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Impact of Security, Perceived Usefulness, and Brand Image on Fintech Adoption and Customer Satisfaction in Pakistan's Financial Sector

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Fintech enhances customer satisfaction by simplifying payment processes and fostering trust, essential for positive engagement. Despite growing adoption in Pakistan and globally, security concerns, such as theft and inadequate measures, create customer apprehension. To increase trust and adoption, enterprises must implement strong security systems and awareness campaigns. While brand image has little impact on fintech adoption, a positive reputation fosters trust. Key factors for adoption include perceived usefulness, ease of use, and trust in the technology. A Cronbach's alpha of .930 confirms high reliability in mobile banking service quality. Trust and security are crucial for widespread fintech acceptance.

1. Introduction

The adoption of new technologies, particularly fintech, is growing rapidly across different countries, with more and more consumers embracing online payment methods. People are increasingly using digital platforms for making payments, withdrawing money, and transacting with various websites. Previous studies have highlighted that fintech has not only enhanced consumer experiences but also boosted demand for these services. In addition, the banking sector is becoming more efficient due to these technological advancements. This rise in fintech is creating opportunities for new companies to enter the market and invest in areas where there is consumer demand. Banks are also capitalizing on fintech by offering better services, especially in lending, where they are facilitating short-term financing in various sectors.

In Pakistan, institutions are starting to adopt fintech products to better serve both consumers and businesses. However, there is still a need for more clarity on how fintech works and its benefits. Two different perspectives exist on fintech adoption in the country. One group supports the growth of fintech, while the other prefers to stick with the traditional banking system. To improve understanding of fintech, there is a need for informative workshops, seminars, and awareness programs targeting both the public and corporate sectors. Some consumers favour fintech, while others believe it is only suitable for technology-focused financial companies and prefer the conventional banking strategy.

Research in the field of fintech has revealed that digital finance is growing rapidly. One key finding is that this technology boosts innovation and can contribute to financial stability by giving consumers better access to their accounts through the banking sector (Chen Serge, 2018). However, these studies haven't covered all factors and innovations, which is important for future research. Banks and financial institutions need to focus on how consumers use fintech products and services. A major concern for consumers is the security of their accounts, which should be included as a key factor in fintech related research. Banks can develop strategies to educate their regular customers about new products, enhancing their understanding of fintech. As a result, it is enhanced to encourage the development of new business frameworks, applications, procedures, and products as shown to the end user (Natarajan, & Saal, 2021; Murinde et al., 2022).

Brokerage firms not only facilitate stock trading but also offer technical analysis and consulting, which fintech can enhance. Companies need to adopt advanced fintech models to deliver accurate results for clients, and there are now several software tools that help traders monitor stock movements. Once clients become familiar with fintech models, they can gradually develop skills from basic to advanced levels in their specific business areas. Fintech also offers convenience to enterprises by reducing the effort needed to trade on behalf of clients. As clients become proficient with the fintech tools provided by the enterprise, they can handle their own transactions, while the enterprise continues to earn commissions or fees, as agreed upon earlier. The key takeaway is that fintech not only facilitates quick actions but also represents a one-time investment for businesses, allowing clients to work independently while the company still benefits from providing the platform.

1.1 The Evolution of Fintech – Two Strategies

The development of fintech can be understood through two main strategies. While fintech is often associated with the information technology sector and has become prominent in the banking industry, its evolution is not entirely clear. To better grasp how fintech works, we can look at two strategies: the actor-founded strategy and the resource-founded strategy. (Arner et al., 2016) and Buckley have studied financial innovation over the past two decades, distinguishing its growth into three phases. However, owing to the fast-changing environment which surrounds today, these phases have shifted dynamically with evolving resources and infrastructure.

It has been suggested by some authors that when it comes to fintech, its essence is innovation since it is limitless and always evolving (Arner et al., 2016). In this way, actor-founded strategy is more about understanding the individuals or structures that innovate with less emphasis on the elicited resources, the structures and the designs. This approach can be viewed from a new perspective, the actors who deliver the requisite resources and capabilities for these innovations. When it comes to the IT and financial sectors, more emphasis is placed on the development processes and future of fintech (Arner et al., 2016).

1.2 Evolutionary Fintech with an Actor-Founded Strategy

Arner et al (2015) suggest that the evolutionary fintech with an actor-founded strategy can be distinguished into three phases. The first phase, which lasted from 1886 to 1987 introduced the development of financial technology on account of the emergence of telecommunication infrastructure such as the transatlantic cable as well as the transmission of such cables. The phase was key in enabling the rapid transition of banking into the networked environments that emerged from the proliferation of the telephone system allowing people to conduct banking operations from one city to another almost instantly. This connectivity made it easier for banks to offer dependable services to customers and is often regarded as the basis of contemporary banking. In the absence of this, the entire banking industry would have remained in a more primitive stage of its development.

