An Investigation Of Determinants Influencing The Usage Of Mobile Banking In Pakistan

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Abstract- In the last few decades the rapid technological change has been observed in the banking industry of both developing and developed countries. The utilization of internet banking increased the level of competition in banking sector. The objective of the study is to determine the factors that impact on the attitude of customers towards the usage of mobile banking.The study collected the data by 150 respondents of five selected banks. The study used perceived usefulness and risk as independent variables and attitude of customers as the dependent variable.Findings of the study revealed that both perceived usefulness and risk are significantly contributed in shaping the behavior of customers towards the usage of mobile banking in Pakistan.The study concluded that the management of the banks should mitigate the fraud issues by providing more privacy and security to their customers.

Index Terms- Internet Banking, Pakistan, Risk Perceived usefulness.

I. INTRODUCTION

The retail banking services and the unionization of telecommunication is introducing several opportunities for surfacing the mobile commerce specifically in mobile banking. The major benefit of mobile banking is to provide convenience, liberty and swiftness to customers, which is helpful for reducing the overall cost of the bank. The latest statistics published by the Pakistan Telecommunication Authority (PTA) have revealed that the cell phone penetration rate is high in Pakistan especially in urban areas. Moreover, the subscribers of cell phones in Pakistan have reached more than 120.5 million (Raza, S. A., & Hanif, N. (2013), pp. 82-96).

The statistics results have also shown that only 12% of the population in Pakistan is having the access of formal banking. Most of the population in Pakistan is living in rural areas; therefore, they have less access to the services of banks as compared to the urban people. According to State Bank of Pakistan (SBP), the service of mobile banking is onset in Pakistan; however, the acceptance rate is low in both urban and rural parts of the country (Kaleem, A., & Ahmad, S. (2015)).

The new innovation in technology has been brought forward in financial services specifically in retail banking industry. The need of these changes has been caused by the rising demanding factors of customer satisfaction, use of IT and communication technology and parallel competitive pressure (Akhlaq, A., & Ahmed, E. (2013), pp. 115-125). In this high competitive market, the need is to provide value added services to fulfill the demands of customers. The satisfaction of customer is not the ultimate goal of the bank but it also enhances market share and competitive advantage over the rest of the banks. Most of the banks have made extensive investments in developing the effective infrastructure of mobile banking service for the lower-income population group (Hanafizadeh, P., Keating, B. W., & Khedmatgozar, H. R. (2014), pp. 492-510).

Numerous studies have provided the evidence that the significant factor, which stimulates people to adopt new technology and mobile banking, is the perceived ease of use. Safeena, R., & Date, H. (2015) stated that perceived ease is the level to which people believed that the use of particular product will provide benefit to them and it would be free of efforts regardless on any charges.

A study has been conducted by Raza, S. A., Jawaid, S. T., & Hassan, A. (2015) revealed that the perceived ease is the most imperative factor in rural areas of different African countries. Though, this is not the only factor that influenced the attitude of users regarding the adoption of mobile banking. Oladejo, M., & Akanbi, T. (2012) stressed in study that the intention to adopt online banking is positively related with perceived ease of use in Malaysia. Similar results have been found by Hussain Chandio, F., Irani, Z., Abbasi, M. S., & Nizamani, H. A. (2013) which postulates that perceived ease is the significant factor in usage of internet banking.

The perception that the usage of a particular system or product will enhance the job performance of individual is referred to as a perceived usefulness. However, preceding literature postulates that the usage of computer is directly influenced by the intention and perceived usefulness of individuals. It is pertinent to mention here, that the adoption of technology is highly dependent on the awareness of people. Once the awareness has been created and consumers realized the significance of different alternate service delivery channels based on technology, the adoption of these services will be increased (Raza, S. A., & Hanif, N. (2013), pp. 82-96).

Kundi, G. M., & Shah, B. (2015) stressed that perceived usefulness is the focal factor, which influenced the attitude of consumers towards the mobile banking. The investigator has collected the data from 435 universities of Turkey and found that majority of the students prefer mobile banking because they perceived that it enhance their performance and it is convenient in use (Kesharwani, A., & Singh Bisht, S. (2012)).

Martins, C., Oliveira, T., & Popovic, A. (2014) have also collected the data from different consumers of mobile banking in Malaysia and found that perceived usefulness is the major determinant that triggers the adoption of mobile technology services. Similar results have also been found by Kaleem, A., & Ahmad, S. (2015).

Perceived risk is also a major determinant that influences the mobile banking in Pakistan. Though, most of the Pakistanis perceived that internet banking is not a secured channel therefore, most of the customers reluctant to use this service for any transaction. The most highlighted risk factor perceived by consumers during internet transactions is risk of service performance, financial risk, time risk and psychological risk. Guru, B. K., Shanmugam, B., Alam, N., & Perera, C. J. (2015) found that in African countries reliability and perceived risk are the main hurdles for the usage of mobile banking.

