

# Factor Affecting Mobile Banking Adaptation In Pakistan

Muhammad Azhar<sup>1</sup>

<sup>1</sup> Student, Hamdard University, muhammadazharashiq@gmail.com

---

## ARTICLE DETAILS

### History

*Received: April 2019*

*Available online: June 2019*

---

### Keywords

*Intentions*

*M-Banking*

*Perceived Risk*

*Perceived Ease of use*

---

## ABSTRACT

### Purpose:

The purpose of this paper is to study the important factors which help explain consumer intention and use behavior in mobile banking adoption

### Methodology:

A questionnaire was utilized to evaluate customer responses on a five-point Likert scale. A convenience sampling technique was used to collect data from a sample of 452 respondents in Pakistan. The data were analyzed using SPSS for Cronbach's alpha and Regression.

### Findings:

The results of the study show that most of the predictors of the intention, including perceived value, performance expectancy, habit, social influence, effort expectancy, hedonic motivation (except for facilitating condition), perceived risk, and trust, are significant. All predictors of usage behavior are significant.

### Conclusion:

The findings of this paper are not only interesting in terms of boosting mobile banking diffusion rate, but also in terms of financial inclusion of the vast majority of mobile users. Further, the impact of the intention, facilitating condition, and habit was checked on actual use behavior since people tend not always to act upon their intentions.

## 1. Introduction

Mobile Banking is a Digital evolution in Electronic banking which is empower user to complete financial transitions via mobile or through other devices (Boor, 2014; Oliveira, 2014 & Lin, 2013). Mobile phones permit the buyer to interface with a worker, perform verification and approval, make portable installments, and hence affirm the finished exchanges (Kim, 2010) & Mirusmonov, 2010). Since providing Mobile Banking to customers will help banks gain a competitive edge, the issues associated with its widespread use are critical (Dineshwar, 2013); Steven, 2013); Au, 2013; & Kauffman 2008). Hence, clients' perspectives and their expectations toward utilization of Mobile Banking are vital to analysts, since it helps monetary organizations, for example, banks and installments administrations suppliers to get a genuine benefit by empowering improved understandings of key factors that influence goal to portable financial use.

Mobile Banking is one among the pervious versatile innovation ponders Shaikh and Karjaluto (2015) and maybe the newest advanced innovation within the monetary administrations area, which has added the component of unadulterated portability to support utilization Bisht (2013); Laukkanen (2007); Mishra (2013); Oliveira (2014) & Sinkkonen (2007) and empowered shoppers to amass helpful admittance to esteem added and banking administrations, even in nations with low salaries (Anderson, 2010; Boor, 2014; & Wonglimpiyarat, 2014). As Juniper Research (2013) uncovered, over one billion individuals are required to utilize Mobile Banking worldwide by 2017.

It improves the style during which individual monetary administrations are planned and conveyed even as the way during which buyers connect with other cultural constituents Oliveira (2014); Lee (2015). It is, subsequently, turning into an indivisible piece of how business is being done today (Ahluwalia, 2009; Boor, 2014; Varshney, 2009 & Wonglimpiyarat, 2014). Although Mobile Banking is constantly attempting to entice potential customers, it does face a number of challenges that make its widespread adoption questionable (Lin, 2011). As Zhang (2012) note, Mobile Banking is up to now in its beginning phases and has, up until this time, neglected to acquire the trust of likely consumer.

Same as Shaikh (2015); Karjluoto (2015); Dineshwar (2013) & Steven (22013) demonstrate, using mobile phones to handle banking transactions and access financial data isn't an unavoidable faithful form that is in accordance with what Hanafizadeh (2014) inferred that notwithstanding mechanical advances and expanded availability of Mobile Banking, the quantity of clients doesn't coordinate specialists assumptions a reality that warrants examination concerning its reasons. Past investigations have utilized Information Technology Adoption (ITA) speculations, as an example, the Technology Acceptance Model (TAM), Innovation Diffusion Theory (IDT), and also the Unified Theory of Acceptance and Use of Technology (UTAUT) to analyze Mobile Banking client's standards of conduct.

A little of those examinations have taken the obstructions and therefore the drivers of web based financial reception into thought. Notwithstanding, just a restricted number of distributed works investigate the components driving Mobile Banking acknowledgment from the purchaser's viewpoint with regards to agricultural nations within the Middle East Al-Somalli (2009) while Mobile Banking is progressively assuming an important part in carrying monetary administrations to individuals of this area (Goh, 2014).

