

The Impact of antecedents of trustworthiness on the Usage of Mobile-Banking Apps: An empirical study on Pakistani Consumers using PLS-SEM

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ABSTRACT

This study aims to investigate the association between trustworthiness and the adoption of mobile banking (M-banking) apps in Pakistan. The convenient sampling method was used to distribute a structured questionnaire. Total 750 questionnaires were distributed and only 660 responses deemed to be appropriate for the confirmatory factor analyses and structural equation modeling by using SMART PLS. The analytical findings show that the adoption of mobile banking apps is positively impacted by each of the three components of trustworthiness (ability, benevolence, and integrity). Banks are conscious about the value of consumer convenience yet struggling to earn customers trustworthiness. This study demonstrates how the high degree of trust among M-banking app users may benefit greater app usage.

Keywords: Trustworthiness, Mobile Banking, Pakistan

INTRODUCTION:

In every economy of the world banking sector is considered as the most important due to its provision of financial services. It not only provides financial services but also manages the movement of money throughout an economy and around the globe. Banks through their products are currently bridging a number of gaps between other industry sectors and end users (Lee & Chen, 2022). Continuous innovation and consumer utilization services keep the banks to put their efforts in supplying new services and usage patterns to their customers which lead to the corporate growth (Shaw et al., 2022). The automation of banking services particularly online ones like mobile banking (M-banking) has improved client convenience and enabled the banking sector to be available 24/7 (Shahid et al., 2022). According to banking literature banks have always put their customers' needs first and have worked hard to increase their operational effectiveness, consumer accessibility and convenience, reduce wait times and transaction costs (Lyu et al., 2022). Similar to online banking, mobile banking app is the thought that had revolutionized the banking sector in all over the world. The goal of the digital economy and paperless currencies around the

world can be easily achieved with M-banking apps by using a quick response code, the account holders' fingertips, or a pin (Chen et al., 2022).

Banks have been attentively observing their customers who use online banking services for the past 20 years. Due to a shift in emphasis toward internet and mobile based services m-banking apps are increasingly recognized as a conduct for supplying users with banking products and services (Shankar et al., 2022). As a result, there is now a change in the need for financial services, which calls for competition. Web-based banking offered more conveniences than traditional banking practices at a lower cost to individuals and the organizations (Ali et al., 2022).

This is the need of time to adopt the m-banking app for a developing nation like Pakistan, which has a population of 225.2 million people and a literacy rate of 58% and among that 76.38 million people in the nation utilize the internet, it would appear favorable for the banking industry to advertise its digital services (datareportal, 2022). Pakistan has 31 banks, which are divided into the following subcategories: The 31 active banks in Pakistan are composed of twenty two domestic commercial banks, 4 foreign banks and five public sector banks. Mobile banking apps frequently make it easier to do transactions for customers. Both domestic and foreign banks operating in Pakistan have introduced mobile apps in the three years prior to help promote efficient financial services (Yoshikuni, 2022).

There are now 27 banks in Pakistan that provide internet and mobile banking services. The number of registered users increased from 3.6 million in the quarter that ended in December 2019 to 3.8 million in the quarter (Jan-Mar 2020). About 14.1 million transactions worth a total of Rs.748 million were made throughout the period.

The banking industry is currently investigating why there has been a decline in the uptake of digital banking services, when people have such high levels of literacy and internet usage, why aren't they adopting M-banking services more?

Prior research has revealed disadvantages associated with consumers' perceptions of internet-based banking services and has emphasized the difficulties associated with the causes why customers do not opt to use these services. Compared to online banking services there is less research on what motivates consumers to use digital banking services and raises their level of satisfaction. The limited use of M-banking services may be due to a number of factors or difficulties.

For instance, no consumers have ever tried M-banking services because of network challenges with local phone services, a lack of confidence in the services security, a lack of reading skills, and a lack of awareness and approach for modern banking services. Numerous topics including gender inequality, financial inclusion, trustworthiness, cultural and technology usage, and religious beliefs, were covered in earlier research on the acceptability of M-banking apps.