Chavan, J. (2013) has conducted a study to identify the attitude of people towards the adoption of internet banking in Tunisia. The investigator has implied theoretical model to determine the most persuaded factors of internet banking usage. The data has been collected from 253 respondents, in which 158 were non users of internet banking; whereas, 95 were users. Regression analysis and factor analysis techniques have been opted for the research. Evidence from the study indicates that security, convenience, risk and prior internet knowledge are the major influencing factors (Akhlaq, A., & Ahmed, E. (2013)). Though, information on online banking does not show any significant impact on the usage of internet banking.

The results from the study also showed that behavior to use internet banking is also influenced by the demographic factors (such as occupation and age group). The findings of the study are beneficial for those who are highly involved in the promotion of new form of banking in this stiff competitive market (Kaleem, A., & Ahmad, S. (2015)).

The perspective of customer towards internet banking has been examined by Akhlaq, A., & Ahmed, E. (2013) in India. The investigator has collected the data by using the convenience sampling method. Furthermore, primary data has been gathered from different educational institutes by using questionnaire technique (Kesharwani, A., & Singh Bisht, S. (2012)). The major variables that analyzed during the study were acceptance of consumers, perceived usefulness and perceived ease and perceived risk of use. Factor analysis technique has been opted to get rigorous results (Hanafizadeh, P., Keating, B. W., & Khedmatgozar, H. R. (2014)). The findings of the study were identified that the most imperative determinants for the adoption of internet banking were perceived risk and perceived ease of use. Evidence from the study also highlighted that these two factors are helpful for the formulation of customer awareness strategies.

The purpose of the study is to identify the determinants that influence the attitude of people towards the adoption of mobile banking in Pakistan. The study posits to find out the customer perspective towards internet banking. Moreover, the investigator has also considered different factors that have an influential effect on the usage of mobile banking in Pakistan. The author has selected the consumers of five banks that were utilizing the service of mobile banking. The selected banks were Habib Bank limited (HBL), United Bank Limited (UBL), Standard Chartered Bank, Muslim Commercial Bank (MCB) and Allied Bank Limited.

The completion of the study is beneficial for both the management of bank and consumers because it creates awareness among people regarding the benefits of mobile banking. Additionally, the hindrance and problems raised in this study is helpful for the management of banks, which are highly involved in the formulation marketing strategies. This study may dearth the gap of preceding studies by highlighting the major influential determinants for the adoption of online banking in Pakistan.

II. METHODOLOGY

2.1 Research Approach

Cross sectional study design and quantitative research approach have been opted to identify the determinants that influence the mobile banking in Pakistan. This study design is helpful for generating rigorous results that have been developed by collecting the primary data from different consumers of internet banking of selected banks.

2.2 Study Variables

The variables that have been assessed during the study were perceived risk, perceived ease and perceived usefulness (Independent variables) and adoption of mobile banking and attitude of people towards mobile banking (Dependent variable). All the variables have been selected by reviewing the preceding studies.

2.3 Study Hypothesis

H_o: Perceived ease and usage is not positively influenced the adoption rate of Mobile Banking in Pakistan
H_1: Perceived ease and usage is positively influenced the adoption rate of Mobile Banking in Pakistan
H_o: Perceived risk of fraud and reliability are not the major influencing factors that affect the attitude towards the use of mobile banking in Pakistan.
H_2: Perceived risk of fraud and reliability are the major influencing factors that affect the attitude towards the use of mobile banking in Pakistan.

2.4 Sample Design

Primary data has been gathered by distributing the questionnaires to consumers of mobile banking of selected banks. Convenience sampling method has been used for the selection of banks because most of the bank's customers were unable to provide relevant information regarding the selected variables. Furthermore, random sampling method has been used for the selection of customers. The selected banks were Habib Bank limited (HBL), United Bank Limited (UBL), Standard Chartered Bank, Muslim Commercial Bank (MCB) and Allied Bank Limited.

The investigator has distributed 150 Likert point scale questionnaires in selected sample of banks. The imperative key stakeholders of the study were potential and recent consumers of mobile banking, board of directors and employees of banks. Customers who were used the service of internet banking from the last one year were included in the study; whereas, customers who were not used the service or exploit the service from the last six months were excluded from the research process. Furthermore, the author has distributed thirty questionnaires in different branches of selected banks. The branches were selected on the basis of customer's traffic and number of accounts.

2.5 Validity and Reliability

Pilot testing has been conducted before distributing the final questionnaire to the customers. It is helpful for eradicating the grammatical mistakes and formatting errors from the research process. After removing all errors, the investigator has personally delivered the questionnaires to the consumers. Hence, the study has accomplished all allegations of validity and reliability.

