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FACTORS AFFECTING THE ADOPTION OF FINTECH SERVICES FOR BANK USERS (A STUDY OF BANK USERS IN KARACHI)

Nimra Siddique
Research Scholar
KASBIT University
nimrasiddique1081@gmail.com

Aiman Haniffo
Research Scholar
KASBIT University
ahaniffo88@yahoo.com

Abstract

The evolution of Fintech services and the adoption of new emerging technology is seen in today's world. Very few researchers have studied the factors that affect the adoption of Fintech services and how human behavior varies as technology changes. Apart from this, the advancement in mobile phones and the increase in their usage of them have increased the demand for online financial services. In this paper, we have considered and studied factors that have an impact on the adoption of Fintech services. We have studied perceived ease of use, innovation, trust, and government support. Through SPSS, we have concluded that each of these factors positively impacts the adoption of Fintech services. Our model is based on TAM (technology acceptance model) and was adopted from our base article. The findings of this research can be used to make improvements in the existing Fintech services and also in the development of new services.

Keywords: Fintech, Perceived Ease of Use, Trust, Innovation, TAM, Government Support.

Introduction

Fintech technology, the integration of financial and technological sectors, has transformed numerous companies' operations into efficient digital systems. It encompasses innovative techniques aimed at improving processes, delivery, and services. Its significance in shaping the financial landscape prompts bank users to consider its adoption.

Fintech services extend beyond traditional banking, incorporating innovations like big data, cloud computing, and mobile applications. Companies offering these services leverage lower labor costs and operational ease.

The expansion of digital technology in recent years has significantly influenced consumption and business patterns. Technological advancement is pivotal for innovation in banking and financial services, altering how companies deliver products and services. However, along with benefits, it poses challenges for businesses.

Assessing an economy's financial position relies heavily on how well its

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banking sector embraces technology, shifting from traditional to digital banking systems.

Previous research indicates a substantial global increase in Fintech investment, resulting in the emergence of thousands of Fintech companies. However, this growth has led to job losses in the banking sector, highlighting the challenge of technological adaptation.

The study targets users of physical and online banking systems in selected areas of Karachi, Pakistan. The findings will be relevant for future research and governmental policy formulation. The research aims to shed light on factors affecting Fintech adoption, government support, and innovation's impact on customer adoption of Fintech services. It will also help banks understand the transition from traditional to digital banking systems and its effects on cost reduction and consumer behavior.

Research Gap

Previous studies have explored reasons for adopting online banking but have overlooked factors hindering adoption (Hu et al., 2019). Our research addresses this gap by identifying barriers to Fintech adoption. While previous studies focus on improving bank efficiency, ours examines user experience with Fintech services. Furthermore, our study considers the impact of COVID-19 on technology adoption, an aspect not thoroughly explored in previous research.

Problem Statement

Understanding Fintech technology remains a challenge for many users. Questions arise regarding its impact on the financial sector's landscape, the security of personal information, and the stability of banking activities. Additionally, Fintech's global prominence raises questions about its unique appeal.

Research Questions

How does Fintech adoption influence the efficiency and productivity of financial services for bank users, and what is its impact on consumer behavior, as assessed through the Technology Acceptance Model?

Research Objective

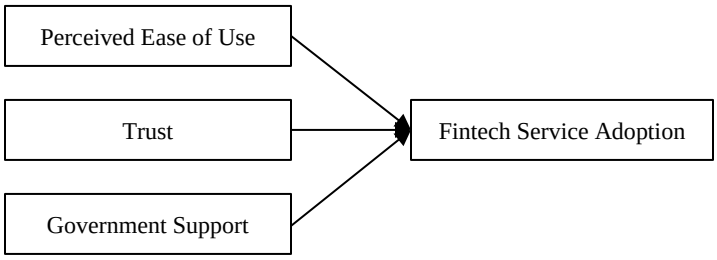
This research aims to investigate how Fintech adoption affects the efficiency and productivity of financial services for bank users and to understand its impact on consumer behavior using the Technology Acceptance Model.

Theoretical Framework

The theoretical framework delineates the relationship between independent and dependent variables concerning Fintech services. It provides a comprehensive understanding of the research objectives, benefiting both present and future researchers.

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Conceptual Framework



Study Hypotheses

H_1: Perceived ease of use significantly influences Fintech Service Adoption.

H_2: Trust significantly influences Fintech Service Adoption.

H_3: Government support significantly influences Fintech Service Adoption.