Starting with the global economic crisis, the second phase, from 1987 to 2008, was a transition period for the banking industry as establishments rapidly shifted to the digitization of processes. Automated teller machines (ATMs) and other innovations in financial products were introduced aiming towards improving general banking services. It was in this period that stock exchanges as well as correspondent banking steadily improved to foster the development of present day's banking. However, there was a shift in models of banking towards technological incorporation which guaranteed subsequent developments.

The third phase, starting in 2014, introduced a wave of new technologies and financial institutions. During this phase, fintech saw rapid development with an investment of only 12 billion dollars, a stark contrast to the 197 billion dollars invested in the second phase. Phase two's investments were primarily in innovation and IT infrastructure, but many legacy systems failed, with approximately 200 billion dollars spent on these non-competitive systems. Phase three, however, moved faster and more efficiently in developing the fintech landscape.

1.3 Fintech Resource-Founded Strategy

The resource-founded strategy highlights that fintech's development doesn't rely solely on its origins but rather introduces new value and designs through innovation. According to this strategy, fintech's growth is driven by three distinct layers, similar to Maslow's hierarchy of needs, which explain the success behind fintech companies. These layers represent different stages of development in financial technology.

The first layer focuses on creating an environment using technology advancements as well as broad accessibility of essential telecommunications and information technology services, in this ecosystem, include all the advancements in IT hardware and software like cheap computers, mobiles, and even the internet, and the necessary skills like programming. These developments provide the foundation for fintech to enter the market. The main facilitators are developments in information technology, such as laptops, tablets, and low-cost hardware, which give people access to fintech services. One of the most critical components for fintech growth is the telecommunications infrastructure, which must be established wherever fintech services are needed (Arner et al., 2022).

1.4 Research Objectives

The study aims to explore several key relationships regarding the use of fintech and mobile banking.

To find out people's intention to use mobile banking services are effect through perceived usefulness.

To find out people's intention to use mobile banking services are effect through perceived ease of use.

To find out the reliability of independent dimensions on mobile banking service quality.

To find out the association ship between trust and the intention through use fintech.

To examine the perceived risk affects breaches and fraud can severe consequences the decision to use fintech.

To identify the positive relationship between brand image and the intention through use fintech.

1.5 Problem Statement

The research objective is to uncover the determinants that affect the behavior of consumers in Pakistan towards the fintech offerings. The primary goal is to investigate the acceptance and awareness of Pakistani consumers regarding fintech products, which could benefit financial and business sectors. A major issue in Pakistan is that many people who conduct financial transactions through banks have limited knowledge about these processes. As banks integrate fintech solutions such as mobile and internet banking, as well as ATMs, it becomes crucial to enhance users understanding of how to utilize these tools effectively. A major concern is the potential for fraud, where individuals may exploit these technologies through hacking and other malicious methods. Additionally, many users struggle with a

limited understanding of the internet, posing other obstacles to the successful adoption of fintech products. This prompts the study to suggest awareness as an independent variable, underlining a need for people being made aware of fintech products and services so they can use it properly.

1.6 Research Gap

The research argues that banking sector should incorporate latest technology in order to enhance their financial technology offerings. Pakistan is adopting the technology but its adoption rate in banking sector of Pakistan vs rest of the world are quite low. There are many factors affecting the use of fintech products and services, with probably security being one of the biggest reason. Pakistani public do believe now a day that their account are not safe to access online likes which is incorrect statement according the capabilities. Additionally, there have been incidents of fraud where hackers have withdrawn large amounts from bank accounts.

Research on customer satisfaction with fintech products and services in Pakistan is limited. The services available to the customers, and their feedback for these are required to study over by conducting an extensive research. This research should cover all aspects of fintech services and products to improve customer experience and address security concerns.

The empirical research conducted indicates that is one of the most important aspects that inhibit or promote consumers willingness to adopt fintech products and services to understand customer requirements, particularly concerning the security and safety of their account balances. Companies must make informed decisions when marketing fintech products and services for financial institutions and banks. Previous research on this topic has not been extensive enough, and more investigation is needed to understand customer behaviour and concerns better.

This research will add to examining customer behaviour in personal banking after adopting fintech products and helps customers embrace these technologies. The study is meant to show that fintech can help move away from in-store banking services and the convenience of traveling while shopping or making purchases.

