**International Journal of Management and Commerce Innovations** ISSN 2348-7585 (Online)
Vol. 13, Issue 2, pp: (776-782), Month: October 2025 - March 2026, Available at: www.researchpublish.com

# DIGITAL TRUST, SECURITY PERCEPTION, AND ADOPTION OF FINTECH PAYMENT PLATFORMS AMONG RURAL CONSUMERS IN SOUTHERN TAMILNADU

[1]Mrs. J. JOSHI, [2]Dr. S. NAZEER KHAN

[1]Ph.D. (Part-Time) Research Scholar, [2]Assistant Professor

[1]PG & Research Department of Commerce

Dr. Zakir Hussain College (Affiliated to Alagappa University), Ilayangudi - 630 702

Sivagangai District, Tamil Nadu State, India.

[2]PG & Research Department of Commerce

Dr. Zakir Hussain College (Affiliated to Alagappa University), Ilayangudi - 630 702

Sivagangai District, Tamil Nadu State, India.

**DOI:** https://doi.org/10.5281/zenodo.18956741

**Published Date: 11-March-2026**

***Abstract:*** **FinTech Payment Platformshas achieved by the swift pace of financial technology (FinTech). It has brought a lot of changes in digital payment systems, especially in emerging economies. Nevertheless, the consideration of FinTech services in rural locations is a pressing issue as the problems of trust, security, and the technological availability are concerned. The paper focuses on the conditions affecting the use of FinTech payment systems by rural consumers in Southern Tamil Nadu. The study is based on four determinants, including digital trust, security perception, perceived usefulness, and perceived ease of use. The quantitative research design was applied and the rural respondents were observed using a structured questionnaire. The Structural Equation Modelling (SEM) was used to determine the relationship between the variables in the study. The results indicate that digital trust (b = 0.34), perceived usefulness (b = 0.31), security perception (b = 0.29) and perceived ease of use (b = 0.22) exert significant impact with positive implications on FinTech adoption. Of these variables, digital trust was found to be the most influential variable in affecting willingness of the user to embrace digital payment platforms. The findings have been used to emphasize the need to foster trust, reinforce security systems, and create user-friendly online financial services to promote their use by the rural areas. Through the research, an understanding of digital financial inclusion is added and offers valuable knowledge to policy-makers, financial institutions, and FinTech providers in enhancing the adoption of digital payment technologies in rural regions.**

***Keywords:*** **FinTech Adoption, Digital Trust, Security Perception, Rural Consumers, Digital Payments, SEM.**

## 1. INTRODUCTION

Financial technology (FinTech) is a novel phenomenon that has become a revolutionary element in the financial industry of the world. Online payment systems like mobile wallet, Unified Payments Interface (UPI) and internet banking applications have facilitated and made financial transactions easier and accessible to finance. Projects like Digital India and financial inclusion programs have enhanced the rate of digital financial services growth in India.The level of adoption of FinTech platforms among rural people is comparably low despite these changes. The rural consumers are mostly

experiencing a number of challenges such as limited technological exposure, worries on privacy of their data, the absence of digital literacy, and lack of trust in the credibility of online financial transactions.

Digital trust and security perception are some of the factors that determine the level of adoption of digital payments among the others. Digital trust is the belief that consumers have in digital platforms in order to transact financial transactions in a safe and efficient manner. Security perception can be defined as the level of confidence, held by the users, that FinTech system will prevent fraud or cyber-attack targeting their personal and financial data.The Southern Tamil Nadu is a territory with a relatively slowing digital financial services growth. Nonetheless, there is a lack of empirical studies that investigate the behavioral variables influencing the adoption of FinTech among rural consumers in this area. Thus, the proposed research would help investigate how digital trust and security perception impact the use of FinTech payment platforms among rural consumers in Southern Tamil Nadu in Structural Equation Modelling (SEM).

