

An Empirical Study on The Adoption of Fintech Services by Bank Customers In India

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Abstract

There has been a great scope for the finance and banking sector thanks to the advancement of technology. India has around 87% of adoption of Fintech services, while it is 64% across the world, especially because of the arrival of Fintech startups providing financial services not only in major cities but also in the remotest areas. The government of India has taken various major steps for promoting Fintech services and digital transformation, considering its potential to play a vital role in financial stability. Collaborative moves have been made by financial bodies to meet the diverse needs of customers. This study is aimed to determine the adoption of fintech services by bank customers across India, along with their perception and constraints towards Fintech services. Total of 213 responses have been collected through an online survey. A self-structured questionnaire was distributed to determine the adoption of Fintech services in India. This study is empirical in nature and is based on primary data. It is observed that, despite growing awareness of Fintech services in India, certain measures are needed from both companies and government bodies to reduce the constraints related to those services that are faced by customers in India.

Keywords – Fintech startups, Fintech services, Fintech, banking sector, financial services, customer perception, digital transformation, bank customers

1. Introduction

Fintech or Financial Technology refers to the technology that can automate and upgrade the overall design and way to provide financial services. Fintech firms come up with different services under one umbrella, including financing startups, money transfer, insurance, and wealth management. Fintech services have made their presence in banking services like payments, deposits, and collection. Fintech companies have a great scope in India. The Government of India has also promoted the use of Fintech services by developing unified software platform to bring India to digital age. With the significant rise in smartphone user base (i.e., around 500 million as of 2020), digital banking is all set to have a significant rise (PwC & Startupbootcamp, 2017).

1.1 Background

Earlier this year in 2021, Finance Minister Nirmala Sitharaman had a statement that there is 87% of adoption of Fintech services in India as compared to 64% of global average. Hence, India is a leading hub

for digital payments and financial services. According to the financial minister, digital payments have seen a tremendous growth from INR 2 trillion to 4 trillion from 2019 to 2020. From January to August 2021, India has seen further growth with digital transactions of over Rs. 6 trillion, with transactions amounting to Rs. 355 Crore, due to huge participation from industries, users, and government.

The finance minister addressed the “Global Fintech Fest” by “Fintech Convergence Council (FCC)” and “Payments Council of India (PCI)” from “Councils of Internet and Mobile Association of India (IAMAI)” in association with “National Payments Corporation of India (NPCI)”. Fintech startups are remodeling and altering to latest technologies to make India a promising Fintech hub. India has several fintech innovations as users are more willing to use digital platforms. The FM also introduced the “UN Principles” for “responsible digital payments” at the Fest, mentioning that it is the right time for UN Principles because countries are in the race to have maximum tech population (Jacob, 2021).

India has boosted the deployment of digital infrastructure for promoting financial inclusion and look forward to “Sustainable Development Goals (SDGs)”. The UN Principles covers the “Unified Payments Interface (UPI)” as an example of inclusive, interoperable and open infrastructure which can boost economic participation from the society with contactless and secure payments. Fintech services keep people at the core of digitization of payments, especially those in rural areas out of conventional financial industry.

2. Literature Reviews

There has been a rise in demand for mobile payment apps in recent years and it becomes important to identify several stakeholders in the process. The study consists of perceived usefulness, ease of use, social influences, easing conditions, preparedness for adoption, and intent to use FinTech in India.

Haritha (2022) discussed the dynamic changes of Fintech in banking industry. The researcher tested the mediation influence of perceived readiness, trust on adoption, and intention to use Fintech. The findings supported the given model to determine the impact of trust, adoption, and intention to use Fintech services.

Tripathy & Jain (2020) highlighted the value of Fintech adoption to boost customer retention. This study has provided macro perspective and authors' views on linkages in Fintech usage. A lot of leading B2C businesses are switching to Fintech payments. Those who skip this trend would lose customers to their competition in the long term. Fintech is a fastest-growing and new industry and there has been a lack of research on its use by non-financial companies and impact on retention. **Das & Das (2022)** analyzed the usage pattern of Fintech services during COVID-19 among bank customers. This study determined the factors affecting adoption of Fintech with the constructs from “technology acceptance model (TAM)” while highlighting the issues in Fintech payments. This empirical study was conducted on 1066 prime earners with bank account. There has been a rise in Fintech services in the study area. Along with private and government employees, self-employed professionals and businessmen, agriculturalists and daily-wage earners have also faced a rise in usage of Fintech services. Perceived usefulness, government support, social influence, and attitude have positively affected adoption of Fintech. However, perceived risks affected trust on Fintech services. So, important measures are needed to determine preparedness of organizations to avoid cyberthreats.