The majority of research conducted to date has been on behavioral theories and models of technology adoption. But not more often than the questions and client anxiety about m-banking app have been addressed in the literature. As a result, customers commonly questions are about the legitimacy of mobile apps when utilizing them for business. By illuminating the opposing viewpoint, this study addressed the difficulties and filled the gap in the literature. Currently 27 banks in Pakistan have their own applications to support

banking and the use of M-banking. The service providers which used most frequently are HBL, ABL, UBL, BOP, MEEZAN, ALFLAH, and ALBARAKA.

In this case, it would be acceptable to look at reliability and building trust is especially important for banks in emerging markets since it will eventually enable them to provide automated services around the clock and reduce their reliance on bank employees for banking operations. Banks are expected to operate efficiently in this way and from the consumers' standpoint; M-banking app users would also be able to access a variety of services without having to put in a lot of work.

Literature Review

M-banking refers to the practice of conducting mobile commerce on mobile devices. M-banking first surfaced as a wireless application protocol and short messaging service for mobile devices with GPRS capabilities (Kala Kamdjoug et al., 2021). While wireless application protocol banking allows users to browse a mobile version of web banking, short messaging service banking (also known as text banking) allows users to perform their banking activities by responding to text messages that are provided by the user (Rajaobelina et al., 2021). Since using mobile devices and applications to access a variety of businesses has become common place in recent years, including hospitality, food delivery, cab services, shopping, entertainment, and virtual reality. The use of mobile banking enhances these services. M-banking can be used to pay for services obtained through other apps in addition to doing banking tasks (Leem & Eum, 2021).

Due to the accessibility and availability of smartphones as well as the advancement of mobile communication technology, banking through mobile applications has emerged as the fastest-growing method for conducting financial transactions (Souiden et al., 2021). Customers are encouraged to utilize mobile banking apps and the literature details the elements that drive this uptake such as perceived customer confidence, perceived security and confidentiality, perceived service excellence, and viewed perceived usability (Thusi & Maduku, 2020). It is clear that consumers prefer to do their banking activities safely when making purchases on internet marketplaces they exercise more prudence. One of the most important variables influencing this market is consumers' confidence in financial services and the security of their online banking transactions (Malaquias & Silva, 2020).

During an earlier study, m-banking applications were mentioned in the media in a number of different nations. Due to the emphasis on emerging markets, subject matter experts have not yet become interested in the issue. Several studies on the use of M-banking apps have been conducted including ones in Tanzania, China, and Sub-Saharan Africa (Yoshikuni, 2022). Most research either developed models of technology adoption or used them. An important factor that encourages people to utilize an app and make transactions through it is credibility (Chen et al., 2022). Users of M-banking apps may develop a sense of trust for one another through frequent interactions, shared experiences, and social referencing. Increased client security checks would improve the perception of security (Shankar et al., 2022). The two key pillars of trust are customer-controlled transactions and ensuring the authorized person is present when utilizing a mobile device. A 2008 Bank of Korea study found that 96% of M-banking app customers are unsatisfied. Customers lacked trust in wireless transactions security and the pace was slower and this explains why dependability is crucial while utilizing M-banking apps (Kala Kamdjoug et al., 2021).

