agrawal et al. (2025), who also saw problems such as poor infrastructure, illiteracy and fear of scamming in their research about acceptance of rural finance-aided technology. On the other hand, the use of FinTech was not significantly related to the user's gender and age, which in part challenges prior works concentrating on gender and generational aspects. To sum up, while most of the results were coherent with the expectations, they must be scrutinized to be applicable due to the small participation of the convenience sample.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The present study discussed how Financial Technology (FinTech) is a tool for promoting financial inclusion in Gujarat- Vadodara rural masses in specific. From the research, it is found that most of the sample-maintained bank account holders are familiar with the digital means of transacting money. The majority of them also employ FinTech applications, especially with regard to sending or receiving funds. In addition, the people think that FinTech is appreciable in the sense that it saves time, has reduced travel costs, makes it easy to inflate banks, and increases the reach of formal finance services.

The results of the Chi-square test demonstrated that the use of FinTech services goes along well with Salary per month, knowledge of Digital Finance, Security when it comes to Online Transactions, Ease of financial service access, Enhanced availability of credit, cash and insurance products or Savings products, respectively. On the other hand, no statistically significant relationships were observed between the aforementioned attributes and Sex, Age, State benefits, or General difficulties.

The research suggests that making use of FinTech could stimulate financial integration in the countryside. However, merely possessing an account is not all. Awareness, digital literacy, trust, infrastructure, and perceived benefits, are necessary to enhance their financial inclusion. This suggests that efforts to boost financial inclusion should emphasize rural internet connectivity, digital literacy skills training and other policies that include fraud awareness campaigns, development of local language applications and financial innovations that are suitable for the rural populace.

Recommendation

First, electronic literacy programs should be implemented in rural areas in order to train people on how to use UPI, prepaid mobile banking, ATM/debit cards and digital wallets safely. Special emphasis should be paid to women, senior citizens, low-income populations, and users with low education.

Second, rural internet access needs to be improved, since the most often mentioned problem is a weak network. For adoption of FinTech, better mobile network availability and cost-effective Internet access are key.

Third, banks, governmental organizations, and FinTech firms should develop awareness initiatives in local languages. Many users in rural areas may be hesitant to use digital platforms due to a lack of full understanding of the process or fear of making a mistake.

Fourth, a greater awareness of security. Users should be informed about phishing links, fraud calls, fake apps, OTP safety, and complaint procedures. Trust is the foundation of financial inclusion in the digital era.

Fifth, FinTech applications must be more user-friendly for rural people. Adoption can be improved by local language layouts, voice-based guidance, easy access, and offline support features.

Finally, digital financial training should go hand-in-hand with government benefit transfer procedures. Simply having money in a bank account is not sufficient proof that a FinTech is being actively used. Participants should receive training on how to safely access legitimate financial services, transfer funds, check balances, and make payments.

Future Scope

Future research can examine rural and urban areas in the district, and further analysis of gender differences under such a study would require a combination of logistic regression or structural equation modelling with a more comprehensive dataset and analysis. The larger scope of the research requires a larger sample size and more comprehensive data, and will require the use of different methods such as research design, sampling, data collection, and analysis.

REFERENCES

1. Acharya, U., & Bhojak, N. (2024). A Study on Digital Natives' Adoption of Fintech: Perspectives from Generations Y and Z. *International Journal of Management and Humanities*, 11(1), 29–39. <https://doi.org/10.35940/ijmh.a1750.11010924>
2. Agrawal, R., Chandani, A., Waghlikar, S., Ubarhande, P., Pathak, M., & Atiq, R. (2025). Challenges in the adoption of fintech by women in rural areas of India using interpretive structural modeling. *Technology Analysis and Strategic Management*, 1–15. <https://doi.org/10.1080/09537325.2025.2544219>
3. Belgavi, V., & Gandhi, M. (2021, May). *The RBI's monetary policy on digital payments*. PWC. Retrieved July 8, 2026, from <https://www.pwc.in/assets/pdfs/consulting/financial-services/fintech/point-of-view/pov-downloads/the-rbis-monetary-policy-on-digital-payments.pdf>
4. Chauhan, M. K. (2023). The role of fintech in financial inclusion: A survey of low-income individuals in Ahmedabad, Gujarat, India. <https://doi-ds.org/doilink/12.2023-94945811/IRJHIS2312016>
5. Ediagbonya, V., & Tioluwan, C. (2023). The role of fintech in driving financial inclusion in developing and emerging markets: issues, challenges and prospects. *Technological Sustainability*, 2(1), 100–119. <https://doi.org/10.1108/techs-10-2021-0017>
6. Farukh, M. U., Taqi, M., Vemavarapu, K. R., Fadel, S. M., & Khan, N. A. (2025). Fintech innovations and the transformation of rural financial ecosystems in India. *FinTech*, 5(1), 3. <https://doi.org/10.3390/fintech5010003>
7. Goswami, S., Sharma, R. B., & Chouhan, V. (2022). Impact of Financial Technology (Fintech) on Financial Inclusion (FI) in rural India. *Universal Journal of Accounting and Finance*, 10(2), 483–497. <https://doi.org/10.13189/ujaf.2022.100213>
8. Kadaba, M. K., Aithal, P. S., & S, S. K. R. (2024). Impact of Digital Financial Inclusion (DFI) initiatives on the Self-Help Group: for Sustainable Development. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4674709>
9. Mishra, A., & Singh, K. (2026). Fintech-enabled financial inclusion: Evidence from India's digital payment revolution. *International Journal of Scientific Research in Modern Science and Technology*, 5(1), 20–29. <https://doi.org/10.59828/ijrmst.v5i1.407>

10. Mohapatra, C. S., & Ghosh, D. (2025). A long-term financial inclusion strategy for Viksit Bharat: Sustained digital literacy, trust and access for all (No. 183). National Council of Applied Economic Research. <https://ideas.repec.org/p/nca/ncaerw/183.html>
11. Naik, R. M., & Selvi, R. (2025). Investigating Regional Literacy Inequalities in Gujarat and Its Association with Socio-Economic Indicators. *INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT*, 09(08), 1–9. <https://doi.org/10.55041/ijssrem52344>
12. Priyadarshi, A. (2025). FinTech-Driven financial inclusion in rural India: Barriers, opportunities, and behavioral insights. *The Lumbini Journal of Business and Economics*, 13(1), 102–111. <https://doi.org/10.3126/ljbe.v13i1.80259>
13. Shah, M. N., & Bhatt, B. (2024). The transformative effects of e-banking on women's lifestyles in Gujarat. *Journal of Economics*, 17, 66. https://www.researchgate.net/publication/384016975_THE_TRANSFORMATIVE_EFFECTS_OF_E-BANKING_ON_WOMEN'S_LIFESTYLES_IN_GUJARAT