Significance of the Study

This study provides insights into Fintech adoption, addressing factors influencing users' reluctance. It emphasizes the significance of trust in online banking services and the impact of government policies on technological adoption. Additionally, it highlights the importance of service availability and ease of use in attracting consumers towards Fintech.

Literature Review

Fintech technology, an amalgamation of financial and technological sectors, is evolving rapidly as more people demand convenient financial products and services (Hu et al., 2019). This evolution is fueled by innovations in cryptographic ledgers, big data, and wise investments, all aimed at enhancing user experiences and overall efficiency in the banking sector (Naviglia & James, 2018). Moreover, governments are increasingly focusing on the reliability and security of Fintech services to protect user data (Naviglia & James, 2018).

However, despite its potential benefits, many businesses remain hesitant to embrace technology due to concerns about its societal impact (Nakashima, 2018). Stewart (2018) asserts that the widespread use and advancement of mobile phones have influenced Fintech adoption, but security risks remain a significant concern.

Technology Acceptance Model

The Technology Acceptance Model (TAM), introduced by Hu et al. (2019), replaces the Theory of Reasoned Action (TRA) and integrates various models and theories to understand users' technology acceptance behaviors. TAM focuses on perceived ease of use and perceived usefulness as critical factors influencing individuals' attitudes toward technology adoption (Hu et al., 2019). Research suggests that perceived ease of use, government support, and innovation positively impact

Fintech adoption (Hu et al., 2019).

Perceived Ease of Use

Perceived ease of use plays a crucial role in Fintech adoption, as users prefer user-friendly services that require minimal effort (Hu et al., 2019). When users perceive Fintech as beneficial and easy to use, they are more inclined to adopt it (Hu et al., 2019).

Innovation

Fintech and innovation are closely linked, as innovative solutions offer more efficient processes and products (Zavolokina, 2016). Zhang (2018) suggests that innovation influences consumers' readiness to adopt new products, with early adopters experiencing lower perceived risk.

Trust

Trust is a critical factor in Fintech adoption, as users are more likely to adopt services they trust (Hu et al., 2019). Government Support: Government support is crucial for Fintech adoption, as it enhances trust and reliability (Hu et al., 2019).

Research Methodology

This research aims to explore the factors influencing the innovation and adoption of Fintech services by analyzing consumer habits and decision-making patterns. Participants were selected randomly, and a questionnaire was distributed through various online platforms such as WhatsApp, Facebook groups, and email to ensure maximum responses. The questionnaire, adapted from a study conducted in China (Hu et al., 2019), consisted of 14 items divided into two parts. The first part gathered basic information such as gender, age, income, and education, while the second part focused on independent and dependent variables.

Research Design

A case study method was chosen to understand the impact of various factors on Fintech adoption. This method allows for a deeper examination of real-life cases and helps in understanding non-conceptual issues like digital innovation. Case studies aid in evaluating the "how" and "why" questions, contributing to a better understanding of Fintech adoption (Karagiannaki et al., 2017).

Approach Used

This research employs a deductive approach, focusing on specific independent variables affecting Fintech users. Additionally, it utilizes a descriptive approach to analyze the broader impacts of digital transformation on financial services. The descriptive approach helps in understanding how Fintech services have changed organizational procedures and leadership styles, impacting customers, employees, and stakeholders (Karagiannaki et al., 2017).

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Research Strategy

Quantitative analysis is used to establish relationships between independent and dependent variables. The study focuses on factors affecting Fintech adoption, such as perceived ease of use, innovation, and government support. The Technology Acceptance Model (TAM) is employed to predict user behaviors toward technology adoption, with attitude serving as a mediator (Zhang, 2018). TAM measures perceived ease of use, which is crucial for Fintech adoption.

Data Collection Techniques

Data from 317 participants were collected using random sampling to ensure representativeness. Questionnaires were distributed to bank users in Karachi, Pakistan, and responses were measured using a 7-point Likert scale. Statistical analysis was performed using SPSS.

Unit of Analysis

The analysis focuses on the educational background and income of bank users, while the observation unit depends on the frequency of Fintech service usage.

Data Analysis Techniques

Various statistical tests were conducted to examine the relationship between variables. Correlation analysis assessed the relationship between independent and dependent variables. Reliability analysis measured the reliability of the items, and regression analysis determined how changes in one variable affected others. These analyses were performed using SPSS.

Credibility and Reliability

Reliable banks offering Fintech services in Pakistan were selected for the study to ensure data credibility.

Ethical Consideration

Ethical considerations were prioritized, ensuring the anonymity and confidentiality of participants' responses. Participants were informed that their responses would be used for research purposes and that their personal information would be protected.