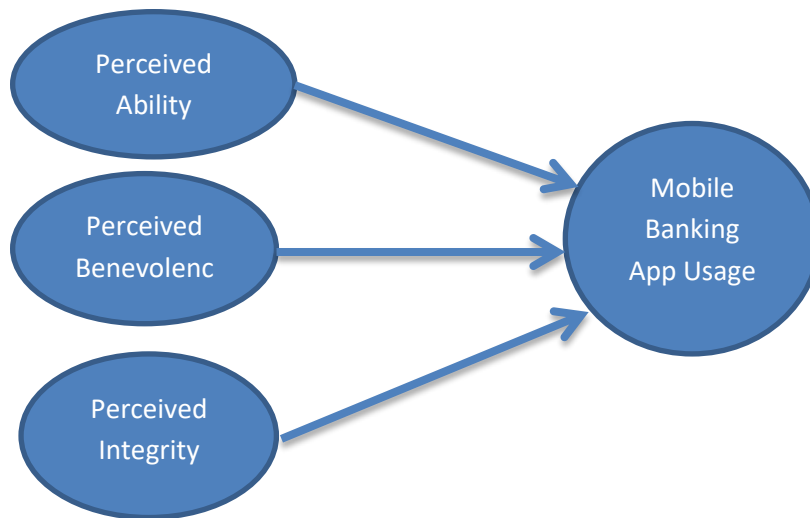
Perceived trustworthiness is the trustors' opinion of the trustee's dependability, according to Mayer et al. (1995), whereas trust is the trustor's readiness to take risks. Additionally, reliability fosters consumer involvement and strengthens brand loyalty. According to experts, "trustworthiness" corresponds to a quality of a potential trustee (such as an entity who may not or may be believed). Therefore, ability, honesty, and kindness are the three main factors that influence how trustworthy someone perceives you. Additionally, they illustrated how these three components are different from one another but work together to raise your reputation. According to scholars that have widened their study of trust literature, the factors that influence customers' trust are skill, honesty, and compassion the most commonly researched (Lyu et al., 2022). Researchers proposed that a brand's reputation for dependability facilitates consumers' civic participation with that brand. The trustee's ability is defined as the trustors' opinion of the trustee's aptitude and inclination to behave in accordance with expectations (Rajaobelina et al., 2021).

It also concerns the standards that a trustee must meet in order to allocate a certain set of obligations. Task focus and professional and interpersonal designation are two independent aspects of the ability. A professional designation that is linked to a particular profession, education, or organization ensures a high degree of knowledge, expertise, and necessary level of capability as a result, it aids in reducing the likelihood of unreliability (Malaquias & Silva, 2020). According to researchers, ability in the context of M-banking refers to a person's perception that M-banking organizations can comprehend their requests in relation to managing their personal finances. If users believe that the providers have the expertise, knowledge, and experience required to provide adequate transactional amenities, they will be in a better position to positively assess M-banking apps (Souiden et al., 2021).

How far a trustee or executor puts the interests of the beneficiary or trustee ahead of his or her own financial benefit is the actual litmus test of their goodness. When the trustee behaves constructively, reciprocally, and loyally then trust is preserved by good intentions. For instance, by clearly outlining and recognizing trustee demands that go above and beyond what is required for remunerated duties. According to researchers, kindness in the context of M-banking refers to customers' impressions that M-banking companies have their best interests in mind. Users are more inclined to utilize an M-banking app if they feel that these firms are helpful. According to researchers, whether or not the trustor feels the trustee will uphold a set of principles or norms of interchange that are acceptable to the trustor both during and after the interchange determines the trustor's perception of the trustee's integrity (Rajaobelina et al., 2021).

According to researchers, integrity is the capacity to uphold a collection of agreed standard requirements that the trustor judges to be reasonable, fair, and pleasurable. Consistency and a sense of justice and satisfaction are the two qualities that make up integrity. The trustee's actions are consistent with his written and verbal obligations (Ali et al., 2022). Academics claim that numerous research have demonstrated the importance of bank customers' concerns about perceived lack of integrity because they fear that their money or personal information may be disclosed to third parties without their authorization. Integrity in M-banking refers to the distinct perception that M-banking businesses adhere to a set of values (such honesty and keeping commitments), which are well-known among customers.

Conceptual Framework and Hypotheses



Hypothesis:

The following are the hypothesis which is drawn from the conceptual framework.

H1: Perceived ability has a significant and positive impact on the mobile banking app usage.

H2: Perceived benevolence has a significant and positive impact on mobile banking app usage.

H3: Perceived integrity has a significant and positive impact on the mobile banking app usage.

