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A STUDY ON LEVEL OF AWARENESS AND ADOPTION OF FINTECH AMONG RURAL POPULATION

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Abstract: Financial Technology (Fintech) has significantly transformed the financial services sector by introducing innovative digital solutions such as mobile banking, digital payments, and online financial services. The present study titled "A Study on Level of Awareness and Adoption of Fintech Among Rural Population" with Special Reference to Ernakulam District, aims to examine the level of awareness and adoption of Fintech among the rural population, identify factors influencing usage, and analyse challenges faced in adopting these services. The study is based on both primary and secondary data, with primary data collected through a structured questionnaire from 162 respondents in rural areas of Ernakulam district and analysed using statistical tools such as percentage analysis, frequency, mean, and independent sample t-test. The findings reveal that although awareness of Fintech services among rural respondents is relatively satisfactory, adoption levels are influenced by factors such as education, income, trust, digital literacy, and accessibility, while security concerns and lack of awareness remain major barriers. The study concludes that improving digital and financial literacy, strengthening infrastructure, and conducting awareness programs can enhance Fintech adoption and contribute to greater financial inclusion in rural areas.

Keywords: Financial Technology (Fintech), Awareness, Adoption, Rural population, Financial Inclusion

Introduction

The application of technology in finance to enhance efficiency, convenience and effectiveness is known as 'Fintech'. The use of technology such as online banking, mobile payment apps, peer to peer lending, e-wallets and other financial services has transformed the conventional financial sector. In India, the rise in the use of smartphones and internet services, along with government's favourable policies have played a major role in the adoption of Fintech solutions. Government policies such as digital India and UPI have enabled the growth of digital financial transactions, making transactions more faster and easier.

While the growth of Fintech has been rapid in urban regions, it is not equally adopted in rural regions. Barriers including lack of digital literacy, awareness, limited internet connectivity, security and trust issues are the main reason for the low adoption of Fintech services in rural areas. But promoting Fintech services in rural areas is crucial for achieving Fintech adoption, cashless transactions and also for enhancing economic growth. Fintech adoption will enable the rural population to be better served through easy availability of banking services, credit services, and saving opportunities, thus improving their general quality of life and participation in the formal financial system.

The study concentrate on rural areas of Ernakulam district, which includes elements both of urbanization and rural conditions. Ernakulam district, which is known to be one of the most economically advanced districts in Kerala, provides an interesting environment for examining Fintech usage among the rural population, also known for its high literacy rate and growing digital services. There are areas in the district where Fintech awareness and usage continue to lag behind. Examining these areas will offer a better understanding of the extend to which Fintech services have reached semi-urban and rural population within a relatively developed area. Thus, accessing the level of awareness and adoption of Fintech services in Ernakulam district will helps in understanding existing challenges and opportunities, and offer suggestions for improving Fintech inclusion among rural population.

Statement of the problem

Fintech revolution has brought about a number of changes in finance, which provides convenience, fast, and cost-effective services such as payment systems, online banking and other financial platforms. In India, various approaches have been put in place towards enhancing Fintech developments in order to establish a cashless economy and thereby enhance financial inclusion. However, the advantages of such innovations are not evenly distributed across all sections of society, especially in rural areas.

Various constraints still exist in rural population which limit their awareness and adoption of Fintech services. These include low level of digital literacy, lack of proper infrastructure such as internet connectivity, limited access to smartphones, and lack of trust and security in digital transactions. Thus, a major portion of rural population still depend on traditional banking methods and cash based transactions instead of modern financial system.

In the case of Ernakulam district, despite being one of the more developed districts, inequalities still exist among urban and rural areas in terms of Fintech usage. It is necessary to understand how much knowledge rural population have and are willing to use Fintech services and what factors influencing their adoption behaviour. Therefore the study aims to examine the level of awareness and adoption of Fintech among the rural population of Ernakulam district and identify the key challenges that affects its effective utilisation.

Objectives of the Study

- To examine the level of awareness and adoption of Fintech services among the rural population.
- To find major challenges and barriers faced by the rural population in accessing and adopting Fintech services.
- To provide suggestions and recommendations to improve Fintech adoption and digital financial inclusion in rural population.

