

An Empirical Study on The Adoption Intention of Financial Technology (Fintech) Services Among Bank Users

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Abstract: *Fintech is a buzzword in the techno-savvy world. Most of the bank users today are comfortable in using digital payment methods, and seen least usage of wallet to carry cash especially in urban and semi urban areas. Thanks to the Financial Technology (Fintech), it has made the life more convenient since it provides wide range of services than the traditional banking services from mobile wallets to peer-to-peer lending to insurance, Fintech services have redefined the way in which consumers and businesses carry out their routine transactions. However, the data shows that the usage of cash still continues in India. This study aims to examine the perception and trust of bank users in the overall payment methods. And also, to examine the influence of demographic factors namely, gender, age, level of education and income which determine the choice of using Fintech. The results shows that the adoption intention of bank users in Fintech are positively correlated, it indicates that respondents have positive intention towards the adoption of Fintech services. It is also found that irrespective of the gender the usage of Fintech services is more in the current scenario.*

Key words: *Fintech, digital payments; adoption intention; trust in digital payment, government support*

1. Background of the study: India is becoming tech-savvy in the 21st century, and so the citizen. Two prime reasons which build strong foundation for the Fintech services are 24/7 service and rise in population, pandemic and integration of IT with finance. In the digital world, Fintech offers transparent, quick, enhanced and better choice for the customers. The real time data transfer is more accurate and fast which pave way for a borderless financial service. Technology is inevitable. The technological ecosystem supports the evolution of Fintech services in a fastest space. It is essential for any consumer in today's world in one way or the other involve in business transaction and payment need to be made digitally in many occasions. Therefore, it is the need of the hour to understand the intention of the customers to adapt Fintech services in the 21st century to follow the tech-savvy crowd as a coping strategy.

2. Introduction: Financial Technology or 'Fintech' refers to the provision of financial services on digital platforms. A number of start-ups have emerged in the Fintech space, which provides services in the traditional areas of banking, such as payments, lending and personal finance. The evolution of money has seen different stages, consensus around the origin and the forms of money has kept changing over the course of time. But what money does is still static over the years. Modern business warrants innovative payment methods which reduce the transaction cost, therefore digital payment method is catching the momentum globally. However, cash plays a pivotal role in trade even today, it has not vanished altogether. Cash might seem convenient as we are accustomed to and it is

ingrained in our habits for its ready acceptability in many places. Despite of it there are issues with cash use. It provides a suitable alternative to aid the informal or parallel economy (Cagan P., 1958); Tanzi V., 1983) digital payment offers itself as a desirable tool for institutions to fix this problem of traceability. The issue of black money is not only the concern in India but also prevailing in other countries and it warrants the concerned governments to take stringent regulatory measures by incurring huge cost to curb the same. Behavioural science research findings shows that people experience difficulties in paying cash compared to digital payments, and this contributes to deferred payments (Prelec D, Loewenstein G 1998; Rick SI 2018; Rogoff K 2015). Though cash may not directly impose any transactional cost like digital money, it is still costly for the stakeholders including governments and end-users. The best alternative method is digital payment which is considered to be an effective method of payment. It is minimizing cost, saving time, reducing the problem of settlement of payments with exact denomination and even risk of carrying cash while travelling. Considering the convenience of using digital payments, it has been witnessed that there is increased demand for digital payment methods and considerable number of people are adopting digital and financial instruments. This is possible due to technological innovation, policy interventions, expansion and strength of existing infrastructure which is capable of meeting the present and future demands. The government of India and RBI are working closely and taking initiatives to reform policy to make the digital payment system secure and user friendly.

A recent survey conducted by Capgemini, reports that Indian and Chinese customers are most open to Fintech (above 75%), followed by the UAE, Hong Kong and Spain. The lowest adoption rates were in France (36.2%), Belgium (30.4%) and the Netherlands (29.8%). Also, young, tech-savvy and affluent customers are major drivers of Fintech products and services. Generation Y uses Fintech services twice as much as others (67.3% versus 33.6%). Among all modes of banking channels, Generation Y and tech-

savvy customers prefer mobile phones. But mobile is yet to overtake PC as the most preferred banking channel. Though computer-based banking has matured, a significant number of customers (excluding Generation Y and tech-savvy) are not yet fully utilizing the potential of mobile application in day-to-day banking—globally, only 40.1% of customers prefer mobile banking as compared to 43.4% for branches, 45.4% for phone, and 56.8% for PC.

