

A Study on Evaluating Factors Influencing the Adoption of Fintech

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Abstract:

Purpose: The study aims to analyse the factors driving the acceptance of Fintech within the fintech environment to offer insights into consumer behaviour and enable informed strategies for enhancing adoption and usability in the financial technology industry. The widespread adoption of Fintech will transform the financial landscape.

Design/Methodology/Approach: The structural equation model was employed to evaluate the factors influencing adoption of fintech.

Findings: The study reveals a significant influence of performance expectancy, effort expectancy, social influence, facilitating condition, and E-service quality on behavioural intention towards fintech adoption.

Practical Implication: The research findings are significant for financial institutions, regulatory bodies, and fintech Companies. By evaluating stakeholders' viewpoints these organisations can create frameworks and strategies that effectively encourage fintech adoption.

Originality/Values: There are many studies on the adoption of fintech using TAM, UTAUT, UTAUT2. This study addresses this gap by utilizing two theories UTAUT and E-service Quality analysing determinants of adoption of Fintech.

Keywords: *Fintech, Structural Equation Model, UTAUT, E-servqual*

1. Introduction:

The transformation has fundamentally altered the way financial institutions provide goods and services in response to customers' growing demand for quicker, more economical, higher-quality services. Financial technology (fintech) has been employed by financial institutions globally to meet the needs of current customers, attract new ones, and stay abreast of technological advancements (Nangin, Barus, & Wahyoedi, 2020). Fintech adoption has resulted in faster and cheaper access to services, increasing demand and acceptance for these services—particularly where security is an issue. Despite its advantages, Chaudhry, Paquibut, and Tunio (2021) point out that concerns about privacy and information security persist due to the security lapses that have been made public in the past ten years.

1.1 Definition of Fintech

Kim (2015) states that the standard definition of financial technology, or FinTech, is a mobile-based technological system that enhances the effectiveness and efficiency of financial performance.

1.2 The importance of innovation and trust in Fintech Adoption

When combined with creative business models, "fintech" refers to a new wave of technology innovation in the financial sector that aims to provide end users with effective and efficient financial services (Hu et al., 2019). Since customers are gradually shifting from traditional techniques to FinTech services, innovation must be prioritized in the financial services sector (Hu et al., 2019). Few studies have been conducted on the variables impacting the uptake of FinTech services in developing nations, despite the number of FinTech users rising. Furthermore, prior studies have repeatedly

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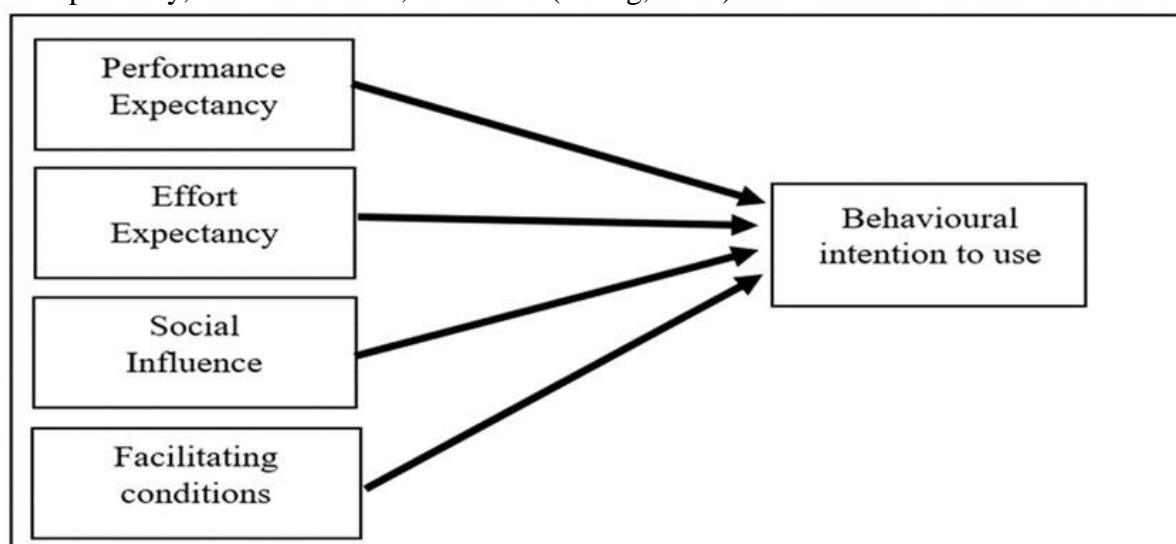
acknowledged trust as a critical component, demonstrating a notable correlation between perceived utility, trust, and ease of use. Nonetheless, the mediating role of trust in technology adoption remains largely unexplored (Venkatesh et al., 2012; Susanto et al., 2015). According to Tang et al. (2020), 82% of clients aware of FinTech services are hesitant to employ them due to the high risks involved. Singh et al., 2021, states that customers' reluctance to use FinTech services is primarily due to worries about system stability, confidentiality, and perceived dependability ().

