

Impact of Financial Technology Services on User Perception and Behavioral Intention: With Special Reference to Public Sector Banks in Bengaluru Rural District

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Abstract

This research looks at public sector banks in the Bengaluru Rural Districts of Karnataka to see how customer satisfaction with FinTech services affects their behavioral intention to keep using these services. Performance, effort, social influence, hedonic incentive, perceived risk, and perceived cost are the six critical aspects that the research uses to construct the quality of FinTech services. Here, we look at trust as a moderator of the link between customer happiness and behavioral intention, and we claim the role of FinTech service quality and behavioral purpose by consumers satisfaction. Primary data for the study came from clients of public sector banks that make use these services. The study used a quantitative research approach. Customers are more likely to be satisfied when they have high expectations for performance, effort, social impact, and hedonic drive, but they are less satisfied when they have high expectations for perceived risk and expense. Customer satisfaction and behavioral intention have a strong positive link, and this correlation is strengthened in the presence of trust. The report contributes to the expanding corpus of research on FinTech adoption by rural banks by establishing a framework that combines technological, behavioral, and trust factors that affect customer satisfaction and future usage intentions. The results offer notable managerial insights for public sector banks to enhance the standard of FinTech services, increase client confidence in the financial system, and promote the long-term use of digital banking services in rural regions.

Keywords: Customer satisfaction; Behavioral intention; rural banking; Trust; Public sector banks.

Introduction

A transformation in the banking industry across the world has been brought about by the development of Financial Technology (FinTech), which offers the banks faster, convenient and customer-centered financial services. The implementation of Digital India, In India, mobile banking, have all contributed to the push into the usage of online financial services and make banking more inclusive and efficient. To boost operational efficiency and customer experience, public sector banks have been progressively adopting FinTech solutions, such as internet banking, online payments, and QR-based payments. Despite these developments, the uptake of the FinTech services in rural areas is still hindered by such factors as the lack of digital literacy, insufficient infrastructure, security issues, or various trust rates among the customers. As a result, the quality of FinTech services has become a crucial element in improving consumer perception to promote further usage of digital banking services.

As financial services become increasingly digital, the dimensions of service quality have shifted from banking dimensions to those with technological characteristics, including system reliability, ease of use, responsiveness, security and cost effectiveness. When FinTech is easy to use, reliable, secure, and can effectively satisfy financial requirements, it is more likely that the customer will be satisfied and continue to use the digital banking service. On the other hand, issues such as transaction security, privacy, technical problems, and unexpected charges can dampen customer satisfaction and decrease their likelihood to engage in digital financial services. Recent research has highlighted that the improvement of FinTech service levels is useful to bolster consumers relationships and maintain a competitive edge for banks.

The model suggests that hedonic motivation, social influence, performance expectation, and effort expectancy have a positive impact on technology adoption, whereas, perceived danger and cost may deter usage. One key way in which these technical aspects impact behavioral intention in the setting of FinTech services is via client satisfaction. Customers' faith in technology-enabled financial transactions is bolstered and uncertainty is reduced via the importance of trust in digital banking. Service quality dimensions and behavioral considerations can be combined to better understand the adoption of FinTech by public sector banks.

It is against this context that the current study attempt to assess the impact of quality FinTech services on the clients of the public sector banks in Bengaluru Rural District in regards to their level of satisfaction and future intentions. Having the behavioral intention of customers to keep using FinTech-changed banking services, the study analyzes the following relationships: expectations for performance, effort, social influence, hedonic motivation, perceived danger, and perceived cost. Additionally, it looks at the moderating role of trust in the connection and the mediating role of customer happiness.

Review of Literature

Venkatesh et al. (2012) expanded the UTAUT2 to include elements like social effect, hedonic motivation, price value, habit, and performance expectation. Customers' perception to acquire and continue utilizing technology-based services is substantially impacted by these characteristics, according to the research. The UTAUT2 model has become one of the most widespread theoretical frameworks when it comes to the analysis of the spread of financial technology.