Moreover, the impact of individual and social boosts in beating customer's hesitance toward the use of Mobile Banking is by all accounts a groundwork hole around there

which should be reflected.

This paper is focused on Pakistan as a developing country within the Mideast, which possesses an oversized population of over 22 Billion individuals. As Hanafizadeh (2014) note, the growing must encourage clients to use cell-phones for his or her banking purposes combined with the negative trend within the adoption of this technology in Pakistan, make it imperative to review what are the barriers of Mobile Banking usage together with the role that individual and social stimuli .

This study examine the what kind of factor are barrier for mobile banking in Pakistan, this study also examine the adaptation of mobile banking with perceive risk, perceive usefulness, perceive cost and perceived ease of use for behavioral attention for mobile baking user.

This shows that together with the adoption of latest technologies, the adoption of Mobile Banking has to discover the factors affecting its acceptance that's what we are aimed to during this study in Pakistan. As quoted in Book Karjaluoto (2015); Lin (2011); Puschel (2010); Shaikh (2015); Schierz (2010) consumers attitudes and intentions shows to be the key predictors that influence their acceptance of technology based banking services. This paper aims to fill a pursuit gap by addressing the explanation behind the low prevalence of Mobile Banking among Pakistani consumers through exploring the factors that affect consumers' attitudes toward the employment of Mobile Banking.

## 2. Literature Review

In this lecture review, we are defining some references from old studies and models like TAM, SCT and some others which are related to our paper. Perceived Risk, Perceived usefulness, Perceived ease of use and perceived value all are defined in this literature review.

### 2.1. TAM (Technology Acceptance Model)

The TAM proposed by Davis, 1992& Bagozzi, 1992) has all the earmarks of being the premier generally utilized development appropriation model. This model has been used in a spread of studies to investigate the elements influencing person's utilization of most recent innovation (Aboelmaged, 2013; Chitungo, 2013; Davis, 2000; Gebba, 2013; Munongo, 2013; Safeena, 2012; & Venkatesh, 2000) proposes that the consecutive relationship of conviction mentality goal conduct in TAM, empowers us to foresee the usage of most recent advancements by clients.

Indeed, TAM is a variation of hypothesis of contemplated activity (TRA) concerning data frameworks (IS) which takes note of that apparent value and saw convenience decide a person's perspectives toward their expectation to utilize a development with the goal filling in as an arbiter to the specific utilization of the framework. Seen convenience is furthermore viewed as influenced straightforwardly by saw usability. Inside the instance of framework selection, reliable with Hanafizadeh (2014) very nearly 40% of all papers during this segment are managed through TAM.

This hypothesis declares that apparent value and straightforward use are central determinants of framework appropriation and utilization Bankole (2011). Be that as it may, in light of the fact that the (TAM) rejects monetary and segment elements and outside factors, it apparently has restricted use for clarifying client's perspectives and conduct aims toward portable financial assistance reception Venkatesh, 2000; Davis , 2000). As a result, many Mobile Banking options recommend expanding or

supplementing the primary Technology Acceptance Model by adding additional builds, such as relative benefit and personalized inventiveness. Chitungo (2013) & Munongo (2013) saw hazard, seen usability, seen helpfulness, seen worth and similarity with way of life (Hanafizadeh, 2014 & Hsu, 2011).

Indeed, TAM gives the stock to include outside factors on the grounds that the determinants of saw value and saw convenience Davis (1989). Also, TAM accepts that potential purchasers are liberal to act and pick without restriction. Truth be told, purchasers may think of certain limitations practically speaking which will forestall them to act openly like the legitimization of conventional financial channels which is the reason a considerable lot of them will in general embrace Mobile Banking over the previous decade Hanafizadeh (2014); Yousafzai (2010), who analyzed three models (TRA, hypothesis of arranged conduct (TPB), and TAM) as far as their capacity to foresee client internet banking conduct, additionally demonstrated that TAM is better than the contrary models and featured the significance of it in understanding web based financial conduct.