1.3 Consumer Behaviour and Challenges in Fintech Service Adoption

The way technology has been incorporated into financial services has had a big impact on customer behaviour, especially considering the state of the industry. In order to meet their everyday financial needs, consumers are demanding FinTech services that provide high reliability, ease of adaption, and reliable platforms (Walden, 2020). FinTech has also expedited transaction processes, cutting down on associated expenses like paperwork and in-person bank visits as well as time. On the other hand, when transactions take place without human intervention, confidence might decline. On the other hand, involving a third party could make transactions more expensive. Thus, customers might try to cut expenses by doing business without the involvement of a third party, but they might oppose adoption if the FinTech service is unreliable (Hu et al., 2019; Singh et al., 2021; Walden, 2020). Numerous FinTech services—especially those pertaining to blockchain, cryptocurrency, and crowdfunding—are recognised as high-risk, unregulated markets where service providers regularly deal with threats and cyberattacks (Walden, 2020). While businesses must abide by privacy regulations, there is always a considerable risk of data breaches.

Unified Theory of Acceptance and Use of Technology

A well-known theoretical framework for comprehending the adoption and usage of technology is the UTAUT, which was created in 2003 by Venkatesh et al., incorporates several variables that affect people's behavioral intentions when it comes to embracing new technology. These variables include moderating variables such as “gender, age, experience, and voluntariness of usage, in addition to performance expectancy, effort expectancy, social influence, and facilitating conditions.” According to the model, a user's behavioural intentions to embrace a technology are influenced by social factors, perceived usefulness, simplicity of use, and the existence of facilitating conditions. The UTAUT model is valid and resilient in predicting technology adoption behaviours by various empirical investigations conducted on various technologies and scenarios. The UTAUT offers a useful framework for assessing the elements that impact FinTech adoption. Notably, factors that have been found to impact customers' adoption of new FinTech platforms include “performance expectancy, effort expectancy, social influence, and trust” (Zhang, 2017).



E-Service Quality

The term "e-service quality" refers to a range of factors that affect how satisfied users are with online services and how they perceive them. Among these characteristics, effort expectation pertains to how easy and simple users believe using an e-service will accomplish their goals, while performance expectancy refers to users' beliefs about how effective an e-service will be to help them achieve their goals. Social influence considers how users' decisions to use a service are influenced by social factors, such as friend recommendations or internet reviews. The facilities and resources users' access, such as infrastructure and technical support, are considered facilitating conditions. Together, these factors influence how consumers assess the overall quality of e-services, influencing their intention to use and level of satisfaction. (Wu & Wang 2005)

Review of Literature:

1. **Saleh, M., et al. (2023).** The study aimed to investigate the variables customers in the Gulf countries consider while adopting fintech, considering situational circumstances related to COVID-19. "Perceived utility, perceived simplicity of use, perceived trustworthiness," and the situational impacts of COVID-19 substantially impact customers' sentiments towards utilising fintech. In consequence, these viewpoints had a big impact on customers' plans to adopt fintech. Customers' inclination to embrace fintech was found to be significantly impacted by both direct and indirect effects, which were attributed to perceived utility and COVID-19 situational variables. Social influences had little effect on customers' opinions regarding fintech, but they directly impacted their intents. Perceived simplicity of use and trust quality had an indirect impact on customers' propensity to adopt fintech.
2. **Hossain et al. (2023).** The purpose of the study was to examine the moderating effect of perceived COVID-19 risk (PCR) on Malaysian millennials' intention to adopt fintech (ITAF) by looking at how "perceived utility (PU), perceived ease of use (PEU), social influence (SI), service trust (ST), user innovativeness (UI), and technological optimism (TO)" function. It was discovered that perceived benefits, social influence, service trust, and technological optimism all had a significant impact on the propensity to adopt fintech. However, user creativity and perceived ease of use did not show a significant impact. Furthermore, these associations were not moderated by perceived COVID-19 risk.
3. **Meghna, et al. (2023).** The research expanded upon the theory of planned behaviour by integrating "information quality (IQ)" and the willingness to pay for privileges as novel components to investigate the fintech adoption patterns of India's Generation Y demographic. A clear correlation between observable "behavioural control (OBC) and actual intention (AI)" was confirmed by the study's findings, which indicated that several hypotheses had a major influence on fintech adoption behaviour. Fintech adoption was found to be significantly influenced by the quality of the information provided.
4. **Florentina, Kurniasari., et al. (2023).** This research used the UTAUT framework to analyse the impact of adoption of Financial Technology (FinTech) in businesses. On adopting FinTech in organisations, it looked into factors like consumer trust, social impact, effort and performance expectations, and regulatory services. The performance expectancy, effort expectancy, social influence, customer trust, and regulatory services were found to have a major impact on the adoption of FinTech in organisations. The primary determinant of FinTech adoption in organisations was customer trust, with regulatory services having the least impact. The results highlighted how crucial FinTech adoption is to improving organisational effectiveness.
5. **L. Samarasekara, et al. (2023).** The study evaluated major factors influencing Malaysians' adoption of FinTech services and the role that trust played as a mediator in this process, taking into account the disparity between FinTech growth rates and acceptance rates linked to a lack of trust. According to the study, Malaysians' adoption of FinTech services is determined by their perception of the services' usefulness, convenience of use, and innovativeness as users, but their adoption of the

services is unaffected by perceived hazards. The effect of perceived risk on FinTech adoption was fully mediated by trust. These results may reduce worries and increase customer trust by assisting financial institutions and regulatory agencies in switching from traditional to FinTech services.

6. **Somya, Gupta. (2023).** The study looked at the factors influencing FinTech organisations' behavioural intentions to use blockchain technology. Using Interpretive Structural Modelling (ISM), the study identified 13 elements from the literature and examined their correlations. Academic blockchain experts developed and validated a conceptual model, and the variables' driving and dependent power was examined using MICMAC analysis. Based on the findings, it is advised that FinTech use blockchain technology because of its benefits, which include enhanced data protection, traceability, and confidence compared to more conventional approaches.

7. **Malokani & Masood (2023).** The purpose of the study was to look at what characteristics affect fintech uptake and the moderating role of government support, focusing on Sindh's Islamic banking industry in Karachi. The study found a favourable correlation between perceived utility, perceived trustworthiness, and awareness and fintech adoption. The relationship between government support and the adoption of fintech was partially mediated by perceived usefulness, whereas the same factor completely mediated the relationship between awareness and adoption.