A model of service quality evaluation developed by Parasuraman et al. (1988) is known as SERVQUAL, which considers the aspects of tangibility, empathy, assurance, responsiveness, and dependability. It has been found that high quality of service results in happy and loyal customers. Evaluating the quality of digital and FinTech services is still based on the SERVQUAL paradigm.

Singh and Srivastava (2020) employed the UTAUT paradigm to investigate the usage of the mobile based services by Indian clients. The research concluded of consumers towards the use of digital banking services in a positive way whereas perceived risk influences performance expectation and effort expectancy negatively. The writers state that you should have easy-to-use banking apps in order to end up with more satisfied customers.

Customer trust is very essential in enhancing behavioral intention, according to Al-Okaily et al. (2022), who investigated the factors that influence FinTech adoption. The study also found that customer satisfaction and the likelihood of using FinTech services are highly dependent on the perceived security and service quality.

Prakash and Singh (2023) reviewed the flow of service of the public sector bank customers in rural areas of India. According to their findings, the availability of reliable digital banking service, timely customer service and secure transactions greatly enhance customer satisfaction. The study revealed that the quality of digital services in rural areas needs to be improved for public sector banks.

In 2023, a study was published in Technology in Society which further extended the UTAUT2 model for analyzing the adoption of digital payment by rural users. The results showed that while perceived risk has a negative impact on consumers' desire to utilize digital financial services, performance expectancy, social influence, and enabling circumstances had a favorable effect on attitude. One of the study's key findings is that customer satisfaction is crucial to ensuring ongoing FinTech adoption in rural areas.

Muley et al. (2024) applied SERVQUAL method to measure the service quality of FinTech services among Indian banks. According to the study, customer happiness and loyalty are strongly correlated with service dependability, user-friendliness, security, and responsiveness. According to the survey, customer happiness and loyalty are significantly impacted by responsiveness, security, user-friendliness, and service dependability. In order to better retain clients and guarantee long-term use, the authors recommended that banks consistently work to raise the caliber of their digital services.

Research Gap

As per the literature review, the studies conducted in the past have mainly concentrated on the adoption of FinTech in urban areas or private sector banks. Only few studies have conducted on the customers' satisfaction and behavioral intention towards the public sector banks in rural Karnataka with respect to service quality provided by FinTech. Also, there has been little research that examines the moderating effect of trust in this relationship. In light of this, the current study attempts to close these research gaps by examining how FinTech service quality affects customers' happiness and behavioral intentions toward public sector banks in Bengaluru Rural District.