### **2.2.1. Perceived Risk**

Perceived risk alludes to particular kinds of monetary, item, execution, social, mental, physical, or time hazards when buyers make exchanges online Laukkanen (2009); Purwanegara (2014); Chen (2013) They discovered it as the main factor affecting demeanour in their investigation into the effect of apparent danger on the adoption of Mobile Banking, agreeing with what others have said Yang (2009) had deduced in his investigation on Mobile Banking reception. Seen hazard has additionally been discovered to be a huge factor influencing buyers' perspectives through saw usability and saw handiness Akturan (2012); Tezcan (2012). As indicated by Hanafizadeh (2014) there is more danger in Mobile Banking contrasted with other fixed gadgets because of removed association. They, trying to examine Mobile Banking selection in Iran, discovered that giving secure individual monetary exchanges is one of the key variables which would ensure the accomplishment of Mobile Banking. Lee (2015) bring up that once specialist co-ops can convey got administrations, at that point the Mobile Banking will be received by buyers.

### **2.2.2. Perceived Usefulness**

Perceived usefulness can be characterized as how much an individual accepts that utilizing a specific framework would upgrade their exhibition Davis (1989). Perceived usefulness is a key element of mindset, which encourages twenty-first-century banking consumers to join more inventive and simple-to-use technologies that offer them a better chance of completing transactions, paying bills, and performing other financial task Pikkarainen (2004).

Davis (1989) Perceived usefulness is a degree to which an individual accepts, by receiving a specific framework his exhibition will improve. As indicated by Venkatesh and Davis (2000), the perceived usefulness is an antecedent for the expectation towards utilization of a PC framework. The past investigations Ha (2009); Stoel (2009) and Sudha (2010) have shown that perceived usefulness straightforwardly impacts PC use. As per Akturan and Tezcan (2012) perceived usefulness straightforwardly impacts mentality towards versatile banking, a study directed on 435 Turkish understudies. Thus, Safeena and Kamani (2011) clarified in their examination that it is a significant determinant in portable financial reception which is in accordance with the discoveries separated from the overview led on Malaysian versatile financial shoppers by Amin and Muhammad

(2007). Perceived usefulness has also been found to have a significant beneficial affect on both behavior and willingness to use Mobile Banking Shaikh and Karjaluo (2015); Purwanegara (2014).

Indeed, a person's eagerness to utilize a particular framework for their exchanges relies upon their impression of its utilization Hanafizadeh (2014). As an outcome, the perceived usefulness the apparent value of Mobile Banking Services, the more certain is the mentality and the goal toward its consistent utilization.

### **2.2.3. Perceived Ease of Use**

Perceived ease of use can be described as how much a person believes that using a particular system will free them from exercises Davis (1989) which is an imminent acceptance driver of new technology based applications Venkatesh (2000). The effect of perceived ease of use on attitude toward use of Mobile Banking is revealed in some past studies Wang and Liao (2007). In this study, however, it is assumed that ease of use has an effect on Mobile Banking usage which encourages consumers to use it in their financial transactions.

According to Davis (1989) a degree to which a user feels, the usage of a particular system is free from the effort is perceived ease of use. Many research findings consolidate the argument that it has a widely significant impact on usage intention. The more the system provides ease the more it would be acceptable (Chitungo, 2013). A recent study conducted in the ruler areas of Zimbabwe an African country explained that perceived ease of use has a significant effect on usage intention of mobile banking services. Additionally, the study conducted by Lule (2012) in Kenya demonstrated the same results which are also with previous findings are completed by Cheah (2011) about finding the intention of mobile banking services in Malaysia.

### **2.2.4. Perceived Value**

The last unique UTAUT2 build is value affectability or a person's level of value flexibility and mindfulness consolidated by (Venkatesh, 2012). However, and for the reason for this examination, value affectability as a develop is supplanted with perceived value on the grounds that most of portable financial administrations and applications use is free Streeter (2009); Al-Jabri & Sohail (2012) and perceived value allows for a more comprehensive review by including both monetary and non-monetary value (Gao and Bai ,2014). Perceived value is a person's estimation of an item's overall value based on a comparison of its usual benefits to its normal costs (Zhu, 2010). Consumers' subjective perceptions of the app's perceived usefulness advantages, such as convenience, enjoyment, personalization, accessibility, quality of service, and enterprise value, all contribute to the app's perceived value (Arcand, 2017). A customer is probably going to embrace an innovation that expands emotional worth and presents him/her with the best benefits (Dootson, 2016). Even so, a higher perceived value decreases concerns and increases the likelihood of article satisfaction Amoroso and Magnier Watanabe (2012) subsequently, it is viewed as one of the fundamental driver of individual innovation reception and utilization expectation (Okazaki, 2015). Individuals are more inclined to assume that mobile banking apps add value to their lives because of their adaptability and flexible services (Awasthi and Sangle, 2013).