The specific purpose of this research is identifying factors that affect the use of financial technology (fintech) services and products. This research is planned to be based on primary data that will be taken from the customers of commercial banks who use these technologies. The research will analyze how security and other aspects impact customer usage. The methodology will involve primary research through a questionnaire, targeting customers of commercial banks who regularly use fintech products for daily transactions, lending, and borrowing in the marketplace.

2. Literature Review

2.1 Theoretical Background

It refers to the distortion between the borrower and lender and causes problems in credit market. Since this imbalance can lead to credit rationing and disrupt the economy in a general endeavor, it had been argued by Jaffee and Russell (1976) as well as Stiglitz and

Weiss (1981). Such as, a lender may unknowingly lend to an unworthy individual because the borrower gave false or misleading information which damages his title and de-limits as well.

In making all of this possible, it is essential to provide advanced information systems and stress on technology readiness, for instance Fintech. However, an advanced or at-least semi-advanced credit scoring system can mitigate these risks significantly by ensuring a more accurate picture of the borrower's true propensity to satisfaction. Objective systems, generally based on verifiable data and track records tend to be more reliable than subjective evaluations.

Frame, Srinivasan & Woosley (2001) and Einav, Jenkins & Levin (2013), found evidence that credit scoring does indeed reduce information asymmetry between borrowers and lenders. Since credit scoring is done by third part, it provides the lenders with a security to assess their risk of lending.

For one, recent papers on fintech lending by Freedman and Jin (2011); Everett et al. (2015); Lin, Prabhala, and Viswanathan (2013). Although this approach has potential benefits, it also poses concerns about fair and non-discriminatory credit access and the need to closely manage compliance with regulation.

2.2 Fintech and the Financial Stability Board

All institutions including institutions that pertain to fintech sector have supervisory boards that take care of the monitoring, advisement and discipline. The Financial Stability Board (FSB) oversees the regulation of fintech and aims to guarantee safe and stable financial services by managing the concerns imbued within it,for instance its algorithms. The FSB has expanded its reach to 20-26 jurisdictions to better address against innovations of fintech.

The Financial Stability Board (FSB) defines fintech as an ‘innovation in financial services enabled by technology’ and accepts this, while fintech has advantages, it also presents some risks. In 2017, FSB published two key studies: one on the ‘Potential impacts on financial stability from Fintech’ and another on ‘Utilization of Artificial Intelligence and machine learning in financial services’. These reports highlight the anticipated growth of fintech and the positive reception it has received from many regulators.

According to the Toronto Centre (2017), fintech impacts the financial sector in four key ways. First, it enhances market competition. Second, it improves performance and efficiency in service delivery. Third, it generates additional investments by bringing in banks and insurance companies to verify the legitimacy of applicants. Fourth, fintech is believed to enhance financial regulation.

2.3 TAM Model

Davis (1986) explored the concept of fintech technology, relevant to this are theory of Technology Acceptance Model (TAM). This theory tracks the change from one technology to another by considering individual behaviors and social norms, they affect for accepting new technology. So according to TAM, the technology adoption is based on two criteria: “Perceived Usefulness” and“ Perceived Ease of Use”. Usefulness is the extent to which a

person's performance and efficiency in using technology, while ease of use means how comfortable he uses this technology.

Previous research has evidenced the success of TAM models in predicting usage intentions for mobile banking, online payments, internet banking as well as e-commerce based technologies. Technology is seen as increasingly beneficial and helping to add value in businesses. Features that empower employees for instance, new technologies they find useful or easy to use can enhance their productivity and ultimately the performance of a business overall.

Up to 2015, fintech attracted substantial investment: globally some $10 billion (Accenture, 2016). Like most cutting-edge technology, fintech has its hurdles with security and fraud risks being chief among them. For fintech solutions, it is important to maintain the confidence of consumers by protecting transaction data and preventing fraud (Dunkley 2016).

Fintech technology benefits from rapidity and efficiency, savings; time saved. Faster and more convenient because it enables them to competences. Moreover, it will improve financial transactions that fintech help enables prompt information availability and secure online payment (Hemmadi, 2015).

2.4 Perceived Usefulness

Technology Acceptance Model (TAM model) focuses on the impact other variables hold over new technology adoption and usage levels. Research concept key Independent variables of TAM are " Perceived Usefulness". This variable measures whether people think that they can do their job more effectively if they use a technology.