A report by Boston Consulting Group and FICCI, India is well-positioned to achieve a Fintech sector valuation of USD 150-160 billion by 2025, implying a USD 100 billion in incremental value creation potential. To achieve this goal, India's Fintech sector will need investments of \$20-25 billion over the next few years, according to this report titled 'India Fintech: A USD 100 Billion Opportunity.' Digital payments have become a way of life in India and we have seen 10-15 million new customers coming on to the digital bandwagon over the last 12 months. Two factors that led to this change were demonetization and Covid-19 pandemic.

According to KPMG, Sydney's financial services sector in 2017 creates 9 per cent of national GDP and is bigger than the financial services sector in either Hong Kong or Singapore. A financial technology innovation lab was launched in Hong Kong in 2015. In 2015, the Monetary Authority of Singapore launched an initiative named Fintech and Information Group to draw in start-ups from around the world. It pledged to spend \$225 million in the Fintech sector over the next five years (Kauflin, Jeff., 2019).

While Singapore has been one of the central Fintech hubs in Asia, start-ups in the sector from Vietnam and Indonesia have been attracting more venture capital investments in recent years. Since 2014, Southeast Asian Fintech companies have increased VC funding from \$35 million to \$679 million in 2018 and \$1.14 billion in 2019 (Schueffel, Patrick., 2017).

Ample number of studies covering the behavioural aspects at individual level that have an impact on choice of payment behaviour in the Indian economy.

However, in the heterogeneity nature of Indian population, different samples might produce disparate results. RBI, banks and governments in particular encourage digital payments system, under this juncture it is imperative to understand the safety and security part of using Fintech services especially for the people with poor knowledge in using digital payment methods. This paper tries to highlight the important factors at the individual level, which influence bank users to use cash or digital payment. While it is critical to push for technological innovations and policy reforms, it is also imperative to understand the aspects that motivate or hinder the adoption of these technologies by the end-user (Sudiksha Shree et al., 2021).

3. Review of Literature: The initiative taken by RBI in introducing Ombudsman Scheme for Digital Transactions (2019) defines digital transactions as “a payment transaction in a seamless system effected without the need for cash at least in one of the two legs, if not in both. This includes transactions made through digital/electronic modes wherein both the originator and the beneficiary use digital/electronic medium to send or receive money”. Many countries have been taking constant efforts in promoting cashless payment methods to eradicate black money in their economies. Even in India efforts have been taken to encourage digital payment modes to solve the problem of black money, especially with higher denomination notes (Rogoff K, 2015). The cost of printing, destroying and other cash related operational expenses in India are estimated at 1.7% of GDP (VISA., 2016). Cash, however, remains a significant part of all the transactions in most countries European Central Bank (2018).

Several research has been carried out at both macro and micro levels to understand the people’s overall preferences and how certain factors influence decisions or choices of payment mode. Considering this line of thought, several research has been examined and analysed the preferences of consumers. The findings reveal that host of technological factors, consumer specific factors due play a crucial role in

choosing the payment modes. Transaction size has a significant impact on what mode of payment people choose. A cross- country comparison of payment diary survey data of seven countries showed that cash was the preferred mode of payment for smallest 50% and largest 25% of transactions (Bagnall J, Bounie D, et.al. 2014). In another study, social marginal costs were computed for various instruments for small and large transaction sizes and it was found that for larger transaction sizes, there were significant differences in cost for electronic vs non-electronic payments (Garcia-Swartz DD, 2006). It is interesting to note that demographic characteristics also play a significant role in how people choose to pay. It was found that better education and higher income lead to lower cash use compared to non-cash modes. Certain categories of age show a stronger preference for digital payments (Bagnall J, Bounie D, et.al., 2014).