## **2.2. Other related theories**

The relate hypotheses which have the right referenced. So hypotheses like TPB and Aboelmaged (2013); Gebba (2013) explains how adoption behavior to followed behavioral focuses, which is influenced by the individual's attitude, assumptions about their ability to regulate a specific behavior, and other external factors. TPB sees people's control over their behavior as a continuum ranging from behaviors that are simple to those that require a lot of effort, resources, and so on. Such controls are likely to play a big role in explaining the connection between behavioral intentions and actual behavior, but the difficulty of assessing actual controls has led to the use of perceived behavioural control (Hanafizadeh, 2014).

## **2.3. Social Cognitive Theory (SCT)**

Social Cognitive Theory (SCT) is a model for recognizing, forecasting, and changing human behavior that depicts social actions as a reference to compare of personal factors, behavior, and the environment. The effect of a person's thoughts and behaviors is included in the modeling relationship between the personal& behavior. The relationship between an individual and their environment includes the development and modification of human beliefs and cognitive competencies as a result of social factors and environmental structures.

SCT is useful for predicting and interpreting person and group actions, as well as defining strategies for changing or changing behavior (Hanafizadeh, 2014). IDT (e.g. Kim (2009); Lin (2011) In this aspect, is the two most frequently used model Shaikh (2015); Karjaluoto (2015) which views mobile banking adoption as a cultural structure that evolves over time through the population.

## **2.4. Theoretical Background**

Previous studies have restricted and mainly centered on SMS banking in developing countries, as Shaikh (2015) and Karjaluoto (2015) point out, and virtually no studies have addressed the use of Mobile Banking applications through smart phones or tablets, which is addressed in this report.

Unlike previous studies that looked at both customers and non customers of Mobile Banking, this research will concentrate specifically on Mobile Banking use, with only users being chosen to confirm that they need a standard to test variables such as current banking system usability.

This research adds to the theoretical model and results in better user responders. The majority of banking transactions in Pakistan are now carried out using a Mobile Banking Application.

Its purpose is to set up a national switch which will link the payment portals of various banks. Exchange, payment, electronic purchase, money exchanging, bill affairs, and balance checking are only a few of the tasks it performs. It's set up to easier for customers to use banks' services after regular business hours and on a 24-hour basis (Hanafizadeh, 2014).

## **2.5. Research Model**

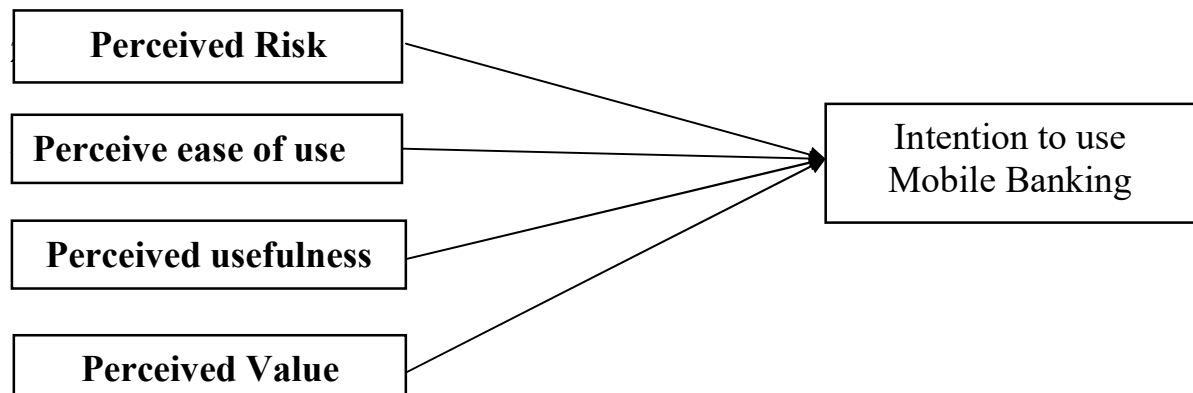
Constraints and operators many of the factors that have adetrimental effects on customers' use of mobile banking are referred to as resistance. Consumers' lives are changing as a result of innovations. Adopting new technology, in reality, often

necessitates a change in consumers' current behaviours and pushes them to develop new ones. Consumer aversion to innovation is a common reaction as a result of this. The greater the transition that an invention requires, the greater the market resistance (Laukkanen, 2007 & Sinkkonen, 2007).

