An Analysis on Customer Perception towards Fintech Adoption

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Abstract. Many recent technical developments have contributed to a profound structural shift in the financial services sector. Banks and other financial institutions are finding it harder to compete with the proliferation of new technologies in the financial sector, collectively known as "FinTech." Consumers are moving away from traditional payment methods and toward FinTech because of its superior user experience. Since there are always new developments in the financial services sector, FinTech has become an essential component of the industry. Financial technology companies can leverage the findings of this research to better cater to a diverse customer base. Affirmations for the usage of FinTech services can be increased if more effort is put into making the services more useful and secure. The study's findings indicated that TAM (Technology acceptance model) was the preferred model for FinTech adoption. According to a recent assessment, the most researched variables in the field of FinTech are, once again, trust, perceived utility, perceived ease of use, perceived risk, compatibility, and performance and effort expectations.

Keywords: FinTech, customer base, technology, financial services, sustainability.

1. Introduction

The manufacturing sector, along with the financial services sector, has been severely impacted by technological advancements. These digital technologies aim to boost manufacturing efficiencies, the most important competitive edge in today's worldwide marketplaces. Thanks to their efficiency-focused nature and digital framework, technologies show great potential as catalysts for positive change in the realms of sustainability and sustainable development. They take away the means that have contributed to the destruction of the environment, the depletion of natural resources, and the disruption of ecological balances. Governments around the world have recognized the need to harness innovations, such as financial technology (FinTech), to reclaim environmental sustainability through the de-materialization of production and consumption.

FinTech services help people save money, improve the quality of their financial services, create more jobs, decrease the number of people living in poverty by making financial transactions cheaper, simplify their personal and professional lives, and increase their access to capital through micro lending and crowdfunding. Using technology in banking can also help consumers improve their familiarity with and proficiency in digital environments.

Today, the influence of FinTech services extends further than the realms of e-banking and the digitalization of more conventional financial services. Consumers' requirements and wants in terms of financial services are now front and center as the financial sector works to create and adopt the cutting-edge technology. Services provided by the financial technology industry may help boost productivity, lessen the likelihood of loss, and broaden the benefits of economic expansion (RBI Report, 2018). As a result, these technological advancements may have a major impact on the standard business models of the strictly regulated financial services sector in order to provide a unique and desirable customer experience (Leong et al., 2017). Using a straightforward layout, up-to-the-moment analytics, and more open data can help achieve this goal.

The willingness of potential consumers to acquire and then use technical innovation is a major factor in the success and widespread adoption of any technology (Rogers, 1983). The need for a comprehensive model outlining the main views and motives for FinTech adoption by more customers for a wide range of services has been spurred by the paucity of existing research in this area.

2. Literature Review and Hypothesis Development

Users are more likely to create enduring behavior intentions for continuous use of technology if they have easy access to it, are informed about its value and utilization, and have firsthand experience with it (Kaba and Toure, 2014). (Ali AlSoufi and Hayat Ali, 2014) used an experiential analysis and a Technology Adoption Model to probe

customers' perspectives on FinTech adoption (TAM). This ability to comprehend why consumers will adopt FinTech services depends heavily on taking into account factors like security and ease of use. It was found that financial stability, education and training, connectivity, and reliability were the most critical aspects in determining the value provided to the pleasure of tech-savvy clients.

FinTech is useful for evaluating the fast-paced growth of the financial sector and its associated institutions. Financial services, such as payments, savings, borrowing, risk management, and advice-seeking, have been made more accessible because of technology advancements in core services and the development of new applications for delivery (Tourpe H 2017). Since many other sectors are undergoing digital revolutions, customers are eager for tech-based financial solutions (Saal M, Starnes S, Rehermann T 2017). Companies in the financial technology industry are responding to customer demand for easy and inexpensive money transfers, loans, and investments by creating new products and services. (Berry 2016). Financial technology is no longer just used by banks and investment firms; retail chains and telecommunications companies are also adopting new methods of providing financial services over their existing infrastructure.

FinTech contributes to the evaluation of the fast-paced growth of the financial sector and its associated institutions. Making payments, saving, borrowing, managing risk, and obtaining financial advice are now more accessible than ever, thanks to technological advancements in core services and the development of new applications for delivery (He et al., 2017).