Advancement of technology in Fintech has attracted billions of dollars in VC over the years. Some of the common examples of innovations in Fintech are digital cash transfer in India and Kenya and P2P lending in China. When developed with helpful regulatory and government policies, these

services can boost financial services to reach hundreds of millions of populations which lacks access (Guild, 2017).

COVID-19 has brought stress, uncertainty and financial crunches. As countries worldwide have adopted preventive measures like voluntary quarantine measures and strict lockdowns, businesses and people had to adjust their normal life to new behaviors. Especially in developing countries, consumer behavior was affected in financial services as people had to switch to Fintech services at haste. Fintech is growing rapidly but its presence is at the beginning stage in developing markets and adoption has widely been elusive in low-income segments.

Billore & Billore (2020) investigated the effect of financial behavior among low-income groups of customers using Fintech services because of COVID-19. Several antecedents like social influence, fear, trust and awareness led to positive adoption of products.

Hu et al. (2019) proposed “technology acceptance model (TAM)” which consists of government support, innovativeness of the user, perceived risk and brand image to determine trust on Fintech services. A self-structured questionnaire was distributed among 387 active customers of “Hefei Science & Technology Rural Commercial Bank”. They analyzed data with “structural equation model (SEM)” to test hypothesis. There is a significant influence of users’ trust in Fintech on their attitudes for adoption. Additionally, there was no effect of perceived risk and perceived ease of use on their attitudes for adoption of Fintech.

India is an emerging market with population of over 1.4 billion for Fintech service. A huge number of under-banked and unbanked people are making India a huge space for Fintech. This technology would be a game changer and disruptive to shape up the conventional financial markets. Over the past five years, Fintech has seen a rapid growth and would grow even more rapidly soon.

Priya & Anusha (2019) focused on basic types of Fintech services and their functions along with challenges and opportunities in business environment of India.

2.1 Research Gap

There has been a lot of studies conducted on Fintech services in India. Most of the studies are focused on specific Fintech service and their strategies to attract more customers. This study fills the knowledge gap between adoption of Fintech services and problems faced by customers on using Fintech services. This study would be helpful to research academia to open further research path on this direction and financial service providers to further improve their services and products.

2.2 Research Questions

- Are Fintech services widely adopted by bank customers in India?
- What is the relation between customers’ perception and constraints faced by them on using fintech services?
- What is the impact of their perception on adoption of Fintech services?

2.3 Research Objectives

- To analyze the adoption of Fintech services by bank customers in India
- To determine the association between perception and constraints faced by customers on using Fintech services
- To determine the impact of customers’ perception on adoption of Fintech services

2.4. Hypothesis

H1 – There is an association between perception and constraints towards using Fintech services by bank customers

H2 – There is a significant impact of customers' perception on adoption of Fintech services

3. Research Methodology

This research would be empirical by nature. The area of the study covers selected private and government banks in Bhopal, Madhya Pradesh. The customers of those banks are targeted for the purpose of this study. The data has been collected from a sample of 213 bank customers through Google Form.

3.1 Research Method & Design

Survey data, which has been collected through online mode, is analyzed using SPSS software version 22. Pearson Correlation would be used to analyze the association between perception and constraints faced by bank customers and One Sample T-test would be conducted to determine the impact of customers' perception on adoption of Fintech services.

3.2 Research Approach

Primary data has been collected with a self-structured questionnaire prepared to fulfill the above research objectives. Secondary data has also been collected from various sources like existing studies and news portals as supportive evidence to this study.

4. Analysis of Study

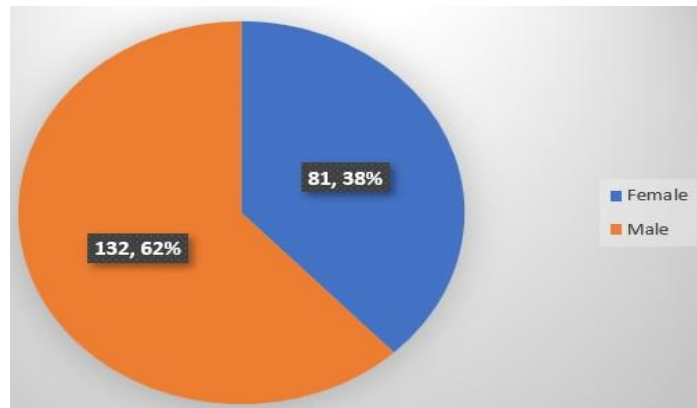
4.1. Demographic Profile

Out of 213 participants in this study, 132 participants (62%) are male and 81 (38%) participants are female (Table 1) (Figure 1).