Descriptive Analysis

Table 01 Demographic Detail

Demographic Variable	Category	Percentage
Gender	Male	42%
	Female	57.8%
Age	18-25	73.3%
	26-35	26.7%
	36-45	0.0%

	46-55	0.0%
	Less than 56	0.0%
Employ Status	students	48.9%
	Civil servant	0%
	Business management personnel	0%
	employee	28.9%
	Self-employed	15.6%
	Other	17.8%
Education	Less than diploma	13.3%
	Diploma	4.4%
	Bachelor	57.8%
	Master or more	24.4%
Income (Rs.)	Less than 30,000	51.1%
	30-60,000	17.8%
	60-100,000	6.7%
	100,000 and more	24.4%
Fintech Service Usage	Never	53.3%
	Occasionally	24.4%
	Usually	11.1%
	Frequently in Everyday	13.3%

Table 01 provides a breakdown of the demographic details of the participants in the study. In terms of gender, 42% of the respondents were male, while 57.8% were female. Regarding age, the majority fell into the 18-25 category, accounting for 73.3% of the participants, followed by 26-35-year-olds at 26.7%. No participants were aged between 36-55. In terms of employment status, nearly half of the respondents were students (48.9%), followed by employees at 28.9%, and self-employed individuals at 15.6%. Other categories, such as civil servants and business management personnel, had no representation. Regarding education, the majority held a bachelor's degree (57.8%), followed by those with a master's degree or higher (24.4%). Regarding income, the most significant proportion of respondents (51.1%) reported earning less than Rs. 30,000, followed by 24.4% earning Rs. 100,000 or more. In terms of Fintech service usage, 53.3% reported never using Fintech services, 24.4% used them occasionally, 11.1% used them usually, and 13.3% used them frequently in everyday transactions.

Analysis and Interpretation

Table 02: Reliability Analysis

S/No.	Variables	Cronbach's Alpha	No. of Item
01.	Perceived Ease of Use	0.75	03
02.	Trust	0.78	02
03.	Government Support	0.72	03
04.	Adoption	0.54	02

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Table 02 presents the results of a reliability analysis conducted on various variables. Reliability, in this context, assesses the consistency of measurement results and the internal coherence of the data. Cronbach's Alpha, a statistical measure, was employed for this purpose (Hu et al., 2019). It gauges the extent to which items in a scale measure the same underlying construct. Higher values indicate more excellent reliability by indicating less random error. The table shows Cronbach's Alpha values for different variables: 0.75 for perceived ease of use, 0.78 for trust, and 0.72 for government support. These values suggest high reliability for these variables. However, the variable of adoption exhibits a Cronbach's Alpha of 0.54, indicating moderate reliability according to Hinton (2014), who defines reliability between 0.5 and 0.7 as moderate. Despite being lower, this still suggests some reliability in measuring adoption.

Regression Analysis

Table 03: Regression Analysis

Model		Unstandardized Coefficient		Standardized Coefficient	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.23	0.18		6.68	0.00
	Perceived Ease of Use	0.32	0.04	0.36	6.97	0.00
	Trust	0.10	0.04	0.13	2.52	0.01
	Government Support	0.23	0.05	0.24	4.67	0.00
a. Dependent Variable: Adoption of Fintech Service						

The table presents the results of a regression analysis conducted to estimate the relationship between dependent and independent variables after checking their correlation. Regression analysis is utilized for prediction, forecasting, and understanding the relationship between variables. The R-squared value of 0.34 indicates that 34% of the variance in the dependent variable (adoption) can be explained by the independent variables (PEU, Trust, and Government Support). The adjusted R-squared value suggests that these variables moderately relate to Fintech technology, while the remaining 66% of the variance is explained by other factors not included in the model.

In the table, each variable's unstandardized and standardized coefficients, along with their significance (Sig.), are presented. The constant term shows the baseline value. The independent variable, Perceived Ease of Use (PEU), is significant at a p-value of 0.00, indicating a rejection of the null hypothesis and suggesting that PEU has a substantial impact on the adoption of Fintech services. Similarly, Trust and Government Support are also significant at a p-value of 0.00, indicating a positive impact on Fintech adoption.

Discussion

The study aimed to investigate the impact of perceived ease of use, trust, and government support on Fintech service adoption, based on three hypotheses: H1: Perceived ease of use significantly influences Fintech Service Adoption. H2: Trust significantly influences Fintech Service Adoption. H3: Government support

significantly influences Fintech Service Adoption. The results revealed that all three independent variables have a significant impact on Fintech service adoption, leading to the rejection of the null hypothesis.