According to TAM, an application perceived by the employees as useful that helps them solve their problems more efficiently is expected generate better performance at the individual level and therefore contribute positively to productivity. Employees that are productive and contended with the tech they work on ultimately contribute to how well the business does as a whole.

Albayati et al., (2020) studied that the perceived usefulness is important and support in positive way to implement fintech technology successfully at banking sector. As new technologies come up, they need to be properly trained on so that employees can understand how the technology works and use these Fintech products. This, in turn results positive performance of them and ultimately profit for company (Jahangir Begum 2008). Wiradimaja and Rikumahu (2019), Pirdayanti & Wiagustini, 2021; Alshathry & Almeshal, (2022) also found related results of the significant positive relationship founded between perceived usefulness and fintech presence. Simply put, when people find fintech technology to be helpful then they are more likely to adopt and use it.

Based on these results, we propose the following hypothesis:

H_1: Perceived usefulness has a positive and significant influence on intention to use mobile banking services

2.5 Perceived Ease of Use

Perceived ease of use is based upon how well users were able to engage with a fintech technology without too much difficulty in completing activities. And this is important as it determines the ease with which people will take and use fintech products. Great technology promises to be more user friendly, and that is likely what will make financial transactions easier for the consumer.

For instance, instead of going to physical branches of banks and spending time in the queue people take up fintech services. Customers are able to Paperless banking through online and digital services that save time, costs; more convenient for users transactions. The design simplifies usage and puts most security risks in the clear for users to feel comfortable right from the start.

Existing research has shown a strong relationship between the ease of use and likelihood to adopt new technology. Customers tend to embrace fintech solutions that are introduced by banks, owing to their ease of use. Being able to access a financial service from any location is the convenience that customers are looking for whether it be banking, shopping, borrowing or lending and which can happen without physically traveling. Findings from few researchers Eltin (2019), Ikhsan et al, (2019) and other conducted researches Pirdayanti & Wiagustini (2021); Alshathry & Almeshal,(2022) proved that the positive and significant relation between perceived ease of use with fintech.

Based on these results, the following hypothesis is proposed:

H_2: Perceived ease of use impacts positively and significantly on users intention to adopt and attitude mobile banking services.

2.6 Attitude

Prior research shows that how people feel about using new tech affects whether they'll use it. When individuals are interested in and like new technology, they're more likely to use it, seems this view of the technology. The Technology Acceptance Model (TAM) corroborate this idea, it suggests that when people have a good view of technology, they tend to see it as easier to use and more helpful. In other words, if users feel good about tech, they often find it simpler to use and more useful. This makes them want to use it more. Many researchers agree with this, like Alshari & Lokhande (2022) and Tran et al. (2024). Studies in banking in Pakistan, have found that using new tech can help. It can make banks run better and keep customers happier.

Based on all this, the following hypothesis is proposed:

H_3: People attitude toward technology adoption have a positive effect on mobile banking services.

2.6 Trust

Evaluating the extent to which new technologies are embraced, especially in the context of fintech services, is usually associated with the level of trust. Banks and other service providing agencies must ensure that adequate security is provided in order for consumers to have faith in the use of various fintech products and services. Trust in such institutions also contributes to the way customers feel and utilize these technologies.

When customers have confidence in the technology as well as in the institution providing it, the technology is more likely to be adopted and espoused by them. Beyond encouraging the use of services, this trust also serves to encourage the marketing of such services. A system that is perceived as reliable and secure will improve customer trust which is likely to enhance the uptake of the system as well as the views held about it.

As mentioned earlier, trust is a strong factor in both the intention of the customer to make use out of the offers of fintech products and the overall reception towards the acceptance of new innovations. It is this confidence that is foundational for the effective use and acceptance of any fintech features in the banking industry. Several scholars (Fortino et al., 2019, Demirkan et al., 2020 & Winanti & Fernando, 2024) has established that trust is one of the positive determinants of using fintech innovation.

The above empirical evidence gives rise to the following Hypothesis:

H_4: Trust has a positively influences the attitude toward intention to use technologies and their adoption on mobile banking services.

2.7 Brand Image

The perceived image of the organization in the eyes of the customers is very important for trust development. Empire's positive image has a profound effect on customer behavior and related contentment. Every single time there is a positive attitude or good impression about the company, the company's brand image has the capacity to propel clients into action & stupendous bonding between the two parties is created which is advantageous to both of them.

A strong affiliation has an effect on reducing the level of customer trust but also on satisfaction which increases the level of customer loyalty. A satisfied customer is able to be a base customer of the organization and an advocate of its goods. For instance, providing comprehensive mobile deposit capabilities through advanced technology allows banks to create a better brand image and subsequently attract and maintain more customers.