In most other words, consumers are unable to change their current operating habits and adopt new technology, like mobile banking, according to Agarwalet (2009), resulting in banks having lower returns on their investments. Hernandez Murillo (2010), which tends to discourage them from using a simple and convenient service like Mobile Banking. Lee (2015) point out that once service providers are able to deliver user friendly, and consumer-satisfying services, then the Mobile Banking will be adopted by consumers.

According to them, Al-Somalli (2009) for customers to be motivated to change from traditional ways of operating to new technologies such as Mobile Banking, it should satisfy their needs; this attenuates their resistance (Hanafizadeh, 2014). Consumers would not adopt it if they do not believe it provides the expected services relevant to their needs. Therefore, inflexibility from existing habits can become a possible obstacle to consumers' perceived of usefulness, which can be detrimental. As a result, the more obstacles to using Mobile Banking, the more negative the behavior toward it becomes.

## 2.6. Theoretical Frame Work



## 3. Methodology

A questionnaire was created to better understand how the behavioral variables discussed influence customer adoption intentions and subsequent perceptions of mobile banking use.

### 3.1. Research Approach

To improve the quality and relevance of their studies, researchers might collect more empirical data, supported by different guiding theories, to clarify adoption patterns across a range of consumers. Combinations of qualitative and quantitative approaches also might effectively test these conceptual models and investigate semantic relationships among the factors or constructs applied. This recommendation is based on the recognition that prior research mostly has used survey instruments to collect data and test hypotheses.

### 3.2. Research Design

The approach of the research is based on regression which determines a impact between two or more variables. The research purpose is to find or identify the adaptation intention of mobile banking in Pakistan which includes the factor Perceived risk, Perceived ease of

use, Perceived usefulness and perceived value (independent variable) on behavioral intention (dependent variable). The main focus of this paper is on Pakistan, a growing country in the World with a population of more than 22 billion people. As Hanafizadeh (2014) note, the growing must encourage clients to use cell-phones for his or her banking purposes combined with the negative trend within the adoption of this technology in Pakistan, make it imperative to review what are the barriers of Mobile Banking usage together with the role that individual and social stimuli like Perceived risk, Perceived ease of use, Perceived usefulness and perceived value (independent variable) on behavioral intention (dependent variable) can play in fading consumers' reluctance.

### **3.3. Sampling Technique**

For choosing an appropriate convenient sample, the sampling method is used. Researchers proposed that for selecting target elements from a population, an effective sampling technique is required. For conducting this research simple random sampling is used. This technique of sampling is important since it gives the respondent an equal opportunity and eliminates bias.

### **3.4. Target Population and Sample Size**

The target population in this research is mobile user (Smartphone users) in Pakistan and also attached with banking relation in deferent age groups, genders and income. The sample size selected for this research is 600 peoples, we get responses from 452 peoples. Data is collected through a questionnaire generated on google form and circulated via link send on respondent's WhatsApp.

### **3.5. Statistical Technique**

Researchers and scholars have confidence that statistical data is the most suitable, reliable and most powerful method for evaluating big set of data. Thus, an arithmetic analysis is used with the assistance of "Social Science Statistical Packages" (SPSS). The hypothesis of this learning is based on mobile user attention (factors: Perceived risk, Perceived ease of use, Perceived usefulness and perceived value) which affects on intention of adaptation of mobile banking. So, for analyzing and finding the relationship between these variables' regression is used.

### **3.6. Questionnaire and Measurement Instrument**

In this research, we use the questionnaire as a measurement tool. The questionnaire consists of questions connected to variables. The information is gathered from strongly agree to strongly disagree by applicants on a 5-point Likert scale.

### **3.7. Ethical Consideration**

A larger scale study with a more representative sample could be conducted to validate the model of this study and to enhance the generalizability of the research conclusions. In addition, this study only examined the effect of the motivators and inhibitors on behavioral intentions, and as such, interrelationships between variables could be investigated. Furthermore, the model is measures perceptions and intentions at a single point in time. However, perceptions change over time as individuals gain experience (Mathieson, 1991; Venkatesh et al., 2003). This change has implications for researchers and practitioners interested in predicting M-banking usage over time and may warrant a longitudinal study.