Reliability analysis, utilizing measures such as Cronbach's Alpha, was employed to assess the consistency between variables and the reliability of the questionnaire items. Our results demonstrated that perceived ease of use, trust, and government support exhibited high reliability, as their Cronbach's Alpha values exceeded 0.7, meeting the criterion for internal consistency. However, the variable of adoption showed a Cronbach's Alpha of 0.5, indicating moderate reliability, suggesting that this variable's results are moderately reliable for Fintech service adoption (Hu et al., 2019).

Regression analysis was conducted to determine the relationship between dependent and independent variables. The standardized regression coefficients obtained from the analysis, according to the Tam model, indicated the strength and direction of the relationships. The R-squared value, representing the proportion of variance in the dependent variable explained by the independent variables, was 54%. This indicates a moderate effect, slightly lower than the existing research's reported 57% (Barbu et al., 2021). Consistent with previous research, the findings indicated a positive correlation between technological development and the innovation of Fintech services (Hu et al., 2019). The correlation coefficients (r) between the independent variables and Fintech adoption were 0.43, 0.35, and 0.50, with p-values of 0.01, suggesting a strong relationship. This significant correlation indicates that 99% of the results are valid and support the hypotheses proposed in this study.

Conclusion

Fintech, characterized as a cutting-edge technology in financial markets, aims to innovate financial activities (Knewtson & Rosenbaum, 2020). Our study focused on understanding Fintech adoption using the TAM model, with 317 respondents contributing significantly to our hypotheses (Gebba & Aboelmaged, 2013).

The research aimed to explore the primary purposes of Fintech services, understand their adoption among bank users and assess their impact on communication levels in banking activities (Zhang, 2018). Furthermore, it sought to understand why Fintech technology struggles to gain traction in the real world and why users are hesitant to adopt it (Naviglia & James, 2018).

The study revealed significant positive relationships between all independent variables (trust, perceived ease of use, government support, and innovation) and the dependent variable, Fintech adoption (Ryu & Ko, 2020). Insights from (Park et al., 2015) helped us understand the impact of each variable on changing bank users' behavior.

These findings are particularly significant as they were derived from our questionnaire, adapted from a foundational study (Hu et al., 2019), with adjustments made to suit our variables. To ensure the reliability of our findings, we conducted various statistical tests, including correlation, regression, and Cronbach's alpha, in the reliability analysis. The comprehensive results strongly support the adoption of Fintech

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services among users.

Limitation

Firstly, our research focuses solely on users who are familiar with technology and use the internet. Additionally, our data collection is limited to users in Karachi, thus limiting the generalizability of our findings.

Secondly, while the study has examined several essential factors that influence the adoption of Fintech technology, there are still many other factors that remain unexplored. Factors such as perceived risk, intention, and user innovation could also play significant roles in shaping user behavior towards Fintech adoption (Hu et al., 2019).

Thirdly, the time frame for our research was relatively short, and it was conducted within four months only. This limited the size of our sample, which is small compared to the number of internet users in Karachi. Additionally, the COVID-19 pandemic further constrained our data collection efforts.

Furthermore, the study did not include users who may desire to use Fintech services but are unable to do so for reasons such as the affordability of technology or lack of education. This omission excludes a significant portion of the population and may limit the comprehensiveness of our findings.

Lastly, while we examined the adoption of Fintech technology in terms of perceived ease of use, trust, government support, and innovation, we did not investigate the impact of RegTech and cybersecurity, which are essential factors in the adoption process. These aspects should be considered in future research to provide a more comprehensive understanding of Fintech adoption dynamics.

Recommendations

Several recommendations can benefit future studies in Fintech adoption. Firstly, researchers should expand participant inclusion beyond tech-savvy individuals and Karachi, aiming for a diverse sample. This broader approach would enhance the applicability of findings across different demographic groups.

Secondly, it is essential to explore additional factors such as perceived risk, intention, and user innovation to gain a deeper understanding of Fintech adoption. Incorporating these variables into research designs would provide insights into the underlying reasons for user reluctance.

Thirdly, extending the research duration would allow for a larger sample size and enable researchers to capture more nuanced trends in adoption behavior over time. More extended studies can lead to more robust findings and conclusions.

Fourthly, future research should adopt an inclusive approach by considering users facing barriers to technology adoption, such as affordability issues or low education levels. This would provide a more accurate representation of the population and shed light on the challenges faced by marginalized groups.

Lastly, exploring additional factors like RegTech and cybersecurity would offer valuable insights into their impact on Fintech adoption. Delving into these areas would help develop effective strategies to promote Fintech adoption among users.

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