All in all, a significant brand image helps to foster positive customer intentions and satisfaction with the use of mobile banking services (Ahsan, 2020), (Winanti & Fernando, 2024).

Hypothesis founded on these insights:

H_5: There is a positive association ship between brand image and the intention to use of mobile banking services.

2.8 Perceived Risk

Perceived risk refers to the potential danger or uncertainty that customers face when using fintech products, especially for significant financial transactions. This risk can impact customer trust and affect the performance of financial institutions. In the banking industry, incidences of security breaches and fraud are prone to have adverse effects. For instance, there are cases when cyber criminals have breached the security systems, hacked customer accounts and made away with huge sums of money leading to losses for both the banks and their customers. These breaches result in losses not only in terms of the amount lost but also in trust from customers who then make calls to the bank to withdraw their funds refusing to use the banking services in question. In order avoid or reduce such losses, there is need for enhancement of security policies and risk management by the banking institutions. Nonetheless, as long as that kind of risk still exists, it can detrimental effects to customers' usage behavioral intention towards mobile banking services, supporting findings by Hong et al, (2020), Keong et al, (2020) & Li et al, (2023).

Hypothesis grounded on these apprehensions:

H_6: There exists a negative relationship between perceived risk and intention to use mobile banking services.

2.9 Plan to usage of Financial Technology

The utilization of mobile banking has become more common due to its benefits to the customers, such as not visiting the bank physically. Mobile banking technology has become more accepted and simplified, enabling People to transact from any location at any given time. Such event is highly experienced in emerging markets as their mobile banking is on an upward trend.

For instance, In Pakistan some of the banks such Alfalah Bank and Meezan Bank, Bank Al-Habib in Karachi have introduced solutions for branch less banking. They provide service however but in the form of shopping, parking malls and without any bank staff. This is also seen as an increasing reliance on other banking provisions which would include, Internet Banking, phone banking applications, buying and selling services banks provide among others.

The Technology Acceptance Model (TAM), states that there is already a lot of evidence for the growing intention of users to start using mobile banking services. This model shows how people engage in a variety of activities through mobile and internet banking, including paying utility bills, shopping online, and using a credit card.

Moreover, the use of these technologies is also connected to customer trust. This is erroneous as some customers are simply unwilling to embrace mobile banking due to reliance on traditional banking and the perceived risk of losing their private information. Until recently, people were used to 'old-style' banking without using technological systems which are now common such as through cheques and face to face interactions.

3. Research Methodology

3.1 Research Design

The primary objective of this study is to determine how the respondents view and embrace products that promote financial technology (fintech). With the increasing use of these technologies, especially in banking, it becomes pertinent to look into people's perspective towards the same.

Fintech takes into account many advancements such as transfer money between individuals via the Internet, banks where there is no building, mobile sending and receiving cash, non-branded banking solutions, and remote sensing for insurance. This has, however, eliminated any unnecessary interruptions in carrying out financial transactions. Nonetheless, such technologies are prone to inconveniences. Firms must ensure they provide adequate security to protect their customers' information.

Customers are vital to a company's success, as their preferences and behaviors directly influence revenue. Different people have varying views on fintech; some appreciate the time-saving and convenience it offers, while others are concerned about potential security risks. Despite these concerns, fintech adoption is growing as it becomes an essential part of modern life. This research uses primary data collected from banking customers and business professionals to gain insights into their perceptions and acceptance of fintech products.

3.2 Sample Data Collection

To explore consumer attitudes towards financial technology (fintech) products, data was gathered from users through questionnaires and interviews. A total of 251 questionnaires were distributed to customers across various banks in Karachi, Pakistan, targeting commercial bank (Bank Al-Falah, Meezan Bank & Bank Al-Habib clients and fintech users. The research utilized SPSS software for data analysis.

The study focused on customers who use fintech for their business transactions and those who find it convenient due to the proximity of branches. By including customers who prefer not to travel to bank branches, the research aimed to understand how fintech services influence their banking behaviour and overall satisfaction.

3.3 Research Strategy

The strategy focused on engaging a diverse group of people from various backgrounds, regardless of race, gender, caste, or religion. The aim was to understand the attitudes and perspectives of individuals from all income levels, including those with low and medium incomes, as they are also users of financial technologies. To achieve this, primary data was collected through personal interactions. We conducted interviews and assisted people with filling out questionnaires to gain insights into their views on financial technologies.