As more and more businesses undergo digital revolutions, consumers have a greater need for financial services that are also rooted in technology (Saal et al., 2017). To satisfy these needs, FinTech firms have developed faster, cheaper, and more accessible means of transferring, borrowing and investing money (Manyika et al., 2016). Retail corporations and telecommunications companies are increasingly using FinTech to expand their service offerings beyond traditional banking and investing funds. Despite the proliferation of FinTech service providers and the steady evolution of the services they offer, only a subset of these services has seen widespread adoption. As a result, investigating the variables that influence the uptake of such services is crucial.

An individual's propensity to change their behavior is significantly affected by the rate of technological change in the financial services industry and the degree to which consumers are aware of this development. If technological development outpaces the rate at which consumers adopt and use it, FinTech firms may miss out on the benefits of the innovation or face a longer gestation period before seeing a return on investment (Abbasi and Weigand, 2017). Numerous studies have found that numerous factors affect people's decisions to act.

According to Knewtson and Rosenbaum's (2020) research, the FinTech sector includes the following subsectors: alternative monetary systems, capital intermediation; investment technology; and infrastructure. Capital intermediation includes digital banking and lending tech, while "money alternatives" are businesses that offer services related to money, such as cryptocurrencies or traditional bank payment systems. Crowdfunding, algorithmic trading, financial intelligence, and investment apps all fall under the umbrella term. Consequently, this research documents the spread of use in interconnected fields such as mobile pos payment, digital commerce, crowdfunding, crowd investing, digital remittances, advisors, crowdlending, and marketplace lending.

According to a study conducted by (Nangin 2020), individuals' perceived value, perceived risk, and social influence are all strongly related to their intent to adopt FinTech. In addition, individuals' performance expectancy, effort expectancy, and perceived risk all affect individual's perceived value, which in turn influences their intent to adopt FinTech.

(Das 2020) studied on FinTech and suggested that Governments have taken necessary efforts towards digital transformation and promoted FinTech firms, realizing the potential of FinTech to assist towards financial inclusion and stability. Banks and other financial institutions have begun working together with FinTech companies to better serve their consumers. The purpose of this article is to look into how clients of various banks view and use FinTech services, how they perceive them, and what kinds of barriers they run into while trying to use them.

Keer yang (2021) discovered that counties with more severe trust loss had bigger gains in FinTech market share than those with less severe erosion. Generic machine learning inference for estimating treatment effect heterogeneity reveals that borrowers with the greatest reduction in faith in banks and the largest increase in adoption of FinTech share defining characteristics.

According to research (Rebecca Chan 2022), the performance expectation, effort expectation, social influence, and perceived risk of customers are all direct antecedents of their decision to use Open Banking. There is a robust mediating effect of social influence on usage intention through performance expectancy. Initial trust moderates the impacts of effort expectation and performance expectancy on customers' usage intentions of Open Banking, whereas perceived risk moderates the effects of both. Last but not least, consumers may be less likely to trust Open Banking due to inadequate financial knowledge.

Based on the above literature review, the research problems were formulated as follows:

1. Does the ease of using FinTech affect customer trust in FinTech?

2. Does data security affect customer trust in FinTech?

3. Does the promotion affect customer trust in FinTech?

4. Does customer trust in FinTech affect customer decisions to use FinTech (FinTech adoption)?

The primary objective of our research is to investigate the variables that encourage individuals to adopt FinTech services and increase their satisfaction levels.

2.1. Research hypothesis:

H1: The perception of usefulness (PU) positively influences the satisfaction of customers toward FinTech services.

H2: The perception of ease of use (PE) positively influences the satisfaction of customers toward FinTech services.

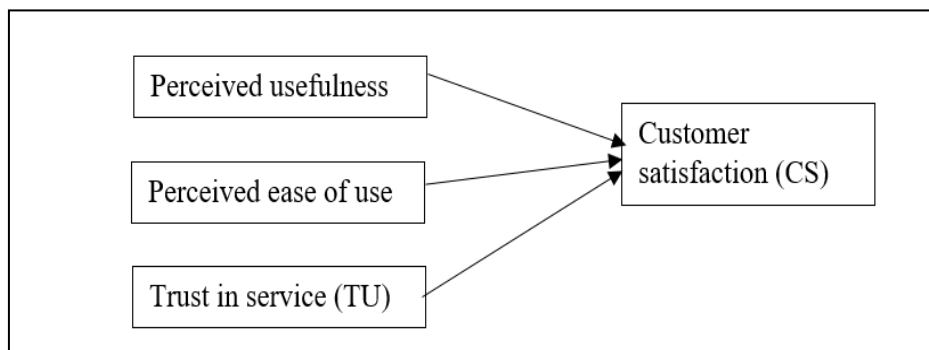H3: Customer trust (TU) towards FinTech services positively influences their satisfaction.