8. **Himendu & Mathur. (2022).** The study aimed to determine the key variables affecting farmers' adoption of fintech and suggest a conceptual framework based on these variables. According to the survey, perceived risk is the main factor adversely influencing farmers' intentions to use fintech goods and services. Other important issues include "perceived security, usefulness, trust, convenience, ease of use, and social influence." Important mediators included "attitude, perceived danger, perceived value, and user inventiveness." Simultaneously, age, gender, and experience were significant moderators impacting the association between these drivers and the inclination to use fintech.

9. **Ankita, &, Debabrata (2022).** The study examined the factors influencing the uptake of these services and understood the FinTech service usage patterns by utilising components of the technology acceptance model (TAM) in Assam. The study discovered that more people are using FinTech services, including business owners, self-employed professionals, government and private sector workers, daily wage earners, and farmers. Government backing, trust, perceived usefulness (PU), attitude, and social impact were important variables that positively influenced fintech adoption. Organisations must improve their defences against cyberattacks, as evidenced by the fact that respondents' faith in FinTech services was badly harmed by perceived dangers.

10. **Khaled, et al. (2022).** The study aimed to overcome the shortcomings of earlier research that concentrated on certain demographic and socioeconomic groups by identifying important factors impacting the adoption facing fintech services in Bangladesh. Customers who were less inclined to use fintech services were those who were more concerned with security, privacy, less government control, and perceived impediments to service instinct, according to the survey. It was found that these issues, not demographic characteristics, were the main determinants influencing fintech adoption.

Objectives of the Study:

1. To evaluate the factors influencing the adoption of fintech.
2. To give appropriate suggestions to fintech promoters and regulatory bodies towards enhancing fintech adoption.

Research Methodology:

Data Collection:	Both primary and secondary.
Sample Size:	200 Fintech Users
Sample Size Calculation:	As per Daniel Soper At 0.3 effect size, statistical power 0.9, number of latent variables = 6, number of observed variables = 30 and probability level = 0.05, the minimum required sample size = 200).
Sampling Technique:	Non-probability purposive sampling was employed for the study.
Statistical Analysis Technique:	Structural Equation Modelling (SEM).
Statistical Tool:	SMART PLS.

Figure No: 1 Sample Size Calculation as per Daniel Soper

Anticipated effect size: ?

Desired statistical power level: ?

Number of latent variables: ?

Number of observed variables: ?

Probability level: ?

Calculate!

Minimum sample size to detect effect: 200

Minimum sample size for model structure: 100

Recommended minimum sample size: 200

Data Analysis and Interpretation:

Table No: 1 Demographics			
Category	Variables	Frequency	Percentage (%)
Gender	Male	100	50.00
	Female	100	50.00
Annual Income	Less than 2,50,000	51	25.50
	2,50,000 to 5,00,000	63	31.50
	5,00,000 to 10,00,000	49	24.50
	Above 10,00,000	37	18.50
Digital Wallet	Paytm	42	21.00
	PhonePe	31	15.00
	Google Pay	59	26.00
	Amazon Pay	39	19.50
	MobiKwik	36	18.00

A total of 200 fintech users—100 males (50%) and 100 females (50%)—were surveyed as part of the study to assess the factors driving the adoption of fintech. About yearly earnings, the most of participants (31.50%) were in the ₹2,50,000 - ₹5,00,000 bracket. These individuals were followed by those making less than ₹2,50,000 (51 participants, 25.50%), ₹5,00,000 - ₹10,00,000 (49 participants, 24.50%), and more than ₹10,00,000 (37 participants, 18.50%). With 52 users (26.00%) utilizing the platform, Google Pay emerged as the most popular choice among respondents when it came to fintech usage, followed by Paytm with 42 users (21.00%). 39 users (19.50%) used Amazon Pay, while 36 users (18.00%) and 31 users (15.50%) used PhonePe and MobiKwik, respectively.

Table No: 2 Model Fit Indices		
Goodness of fit model index	Recommended value	Model
CMIN/DF	<3	2.782
GFI	>0.8	.823
NFI	>0.8	.865
TLI	>0.9	.921
CFI	>0.9	0.918
RMSEA	<0.08	0.062

As per Table No: 2 all the values are complying with the recommended values as per Hair et al. (2010) Indication of excellent Model fit.