In the survey, the target respondents were regular banking customers who use banking services daily. We strategic these individuals at their workplaces, such as offices, business shops, to complete the questionnaires. While some respondents provided their answers promptly, others were delayed due to their busy schedules. The process of gathering

responses was enriching, though it became evident that some individuals were unfamiliar with the latest technologies and continued to rely on traditional banking methods.

3.4 Research Type

This inductive research aims to understand consumer attitudes and acceptance towards financial technologies. To gather data, primary information was collected through both questionnaires, and also distributed online surveys to gather responses from a diverse group of customers using fintech services, such as internet banking and online transactions across various banks. Although we received a good number of responses, it was challenging to get timely feedback from some participants due to their busy schedules.

3.5 Population

The research targeted customers of commercial banks who use fintech services, including both those from different income levels and those actively engaged with financial technologies. The focus was particularly on middle-aged individuals and teenagers, as they represent a significant portion of fintech users. People involved in business rely on financial technologies for their daily transactions, while others use these services primarily for business-related purposes.

The research aimed to gather insights from a diverse group of commercial bank customers who engage in regular business transactions. Various commercial banks offer different methods of online transactions, such as online and internet banking. It was crucial to ensure that the customers were well-informed about the products and services available to them.

4. Result and Findings

In the table-01, the customer sample for three banks namely Bank Al-Falah, Meezan Bank & Bank Al-Habib in providing mobile banking services up to the extent of responding about the services covers a sample of 251 respondents with 134 males and 117 females. Moreover reveals that out of 251 samples, 71 were aged between 21-27 years, 37 were aged between 28 – 35 years, 58 aged between 36 – 44 years, 54 aged between 45 – 53 years and the remaining 31 respondents were aged 54 years and above. Also this table presents data concerning income of the customers which indicates that 72 customers are in the income bracket of Rs. Up to 38,000, 28 customers were in the income bracket of Rs. 39,000 - 45,000, 67 customers were in the income range of Rs. 46,000 - 54,000 and remaining customers were in Rs. 55,000 and more.

Table No 1: Respondents List

Age	Freq.	%	Cum. %
21 - 27	71	28.3	28.3
28 - 35	37	14.8	43.1
36 - 44	58	23.1	66.2
45 - 53	54	21.5	87.7
54 and above	31	12.3	100
Total	251	100	
Qualification			
Intermediate	75	29.9	29.9
Graduation	85	33.9	63.8
Masters	70	27.9	91.7
Doctoral	21	8.3	100
Total	251	100	
Gender			
Male	134	53.4	53.4
Female	117	46.6	100.0
Total	251	100	
	Total	251	
Income			
Upto 38,000	72	28.7	28.7
39,000 - 45,000	28	11.1	39.8
46,000 - 54,000	67	26.7	66.5
55,000 and above	84	33.5	100
Total	251	100	

Table No 2: Reliability Statistics

Cronbach's Alpha
0.930

In Table-02, the reliability results showed that the Cronbach's alpha coefficient recorded is .930 which is above the acceptable threshold of .70 thus showing that there is high reliability of service quality measures in mobile banking.

Table No 3: Correlation between an Item and the Total Score, Reliability (Cronbach's alpha) and Communalities

Dimensions	Item	Variables	Corrected Item-Total Correlation	Cronbach's Alpha (Reliability)	Communalities
		FTCH_1	0.835	0.923	0.781
		FTCH_2	0.890	0.921	0.922
Fintech	4	FTCH_3	0.803	0.924	0.826
		FTCH_4	0.723	0.925	0.743
		PUFN_1	0.569	0.927	0.899
		PUFN_2	0.637	0.926	0.724
Perceived Usefulness	4	PUFN_3	0.626	0.926	0.744
		PUFN_4	0.786	0.923	0.727
		POU_1	0.483	0.928	0.854
Perceived Ease of Use	4	POU_2	0.613	0.926	0.786
		POU_3	0.553	0.927	0.745
		POU_4	0.639	0.926	0.692
		ATD_1	0.196	0.931	0.717
Attitude	4	ATD_2	0.464	0.928	0.788
		ATD_3	0.556	0.927	0.831
		ATD_4	0.599	0.927	0.624
		TRS_1	0.231	0.933	0.75
Trust	4	TRS_2	0.477	0.929	0.618
		TRS_3	0.105	0.935	0.741
		TRS_4	0.178	0.935	0.851
		BRM_1	0.807	0.923	0.873
Brand Image	4	BRM_2	0.820	0.923	0.883
		BRM_3	0.778	0.924	0.844
		BRM_4	0.764	0.923	0.809
		PRRS_1	0.239	0.935	0.759
Perceived Risk	4	PRRS_2	0.462	0.913	0.638
		PRRS_3	0.204	0.919	0.721
		PRRS_4	0.361	0.948	0.858

In Table: 03 illustrated the assessment of reliability through the calculation of the inter-item consistency, which is the Cronbach's alpha. All dimensions of mobile banking services in terms of alpha values range between .921 and .948 and above the minimum acceptable level .70 (Nunnally, 1978) hence the scale is regarded as highly reliable while communalities range between .618 to .922 which indicated that the explanation of extracted factors variable well because it takes into account variation in the data structure.