The adoption of payment systems by consumers is significantly affected based on safety/risk, convenience/ease of use, anonymity and costs. Png and Tan., 2019, study reveal that concerns about privacy emerged as one of the main psychological factors causing a bias towards cash for retail transactions. Kahn et al, McAndrewset et al., 2005 show that business in the unorganized economy was attributed to transactions that could be made in cash and did not reveal the agent’s identity. Bagnall et al. (Bagnall J, Bounie D, et.al. 2014) paper based on cross-country consumer diary surveys shows that consumers who rated cash high on ‘ease of use’ ended up using it more. In a study assessing payment perception of Dutch consumers, non-price parameters such as ‘acceptance’, ‘convenience’, ‘transaction speed’ and ‘safety’ were used to gauge the perception of payment instruments used at PoS terminals (Jonker N (2007). Numerous studies have used the Technology Acceptance Model (TAM) to show ‘perceived usefulness’ and ‘perceived ease of use’ have a significant impact on behavioral intention and thus, actual use of electronic payment systems (Lai PC (2017, Ozturk AB (2016).

According to Maqableh M. (2015) research paper, perceived trust in the payment system is shown to have a positive effect on the usage of digital modes of payment. Apart from the central bank and commercial banks non-banks have also emerged as new players in the framework. A recent empirical study conducted by the Monetary Authority of Singapore found that trust in banks impacts the nature of the transaction (Png and Tan 2019). A cross- country analysis shows that residents in countries that reported lower trust in banks preferred cash for making transactions. In some cases, while an increase in trust can lead to the opening of accounts, it might not translate to actual usage of those accounts (Galiani S, Gertler, 2020). Central banks also play a pivotal role in ensuring safety, integrity and stability of the payments system. Experience of online fraud can shape beliefs of perception and trust and can have a direct impact on payment behaviour. Media coverage of these incidents is shown to affect card payment (Kosse A., 2013). The direction, strength and frequency of media coverage affected debit card use. Few studies show that people simply use digital modes of payment because they have exhausted their stock of cash in hand. It is called 'cash first' or 'cash-burning' and is perceived to be an optimal policy by the consumer (Arango CA et al., 2018). Studies also point that people still pay in cash simply because it is difficult to give up the habits (Jonker N., 2007).

Sudiksha Shree et al., 2021, paper shows inconsistent behavior when studying the impact of experience of digital payment fraud on choice of payment tool. The impact that experiencing such a fraud has on the choice to pay digitally differs according to the purpose of the transaction. Mansour Saleh et al. (2021) research finding shows that Fintech efforts have not yet contributed to a radical transformation of the Saudi financial market. This study suggests that the regulators and policymakers need to act efficiently to support the ecosystem. Further the study suggests future Fintech startups should focus on the areas of credit scoring for personal banking and corporate credit rating. The findings of the Witold Chmielarz et

al. (2021) paper indicate the undoubted fact of increased interest in the use of m-payment in e-commerce and e-banking, and even more importantly, differences concerning 40% of the attributes applied to assess the use of m-payment in Poland and Turkey. Jonna Blach et al. (2021) paper presents that the market behavior of BLIK (BLIK is a payment system in Poland that allows users to make instant payments and withdraw cash using only the user's standard mobile banking app.) as an open business model and the key success factors of BLIK adoption and diffusion and the determinants for further open payment innovations' development. Michal Grabowski (2021) study reveals that the principles of two primary models of white-label banking were established. The first model is based on a bank acting only as an outsourcing service provider. In the second model, bank also operates on the basis of a license it was granted. Both models have a common legal origin in European Union law, but local variations exist depending on the legal system of a given member state. The research paper of Anne Laure (2021) draws on the future-oriented challenges and opportunities related to Fintech growth and stability across borders. The present study presents methodology, sample summary statistics, results and analysis, discussion, limitations, future implications and in fine conclusion on the adoption intention of Fintech services of bank users accordingly. Under this background, following research objectives have been considered for this study.

4. Objectives of the study: The specific research objectives in this study are drawn, in part, from the investigations discussed earlier.

- To study the influence of demographic factors on the adoption intention of Fintech services among bank users.
- To find the relationship between Fintech service adoption intention and gender.
- To examine the association between various constructs which induce the adoption intention of Fintech services among bank users.

5. Hypothesis statement:

H_{0a}: There is no significant difference between gender and Fintech service usage.

H_{1a}: There is a significant difference between gender and Fintech service usage.

H_{0b}: Brand Image (BI) and Perceived Ease of Use (PEU) are not positively correlated

H_{1b}: Brand Image (BI) and Perceived Ease of Use (PEU) are positively correlated

6. Research Methodology: For this study a structured questionnaire developed by Sudiksha Shree, Bhanu, et al., 2021, has been used after modification. Primary data was collected by using Google Forms. The questionnaire link was shared on WhatsApp and emails for better reach. It consists of 15 main questions that are divided into ten sections viz. demographics, perceived usefulness, perceived ease of use, trust, brand image, perceived risk, government support, user innovativeness, attitude and intention.