Table 1 – Gender of participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Female	81	38.0	38.0	38.0
Male	132	62.0	62.0	100.0
Total	213	100.0	100.0	

Figure 1 – Gender of participants

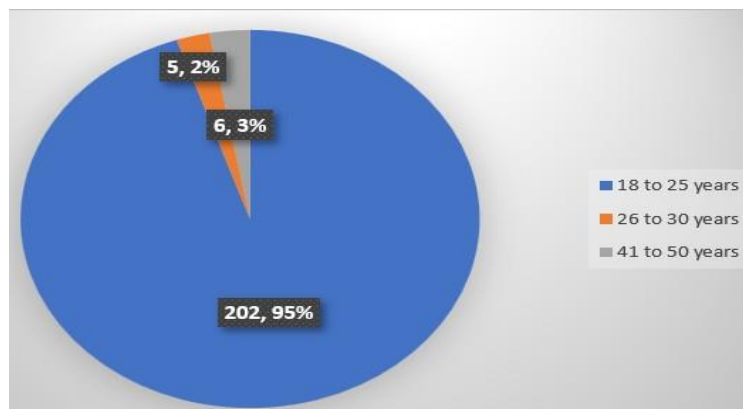


In this study, majority 202 (94.8%) participants are young, i.e., aged 18 to 25 years. In addition, only 5 (2.3%) participants are 26 to 30 years old and 6 (2.8%) participants are 41 to 50 years old (Table 2) (Figure 2).

Table 2 – Age of the participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18 to 25 years	202	94.8	94.8	94.8
26 to 30 years	5	2.3	2.3	97.2
41 to 50 years	6	2.8	2.8	100.0
Total	213	100.0	100.0	

Figure 2 – Age of the participants



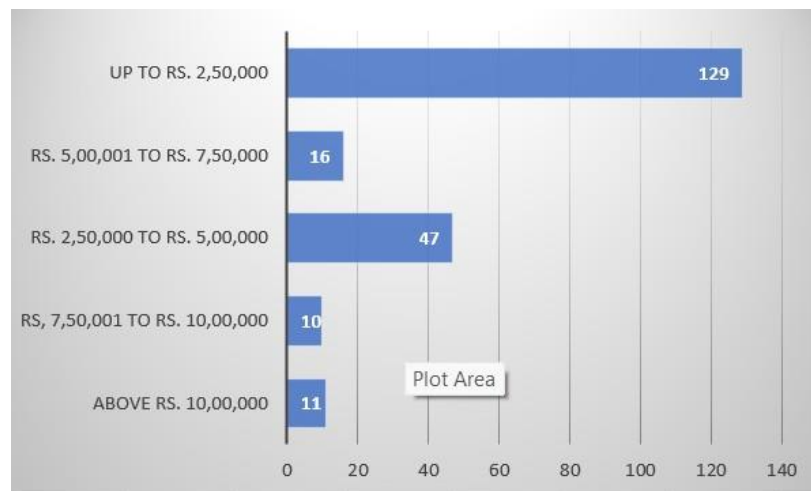
When it comes to annual income of the participants, majority of participants, i.e., 129 (60.6%) have annual income up to Rs. 2,50,000. In addition, 16 (7.5%) participants are earning from Rs. 5,00,001 to

Rs. 7,50,000. There are 47 (22.1%) participants earning from Rs. 2,50,000 to Rs. 5,00,000, 10 (4.7%) participants were earning from Rs. 7,50,001 to Rs. 10,00,000 and only 11 (5.2%) participants were earning above Rs. 10 lakhs per annum (Table 3) (Figure 3).