## 2. REVIEW OF LITERATURE

The use of financial technology (FinTech) and digital payment systems has entered a prominent sphere of research because of its contribution to the financial inclusiveness and the enhancement of access to financial services. The determinants, challenges and implications of adopting digital payments in various socio-economic settings has been researched on several occasions.Venkatesan and Ranganathan (2025) studied the barriers to digital payments and the preference of the user in Tamil Nadu in terms of financial inclusion. According to their research, lack of digital literacy, fears on the security of transactions, and a lack of confidence in the online payment systems are among the key barriers to the adoption of digital payments. The authors highlight that financial inclusion of underserved populations can be significantly increased by enhancing user awareness and enhancing digital infrastructure.

Theerthamalai and Elumali (2024) explored the use and level of literacy regarding digital financial services through FinTech, in Tamil Nadu. They indicate that access to the internet and government efforts are some of the factors that have had a huge impact on the expansion of digital financial services. Nevertheless, they also pinpoint that the rural users still lack technological knowledge, which is constraining the growth of FinTech platforms.

Hemamalini and Nedumaran studied how digital wallet applications can be used in improving financial inclusion in Tamil Nadu (2025). Their study indicates that mobile wallet services are an important environment in making financial transactions to younger groups of people, as well as bird owners of small businesses. The research finds out that digital wallets enhance financial services accessibility but needs a better security system and sensitization campaign to enhance users confidence.

The article by Kiruthika and Magesan (2024) was aimed at researching the effects of FinTech usage in the marketing industry with a special emphasis on the role of women in the market of organic products in Tamil Nadu. The authors discovered that FinTech platforms do empower women entrepreneurs to make safe online transactions, increase their customer base and enhance financial management. The paper brings to the fore the opportunities of FinTech technologies to empower women entrepreneurs and support their inclusion in economic activities.

Sankararaman et al. (2025) developed research about the patterns of FinTech adoption and preferences in Chennai. They find that convenience, speed of transaction, and cost-effectiveness are the most important factors that affect the use of FinTech. Nevertheless, the research also states that security issue and lack of knowledge are also important factors that are blocking larger adoption by some groups of users.

Shely and Sreekanth (2024) reviewed the customer perceptions and issues surrounding electronic payment systems in the Thiruvananthapuram district. The problems that their study recognized were transaction failures, system errors, and poor customer support are common problems that were experienced by the users. These factors adversely affect the trust and satisfaction of users to online payment portals.

Yoganandham (2025) examined the existence of a rural credit crisis in Tamil Nadu and emphasized the structural factors of financial exclusion. The paper maintains that rural financial inclusion is further enhanced by the absence of accessible banking infrastructure, as well as financial illiteracy. The author implies that digital financial technologies may be a good solution to overcome the financial gap and introduce inclusive banking systems.

Kumar and VijayaKumar (2023) examined the demographic variables that affect the adoption of digital payments by the rural populations. Their literature review revealed that the income, age and education level are the variables that have a significant influence on use of digital payment platforms. As highlighted by the authors, the digital awareness and the

availability of user-friendly financial technologies can be promoted to achieve a higher adoption rate among the rural communities.

The article by Sadiq et al. (2025) is a review of the implementation of digital banking services by agripreneurs in rural women. Their research states that rural women entrepreneurs have a lot of opportunities with the digital financial technologies as they have access to financial services and credit facilities, as well as to digital marketplaces. The authors however point out that digital literacy and trust are also a crucial factor that can affect adoption.

Vijay et al. (2026) explored the connection between financial technology and financial literacy and their role in bringing about financial inclusion by women in the informal sector. The data has shown that financial literacy can greatly improve the effective utilization of digital financial services and economic empowerment of the female workers.

Jayanthi et al. (2024) investigated the usage of the FinTech payment services via a protracted Technology Acceptance Model (TAM). Their study proves that perceived usefulness, perceived ease of use, and trust are significant factors affecting the willingness of consumers to use digital payment systems.