Table No 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		
Bartlett's Test of Sphericity	Approx. Chi-Square	11505.81
	Df	276
	Sig.	0.000

In Table : 04 indicated that in the study, the Kaiser-Meyer-Olkin (KMO) was about .45, the Bartlett's sphericity test was Chi-square = 11505.81, df = 276 and p value = 0.000 which is less than .05 or 5 percentages indicated that it was feasible to perform factor analysis on the data obtained.

Table No 5: Collinearity: Variance Inflation Factor

Dimensions	**Intention**
Fintech	000
Perceived Usefulness	878
Perceived Ease of Use	546
Attitude	686
Trust	787
Brand Image	510
Perceived Risk	321

In Table 05: The Construct VIF is below 3, hence the results indicates that the structural model does not present any presence of collinearity.

Table No 6: Measurement Model of Fitness

Model	**Criteria**								
	χ^2/df	**P-VL**	**RMSA**	**GF**	**RM**	**NFI**	**CFI**	**IFI**	**RFI**
	<3	>0.05	< 0.07	> 0.8	< 0.06	> 0.8	> .8	> 0.8	> 0.8
Measurement	1.96	0.000	0.08	0.84	0.07	0.74	0.71	0.71	0.72

In Table 06: The overall model fitness indicates that the results are significant, suggests that customers may prioritize mobile banking services when choosing to use the latest technologies. Instead, customers are more likely to select technologies founded on their daily experiences with online and internet banking.

If a bank or financial institution has a strong and positive technology adoption, it can attract and retain customers who value that reputation. For banks and financial companies, maintaining a good technology adoption is crucial as it influences customer choices and loyalty. Despite this, the research shows that mobile banking service alone does not significantly impact the adoption of fintech technologies; practical aspects and daily use seem to be more influential.

4.1 Evaluation of Hypothesis Summary

H_1: Perceived usefulness has a positive and significant influence on intention to use mobile banking services

Table No 7: Impact of Perceived Usefulness on Intention to Use

Factors	Sig.	Sum. Evaluation	Association ship
PUFN_1	0	Accepted	Positive
PUFN_2	0.35	Not Accepted	Positive
PUFN_3	0	Accepted	Positive
PUFN_4	0	Accepted	Positive
Over all Result Accepted			

H_2: Perceived ease of use impacts positively and significantly on users intention to adopt and attitude mobile banking services.

Table No 8: Impact of Perceived Ease of Use on Users Intention to Adopt and Attitude Mobile Banking Services

Factors	Sig.	Sum. Evaluation	Association ship
POU_1	0	Accepted	Positive
POU _2	0	Accepted	Positive
POU _3	0.11	Not Accepted	Positive
POU _4	0.03	Accepted	Positive
Over all Result Accepted			

H_3: People attitude toward technology adoption have a positive effect on mobile banking services.

Table No 9: Impact of Attitude Toward Technology Adoption on Mobile Banking Services

Factors	Sig.	Sum. Evaluation	Association ship
ATD_1	0	Accepted	Negative
ATD _2	0	Accepted	Positive
ATD _3	0	Accepted	Positive
ATD _4	0	Accepted	Positive
Over all Result Accepted			

H_4: Trust has a positively influences the attitude toward intention to use technologies and their adoption on mobile banking services.

Table No 10: Impact of Trust on Attitude Toward Intention to Use Technologies and Their Adoption on Mobile Banking Services

Factors	Sig.	Sum. Evaluation	Association ship
TRS_1	0	Accepted	Positive
TRS _2	0	Accepted	Positive
TRS _3	0	Accepted	Positive
TRS _4	0	Accepted	Positive
Over all Result Accepted			

H_5: There is a positive association between brand image and the intention to use of mobile banking services.