## 4. Results & Discussions

### 4.1. Descriptive Analysis

Data analysis is the method by which statistical or logical methods are frequently used to explain, demonstrate, and transforming and modeling to discover helpful information and to support decision making.

**Table No.1. Demographics**

	Frequency	Percent	Valid Percent	Cumulative Percent
Gender	121	26.8	26.8	26.8
Female	186	41.2	41.2	67.9
Male	145	32.1	32.1	100.0
Total	452	100.0	100.0	
<b>Age</b>				
21-30	94	20.8	20.8	47.6
31-40	112	24.8	24.8	77.4
41-50	36	8.0	8.0	85.4
51 Above	23	5.0	5.0	
Total	452	100.0	100.0	
<b>Income</b>				
Upto- 20000	77	17.0	17.0	43.8
21000-30000	125	30.5	30.5	74.3
31000-40000	63	14.0	14.0	91.6
Above 41000	187	41.3	41.3	
Total	452	100.0	100.0	

**Source: Author's own elaboration**

The above table describes the demographic of respondents in which the proportions of two genders are mentioned 41.2% female and 32.1% male. Furthermore, the age group of the respondent is divided into five sections 21-30 are 20.8%, 31-40 are 24.8%, 41-50 are 8.0%. As far as the income is concerned: upto-20000 are 17%, 21000-30000 are 30.5%, 31000-40000 are 14% and above 41000 are 41% respectively.

### 4.2. Reliability Analysis

The proportion of the systematic difference in a scale that can be achieved by analysing the relationship between the responses obtained from different scales is determined in reliability analysis. In this research, reliability is measured in terms of Cronbach alpha indicating how well the items in the research are favorable with one another.

**Table No. 2 Reliability Statistics**

Cronbach's Alpha No. of Items		
15	.897	26

### 4.3. Model Summary

**Table No 3. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.749 <sup>a</sup>	.761	.755	4.13217

**Source: Author's own elaboration**

a. Predictors: (Constant), PV, PR, PEOU, PU

*Note: PV is stand for perceived value, PR stands for perceived risk, PEOU stands for Perceived ease of use and PU stands for Perceived Usefulness.*

This table provides the R and R Square values. The R value represents the simple correlation and is 0.749 which indicates a high degree of correlation. The R Square value indicates how much of the total variation in the dependent variable by the independent variable. In this case, 76.1% can be explained, which is very large.

**Table No 4. Over All Significance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1017.799	4	254.450	86.854	.000 <sup>b</sup>
	Residual	1268.530	433	2.930		
	Total	2286.329	437			

This table indicates that the regression model predicts the dependent variable significantly well. This indicates the statistical significance of the regression model that was run. Here,  $p < 0.0005$ , which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

**Table No.5. Regression Analysis**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.364	.347		6.809	.000
	PR	.414	.037	.517	11.328	.000
	PEOU	-.244	.033	-.366	-7.485	.000
	PU	.353	.039	.449	8.969	.000
	PV	.107	.021	.232	5.076	.000

**Source: Author's own elaboration****a. Dependent Variable: ITUMB**

*Note: PV is used for perceived value, PR used for perceived risk, PEOU used for Perceived ease of use, PU used for Perceived Usefulness and ITUMB used for intention to use mobile banking respectively.*

The above Regression table shows the regression path, Beta value, and the p-value. The beta value informs the dependent variable's connection with each independent variable. If the beta value is negative, it indicates that the relationship is inversely proportional between dependent and independent variables. If the beta value is positive, on the other side, it demonstrates the beneficial relationship between the dependent and independent variables stating that the relationship is direct. Whereas, p-value determines the significant or insignificant relationship between the variables.

**5. Conclusion & Recommendations**

Four hypothetical relationships were established and tested based on a sample of 452 responses. PV, PR, PEOU, and PU have a major influence on ITUMB. Lu (2005) discovered a major positive relationship between PEOU and ITUMB's adoption of mobile banking in the United States in previous study. Similarly, Yu (2012) showed that the higher the PE, the higher the individuation.

Chen (2008); Chen (2013); Tan & Teo (2000), was suggested that bank customers view risk as a major barrier to Mobile Banking adoption. Our findings, on the other hand, were consistent with those of Karjaluoto (2014), who concluded that bank customers perceive little risk associated with mobile devices and applications, and that their perceptions are accurate.

Mobile Banking Consumers in Pakistan did not consider the impact of PR on their ITUMB and adoption, when considering Mobile Banking, implying that rising risk in Mobile Banking would not stop potential customers from using it from adopting Mobile Banking.