Methodology

The Residents of Punjab, Pakistan, who use mobile banking apps are the study's participants. Bank customers both public and private are picked by a real-world random selection process. A sample of consumers who use mobile banking apps has been selected for this study. Users are approached in various malls to collect data using a survey questionnaire after receiving permission from the respected head of the shopping Centre. Initially, 750 respondents were split among various malls. Of the 660 completed surveys, only 550 were deemed complete enough to be examined further. The study's results can be extrapolated to the larger population with great success because to the response rate of 73.3%. The four measurement scales related to the study variables were utilised in this study to build a questionnaire for the current investigation with the help of the literature. The form's opening questions are related to demographics. Perceived ability, an independent variable, is examined using three questions. A further independent variable that is measured using three questions is perceived benevolence. Another independent variable that is measured using three questions is perceived integrity. Three questions are used to measure the dependent variable, which is the mobile banking app. A five-point Likert scale is used for all of the questions in order to collect responses from the

respondents. On the basis of convenience, data is gathered from a few chosen cities, including Multan & Lahore, Faisalabad, and Rawalpindi. Data analysis is done with the help of PLS-SEM.

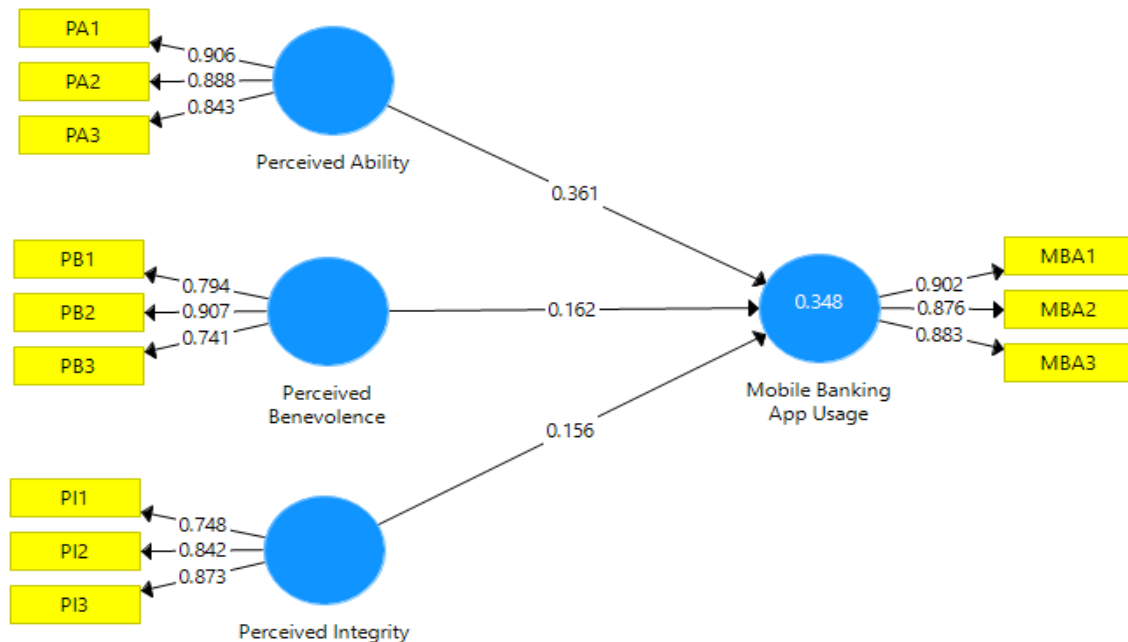
Results and Discussions

The data's statistical analysis reveals the various outcomes of the questionnaire's many parts, and these outcomes are displayed below in the form of tables. In Table 01 below, the full breakdown of the demographic data is shown.