Fig. 1: Conceptual research model.

3. Research Methodology

The current study is undertaken to measure how customers perceive FinTech services and their impacts on their satisfaction. To achieve the research objectives, the study conducted descriptive research where quantitative data was collected from the respondents. The target population for this paper is people who are using FinTech in their banking services. The sample was selected using simple random sampling and a survey was conducted to collect data from a sample that is potential consumer adopters. The semi-structured questionnaire was framed, which contains demographic details and the second section contains questions related to research variables for which respondents were asked to give their opinion on a 5-point Likert scale (1 indicates Strongly disagree and 5- Strongly agree).

The measure for the scale was derived and adapted from previous studies. For measuring the perception of customers, items were selected from the Lien et al., (2020); Hu et al. (2019) and Kim et al. (2016) studies. Customer satisfaction was measured using 3 items derived from the study of Ghani et al., (2017).

For the analytical method, the authors used structural equation modeling (a sequence of regression equations) to estimate the research model. Before conducting

regression analysis, the authors conducted an exploratory factor analysis and Cronbach's Alpha. The data analysis was performed using SPSS 26 version and AMOS graphics.

Table 1: Demographic details (N=221)
Source: Primary survey

Measures	Items	Frequency	Percentage
Marital Status	Married	153	54.6
	Unmarried	127	45.4
Education	Secondary board/ Equivalent degree	61	27.6
	Graduate	104	47
	Post-graduate	56	25.4
Age of the respondents	<28yrs	45	20.3
	29 to 38 yrs	92	41.7
	38 to 48 yrs	63	28.5
	Above 48 yrs	21	9.5

Factor analysis: A preliminary factor analysis was performed to ascertain how consumers felt about FinTech. The Kaiser–Meyer–Olkin (KMO) value determines if sample size is adequate for further study. For factor analysis, a KMO value of 0.7–0.8 is suitable, while a number more than 0.8 is fantastic. As for doing factor analysis, a KMO value of 0.7–0.8 is good enough, and a value of 0.8–1.0 is fantastic. Based on the KMO value of 0.869 and the significance level of Bartlett's test is less than 0.05, the data provided is suitable for conducting factor analysis.

Factor Extraction: Twelve questions are factor analyzed using Principal Component Analysis with Varimax rotation. These questions were extracted into four factors explaining a total variance of 71.172 %, with eigenvalues above 1.

Table 2: Factor loadings of variables.

Factor	Items	Item loadings
Perceived usefulness (PU)	FinTech service can meet the needs of customers.	.805
	Customers can access many utilities attached when using the FinTech service.	.801
	Customers save a lot of time when using FinTech services.	.851
Perceived ease of use (PE)	The operations performed in FinTech service are quite simple for customers.	.853
	Instructions on the FinTech service system are clear and easy to understand.	.873
	Customers can interact with the FinTech service system everywhere	.881
Trust in service (TU)	FinTech service has good information security ability.	.854
	FinTech service is provided by reputable units only.	.823
	Customers feel confident when using FinTech services.	.811
Customer satisfaction (CS)	The selection of FinTech was a wise one and I am happy with the services	.807
	It was a pleasant experience with FinTech services	.743
	Overall, I am satisfied with the services.	.868

Table 3: Cronbach's alpha, mean, std. deviation and correlation of the variables
*Note: ** indicates Correlation is significant at the 0.01 level (2-tailed)*

	PU	PE	TU	CS
Reliability (Alpha value)	0.871	0.890	0.847	0.856
Mean	3.524	3.135	3.214	3.725
Standard deviation	.73287	.75007	.70883	.62442
Perceived usefulness (PU)	1	.453**	.340**	.670**
Perceived ease of use (PE)	.453**	1	.369**	.587**
Trust in service (TU)	.340**	.369**	1	.592**
Customer satisfaction (CS)	.670**	.587**	.592**	1

The descriptive statistics table of perception of customers towards FinTech service shows the mean value for perceived usefulness is highest (M=3.52). Perceived ease has a mean =3.13 with 0.750 standard deviations. Trust in services respondents have an opinion above mean =3.21. Customer satisfaction means the value is 3.72. The majority of the mean values of factors are near to agreement degree, which indicates a higher perception of customers towards FinTech.