Table 3 - Annual Income

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Above Rs. 10,00,000	11	5.2	5.2	5.2
Rs. 7,50,001 to Rs. 10,00,000	10	4.7	4.7	9.9
Rs. 2,50,000 to Rs. 5,00,000	47	22.1	22.1	31.9
Rs. 5,00,001 to Rs. 7,50,000	16	7.5	7.5	39.4
Up to Rs. 2,50,000	129	60.6	60.6	100.0
Total	213	100.0	100.0	

Figure 3 – Annual income of participants

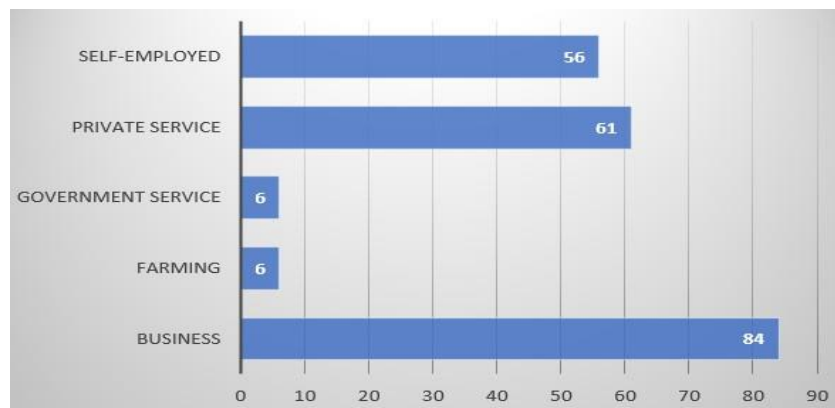


When it comes to occupation of participants, 84 (39.4%) participants have their own business, 56(26.3%) participants are self-employed, 61 (28.6%) participants are private employees, 6 (2.8%) participants are government employees, and 6 (2.8%) participants are farmers (Table 4) (Figure 4).

Table 4 – Occupation of the participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Business	84	39.4	39.4	39.4
Farming	6	2.8	2.8	42.3
Government service	6	2.8	2.8	45.1
Private service	61	28.6	28.6	73.7
Self-employed	56	26.3	26.3	100.0
Total	213	100.0	100.0	

Figure 4 – Occupation of the participants



When it comes to academic qualification, 100 (46.9%) participants are students, 35 (16.4%) participants are graduate, 54 (25.4%) participants are post-graduate, and 24 (11.3%) participants have professional degree (Table 5) (Figure 5).

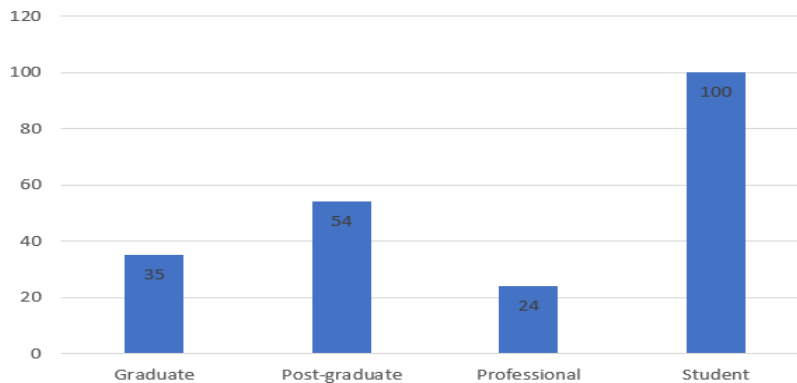
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Table 5 – Education of the participants

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid Graduate	35	16.4	16.4	16.4
Post-graduate	54	25.4	25.4	41.8
Professional Student	24	11.3	11.3	53.1
Total	100	46.9	46.9	100.0
	213	100.0	100.0	

Figure 5 – Education of the participants



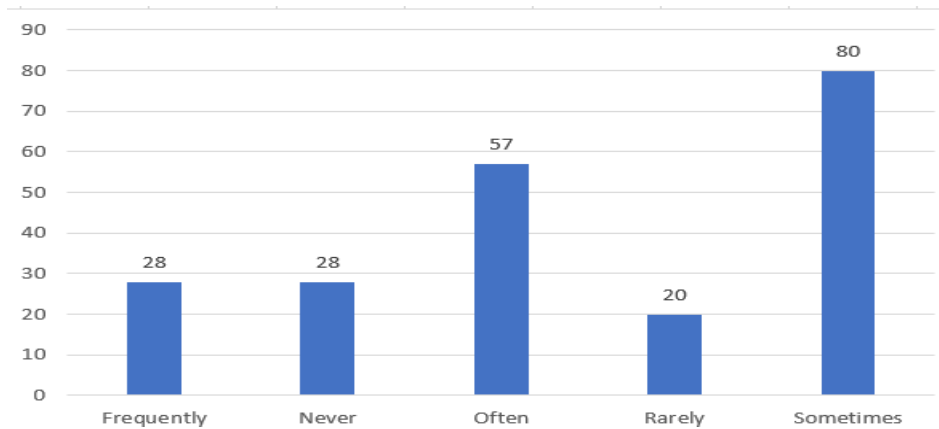
4.2. Adoption of Fintech Services

In this study, 80 (37.6%) participants use Fintech services sometimes, 57 (26.8%) participants often use Fintech services, 20 (9.4%) participants rarely use Fintech, 28 (13.1%) participants frequently use Fintech while same percentage of participants never use Fintech (Table 6) (Figure 6).