Table No 11: Association between Brand Image and The Intention to Use of Mobile Banking Services

Factors	Sig.	Sum. Evaluation	Association ship
BRM_1	0	Accepted	Positive
BRM _2	0	Accepted	Positive
BRM _3	0	Accepted	Positive
BRM _4	0	Accepted	Positive
Over all Result Accepted			

H_6: There exists a negative relationship between perceived risk and intention to use mobile banking services.

Table No 12: Relationship Between Perceived Risk and Intention to Use Mobile Banking Services

Factors	Sig.	Sum. Evaluation	Association ship
PRRS_1	0	Accepted	Negative
PRRS _2	0	Accepted	Negative
PRRS _3	0	Accepted	Negative
PRRS _4	0	Accepted	Negative
Over all Result Accepted			

4. Discussion

A comprehensive study was conducted to assess the awareness and value of fintech among people in Pakistan, focusing primarily on existing bank customers who prefer fintech solutions over traditional banking methods. We distributed 251 questionnaires to gather insights into what motivates people to choose fintech. The questionnaire addressed several factors including usefulness, trust, brand image, attitude, risks associated with fintech, and reliability.

In addition to the questionnaires, we held face-to-face discussions to broaden our survey's scope. The findings revealed that many people appreciate the benefits of fintech, especially its convenience. Around 75% of respondents highlighted that fintech allows

transactions to be made any time, without being restricted to banking hours. This flexibility means they can send or receive payments while travelling or during any activity, unlike the traditional strategy which requires visits to the bank during business hours.

Fintech also offers a variety of services and eliminates the need for separate accounts, as it automatically manages accounts and provides accurate account statements, reducing errors compared to manual records. Regarding trust, nearly 90% of respondents expressed confidence in fintech, noting that transactions involve robust authentication and security measures. The remaining 10% had concerns about security, but these were largely resolved after further explanation about fintech's trustworthiness and reliability.

Banks offering fintech services see a positive shift in customer behaviour and brand image. Customers view banks that integrate fintech as more progressive and responsive to their needs. This positive perception can enhance customer satisfaction and differentiate banks from their competitors. In Pakistan, and globally, companies and financial institutions are increasingly adopting fintech technologies to grow their businesses. However, there are concerns about security, as incidents of theft and inadequate security measures have led to customer apprehension. This insecurity may deter people from using these technologies despite their benefits.

Moreover, after adopting fintech, customers have shown a more positive and relaxed attitude towards their service providers, improving business relationships. Although fintech comes with risks, these can be managed with proper controls. About 75% of people believe that risks are manageable with adequate privacy measures and authentication techniques. Normal users, less familiar with fintech compared to technical staff, may face higher risks, but thorough knowledge and proper controls can significantly mitigate these risks.

5. Conclusion

Fintech plays a crucial role in gauging customer satisfaction with enterprises. Whenever the processes and systems of payments and transactions are made easier through technology, customers appreciate and trust the enterprise more which results in positive interaction. For banks and other enterprises, it is essential to implement effective checks and controls for their sophisticated systems in order to gain and maintain the trust and satisfaction of their clients.

In Pakistan and around the world, organizations and banking sectors are shifting towards banking technology or fintech so that they expand their businesses. On the other hand, there are issues regarding safety because somewhere; customers have experienced loss due to inadequate safety levels. Such apprehension may discourage individuals from embracing such technologies even as they appreciate the advantages contained in them.

Additionally, fintech helps enterprises understand customer expectations better, allowing them to meet these expectations and stand out in the market. By identifying performance metrics, managers can enhance customer experiences, improve attitudes towards fintech services, and increase customers' willingness to use these services.

Despite the advantages, some customers may feel insecure about their financial assets when using new technologies. To mitigate risks and increase trust, enterprises should implement robust security measures and run awareness campaigns. Customers, who are often busy with their businesses, can benefit from time-saving technologies that streamline transactions and reduce the need for manual processes.

The research indicates that brand image does not significantly impact the adoption of FinTech technologies. Nonetheless, the significance of maintaining a good image of a company or a bank is still present. Thus, if a bank is reputable, it is more plausible that customers would access and trust the bank's fintech innovation. The negative impact of a poor brand image on customer trust in the past highlights the importance of a good brand image. Reliability test showed that Cronbach's alpha co-efficient has .930 which is more than .70 which indicates excessive reliability of existence in service quality of mobile banking services.

The research indicates that how customers perceive the usefulness and ease of use of fintech services is very important for their acceptance. Customers need to find these technologies beneficial and user-friendly to be willing to adopt them while these factors are well-supported by the research. Trust in the technology and assurance about the security of products and services are essential for encouraging widespread adoption and ensuring that customers feel comfortable using fintech solutions.

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