The above table also shows the Correlation of the independent variables with each other and the dependent variables. The correlation coefficients of all relationships with customer satisfaction are positive and significant, highlighting that an increase in perception towards FinTech leads to improvement in Customer satisfaction.

Finally, table 3 also includes Cronbach's alpha values that were used for measuring the reliability of the research variables. The alpha value for all four factors is above 0.7 as per threshold criteria, thus confirming the reliability of the data.

Hypothesis Testing Using Structural Equation Modelling: In order to assess the significant relevance of the structural model relationship, the maximum likelihood estimation method was used. The results in Table 3 depict the path coefficient of respective constructs with their level of significance. The criteria for acceptance of the hypothesis are based on a path having a p value less than 0.05 at 5% level of significance.
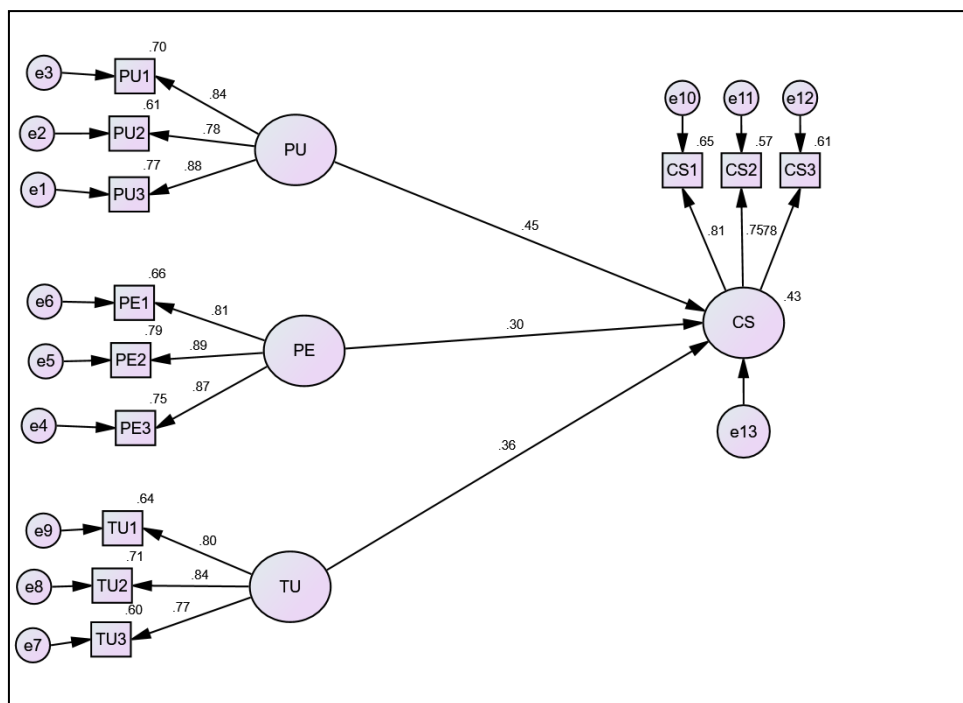

Fig. 2: Casual model.

Note: Here PU: Perceived usefulness, PE: Perceived ease of use: TU: Trust in service and CS: Customer satisfaction

Table 4: Path coefficients of the structural model.

Hypo-theses	Outcome variables		Causal Variables	SE.	CR.	P	Path coefficient	Result
H1	Customer satisfaction	←	Perceived usefulness	.060	6.354	***	.454	Accepted
H2	Customer satisfaction	←	Perceived ease of use	.059	4.379	***	.296	Accepted
H3	Customer satisfaction	←	Trust	.072	5.039	***	.364	Accepted

*Note: SE; Standard error, CR; Critical ratio, Path coefficient: Standardized regression weights and p: the probability of significance. *** indicates p<0.000.*

By referring to Table 3 and figure 4, it is concluded that all three perception dimensions of FinTech services have a significant impact on customer satisfaction. The standardized path coefficient (β) of perceived usefulness to satisfaction is 0.454 with p=0.000. Since the p-value is less than 0.05, indicating a positive influence on the satisfaction of customers, thus proving hypothesis H1.

The standardized path coefficient of perceived ease of use to satisfaction is 0.296 (p<0.05), inferring a positive effect on customer satisfaction and hypothesis H2 is also proved. Finally, customer trust in FinTech services positively influences their satisfaction with a standardized path coefficient of 0.364 (p<0.05), indicating a positive impact; hence hypothesis H3 is supported.