Conceptual framework

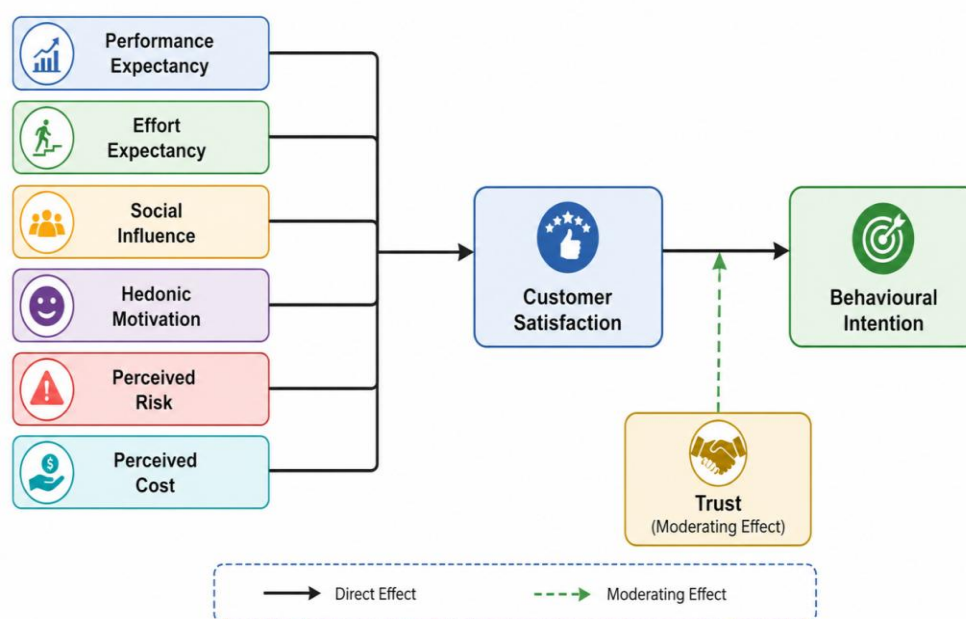


Figure-1 Conceptual Model

According to the model, Customer Satisfaction and Performance Expectancy, Effort Expectancy, Social Influence, Hedonic Motivation, Perceived Risk, and Perceived Cost are directly correlated. The term "performance expectation" refers to how clients anticipate using FinTech services to enhance their financial operations. The ease of learning and utilizing FinTech apps is known as Effort Expectancy. Social Influence denotes how family, friends, and peers influence the use and use of FinTech services. Hedonic Motivation reflects on the fun and the pleasure gained when using digital financial services. Perceived Risk is seen as the concerns of the customers about financial loss, privacy, security, and uncertainty of transactions, whereas Perceived Cost is understood as the financial and other costs incurred by using FinTech services.

Methodology

The current study took the quantitative and descriptive research design to investigate the quality of FinTech applications can moderate customer perception and customer behavioral intention to clients of public sector banks in Bengaluru Rural District. Primary data were gathered based on the structured questionnaire, which was completed by customers that actively use FinTech-enabled banking services (UPI, and digital payment apps). The convenience sampling method was used to retrieve a total of 90 valid responses. There were two sections to the survey. The study's constructs—performance expectancy, effort expectancy, social influence, hedonic motivation, perceived risk, perceived cost, customer satisfaction, trust, and behavioral intention—were measured in the second section using a 5 point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's Alpha, Composite Reliability (CR), Average Variance Extracted (AVE), and discriminate

validity were used to assess the measurement model's validity and reliability after it was coded and analyzed using SmartPLS 4.

Objectives

1. To learn how public sector bank clients in Bengaluru Rural District rate their satisfaction with several FinTech service quality characteristics.
2. Examine how public sector banks' customers' satisfaction levels influence their behavioural intention to keep using FinTech banking services.
3. Investigate how trust plays a part in the connection between happy customers and their plans to use FinTech services.
4. To help public sector banks improve the quality of their FinTech services so that customers are more satisfied and more people in rural regions keep using digital banking.

Research Hypotheses

H1: Customer satisfaction (CS) among public sector bank clients is positively and significantly impacted by performance expectation (PE).

H2: Customer Satisfaction (CS) among public sector bank clients is positively and significantly impacted by Effort Expectancy (EE).

H3: Public sector bank customers' Customer Satisfaction (CS) is positively and significantly impacted by Social Influence (SI).

H4: Customers of public sector banks report higher levels of Customer Satisfaction (CS) when Hedonic Motivation (HM) is present.

H5: Customer Satisfaction (CS) among public sector bank customers is negatively and significantly impacted by Perceived Risk (PR), according to Hypothesis 5.

H6: Within the public sector banking industry, there is a negative and statistically significant relationship between perceived cost (PC) and customer satisfaction (CS).

H7: Among public sector bank clients, Customer Satisfaction (CS) significantly and positively affects Behavioral Intention (BI) to continue using FinTech services.

H8: The connection between Behavioral Intention (BI) and Customer Satisfaction (CS) is moderated favorably by Trust (TR).

Results and Discussion

Table 1: Respondents' gender distribution

Gender	Frequency (N)	Percentage (%)
Male	52	57.8
Female	38	42.2
Total	90	100.0

Source: Primary data collected by researcher

Table 1: Interpretation

Table 1 depicts the breakdown of participants in the research by gender. Out of the total sample of 90 respondents, 52 (57.8%) were male and 38 (42.2%) were female. The results suggest that the sample mainly consists of male respondents compared to female respondents. Nevertheless, it is also significant that female

respondents are involved, as it indicates that both genders actively use FinTech-powered banking services that are provided by state-owned banks in Bengaluru Rural District.