This study broadly aims to understand the impact of user perception, trust in digital payment systems, and government support in particular and other (mentioned above) six constructs in general on the choice of mode of payment and the influence of demographic factors (gender, age, level of education, occupation and income) while choosing payment modes. It is an exploratory study. Sample units are bank users comprising of different age group with different education, employment background and income levels. The sample size is 109 and the survey was conducted by snowball technique to collect the data.

The statistical tools like, percentage analysis, independent sample t-test, Mean, standard division (SD), Kurtosis and Skewness, Cronbach’s alpha, and Correlation were applied. In order to understand whether the contents in this questionnaire were internally consistent, a Cronbach’s alpha was run. The internal consistency is checked with a reliability test, and is observed that the value ranges from 0.95 to 0.76, which is highly acceptable with a threshold value of greater than .60.

7. Results and Discussions: The questionnaire was filled in and submitted by the respondents, the

response rate could not be ascertained since it was surveyed through snowball technique by sending the links through social media. The analysis of the study is presented here.

7.1 The demographic details of the respondents were collected and presented in Table 7.1. It shows the sample size, gender, age distribution, education, occupation and monthly income of the respondents. Out of the 109 respondents who participated in this study, 57.8 % per cent are male and 42.2 % are female. More than half of the respondents are falling under the age group of 20 to 25 years, more than one third of the respondents are having master’s degree, nearly one third of the respondents work in private sector companies and private institutions, and nearly half of the respondents are college students and their income is less than ₹ 20,000 per month, around one fourth of the respondents’ monthly incomes are ranging from ₹ 20,000 to ₹ 60,000 and remaining one fourth of the respondents’ salary are ranging from ₹ 60,000 to above ₹ 1,00,000 per month.

Table 7.1: Showing Demographic Profile of the respondents

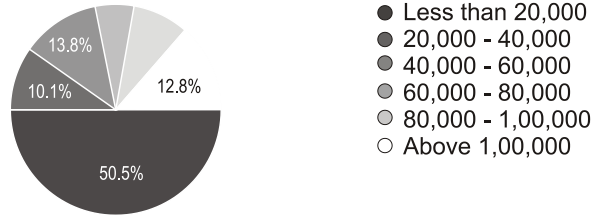
Variables	Frequency	Percentage (%)
Sample size	109	100
Gender:		
Male	63	57.8
Female	46	42.2
Age distribution (in years):		
20 – 25	62	56.9
26 – 35	21	19.3
36 – 45	36	14.7
46 – 55	7	6.4
56 and above	3	2.8
Education:		
Diploma	3	2.8
Bachelor	33	30.3
Master degree	43	39.4
Professional degree	11	10.1
PhD	19	17.4

Employment status:		
Student	57	52.3
Civil service/institution staff	2	1.8
Business management personnel	2	1.8
Employee (private sector/institution)	33	30.3
Self-employed	4	3.7
others	1	0.0
Income (in rupees - ₹)		
Less than 20,000	55	50.5
20,000 - 40,000	11	10.1
40,000 - 60,000	15	13.8
60,000 - 80,000	6	5.5
80,000 - 1,00,000	8	7.3
Above 1,00,000	14	12.8