The coefficient of determination (R^2) value is 0.426, revealing that perceived usefulness, ease of use and trust are able to explain 42.6% of the variance in customer satisfaction toward FinTech services.

The goodness of Fit indices values, as mentioned in table 4 indicate that data is in good fit with the collected data and very well represents the research model goodness.

Table 5: Overall model fit.
Source: Researcher's calculation based on primary survey

Indices	Recommended criteria	Model values
Chi square (χ^2)	pval>0.05	
Normed chi square (χ^2/DF)	1<χ^2/df<3	2.710
Goodness-of-fit index (GFI)	>0.90	0.901
Adjusted GFI (AGFI)	>0.80	0.849
Comparative fit index (CFI)	>0.95	0.942
Root mean square error of approximation (RMSEA)	<0.05 good fit <0.08 acceptable fit	0.068
Tucker-Lewis index (TLI)	0<TLI<1	0.925

4. Discussion and Implications

The term "FinTech" refers to the use of digital innovation and cutting-edge technology to enhance, expand, and automate financial services for the benefit of businesses, investors, and customers. For a company, it is very important to understand their customer need and design the products according to their need. Currently, the majority of the banks are adopting or signing with FinTech services for smooth delivery experience to customers. In order to understand the developing scenario of FinTech in India, the current study explores to identify factors determining the perception of customers towards FinTech adoption and how these perception determinants are influencing their satisfaction. For the current study, perception determinants were measured through perceived usefulness, ease of use and trust in service.

The findings of the study confirmed that all three determinants significantly influence the satisfaction of customers with FinTech service. These results are in line with the study of Lien et al., (2020). The results also highlighted that based on standardized regression weights, the impact of perceived usefulness is highest on customer satisfaction. This result reflects that flexibility of service and design according to customer needs are the most significant features. Overall, the study confirmed that when FinTech provides usefulness, ease of use, accessibility, amount of information, flexibility, safety & security leads to the satisfaction of customers towards services.

It is suggested that in order to appeal to a wider range of customers, banks should work to enhance the functionality of FinTech services. In the same vein, the process of making a purchase with the help of FinTech services needs to be user-friendly.

The findings proved that trust is a significant factor in developing customer satisfaction. Therefore, it is recommended for Banks, financial services and companies involved with FinTech to focus on building the trust of customers by especially focusing on customer security issues and transparency of the content.

Banks need to strengthen their cooperation with FinTech to take advantage of the companies' existing technological advantages, thereby aiming to improve the quality of high-tech application services and bring better experiences to customers. With this cooperation, banks can diversify products and services by applying high technology and improving access to customers at a low cost.

The study's findings have substantial real-world relevance. Financial institutions, such as banks that offer FinTech services, should make use of these advantages while creating new services. They must also take steps to address the rising number of cyber security problems involving FinTech in order to keep the sector's adoption rates high. The findings indicate that concern about contracting COVID-19 has been a driving factor in the uptick in adoption witnessed throughout the epidemic. This research suggests that after the pandemic has passed, bank customers will likely reevaluate

their experience with FinTech and depart it because of concerns about FinTech instabilities. Providers of financial technology services shall guarantee their customers' data privacy and prompt resolution of any security issues that arise by investing in the safety of their services. For policymakers, the positive effect of FinTech on sustainability highlights the need for developing nations to make the transition to a cashless society and digital economy. There are important theoretical ramifications of this finding as well. This research shows that the perceived benefits of adopting FinTech are a uniform element in the decision to do so. Users' emotions and concerns about contracting COVID-19 should be taken into account in future research on FinTech, e-commerce, online learning, and other digital technologies to better understand how these factors influence users' adoption and experience.

While this study's objective has been met, it has limitations because it has not considered a number of additional factors that may affect FinTech customer service. These include the type of information technology platform used, the customers' financial resources, and the risks involved in using the service. On the other hand, the study is cross-sectional, where data were collected one time. Future research can use the longitudinal study to measure the impact of pre and Post-FinTech services adoption.

5. Conclusion

Consumer opinion is a driving force behind the growth of the FinTech trend, but the field of research currently lacks clear scientific proof to back up literary mapping. Another wave of literature on customer satisfaction and attitudes toward financial technology will focus on security concerns, which have been regarded as the biggest barrier to satisfaction (FinTech). Concerns about the safety of user's personal information are valid and have a good impact on the goals of the FinTech industry. Customers' confidence in a FinTech brand correlates positively with their likelihood of using that brand, as shown by the study's findings. A rise in consumer confidence will lead to a rise in the use of financial technology.

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