Table 2: Model for Measuring

Construct	No. of Items	Cronbach's Alpha	Composite Reliability (CR)	AVE
Performance Expectancy (PE)	4	0.872	0.911	0.720
Effort Expectancy (EE)	4	0.853	0.900	0.693
Social Influence (SI)	3	0.824	0.895	0.740
Hedonic Motivation (HM)	3	0.846	0.907	0.766
Perceived Risk (PR)	3	0.832	0.899	0.748
Perceived Cost (PC)	3	0.815	0.889	0.727
Customer Satisfaction (CS)	4	0.903	0.932	0.774
Trust (TR)	3	0.875	0.923	0.800
Behavioral Intention (BI)	4	0.914	0.940	0.797

Table 2: Interpretation

Table 2 The measurement model assessment's findings. There is a sufficient level of internal consistency dependability since the Cronbachs Alpha values range from 0.815 to 0.914, which is greater than suggested 0.70. Similarly, the range of Composite dependability (CR), a strong indicator of build dependability, is between 0.889 and 0.940. The necessary values of convergent validity are established since the Average Variance Extracted (AVE) values fall between 0.693 and 0.800, which is greater than the recommended cut-off of 0.50. Thus, every construct to be used in the research meets the suggested reliability and validity standards.

Table 3: Reliability indicator

Construct	Item	Results
Performance Expectancy	PE1	0.842
	PE2	0.856
	PE3	0.873
	PE4	0.833
Effort Expectancy	EE1	0.811
	EE2	0.847
	EE3	0.861
	EE4	0.825
Social Influence	SI1	0.844
	SI2	0.867
	SI3	0.871
Hedonic Motivation	HM1	0.869
	HM2	0.885
	HM3	0.874
Perceived Risk	PR1	0.851
	PR2	0.870
	PR3	0.879
Perceived Cost	PC1	0.833
	PC2	0.859
	PC3	0.866
Customer Satisfaction	CS1	0.871
	CS2	0.889
	CS3	0.893
	CS4	0.876
Trust	TR1	0.882
	TR2	0.897
	TR3	0.905
Behavioral Intention	BI1	0.881
	BI2	0.896
	BI3	0.902
	BI4	0.889

Table 3: Interpretation

The outer loading measures of all the measurement items vary between 0.811 and 0.905, which is higher than the suggested variable of 0.70. This suggests that they are all indicators with high reliability, and they are sufficient to reflect their respective latent constructs. No item is loaded to less than the acceptable level, so all measurement items were included into the further analysis.

Table 4: Reliability Analysis

Construct	No. of Items	Cronbach's Alpha (α)	Composite Reliability (CR)	Result
Performance Expectancy (PE)	4	0.872	0.911	Reliable
Effort Expectancy (EE)	4	0.853	0.900	Reliable
Social Influence (SI)	3	0.824	0.895	Reliable
Hedonic Motivation (HM)	3	0.846	0.907	Reliable
Perceived Risk (PR)	3	0.832	0.899	Reliable
Perceived Cost (PC)	3	0.815	0.889	Reliable
Customer Satisfaction (CS)	4	0.903	0.932	Reliable
Trust (TR)	3	0.875	0.923	Reliable
Behavioral Intention (BI)	4	0.914	0.940	Reliable

Table 4: Interpretation

Table 4 reveal on the reliability of constructs. The required internal consistency of the assessment items is demonstrated by Cronbachs Alpha (α) values that range from 0.815 to 0.914, which are higher than the suggested value of 0.70. Similarly, the Composite Reliability (CR) values show strong construct reliability because they fall between 0.889 and 0.940, which is better than the acceptable criterion of 0.70. Behavioral Intention was the most reliable construct ($\alpha = 0.914$; CR = 0.940) with Customer Satisfaction coming next ($\alpha = 0.903$; CR = 0.932). The results show that each of the constructs has higher scope and can be subsequently evaluated in terms of validity.