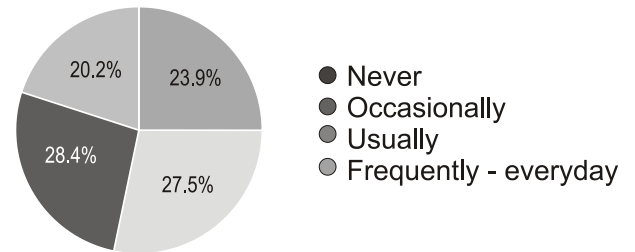
Source: From Survey

Chart 7.1: Depicting Socio-Demographic Variables

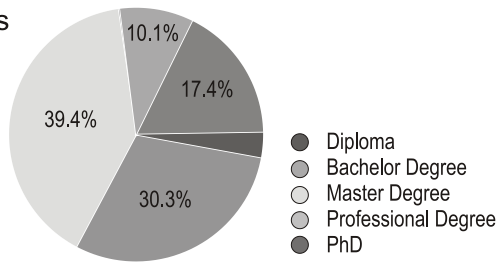
5. Incoem (in rupees)
109 responses



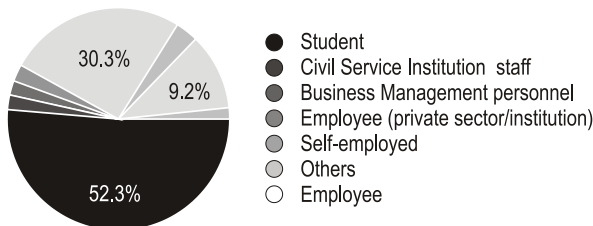
6. Financial Technology (Fintech) service usage
109 responses



3. Education
109 responses



4. Employment Status
109 responses



Source: From Survey

Table 7.2: Showing Mean, (SD), Kurtosis and Skewness, Cronbach's alpha, and Correlation Matrix of the variables:

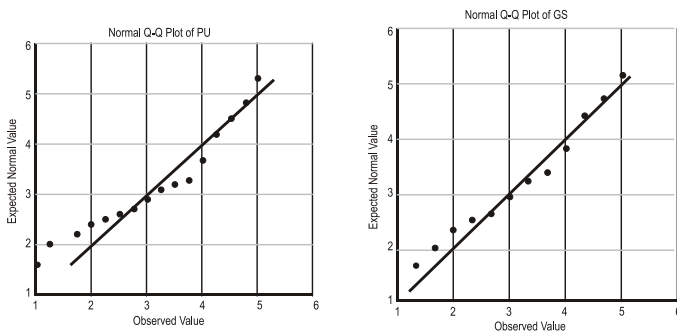
Variable	1	2	3	4	5	6	7	8
PU	0.95							
PEU	.712**	0.90						
TRU	.497**	.675**	0.93					
PR	.290**	.336**	.278**	0.88				
GS	.614**	.722**	.595**	.315**	0.87			
AT	.664**	.641**	.465**	.257**	.672**	0.89		
INT	.662**	.606**	.477**	.302**	.665**	.766**	0.76	
BI	.749**	.810**	.694**	.379**	.786**	.658**	.661**	0.86
UI	.465**	.456**	.400**	.475**	.401**	.570**	.450**	.582**
Mean	3.782	3.575	3.339	3.168	3.517	3.664	3.633	3.609
Standard deviation	1.052	1.020	0.997	0.894	1.012	0.861	0.933	0.936
Skewness	-1.118	-0.883	-0.707	-0.385	-0.649	-0.836	-0.971	-1.190
Kurtosis	0.639	0.232	0.118	-0.250	0.243	0.403	0.858	0.872

Note: N=110. Diagonal value in parenthesis represents Cronbach's alpha.

**Correlation is significant at the 0.01 level(2-tailed).

Table 7.2 depicts the mean, SD, Skewness & Kurtosis, Cronbach’s alpha value, and correlation of the study variables. The internal consistency is checked with a reliability test, and is observed that the value ranges from 0.95 to 0.76, which is highly acceptable with a threshold value of greater than .60. Hence, there is a high internal consistency among the study variables. The Pearson correlation for all the constructs is quite good with a maximum of (r = .81) for the construct. Brand Image (BI) with perceived ease of use (PEU). It is also observed that all the constructs are positively correlated with each other with respect to all the other construct, in the adoption of Fintech service usage. The value of mean for all the variable is greater than 3, which shows a positive opinion towards the adoption of Fintech with respect to the variables identified. Skewness and Kurtosis lies with the acceptable range +3 to -3.