On the same note, Gularso and Nicola (2025) researched on the usage of digital investment platforms amongst Generation Z users. Their results emphasize the fact that financial awareness, digital literacy, as well as risk perception are critical in determining users to adopt the FinTech-based financial platforms. On the whole, the literature reviewed suggests that digital trust, perceived security, financial literacy, and technological awareness are some of the factors which have significant impacts on FinTech adoption. Although a number of studies have been done on urban population and on particular demographic groups, little research has been conducted to understand the effects of digital trust and security perception on the rural consumers in Southern Tamil Nadu. Thus, the given research seeks to fill this research gap and examine how digital trust and perception of security impact the adoption of FinTech payment platforms by rural consumers via Structural Equation Modelling.

## 3. RESEARCH METHODOLOGY

This research design is quantitative since it focuses on the issue of determinants that contribute to the uptake of FinTech payment platforms among consumers in the rural areas of Southern Tamil Nadu. The primary data were obtained in terms of a structured questionnaire distributed to the rural consumers with the experience of using the digital payment systems. There were 244 valid response obtained to analyze. The research used convenience sampling method to pick the respondents in the various rural regions of the Southern Tamil Nadu. The research model incorporates the independent variables as digital trust and security perception, the mediating variables as perceived usefulness, and perceived ease of use, and the dependent variable as FinTech adoption. Structural Equation Modelling (SEM) was used to analyze the data collected with the aim of determining the relationship between the variables. Reliability analysis, confirmatory factor analysis (CFA), and structural model evaluation, as well as hypothesis testing, were the part of the analysis process to prove the correctness of the proposed research framework.

## 4. RESULTS AND DISCUSSION

**Table 1: Demographic Profile of Respondents**

| Variable | Category | Percentage |
|---|---|---|
| Gender | Male | 56% |
| | Female | 44% |
| Age | Below 30 | 48% |
| | 30–45 | 32% |
| | Above 45 | 20% |
| Education | School | 38% |
| | Undergraduate | 42% |
| | Postgraduate | 20% |
| Occupation | Farmer | 36% |
| | Small Business | 28% |
| | Private Employee | 21% |
| | Others | 15% |

The demographic profile of respondents gives a summarization of the nature of the people who were involved in the study. In terms of the gender distribution, half of the respondents are male and half are female, which means that both genders are actively engaged in the utilization of digital payment platforms in the rural setting. Regarding the age, most respondents (48%), are in the age group of below 30, 32% are in the 30-45 years, and 20% are in the above 45 years which indicate that the younger people are more involved in adopting FinTech payment services.

On the educational qualification, 42 percent of the respondents have undergraduate education, 38 percent have school education and 20 percent have post graduate education. This implies that basic and moderately educated people are adopting digital financial transactions to a great extent. On occupation, 36 percent of the respondents are farmers and 28 percent of the respondents are small business owners, 21 percent are also employed as private workers and 15 percent occupy other occupational categories. The given distribution also emphasizes that FinTech usage is slowly spreading among various occupational categories within rural areas with a preference given to farmers and small-scale enterprises where people are progressively using digital payment platforms to conduct financial operations.

**Table 2: Measurement Model (CFA)**

| Construct | Cronbach Alpha |
|---|---|
| Digital Trust | 0.87 |
| Security Perception | 0.89 |
| Perceived Usefulness | 0.85 |
| Ease of Use | 0.83 |
| FinTech Adoption | 0.88 |

Cronbachs Alpha was used to measure the reliability of the measurement constructs to ascertain the internal consistency of the items that were applied in the questionnaire. The findings show that the constructs are all satisfactorily reliable because the Cronbachs Alpha represent values that are higher than the suggested value of 0.70. In particular, the reliability value of Digital Trust was 0.87, and the highest value of reliability was used in Security Perception (0.89), which demonstrates that measurement items are well correlated with one another. On the same note, Perceived Usefulness achieved the Cronbachs Alpha value of 0.85 and Ease of Use was 0.83 which are good reliability scores. FinTech Adoption is also a dependent construct that demonstrated high value of reliability 0.88. In general, these findings can be concluded to indicate that the measurement items employed in the research are valid and could be used in further statistical procedures such as Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM).