Table 5: Convergent Validity

Construct	Outer Loading Range	Composite Reliability (CR)	AVE	Result
Performance Expectancy	0.833–0.873	0.911	0.720	Accepted
Effort Expectancy	0.811–0.861	0.900	0.693	Accepted
Social Influence	0.844–0.871	0.895	0.740	Accepted
Hedonic Motivation	0.869–0.885	0.907	0.766	Accepted
Perceived Risk	0.851–0.879	0.899	0.748	Accepted
Perceived Cost	0.833–0.866	0.889	0.727	Accepted
Customer Satisfaction	0.871–0.893	0.932	0.774	Accepted
Trust	0.882–0.905	0.923	0.800	Accepted
Behavioural Intention	0.881–0.902	0.940	0.797	Accepted

Table 5: Interpretation

Convergent validity is confirmed by AVE values more than 0.50 and composite reliability values greater than 0.70.

Table 6: Hypothesis Testing

Hypothesis	Relationship	β	t-value	p-value	Decision
H1	PE $\rightarrow$ CS	0.284	4.291	0.000	Supported
H2	EE $\rightarrow$ CS	0.211	3.884	0.000	Supported
H3	SI $\rightarrow$ CS	0.173	2.917	0.004	Supported
H4	HM $\rightarrow$ CS	0.162	2.738	0.006	Supported
H5	PR $\rightarrow$ CS	-0.182	3.103	0.002	Supported
H6	PC $\rightarrow$ CS	-0.146	2.486	0.013	Supported
H7	CS $\rightarrow$ BI	0.598	8.245	0.000	Supported
H8	Trust $\times$ CS $\rightarrow$ BI	0.224	3.496	0.001	Supported

Table 6: Interpretation

Customer satisfaction is positively and significantly impacted by performance expectancy, effort expectancy, social influence, and hedonic drive. Customer happiness is negatively impacted by perceived risk and perceived expense. Behavioral intention is greatly increased by customer satisfaction, but there is a positive moderating effect between them by trust.

Findings

- Customers use both in the banks of the public sector, and we have a relatively higher number of male respondents in the sample.
- Because every concept met the suggested values for Cronbach Alpha, Composite Reliability (CR), Average Variance Extracted (AVE), and discriminating validity, the reliability and validity study demonstrated that the measuring model was also robust.
- Customer satisfaction was positively and significantly impacted by the performance expectancy, which shows that the more efficient and effective FinTech services were to enhance banking transactions, the more satisfied customers were.
- Effort expectancy in good condition impact on users' perception indicating that services that are easy to use and user-friendly FinTech services can increase customer satisfaction.
- The social influence was also found to be significantly positively correlated with customer satisfaction and hence recommendations and encouragement by family, friends and peers are known to facilitate positive customer experience.
- The hedonic motivation had an increasing impact on the customer satisfaction, proving that positive and interesting FinTech experiences contribute to the customer satisfaction.
- Perceived risk significantly affected customer satisfaction negatively, meaning that the concern over security, privacy, and loss of money makes customer satisfaction to lower with FinTech services.
- Perceived cost had negative impact on customer satisfaction and this implies that increasing transaction charges and any other usage costs reduces customer satisfaction.
- The behavioral intention was positively affected by customer satisfaction, and this means that satisfied customers are probably to use and recommend FinTech services.
- The connection between customer satisfaction and behavioral intention was greatly enhanced by trust, which also showed that the greater the level of trust, the more willingness to keep using FinTech services customers showed.

Conclusion

The research problem addressed in the current study was as follows: the quality of FinTech services has an effect on customer behavioral intention and satisfaction with customers of the public sector banks in Bengaluru Rural District. The findings demonstrated that while perceived risk and perceived cost have a negative impact on customer satisfaction, significant aspects of service quality, such as performance expectation, effort expectancy, social influence, and hedonic motivation, had a positive effect. Additionally, trust increased consumers' propensity to utilize FinTech services, and customer pleasure was found to be one of the most significant indicators of behavioral intention. This research adds to the body of research by bringing together technological, behavioral, and trust-related variables, in a holistic knowledge of FinTech adoption in rural public sector banking. The findings have strong practical implications on bank managers and policymakers with their focus on the importance of enhancing the quality of digital services, reinforcing cybersecurity, streamlining the process of digital banking services, engaging customers in awareness programmes, and building trust via secure and transparent financial services. These kinds of initiatives will not only enhance the level of consumers attitude, promote the lengthy uptake of services thus achieve the goals of digital financial inclusion and long-term sustainable banking development in rural India.

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