**References**

- C.-S. Yu, "Factors affecting individuals to adopt mobile banking: empirical evidence from the UTAUT Model," *Journal of Electronic Commerce Research*, vol. 13, no. 2, pp. 104-121, 2012.
- Yu, p. 2012.
- S. Y. Yousafzai, "A proposed model of e-trust for electronic banking," *Tec novation*, vol. 23, no. 11, pp. 847-860., 2003.
- V. Venkatesh, "'Determinants of perceived ease of use. integrating control, intrinsic motivation, and emotion into the technology acceptance model'," *Information System Research*, vol. 11, no. 4, pp. 342-365., 2000.
- V. Venkatesh, "'Determinants of perceived ease of use. integrating control, intrinsic," *Information System Research*, vol. 11, no. 4, pp. 342-365, (2000).
- C. C. C. L. a. B. F. Van Slyke, "'Gender differences in perceptions of web-based shopping'," *Communications of the ACM*, vol. 45, no. 6, pp. 82-86, 2002.
- R. Thakur, "'What keeps mobile banking customers loyal?," *International Journal of Bank Marketing*, vol. 32, no. 7, pp. 628-646, 2014.
- H. & R. R. E. Riquelme, "The moderating effect of gender in the adoption of mobile banking," *International Journal of Bank Marketing*, vol. 28, no. 5, pp. 328-341, 2010.
- S. B. o. Pakistan, "'Annual performance report 2015',"

- <http://sbp.org.pk/publications/apr/index.htm> (accessed January 15, 2015). , 2015.
- G. & P. M. Ivatury, "Mobile phone banking and low-income customers : Evidence from South Africa," *Consultative Group to Assist the Poor.* , vol. 3, no. 2, pp. 232-260, 2006.
- R. & S. M. Dineshwar, "An Investigation on Mobile Banking Adoption and Usage: A Case Study of Mauritius.," *Proceedings of 3rd Asia-Pacific Business Research Conference, Vols.* ISBN: 978-1-922069-19-, pp. 25 - 26, 2013.
- C. M. W. E. T. F. Y. H. a. H. H. Y. Chiu, "'Understanding customers'repeat purchase intentions in B2C e-commerce: the roles of utilitarian value, hedonic value and perceived risk'," *Information Systems Journal*, , vol. 24, no. 1, pp. 85-114, 2014.
- Y. M. Cheng, "'Antecedents and consequences of e-learning acceptance'," *Information Systems Journal*, vol. 21, no. 3, pp. 269-299. , 2011.
- U. & T. N. Akturan, "Mobile banking adoption of the youth market: Perceptions and intentions," *Marketing Intelligence & Planning*, vol. 30, no. 4, p. 444–459, 2012.
- S. & S. A. Afshan, "Acceptance of mobile banking framework in Pakistan," *Telematics and Informatics*, vol. 33, no. 2, p. 370–387, 2016.
- C. M. T. A. C. S. J. J. O. K. H. & a. T. B. I. J Cheah, "Factors Affecting Malaysian Mobile Banking Adoption: An Empirical Analysis," *International Journal of Network and Mobile Technologies*, vol. 2, no. 3, pp. 149-160., 2011.
- U. (2015), " [http://www.unicef.org/infobycountry/pakistan\\_pakistan\\_](http://www.unicef.org/infobycountry/pakistan_pakistan_), "[http://www.unicef.org/infobycountry/pakistan\\_pakistan\\_](http://www.unicef.org/infobycountry/pakistan_pakistan_), 2015.
- S. B. o. P. (2015), "'Payment Systems Review 2015'," <http://sbp.org.pk/psd/reports/pdf/2015/PS-1st-Qrtly-FY15.pdf> (accessed.
- Purwanegara, M., Apriningsih, A. and Andika, F., "Snapshot on Indonesia regulation in mobile internet banking users attitudes," *Procedia – Social and Behavioral Sciences*,, vol. 115, no. 2, pp. 147-155, 2014.
- Akturan, U., & Tezcan, N, "Mobile banking adoption of the youth market:," *Marketing Intelligence & Planning*, vol. 30(4), p. 444 – 459.
- Davis and Bagozzi , "International Journal of Bank," *Emerald Group Publishing Limited*, vol. 33, 2015.
- Teo, A., Tan, G.W., Cheah, C., Ooi, K. and Yew, K, "Can the demographic and subjective norms influence the adoption of mobile banking," *Int. J. Mobile Commun*, vol. 10, no. . 6, pp. 578-597, 2012.
- Amin, H. B., & Muhammad, M. Z. (2007)., "An analysis of mobile banking acceptance by Malaysian Customers," *Sunway University College Academic Journal*, vol. 4, pp. 1-12, (2007).
- Afshan, S., & Sharif, A, "Acceptance of mobile banking framework in Pakistan," *Telematics and Informatics, Vols.* 33(2),, pp. 370-387, 2016.
- Kuo, Y. and Yen, Sh., "'Towards an understanding of the behavioral intention to use 3G mobile value-added services'," *Computers in Human Behavior*, vol. 25, no. 1, pp. 103-110, 2009.
- Sanchez-Franco, M. J., Ramos, A. F. V. and Velicia, F. A. M, "'The moderating effect of gender on relationship quality and loyalty toward Internet service providers'," *Information & Management*, vol. 46, no. 3, pp. 196-202., 2009.
- Riquelme, H. E. and Rios, R. E, "'The moderating effect of gender in the adoption of mobile banking'," *International Journal of Bank Marketing*, vol. 28, no. 5, pp. 328-341., 2010.