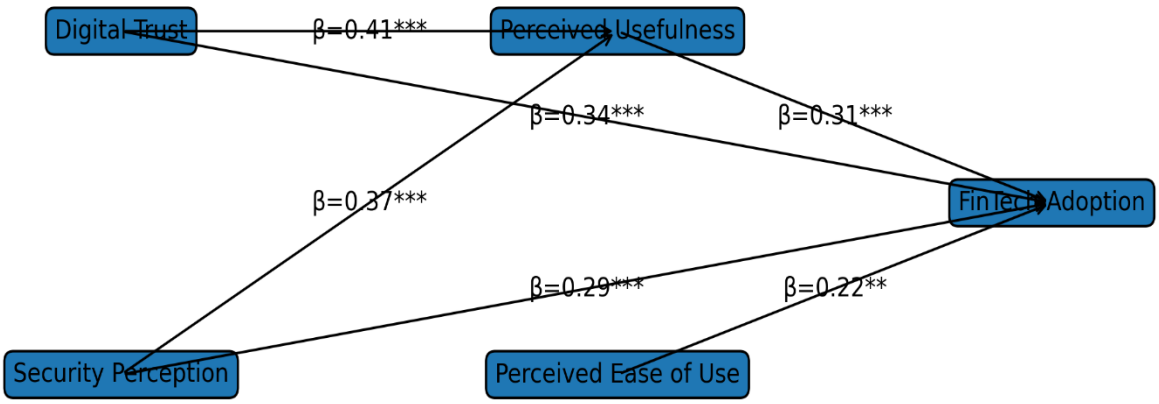
**Table 3: Model Fit Indices**

| Fit Index | Value | Recommended |
|---|---|---|
| CFI | 0.94 | >0.90 |
| TLI | 0.92 | >0.90 |
| RMSEA | 0.052 | <0.08 |
| Chi-square/df | 2.18 | <3 |

Indicators of the model fit were also analyzed to determine the suitability of Structural Equation Model (SEM) that was employed in the study. The value of Comparative Fit Index (CFI) is 0.94 that is higher than the suggested value of CFI of 0.90 and it shows that the model fits well. Similarly, the Tucker-Lewis Index (TLI) value of 0.92 also meets the acceptable threshold of more than 0.90 implying that the proposed model suits the observed data. Root Mean Square Error of Approximation ( RMSEA ) = 0.052 and is less than the desired value of 0.08 which implies an acceptable amount of approximation error. In addition, the Chi-square/df ratio is 2.18, and this is below the acceptable limit of 3, which is to confirm that the model exhibits an adequate fit. All these fit indices indicate that the structural model proposed is statistically acceptable and can be used to test the relationship between the study variables.

**Table 4: Structural Model Results**

| Path | Beta | p-value | Result |
|---|---|---|---|
| Digital Trust → FinTech Adoption | 0.34 | <0.001 | Significant |
| Security Perception → FinTech Adoption | 0.29 | <0.001 | Significant |
| Perceived Usefulness → Adoption | 0.31 | <0.001 | Significant |
| Ease of Use → Adoption | 0.22 | <0.01 | Significant |




To study the factors studied using the structural path analysis, the analysis examined the relationship among the study variables and how they affect FinTech adoption among the rural consumers. The findings show that Digital Trust has a strong positive impact on FinTech Adoption (b = 0.34, p < 0.001), which indicates that the stronger the trust to digital platforms, the more likely rural consumers become to engage in FinTech payment services. In the same way, Security Perception also demonstrates a positive significant correlation with FinTech Adoption (b = 0.29, p < 0.001), which shows that users who believe in the security of digital payment systems adopt them more often.

In addition, Perceived Usefulness is a significant factor in FinTech Adoption (b = 0.31, p < 0.001), meaning that the more consumers believe FinTech platforms can make the process of conducting financial transactions more efficient and convenient, they would more likely adopt them. Moreover, FinTech Adoption is positively and significantly influenced by Perceived Ease of Use (b = 0.22, p < 0.01), which means that easy-to-use digital payment systems are more likely to make rural buyers adopt them. Altogether, the findings support the fact that each of the suggested relationships in the structural model is statistically significant, which indicates the role of trust, security, usefulness, and easy usage in enhancing the adoption of FinTech.