Table 6 – Frequency of using Fintech

How frequently do you use Fintech services?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Frequently	28	13.1	13.1	13.1
	Never	28	13.1	13.1	26.3
	Often	57	26.8	26.8	53.1
	Rarely	20	9.4	9.4	62.4
	Sometimes	80	37.6	37.6	100.0
Total		213	100.0	100.0	

Figure 6 – Frequency of using Fintech

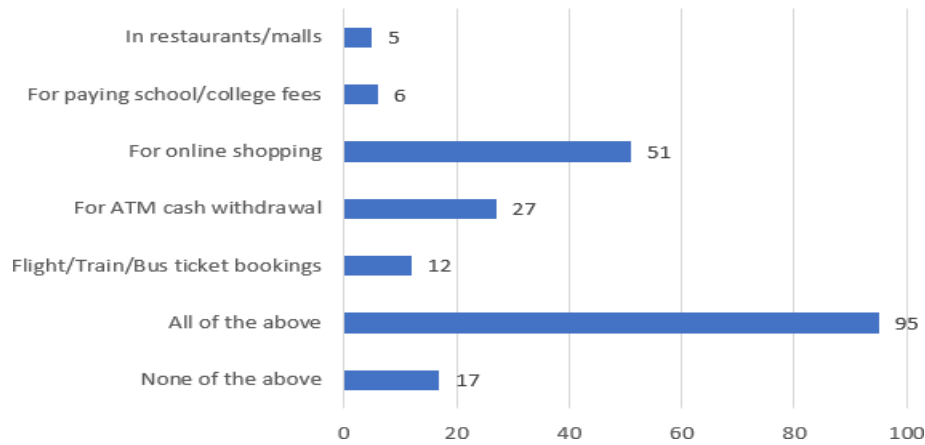


In this study, we have observed various purposes of using Fintech services. Majority 95 (44.6%) participants use Fintech services for flight/train/bus ticket booking, ATM cash withdrawal, online shopping, paying school fees, and in restaurants and malls. In addition, 27 (12.7%) participants use Fintech for ATM cash withdrawal, 12 (5.6%) participants use Fintech for travel booking, 51 (23.9%) participants use Fintech for online shopping, 6 (2.8%) participants use it for paying school/college fees, 5 (2.3%) participants use it in restaurants/malls and 17 (8%) participants don't use Fintech for all these purposes.

Table 7 – Purposes of using Fintech

What is your purpose of using Fintech services?	Frequency	Percent	Valid Percent	Cumulative Percent
Valid All of the above	95	44.6	44.6	44.6
Flight/Train/Bus ticket bookings	12	5.6	5.6	50.2
For ATM cash withdrawal	27	12.7	12.7	62.9
For online shopping	51	23.9	23.9	86.9
For paying school/college fees	6	2.8	2.8	89.7
In restaurants/malls	5	2.3	2.3	92.0
None of the above	17	8.0	8.0	100.0
Total	213	100.0	100.0	