Review of Literature

Previous studies have found Fintech as a main tool in promoting financial inclusion and improvements in accessing financial services in rural population. The study by Sapna Saini (2026) examined the adoption of mobile payment technology in rural Haryana', and identified that Fintech plays a crucial role in enhancing financial inclusion. Likewise, Mishra, Pratiksha (2025) examined the factors determining the adoption of Fintech services in rural communities of Chhattisgarh, India, with a special focus on digital payment services enabled through mobile/internet banking. Tshering Pincho Bhutia (2025) also studied 'the impact of Fintech and digital financial services on financial inclusion in Sikkim', focusing on availability, accessibility, and adoption in urban and rural districts. Whereas Ram Kishor (2025) study focuses on the effect of influence of Fintech adoption on personal financial management behaviour with special reference to Andhra Pradesh, India. Applying Behavioral Reasoning Theory (BRT) integrated with Innovation Resistance Theory (IRT). Schuetz and Venkatesh (2020) identified several factors hindering financial inclusion in India including poor geographical access, cost of services, lack of financial literacy and inappropriate financial products poorly suited to local needs. Bansal (2014) examines the role of Information and Communication Technology (ICT) in achieving financial adoption in rural areas. The main objective is to analyse how technology benefits in rural population and improve accessibility.

Research Methodology

This study aims to analyse the awareness and adoption of Fintech among rural population using quantitative methods. This study is carried out by using descriptive research design to examine the level of awareness and adoption of Fintech among the rural population of Ernakulam district. The study used both Primary and Secondary data. Primary data is collected through a structured questionnaire from 162 respondents among rural areas of Ernakulam district using a convenience sampling method. Secondary data is gathered from journals, reports, official websites, and other sources to supplement the research. The questionnaire includes demographic information of the respondents, their awareness, adoption level, challenges faced, and suggestions on behalf of Fintech services. The collected data is analysed through Microsoft Excel and SPSS, and the results are presented through tables and charts using statistical tools like percentage analysis and frequency distribution.

Analysis and Discussions:

Table 1 – Showing Demographic profile of the respondents

Variable	Category	Frequency	Percentage
Age	Below 20	11	6.8
	21 – 30	71	43.8
	31 – 40	23	14.2
	41 – 50	23	14.2
	Above 51	34	21
Gender	Male	64	39.5
	Female	98	60.5
Education	Secondary	5	3.1
	Higher Secondary	18	11.1
	Graduate	106	65.4
	Postgraduate & above	33	20.4
	Students	60	37
	Self-employed	25	15.4

Occupation	Government Employee	9	5.6
	Private Employee	55	34
	Retired	4	2.5
	Other	9	5.6
	Below ₹10,000	65	40.1
Monthly Income	₹10,001 - ₹20,000	25	15.4
	₹20,001 - ₹40,000	30	18.5
	Above ₹40,001	42	25.9

(Source: Primary Data)

The demographic profile of the respondents shows a diverse but slightly focused group. The age distribution indicates that the majority of the respondents belong to 21 - 30 age group (43.8%), showing a majority of young adults who are more likely to be familiar with Fintech services.

The table showing the gender category of the respondents shows that female participants (60.5%) form the majority. While male respondents (39.5%) are comparatively in smaller proportion.

The table showing educational qualification category of the respondents shows that majority are graduates (65.4%), indicating a high level of education. A significant portion also belong to postgraduate & above category (20.4%), indicating a well-educated sample group. The higher secondary group (11.1%) with moderate respondents, while secondary education (3.1%) forms the smallest segment.

The occupational distribution shows that the majority of the respondents are students (37%), followed by private employees (15%) indicating a significant portion of respondents consists of young individuals, likely to be more familiar with digital technologies and working professionals with potential exposure to Fintech services. Self-employed group (15.4%) with moderate representation, government employees (5.6%) and other category (5.6%) with smaller shares. Retired category (2.5%) has the least representation.