## 5. DISCUSSION

The current paper analyzed how digital trust, security perception, perceived usefulness, and perceived ease of use impacted the use of FinTech payment platforms amid the rural consumers in Southern Tamil Nadu by structural equation modelling (SEM). The results present important understanding of the behavioral and technological determinants that inform the use of digital financial services in rural areas.The findings show that digital trust is a high and meaningful predictor of FinTech adoption (b = 0.34, p < 0.001). This indicates that, in case the rural customers believe that digital payment systems are safe and secure to use, they will be more likely to use the technologies in making financial transactions. A moderate positive effect of 0.34 suggests that the rise in digital trust will result in the probability of using FinTech services. The result of this finding shows that creating user confidence in digital systems is an essential process that is fostered by clear-cut policies, trusted services, and steady performance of transactions. Trust in rural communities, where traditional banking systems have remained the norm for a long time, is a core issue and the key to motivating users to switch to digital financial systems.

In the same vein, the research established that the security perception is a significant variable affecting the adoption of FinTech (b = 0.29, p < 0.001). The positive correspondence means that users who see the digital payment platforms as safe will be more willing to use this service. Whereas the effect of security perception is a bit smaller than digital trust, the value of the coefficient of 0.29 is still a significant input to the adoption process. This finding proves that the issue of fraud, unauthorized access, and the privacy of data is a significant concern to rural consumers. Users will be more confident in the use of digital transactions when financial institutions are equipped with high-level security systems including encryption, authentication systems and fraud detection systems.It can also be seen that a perceived usefulness also positively influences the FinTech adoption (b = 0.31, p < 0.001). The value of 0.31 of the coefficient means that the users will be ready to use digital payment platforms more often when they see the apparent benefits, including convenience, efficiency, and saving

time advantages. In the countryside where physical infrastructure of banks might not be in place, online payment platforms offer an effective variant of carrying out financial operations. The possibility to send and receive money within a second, make payments using electronic means, and receive financial services via mobile gadgets makes FinTech systems more practical to rural customers.

Besides, the ease of use also thinks positively on FinTech adoption in a significant way ($b = 0.22$, $p < 0.01$). Even though the coefficient value is not as high as other variables, it still means that ease of use is a significant factor when it comes to consumer behavior formation. A mean of 0.22 implies that easy to use application design and easy to transact are allied to the increased adoption levels. The rural consumers can be reluctant to embrace digital technologies because they are not well exposed to them or have the necessary technical capabilities. But, with the use of FinTech applications that offer user-friendly easy-to-follow instructions and interfaces, users can easily use those applications to carry out digital transactions and, in the long term, promote their usage.The model fit indicators also justify the goodness of the structural model that was employed in this research. The Comparative Fit Index (CFI = 0.94) and Tucker-Lewis Index (TLI = 0.92) indicate that both the proposed research model fits the observed data very well (Greene, 2017). Also, the Root Mean Square Error of Approximation (RMSEA = 0.052) falls below the adequate level of 0.08 which indicates an acceptable degree of approximation error. The value of Chi-square/df = 2.18 does not exceed the range of 3 either, which confirms that the structural model gives a good presentation of the relationships between the variables in the study.

The interpretation of the findings can also be supported by the demographic characteristics of the respondents. Most of the respondents (48%), fall in the category of those under the age of 30 years, meaning that younger rural shoppers are likely to embrace the use of technology in payment. Further, 42 percent of the respondents have undergraduate education, thus indicating that the people with average education are getting busy using FinTech services. Professionally, 36 percent of the respondents are farmers, and 28 percent of respondents engaged in small businesses, which indicates the increased applicability of digital payment platforms in agricultural and rural business operations.On the whole, the findings indicate that digital trust, security perspective, perceived usefulness, and perceived ease of use all have a significant effect on FinTech adoption by rural consumers. The strongest among these variables is the digital trust ($b = 0.34$) and subsequently the perceived usefulness ($b = 0.31$), security perception ($b = 0.29$) and perceived ease of use ($b = 0.22$). These results indicate that trust and security are the most critical factors that can be used to motivate rural consumers to use digital financial technologies despite the importance of usability and perceived benefits.The discussion also suggests that the expansion of the use of FinTech in rural communities needs a mixture of technological stability, high security standards, and better user education. FinTech companies, policymakers, and financial institutions should pay more attention to enhancing cybersecurity, advancing digital literacy, and creating easy-to-use digital platforms. These programs can contribute greatly to the establishment of trust and confidence in rural users, which can help accelerate the use of FinTech payment services and increase the rate of financial inclusion.