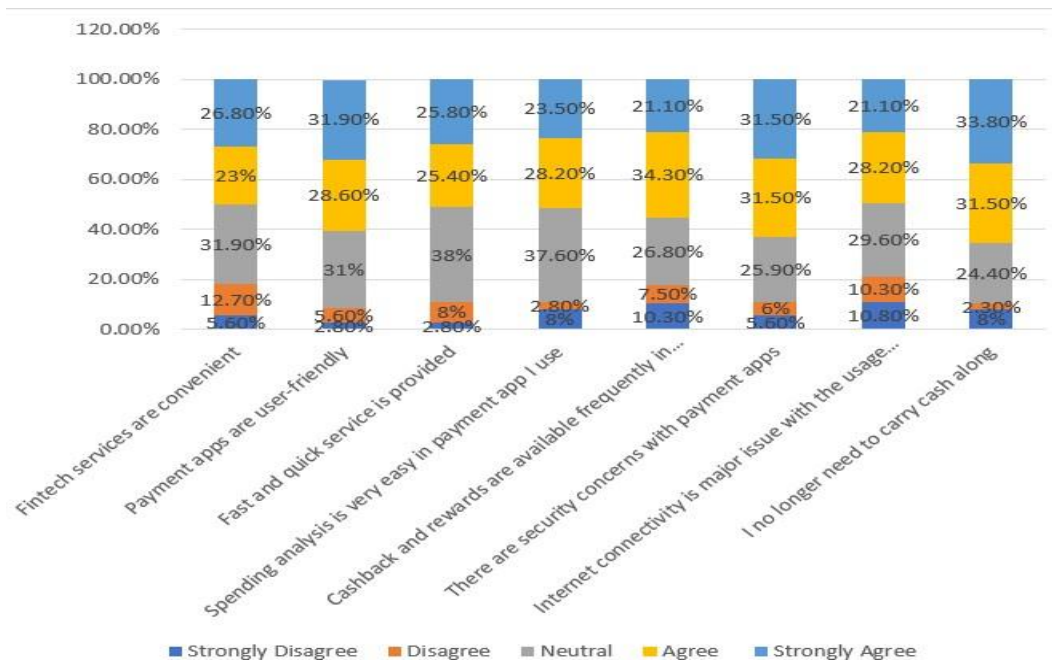
Figure 7 – Purposes of using Fintech



4.3. Perception towards Fintech services

In this study, it can be observed that 50%, 60.5% and 51.2% participants perceive that Fintech services are convenient, user-friendly, and provide fast and quick services. It is also observed that 49.3% participants perceive internet connectivity as a major issue for using these apps. In addition, 51.7%, 55.4%, 63% and 65.3% participants perceive that spending analysis is very simple in payment apps they use, rewards and cashbacks are available frequently in their payment apps, there are security concerns with payment apps and they no longer need to carry cash along, respectively. (Figure 8)

Figure 8 – Perception of users towards Fintech Services



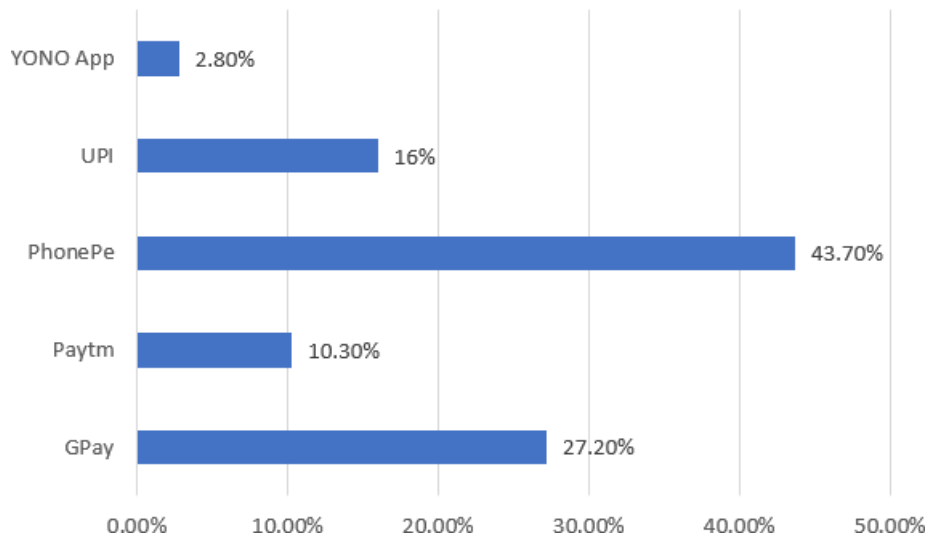
4.4. Awareness of various Fintech services

In this study, it is observed that PhonePe is the most popular Fintech app among participants (93, 43.7%). In addition, 58 (27.2%) participants are aware of GPay, 22 (10.3%) participants are aware of PayTM, 34 (16%) participants are aware of UPI and only 6 (2.8%) participants are aware of SBI YONO app (Table 8) (Figure 9).