The table showing monthly income category of respondents indicating, a majority of the respondents falls under the category below ₹10,000 (40.1%), indicating a lower income category. Above ₹40,001 group (25.9%) also represents a considerable share of higher income respondents. The ₹20,001-₹40,000 category (18.5%) and ₹10,001- ₹20,000 (15.4%) have moderate representation.

Awareness and Adoption of Fintech services

Table 2 – Showing frequency of source of awareness of Fintech services among the respondents

Source	Frequency
Bank staff	66
Friends/Family	136
Social media	83
Television	31
Government programs	34
Self-Learning	8

(Source: Primary Data)

The table shows different sources through which respondents learned about Fintech services. Friends/Family (136 respondents) act as the primary source of awareness, indicating that personal communication and word-of-mouth act as the major source in sharing information. Social media (83 respondents) follows as the second most important source, which highlights the growing impact of digital platforms. Bank staff (66 respondents) suggesting that, banks still significantly educate customers about digital financial services. Government programs (34 respondents) and Television (31 respondents) is having a lower impact. Overall, it shows that informal networks and digital media are the main source of awareness of Fintech. Self-learning (8 respondents) have much smaller role compared with other sources.

Table 3 – Showing frequency of usage of Fintech services among the respondents

Fintech Services	Frequency
UPI	149
ATM	122
Internet Banking	90
Online Loans	11
Online Investments	36

(Source: Primary Data)

The table shows the usage of Fintech services among respondents. It shows that UPI is used by 149 respondents, which indicates its widely usage and strong acceptance as digital banking services are convenient and efficient. Usage of ATM is also high (122 respondents), showing that traditional banking service is still preferred among many respondents. Internet banking (90 respondents) shows that respondents are comfortable performing financial services through online. Advanced Fintech services like Online Investments (36 respondents) and Online Loans (11 respondents) are having limited usage.

Table 4 – Showing mean score analysis on perception towards Fintech services among respondents

Statement	N	Mean	Result
Knowledge of digital financial service	162	2.53	**High**
Fintech services are easy to use	162	1.80	**Strongly agree**
I trust digital payment systems	162	2.09	**Agree**
Concern about online fraud and statement	162	1.85	**Highly concerned**

(Source: Primary Data)

The mean score analysis shows that the knowledge level of the respondents regarding digital financial services are quite high. Since the mean value is between those values representing `high`. From observation it is obvious that the majority of the respondents in rural areas are having high knowledge about digital financial services.

The table showing mean score analysis of perception of the respondents towards Fintech services gives mean score of 1.80 for the statement `Fintech services are easy to use` indicates a strong acceptance of ease of using Fintech by respondents. Similarly, mean score for trust in digital payment system is 2.09, indicating a positive level of trust (agree).

The mean score analysis showing concern among respondents about online fraud and security risks is 1.85, indicating that respondents are highly concerned about security issues and fraudulent activities related with Fintech.

H0: There is no significant difference between the gender of the respondents and trust towards Fintech platforms

Table 5 – Independent sample t-test showing gender difference in trust towards Fintech platforms

Variable	Gender	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
customer trust towards the fintech platform	Male	64	2.06	0.889	-0.346	136.748	0.73
	Female	98	2.11	0.907			

(Source: Primary Data)

The table shows the result from conducting an independent sample t-test, to check whether there is a significant difference on customers trust towards Fintech platforms based on gender. The mean score for female respondents (2.11) is comparatively more than male respondents (2.06), indicating that females have higher trust levels.

P-value (Sig = 0.73) is greater than 0.05, indicating that the gender does not have an impact on trust towards the Fintech platforms. Therefore, we accept the null hypothesis.

Challenges and Barriers

Table 6 – Showing elements preventing Fintech usage among the respondents

Challenges	Frequency
Lack of digital knowledge	36
Fear of fraud	92
Poor internet connectivity	78
Language problems	5
No trust	19
None	9

(Source: Primary Data)

The table shows the factors preventing respondents from using Fintech services regularly. Among these, Fear of fraud (92 respondents) were chosen as the major challenge in using fintech services. Poor internet connectivity (78 respondents) is the second major challenge faced by respondents. Some respondents choose lack of digital knowledge (36 respondents), which shows insufficient technical skills and awareness. Language problem (5 respondents) is the least factor which prevent many from using Fintech services regularly.