2.6 Ethical Consideration

The consent of bank's staff has been taken before distributing the questionnaires to the consumers. Furthermore, the sanction of customers was also taken in order to get genuine responses. The data has been gathered, compiled and analyzed in full confidentiality and the foremost importance of the researcher is the anonymity and free consent of customers

2.7 StatisticalAnalysis

Statistical Package for the Social Sciences (SPSS software version 20) has been opted to analyses the gathered data. Linear regression, Pearson Correlation and descriptive test were employed to identify strengthen of relationship between variables.

III. DATA ANALYSIS AND RESULTS

3.1 Introduction

The following section discussed about the findings of the study that are based on the hypothesis and research questions, which have been formulated in the preceding section.

Questionnaire Findings

3.2 Descriptive Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MB gives flexibility to conduct banking business 24 hours/day	150	1	5	2.85	1.122

MB transactions save more time and it's a free of effort service	150	1	5	3.04	1.558
MB makes it easier for me to do my banking	150	1	5	2.93	1.371
MB helps me to know the state of my account faster	150	1	5	1.83	1.028
MB provides me prompt and efficient services	150	1	5	2.49	1.246
MB provides systems to give appropriate feedback	150	1	5	3.57	1.172
MB gives the joy of controlling my financial transactions in a shortest period of time	150	1	4	2.84	.715
Learning to use MB was easy for me	150	1	5	3.11	1.620
Instructions in the MB system are clear and understandable	150	1	5	2.88	1.146
I feel that user-friendliness of the MB website or app is important.	150	1	4	2.96	1.164
MB has more flexible ways to search for information	150	1	5	2.75	.810
MB will allow unauthorized person to access personal information.	150	1	4	2.33	1.151
MB provides accurate, relevant and up to date information	150	1	5	2.61	1.209
MB has the high chance of fraud	150	1	5	3.02	1.845
MB needs expertise and training	150	1	5	2.93	1.398
MB has inadequate information on the website and less operational reliability	150	1	5	3.24	1.617
I trust the ability of MB to protect my privacy	150	1	5	2.96	1.460
The flexibility and easiness of use positively impact my attitude towards MB	150	1	5	2.43	1.700
The high risk and chance of fraud negatively influence my adoption rate towards MB	150	1	5	3.70	1.268
I prefer to use MB because it enhances my performance	150	1.0	5.0	2.213	1.2402
Valid N (list wise)	150				

The aforementioned table 1 depicts the descriptive analysis of the questionnaire, which was disseminating in the different banks of Pakistan. Total 150 questionnaires were distributed in customers that are frequently users of mobile banking. The findings of the table 1 showed that the maximum value is 5 and minimum value is 1. Moreover, the highest standard deviation is 1.845; whereas, the highest mean value are 3.7.

3.3 Hypothesis 1

3.3.1 Correlation Analysis

Q1: MB gives flexibility to conduct banking business 24 hours/day
Q2: MB transactions save more time and it's a free of effort service

<div align="center">Correlations</div>

		MB gives flexibility to conduct banking business 24 hours/day	MB transactions save more time and it's a free of effort service
MB gives flexibility to conduct banking business 24 hours/day	Pearson Correlation	1	.894**
	Sig. (2-tailed)		.000
	N	150	150
MB transactions save more time and it's a free of effort service	Pearson Correlation	.894**	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2 represents the Pearson Correlation analysis of the abovementioned questions. The results highlighted that strong positive relationship subsist between the selected variables. Moreover, it is also depicted that statistically significant relationship exists between the perceived usage and attitude towards mobile banking in Pakistan.

Q1: The flexibility and easiness of use positively impact my attitude towards MB
Q2: I prefer to use MB because it enhances my performance.

<div align="center">Correlations</div>

		The flexibility and easiness of use positively impact my attitude towards MB	I prefer to use MB because it enhances my performance
The flexibility and easiness of use positively impact my attitude towards MB	Pearson Correlation	1	.787**
	Sig. (2-tailed)		.000
	N	150	150
I prefer to use MB because it enhances my performance	Pearson Correlation	.787**	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

The results in table 3 indicate strong positive relationship between the variables. The aforementioned results also showed significant relationship between enhancement in performance and attitude towards mobile banking.

3.3.2 Regression Analysis

<u>Perceived Ease or Usage and Attitude towards MB</u>

<div align="center">Model Summary</div>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.438ᵃ	.191	.186	.645

a. Predictors: (Constant), The flexibility and easiness of use positively impact my attitude towards MB

Coefficients

Model		Un standardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.394	.092		26.018	.000
	The flexibility and easiness of use positively impact my attitude towards MB	.184	.031	.438	5.919	.000

Dependent Variable: MB gives the joy of controlling my financial transactions in a shortest period of time

Table 4 indicates a significant relationship between the ease of usage and attitude towards mobile banking in Pakistan. Furthermore, the abovementioned table signifies p-value is less than the threshold alpha i.e. 0.05; thus, the study rejects the null hypothesis and accepts the alternative hypothesis.