Table 8 – Awareness of Fintech services

Are you aware of the following Fintech services?	Frequency	Percent	Valid Percent	Cumulative Percent
Valid GPay	58	27.2	27.2	27.2
Paytm	22	10.3	10.3	37.6
PhonePe	93	43.7	43.7	81.2
UPI	34	16.0	16.0	97.2
YONO App	6	2.8	2.8	100.0
Total	213	100.0	100.0	

Figure 9 – Awareness of Fintech apps



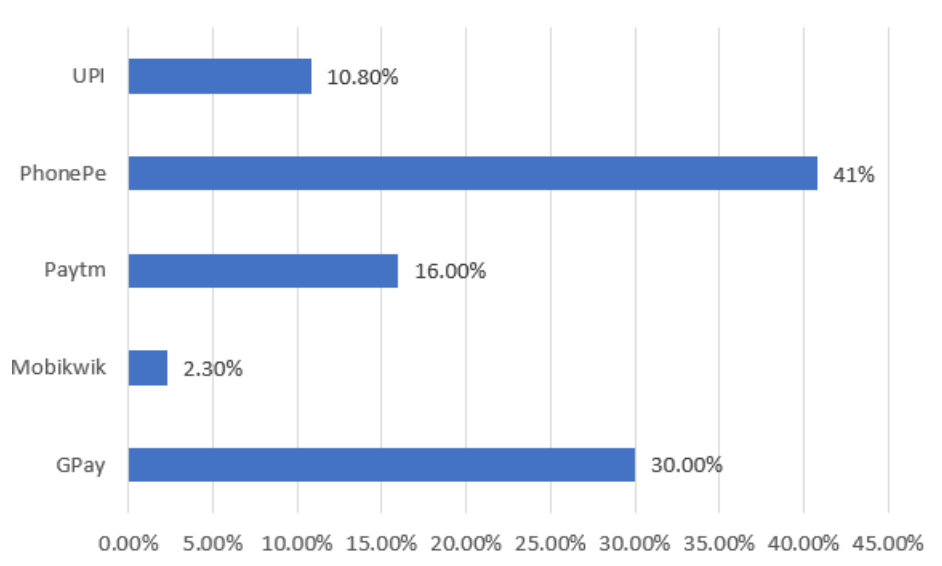
4.5. Usage of various Fintech services

In this study, PhonePe is found to be the most widely used Fintech app as it has been used by 87 (40.8%) participants, followed by GPay, which has been used by 64 (30%) participants. In addition, 34 (16%) participants use PayTM, 23 (10.8%) participants use BHIM UPI, and only 5 (2.3%) participants use Mobikwik (Table 9) (Figure 10).

Table 9 – Usage of Various Fintech services

Which of these Fintech apps do you use?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	GPay	64	30.0	30.0	30.0
	Mobikwik	5	2.3	2.3	32.4
	Paytm	34	16.0	16.0	48.4
	PhonePe	87	40.8	40.8	89.2
	UPI	23	10.8	10.8	100.0
Total		213	100.0	100.0	

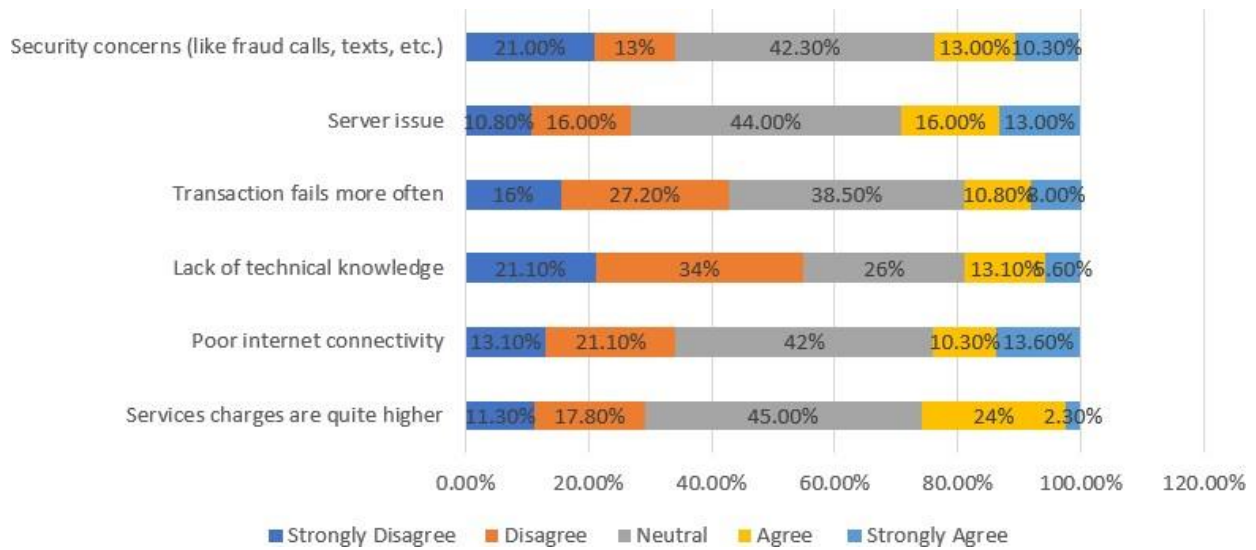
Figure 10 - Usage of Various Fintech apps



4.6. Constraints faced by Customers

Along with benefits, there are various constraints faced by consumers using Fintech services. However, the percentage of those people was very less. There are only 26% participants who find service charges higher, 24% face poor internet connectivity, 18.7% participants have lack of technical knowledge, 18.8% participants observed that their transactions fail more often, 29% participants faced server issue, and 23% participants faced security concerns like fraud calls, emails, text. etc. (Figure 11).