Table No: 3 Reliability and validity			
Path	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Behavioural Intention	0.782	0.791	0.549
E-service quality	0.881	0.893	0.600
Effort Expectancy	0.905	0.904	0.643
Facilitating Condition	0.884	0.891	0.605
Performance Expectancy	0.907	0.909	0.614
Social Influence	0.895	0.903	0.587

As per table no: 3 all the vales of Cronbach's Alpha >0.7 indicating adequate reliability. Also composite reliability > 0.7 and AVE > 0.5 . Thus, it can be said that items are perfectly representing its constructs and there exists a convergent validity

Table No: 4 discriminant validity						
Path	BI	ESQ	EE	FC	PE	SI
Behavioural Intention (BI)	0.741					
E-service quality (ESQ)	0.715	0.774				
Effort Expectancy (EE)	0.731	0.736	0.802			
Facilitating Condition (FC)	0.721	0.756	0.735	0.778		
Performance Expectancy (PE)	0.727	0.720	0.774	0.725	0.783	
Social Influence (SI)	0.711	0.718	0.737	0.764	0.712	0.766

As per the fornell larcker criteria, it can be concluded that the constructs are distinct and there exist and adequate Discriminant validity.

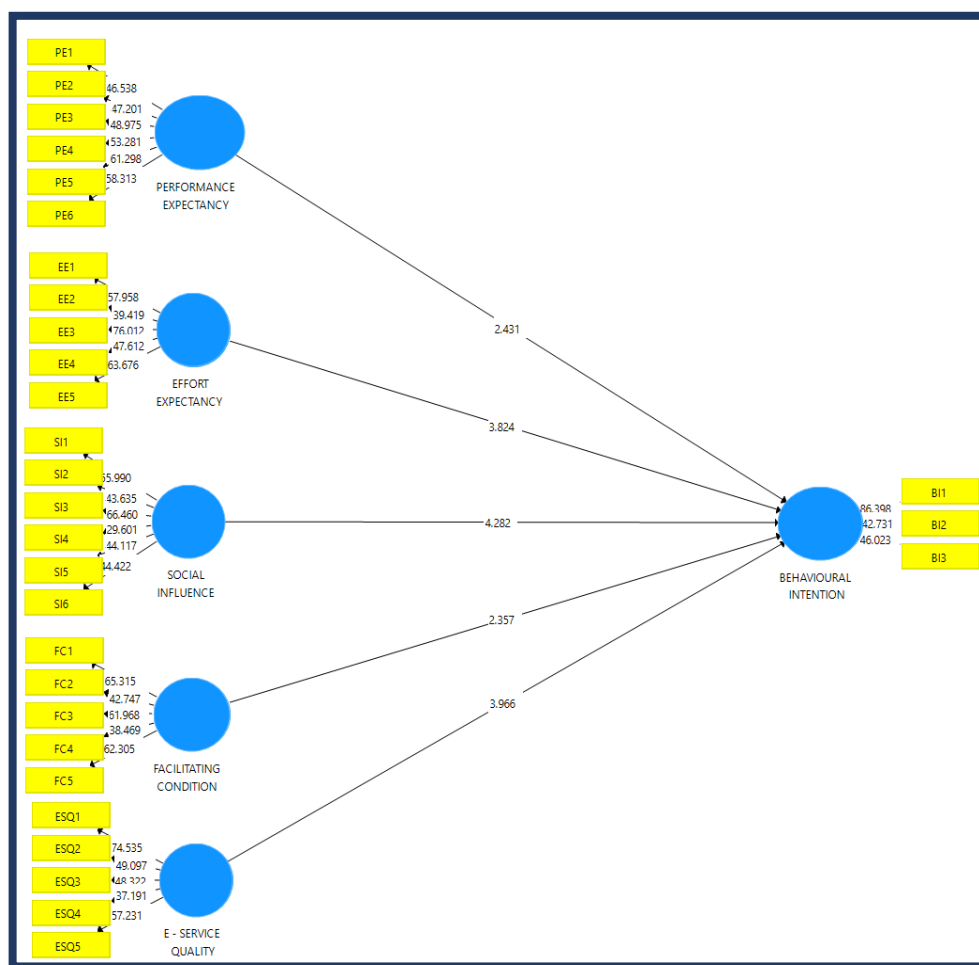


Figure No: 2 SEM model

Table No: 5 Hypothesis testing			
Path	Beta Coefficient	T-statistics	P-Value
Performance Expectancy → Behavioural Intention	0.125	2.431	0.015
Effort Expectancy → Behavioural Intention	0.218	3.824	0.000
Social Influence → Behavioural Intention	0.229	4.282	0.000
Facilitating Condition → Behavioral Intention	0.123	2.357	0.019
E-service quality → Behavioural Intention	0.198	3.966	0.000

P (value) < level of significance 5%; in every case, H1 is accepted and Ho is rejected, demonstrating the major impact of e-service quality, social influence, performance expectancy, and effort expectancy on behavioural intention.

Table No: 6 Summary of Hypothesis	
Alternative Hypothesis	Result
Ha1: Performance expectancy has a significant influence on behavioural intention	Supported
Ha2: Effort expectancy has a significant influence on behavioural intention	Supported
Ha3: Social Influence has a significant influence on behavioural intention	Supported
Ha4: Facilitating Conditions has a significant influence on behavioural intention	Supported
Ha5: E-Service Quality a significant influence on behavioural intention	Supported

Conclusion:

The results of this study highlight the critical influence that different e-service quality aspects have on consumers' behavioural intention to adopt fintech. Users' intents to use fintech were significantly influenced by performance expectancy, which reflects their judgements of how well fintech solutions satisfy their needs, and effort expectancy, which relates to how easy these services are to use. The study also emphasizes the significance of social influence, showing that peer recommendations and internet reviews are important factors in people's decisions to adopt fintech. In addition, it was found that facilitating conditions, which include the availability of resources and support, was still another important factor impacting users' behavioural intentions. When considered, these results highlight the complex relationship between e-service quality and user attitudes and behaviors surrounding the adoption of fintech. In order to encourage the widespread use of fintech solutions, financial institutions, regulatory bodies, and fintech advocates must acknowledge and address these characteristics of e-service quality.

Suggestions:

Suggestions for Regulatory Authorities:

- Simplify regulations and procedures to lower entrance barriers for fintech companies and encourage innovative e-service solutions.
- Establish innovation hubs and regulatory sandboxes to give fintech companies a secure setting for evaluating and improving their e-services, encouraging more experimentation and education.
- Provide fintech companies with precise rules and best practices to improve the quality of e-services, emphasizing enhancing user pleasure, performance, and usability.
- To promote e-service excellence and fintech adoption, foster cooperation between regulatory bodies, financial institutions, and fintech companies to exchange knowledge and experience.
- Maintain to evaluate how regulatory actions affect the quality of e-services and the uptake of fintech and solicit input from stakeholders and users to guide future regulatory actions.

Suggestions for Fintech Promoters:

- To increase customer happiness and adoption, prioritize simplicity, intuitiveness, and user-friendliness while designing e-services.
- Present gratifying user comments, ratings, and reviews to establish authenticity and trust while utilizing social media to encourage future users to sign up.

- Establish customer support channels that are easily available and responsive to resolve consumer issues and concerns rapidly, hence improving the enabling conditions for adoption.
- Create instructional materials and awareness campaigns to help people learn more about fintech solutions and their advantages. This will enable consumers to make well-informed adoption decisions.
- Adopt an innovative and progressive culture in which market insights and user comments are sought to continuously improve the quality of e-services and guarantee recurring customer pleasure and loyalty.

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