## 6. CONCLUSION

This paper was an analysis of the variables that affect the adoption of FinTech payment systems among rural consumers in Southern Tamil Nadu, through Structural Equation Modelling (SEM). The findings show that digital trust ($b = 0.34$), perceived usefulness ($b = 0.31$), security perception ($b = 0.29$), and perceived ease of use ($b = 0.22$) have strong positive influences on FinTech adoption. Out of these, digital trust was the best predictor.The results indicate that better security of the platform, user trust, and simpler and useful digital payment system can make FinTechs become popular in rural communities. By reinforcing these aspects, financial inclusion will be boosted and digital financial services will be developed.

## REFERENCES

[1] Gularso, Kurnadi, and Nicola Nicola. “Gen Z’s Adoption of Investment Platforms: The Roles of Awareness, Literacy, and Risk Perceptions.” *Journal of Business & Applied Management* 18.1 (2025): 63-80.

[2] Hemamalini, F., and G. Nedumaran. “Digital Wallet Apps and their Impact on Financial Inclusion in Tamilnadu.” *Srusti Management Review* 18.1 (2025): 134-148.

[3] Jayanthi, M., et al. “Adoption of FinTech payment services-An extended expectation towards core constructs of technology acceptance model.” *AIP Conference Proceedings*. Vol. 3180. No. 1. AIP Publishing LLC, 2024.

[4] Kiruthika, E., and A. A. Magesan. “Impact Of Fintech Adoption In Marketing Sector In Tamil Nadu: A Special Study on Women’s Participation in Organic Products.”

[5] Kumar, TK Sateesh, and R. VijayaKumar. "Digital Payment: An Analysis of Demographic Facets of Rural Population." *International Conference on Computational Intelligence in Machine Learning*. Singapore: Springer Nature Singapore, 2023.

[6] RM, Shely, and G. Sreekanth. "A Study on Customer Perceptions and Problems of Electronic Payment System inThiruvanthapuram District." *Frontiers in Health Informatics* 13.1 (2024).

[7] Sankararaman, G., et al. "Fintech Adoption in Urban India: A Study of Usage Patterns and Preferences in Chennai." *Advances in Consumer Research* 2.4 (2025): 2367-2373.

[8] Sadiq, M. S., et al. "Adoption of digital banking services among rural women agripreneurs: a review." *Int. Knowl. Res. J. Arts Bus.* 10.1 (2025): 15-27.

[9] Venkatesan, Ranganathan. "Digital Payment Barriers, Payment Modes, and User Preferences in Promoting Financial Inclusion: A Study in Tamil Nadu, India." *Splint International Journal of Professionals* 12.2 (2025): 210-219.

[10] Vijay, M. Maria, et al. "The role of financial technology and financial literacy in driving financial inclusion among the women workforce in the informal sector." *International Journal of Human Capital in Urban Management* 11.1 (2026).

[11] Theerthamalai, S., and D. Elumali. "Emergency for digital financial services of fintech its literacy and usage in Tamil Nadu." *AcadInt J Multidiscip Res* 2.4 (2024): 101-113.

[12] Yoganandham, G. "Rural Credit Crisis in Tamil Nadu With Reference to Structural Causes, Financial Exclusion, and the Urgent Need to Reimagine Inclusive Banking-An Empirical Assessment." *Journal of FinTech and Sustainable Finance* 1 (2025): 84-103.