Chart 7.2: Output of Independent sample t test



Source: From Calculation

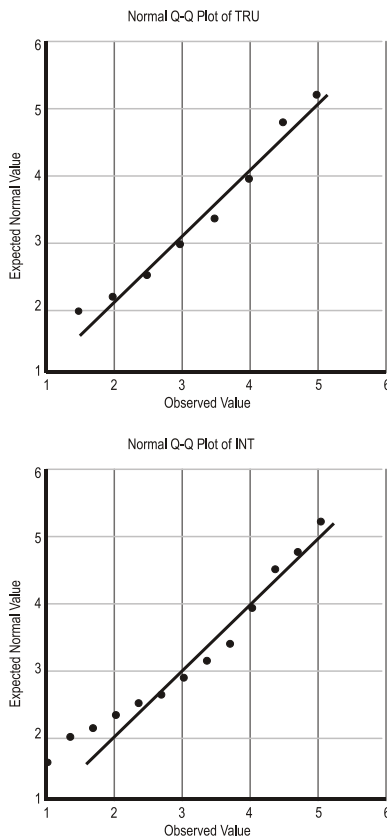
The results of independent sample t test for gender and FSU are presented in the table 5.3. Levene’s test check the null hypothesis that the variance of the two groups is equal. Here the p value is .430 so the assumptions are not violated. The value of t statistics is 0.586 and the p value is .559, which is greater than .05, reject alternative hypothesis and accept null hypothesis. It is found that irrespective of the gender the usage of Fintech services is more in the current scenario.

Q-Q plot for the construct Perceived Use (PU), Trust (TR), Government support (GS) and Attitude (AT). The

below Normal Q-Q plot represent that the data follows normal distribution and except few deviations at the extreme of the line. Out of the construct studied only four are presented hereunder.

8. Empirical findings of the study: Key findings of this study reveal the significant impact of perception of digital payment methods on how people choose to pay. In few cases, digital payments may not be accepted so the only option left is cash payment. It has also been observed that some vendors do not accept cash as a payment mode and insists only digital payments. The mode of payment is therefore decided based on the circumstances rather than convenience. However, in order to increase the number of digital payment users, banks and financial institutions in India are sending SMS to the registered mobile phones. In order to use digital payments one has to have the Android phones, therefore it is important to consider this factor while promoting digital payment modes. It is quite natural to find Fintech users in urban and semi urban areas whereas in rural places where more than 60% of the Indian population lives, the digital payment users may be in negligible numbers. There are several reasons for the same, the internet connectivity issues, affordability to buy the Android phones, lack of basic knowledge and skill to use the smartphones, fear of technology, safety and security reasons, and many more. Therefore, to ensure the safety and security of the bank users banks and financial institutions are taking stringent measures by sending SMS alert messages whenever log in to the Net banking accounts, asking for the OTP for any additional withdrawal of money in ATM booths, cautioning the customers not to share the debit card details, OTP, expiry data, CVV number suggesting customers to change their passwords periodically to avoid any financial loss. Apart from the above, the list of dos and don’ts have been communicated to the general public by banks and also through SEBI’s Investors Education Workshops the awareness has been created among the general public.

Chart 7.3: Output of Independent sample t test



Digital payment modes are indispensable and instead of complaining about the risks associated with it, the bank users are expected to be cautious and vigilant while making digital payments and Net banking transaction. Password and user ID need to be protected, public internet service need to be avoided, after the use of digital payments immediately account has to be logged out to avoid fraudulent acts. The RBI, banks and other financial institutions could save considerable amount of money by minimizing the transaction cost which is not possible in cash payment mode.

9. Limitations of the study and Future Implications: Most of the respondents are already digitally literate and educated when compared to the population. Therefore, the results of this study may not be generalized. Another limitation is that the responses

were collected through Google Forms therefore personal interaction and observation were absent during the survey. Further research is needed to explore and study the percentage of digital payment users in rural areas and compare it with semi urban and urban areas.

10. Conclusion: In the modern economy the central banks, commercial banks, governments, regulators and service-providers are promoting digitalization of payments and taking initiatives to monitor the Fintech companies. The key regulators in India namely, the RBI, SEBI, IRDAI and the Pension Fund Regulatory and Development Authority ("PFRDA"), have issued draft guidelines and, in the case of RBI and SEBI, operationalized regulatory sandboxes in order for Fintech businesses to live test their innovations in a controlled regulatory environment and building required infrastructure in place to promote digital payment modes. This process of digitalization enables banks and financial institutions to minimize their work pressure. Under this background, this study makes sense in understanding the perception of beneficiaries or the end users about the usefulness of Fintech. The results show that the adoption intention of bank users in Fintech are positively correlated, it indicates that respondents have positive intention towards the adoption of Fintech services. It is also found that irrespective of the gender the usage of Fintech services is more prevalent today. Digital payment modes are indispensable to all the stakeholders irrespective of their quantum of transaction. It is evident from the current scenario that customers' payment modes will be smoother with digital payments and also it is the order of the day to adapt and accustomed to the innovative Fintech services.

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