Table 01

Details of Demographic Variables	Frequency	%
Gender		
Male	375	75
Female	175	25
Age		
19-22	189	34.36
23-25	245	44.54
26 and above	116	21.09
Bank		
Public	100	18.18
Private	400	72.72
Foreign	50	.099
Mobile Banking App		
YES	550	550
NO	0	0

PLS-SEM MODEL



Path Analysis PLS-SEM Diagram

The R^2 value is used to assess the model's capacity for explanation. The R^2 scale ranges from 0 to 1 (Raouf et al., 2021; Abdulmuhsin et al., 2021; Basheer et al., 2021; Yan et al., 2020; Nuseir et al., 2020; Asada et al., 2020), meaning that the greater the R^2 value, the greater the model's explanatory ability. A model with moderate explanatory power is one with an R^2 value that is close to 0.50. A model is thought to have a high degree of explanatory power when its R^2 value is close to 0.75. Consequently, it is clear that the explanatory power of perceived competence, perceived goodness, and perceived integrity to mobile banking app usage is 0.348. With 34.8 percentage points, the latent variables in this study considerably account for the level of explanatory power.

Table 4.2 Reliability and Validity

Name of Variables	Items	F.L Value	α	c.r	Avg
Perceived Ability	PA1	0.906	0.743	0.845	0.554
	PA2	0.888			
	PA3	0.843			
Perceived Benevolence	PB1	0.794	0.859	0.853	0.593
	PB2	0.907			
	PB3	0.741			
Perceived Integrity	PI1	0.748	0.900	0.842	0.630
	PI2	0.842			
	PI3	0.873			
Mobile Banking App Usage	MBA1	0.748	0.793	0.821	0.531
	MBA2	0.842			
	MBA3	0.873			

α = cronchbach's alpha, c.r= composite reliability, F.L value= factor loading value

All the factor loading values are in the acceptable range which is above than 0.6 according to many previous studies. While the cronbach's alpha value is also acceptable within the range of 0.743 for the perceived ability, 0.859 for the perceived benevolence, 0.900 for the perceived integrity and 0.793 for the mobile banking app usage. The composite reliability value is also acceptable within the range of 0.845 for the perceived ability, 0.853 for the perceived benevolence, 0.842 for the perceived integrity and 0.821 for the mobile banking app usage.

Discussion

This research initially talked about the need of comprehending M-banking applications for a growing market like Pakistan in order to demonstrate the need for the study. Second, we investigated the issue of to what extent trustworthiness influences the adoption of M-Banking apps" using empirical research. Empirical research shows that the perceived capacity has a significant favorable effect on the adoption of M-banking apps. The study also shows th4at perceptions of charity have a positive and significant impact on how often people use mobile banking apps. According to the study, customers' perceptions of honesty had a considerable beneficial impact on how they used mobile banking applications. These results imply that higher levels of user perceptions of the M-banking app provider's dependability will result in higher levels of usage.

Banking service providers are well aware of the fact that cellphones are growing more and more popular around the world and are particularly popular among Bangladeshis. In actuality, having access to M-banking capabilities alters how banks interact and communicate with their clients.

The study's findings should serve as a warning to M-banking service providers to take into account their customers' needs in terms of competency, trust, and generosity. This implies that M-banking service providers ought to constantly strive to offer M-banking app services in a style that improves the clients' view of the banks' dependability.

Implications of the Study

Managerial Implications

This study shows how banks may increase customer trust in mobile banking services generally and mobile banking apps specifically. In order to create strategies for specific demographic segments, bank authorities may find it useful to understand the significance of demographic parameters, such as gender, age, social status, experience, or user involvement in relation to trustworthiness. In light of the lower participation rates for women and people from the business class, the paper also illustrates how bank executives and strategists profit from trustworthiness. This shows that those with higher levels of education and a command of the English language use mobile banking more frequently. Additionally, this study might be used as a guide for administering various loyalty programmes and setting market trust standards.

Research Implications

Other studies in the field might use this study as a template. This study is focused on trustworthiness and has limitations on the kind of related criteria it can include because one study cannot potentially cover everything. The study's limitations are listed below as a jumping off point for additional research into mobile banking software. Future research in this area might contrast the causes and motives for utilization against non-usage.

Social class, technology suitability, internet usage, income, transaction frequency, and use purpose are a few examples of these elements. The suggested model also takes into account how important client expertise is when using M-Banking applications, which are tools and services that banks use to share their expertise.

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