Figure 11 – Constraints faced by customers using Fintech services



4.7. Perception and Constraints towards using Fintech Services

In order to find out if there is association between perception and constraints faced by users towards Fintech services, Pearson Correlation was conducted using SPSS software 22. Correlation between these two variables is found significant at 0.01 level. Hence, this test approved H1, i.e., there is an association between perception and constraints towards using Fintech services by bank customers.

Table 10 – Correlation between Perception and Constraints towards using Fintech Services

	Perception	Constraints
Perception Pearson Correlation	1	.184**
Sig. (2-tailed)		.007
N	213	213
Constraints Pearson Correlation	.184**	1
Sig. (2-tailed)	.007	
N	213	213

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

4.8. Impact of Customers' Perception on Adoption of Fintech Services

In order to find out the impact of customers' perception on adoption of Fintech services, One-Sample t-test was performed using SPSS 22. In this test, the value of significance ($p < 0.05$) is 0.00 for all the variables. Hence, this test approved H2, i.e., there is a significant impact of customers' perception on adoption of Fintech services.

Table 11 - One-Sample t-Test on Consumer Perception

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Fintech services are convenient	43.763	212	.000	3.526	3.37	3.68
Payment apps are user-friendly	53.592	212	.000	3.812	3.67	3.95
Fast and quick service is provided	50.979	212	.000	3.634	3.49	3.77
Spending analysis is very easy in payment app I use	46.394	212	.000	3.563	3.41	3.71
Cashback and rewards are available frequently in payment apps that I use	42.235	212	.000	3.484	3.32	3.65
There are security concerns with payment apps	44.190	212	.000	3.474	3.32	3.63
Internet connectivity is major issue with the usage of these apps	40.058	212	.000	3.385	3.22	3.55
I no longer need to carry cash along	47.585	212	.000	3.808	3.65	3.97

5. Result Analysis

In this study, it is observed that adoption of Fintech services is quite decent among bank customers in India as 37.6% participants use Fintech services sometimes while only 13% participants use those services frequently. In addition, 44.6% participants use Fintech services for various purposes like ATM cash withdrawal, online shopping, restaurants/malls, etc. rather than specific purposes. When it comes to perception towards Fintech services, it is observed that around 60% of participants perceive Fintech services to be helpful, convenient, user-friendly, quick, and rewarding. In terms of awareness and usage, PhonePe is found to be the most popular and widely-used payment app in this study as it has been used by majority of users.

There are still some participants who face constraints while using Fintech services like security concerns, server issue, internet issue, transaction failure, lack of technical knowledge, and higher service charges. There is a strong correlation observed between perception and constraints faced by Fintech users and there is also an impact of customers' perception on adoption of Fintech services.

Digital payments have been used widely in India and are constantly replacing cash and other traditional payment modes. It is also found that there are some constraints in using Fintech services. Even though Fintech services have achieved significant adoption in the field of study, more studies are still needed to increase awareness of various payment apps that can make lives easier. Lack of technical knowledge, security concerns, server issue, internet connectivity, etc. are some of the concerns for users. Proper monitoring and security measures can help reduce cyber threats and proper systems should be placed to avoid server issue.

6. Conclusion

With the rapid rise in smartphone usage and technical innovation, bank customers have started using various Fintech apps and services. The conventional cash-based economy is finally becoming paperless and cashless due to COVID-19 and other reasons. However, adoption of Fintech is highly prevalent only among younger population. Hence, this new space must be provided to older population too to promote efficient and better use of those services.

The usage and awareness of Fintech is pretty low among older bank customers, agriculturalists and housewives because of misconception and lack of awareness. Hence, it is important to take certain steps to improve awareness among bank customers about the convenience and benefits of such services. Fintech has a lot of potential to reach marginalized and unbanked population and connect them to banking sector. It will further boost the formal financial system and channelize the untapped resources to help in economic growth.

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