Solution and Improvement measures

Table 7 – Showing frequency of factors which improve Fintech usage in rural areas

Factors	Frequency
Awareness programs	108
Digital training camps	104
Better internet facilities	90
Stronger security system	69
Government support	81
Local language apps	40

(Source: Primary Data)

The above table shows the suggestions for improving Fintech services in rural areas. Awareness programs (108 respondents) are suggested and Digital training camps (104 respondents) are highly preferred. Better internet facility (90 respondents) and government support (81 respondents) are other important factors for improvement. Stronger security system (69 respondents) and Local language apps (40 respondents) are also considered essential for making trust and Fintech services more accessible.

Findings

The major findings from the data collected are:

- This study sample mainly consist of young, educated individuals, with high proportion of females from low to middle-income groups influencing the study.
- It is shown that, highest awareness of Fintech services is UPI and other widely used Fintech services. While awareness among the advanced services remains low.
- Friends/Family and social media were observed as the major source of awareness of Fintech services among the respondents.
- The government initiatives like Digital India or UPI have high level of awareness among the respondents.
- Majority of the respondents in rural areas are having high knowledge about digital financial services.
- UPI is the most widely adopted Fintech service, while advanced services like online loans and investments got limited adoption.
- Majority of the respondents use digital payment apps on a daily basis, indicating it as an integral part of once daily routine.
- Majority of the respondents also prefer digital payment over cash.
- Majority of respondents are having positive perception towards Fintech services, finding them convenient, and easy to use.
- Respondents are having a positive level of trust.
- Fear of fraud, lack of internet connectivity and lack of digital knowledge are the major barriers for using Fintech services.
- Majority have experienced technical issues while using digital payment apps.
- Respondents also show a high level of concern about online fraud and security risks in Fintech services.
- It is suggested that awareness programs and digital training camps can improve Fintech adoption, along with better internet facility and government support.
- Majority respondents support conducting awareness program by banks.
- The findings shows willingness among respondents to attend digital training programs if conducted in their village, indicating a strong interest in improving Fintech knowledge.

Suggestions

The following are the suggestions proposed based on this study:

- Awareness programs should be conducted in rural areas to improve knowledge about Fintech services and its benefits.
- Conduct digital training camps to improve safe use and understanding of digital financial platforms.
- Improving internet connectivity will ensure smooth access to digital financial services in rural areas.

- Enhancing security measures and building trust can address concern related to fraud and cyber security risk.
- Developing user-friendly applications in local languages can make Fintech services more accessible.
- Encouraging banks and financial institutions can support inclusion of digital financial services in rural areas.

Conclusion

The study on Fintech usage in rural areas shows that people really started using digital financial services mainly by the young educated members of low and middle-income groups. The study reveals that the awareness on basic Fintech services such as UPI is very high, and most respondents have well knowledge about digital financial services and tools. This study indicates that the initiatives promoting digital finance have been successfully creating awareness and understanding among the rural population. The adoption of Fintech services such as UPI and digital payment applications have become a part of their daily life. Majority of the respondents choose digital payment over cash indicating a gradual shift to cashless economy. Ease of use and trustworthiness among respondents leads to increase in use of Fintech services. However, usage of advanced Fintech services such as online loans and online investment applications are limited. The challenges such as fear of fraud, limited internet connectivity and lack of digital literacy are found to be affecting the full potential of Fintech services usage within rural population.

The study highlights the importance of awareness programs, digital training camps and government support. Respondents have shown strong need for digital training programs from banks and government. Improving internet connectivity, security measures and offering local language services will increase the usage and trust of Fintech platforms among rural population.

In conclusion, Fintech has made a great improvement within rural areas and has a great potential for future growth. However, for achieving inclusive and sustainable adoption of Fintech services, there is a need for overcoming the challenges through awareness, training and infrastructural development within rural populations.

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