3.4 Hypothesis 2

3.4.1 Correlation Analysis

Q1. MB will allow unauthorized person to access personal information.
Q2. MB has the high chance of fraud

Correlations

		MB will allow unauthorized person to access personal information.	MB has the high chance of fraud
MB will allow unauthorized person to access personal information.	Pearson Correlation	1	.945[**]
	Sig. (2-tailed)		.000
	N	150	150
MB has the high chance of fraud	Pearson Correlation	.945[**]	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

The results depicted in table 6 shows strong positive relationship between the variables. Moreover, the p-value of 0.000 signifies statistically strong positive relationship between the access of unauthorized person and chances of fraud in MB.

Q.1 MB has inadequate information on the website and less operational reliability.
Q.2 I trust the ability of MB to protect my privacy.

Correlations

		MB has inadequate information on the website and less operational reliability	I trust the ability of MB to protect my privacy
MB has inadequate information on the website and less operational reliability	Pearson Correlation	1	-.422[**]
	Sig. (2-tailed)		.000
	N	150	150
I trust the ability of MB to protect my privacy	Pearson Correlation	-.422[**]	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

The results depicted in table 8 shows moderate negative relationship between the variables. Furthermore, the results also indicated that statistically significant relationship subsists between the trust factor and operational reliability of the mobile banking.

3.4.2 Regression Analysis

Perceived Risk and Attitude towards MB

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.726[a]	.528	.524	.874

a. Predictors: (Constant), MB has the high chance of fraud

Coefficients

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.208	.137		37.932	.000
MB has the high chance of fraud	-.499	.039	-.726	-12.857	.000

a. Dependent Variable: The high risk and chance of fraud negatively influence my adoption rate towards MB

The regression analysis shows statistically significant relationship between the variables. Furthermore, the p-value is less than the threshold alpha i.e. 0.05; thus, the study rejects the null hypothesis and accept the alternative hypothesis.

3.5 HYPOTHESIS RESULTS

HYPOTHESIS	RESULTS
Hypothesis 1	Null hypothesis rejected and alternate hypothesis accepted
Hypothesis 2	Null hypothesis rejected and alternate hypothesis accepted

IV. DISCUSSION

The findings of the study illustrate that perceived ease and usage is positively influence the adoption rate of mobile banking in Pakistan. Safeena, R., & Date, H. (2015), indicated that perceived ease and usage are the major factors that influence the internet banking in Pakistan. Evidence from the study also suggested that usefulness of mobile banking helps in the strategy formulation process. Raza, S. A., Jawaid, S. T., & Hassan, A. (2015), conducted a study in Vietnam stressed that perceived usage, trust and government support are the major factors that impact the adoption rate of online banking in Vietnam. Though, the study suggested that perceived ease is insignificant in regards of technology reception model.

Oladejo, M., & Akanbi, T. (2012), have indicated that convenience, risk, security and internet knowledge are the major factors, which effect the internet banking in Tunisia. The results also highlighted that the demographic factors are the most influential determinants that persuade the online banking. According to the customer's standpoint, the foremost reason of using internet banking is the simplicity and expediency of performing transaction without being restricted from any particular place or specific time. Though, the security of credential is the foremost important issue as it entails the complete account details (Kesharwani, A., & Singh Bisht, S. (2012), pp. 303-322).

Kundi, G. M., & Shah, B. (2015),have discussed that the increase in the usage of internet banking is highly depended on the perception of customers regarding the usefulness of this particular technology. Moreover, if customers perceived a specific technology difficult so it will not lead to the usefulness of the product. Evidence from the study showed that perceived risk and reliability issues are the foremost determinants that impact on the attitude of customers towards online banking. Though, after critically analyzing the views of different customers it has been noted that the issues of risks can be mitigated by enhancing the features of privacy settings (Martins, C., Oliveira, T., & Popovič, A. (2014), pp. 1-13).

V. CONCLUSION

The usage of internet banking is increased after receiving facilities of online bills payments, fund transfer, balance inquiry, mobile recharge and shopping through cards. This study analysis the two determinants i.e. perceived eases and perceived risk. The results corroborates that these two factors are the major factors that impact on the attitude of customers towards the usage of mobile banking in Pakistan. It is highly recommended that the management of the bank should make efforts to provide more facilities to the internet banking users and develop the software that are user friendly and easy to use for the desired customers.

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