- Safeena, R., Date, H., Kammani, A. and Hundewale, N., "“Technology adoption and Indian consumers: study on mobile banking”," *Int. J. Comput. Theory Eng*, vol. 4, no. 6, pp. 1020-1024, 2012.
- Bosnjak, M., Obermeier D. and Tuten T.L., "“Predicting and explaining the propensity to bid in online auctions: a comparison of two action-theoretical models”," *Journal of Consumer Behaviour*, vol. 5, no. 2, pp. 102-116., 2006.
- Zhou, Z., Jin, X. L. and Fang, Y., "“Moderating role of gender in the relationships between perceived benefits and satisfaction in social virtual world continuance”," *Decision Support Systems*, vol. 65, pp. 69-79. , 2014.
- Shaikh, A.A. and Karjaluoto, H., "“Mobile banking adoption: A literature review”," *Telematics and Informatics* , vol. 32, no. 1, pp. 129-142, 2015.
- Reeves, M. and Sabharwal, N., "“Microfinance and mobile banking for the bottom of the pyramid”," *Journal of Enterprising Communities: People and Places in the Global Economy*, vol. 7, no. 2, pp. 155-166., 2010.
- Chitungo, S.K. and Munongo, S., "“Extending the technology acceptance model to mobile banking adoption in rural Zimbabwe”," *Journal of Business Administration and Education*, vol. 3, no. 1, pp. 51-79, 2013.
- Mallat, N., "“Exploring consumer adoption of mobile payments – a qualitative study”," *Journal of Strategic Information Systems* , vol. 16, no. 4, pp. 413-432, 2007.
- Bons, R. W., Alt, R., Lee, H. G., and Weber, B., "“Banking in the Internet and mobile era”," *Electronic Markets*, vol. 22, no. 4, pp. 197-202, 2012.
- Ramdhony, D. and Munien, S., "“An investigation on mobile banking adoption and usage: a case study of Mauritius," *World J. Soc. Sci*, vol. 3, no. 3, pp. 197-217, 2013.
- Wessels, L. and Drennan, J., "“An investigation of consumer acceptance of m-banking”," *International Journal of Information Management*., vol. 11, no. 4, pp. 689-703, 2014.
- Purwanegara, M., Apriningsih, A. and Andika, F., "“An evaluation of e-banking and m-banking adoption factors and preference in Malaysia: a case study”," *International Journal of Bank Marketing*, vol. 6, no. 2, pp. 255-273, 2014.
- Tan, K.S., Chong, S.C., Loh, P.L. and Lin, B., "“An evaluation of e-banking and m-banking adoption factors and preference in Malaysia: a case study”," *Int. J. Mobile Commun*, vol. 8, no. 5, pp. 507-527, 2010.
- Schepers, J., and Wetzels, M., "“A meta-analysis of the technology acceptance model: Investigating subjective norm and moderation effects”," *Information & management*., vol. 44, no. 1, pp. 90-103, 2007.
- D. C. D. J. H. & J. H. Chawla, "Consumer perspectives about mobile banking adoption in India—a cluster analysis," *International Journal of Bank Marketing*, vol. 35, no. 4, p. 616–636., 2017.