

Antecedents of e-banking usage: a case of Pakistan

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Abstract

E-banking has become the most engrossed features for analyzing the customer satisfaction. high quality services provided by the bank generate satisfied and loyal customers. this study highlights the importance of antecedents of e-banking usage namely customer attitude towards e-banking attitude, e-service quality, perceived ease of use, perceived usefulness and customer satisfaction that facilitates e-banking usage that helps the speedy and easy use of money in banking sector. the main objective of this study is to measure the direct relationship of customer attitude towards e-banking, e-service quality, perceived ease of use, perceived usefulness with e-banking user satisfaction and e-banking adoption. another objective of this study is to measure the indirect relationship (mediation) of customer satisfaction between the direct relationships of customer attitude towards e-banking, e-service quality, perceived ease of use, perceived usefulness and e-banking adoption. this study used quantitative research methodology. the data for the current study was collected from 250 employees working in several banks of south punjab, pakistan through questionnaires. the data was analyzed through spss and smart pls 3.0. the results of this study found a significant positive relationship among customer attitude towards e-banking, e-service quality, perceived ease of use, perceived usefulness with e-banking user satisfaction and e-banking usage. the result of this study also supported the partial mediation of e-banking user's satisfaction among customer attitude towards e-banking, e-service quality, perceived ease of use, perceived usefulness and e-banking usage. the results of this study indicated that to meet the challenges, the bank should spread their services, computerize their procedures and functions through use of e-banking services, this will increase their customer satisfaction and e-banking usage. this study recommends to the banks that they should focus on their customers when designing e-banking systems.

key words: customer satisfaction, attitude towards e-banking, e-service quality, perceived ease of use, perceived usefulness and e-banking adoption.

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Introduction

Use of e-banking services through information technology has revolutionized the banking practices in today's world. currently, banks provide their services through electronic systems. these systems have provided convenience, security, trust and the ease in operations which helps in fast currency flow in the economy as transactions increase due to the ease in transactions. Pakistani banks have moved towards taking the advantage of this opportunity and flourished through high response of their users. however, many users are still reluctant to adopt this technology for banking purpose despite of large investments in this technology by banks and the potential advantages of this services (ayo et al, 2016). banks are interested to know the factors which can attract the users towards e-banking in Pakistan. as electronic banking is experiencing growth in the Pakistan, it is necessary to identify the important factors behind the adoption of e-banking services. for example, the factors that influence the customer's mind for the adoption of the electronic banking services should be identified. researches on electronic banking in the context of Pakistan are limited and focus some factors related to the macroeconomic conditions in order to analyze the adoption of e-banking (raza and hanif, 2011; mudassir et al. 2016; sabir et al.2014; dar, 2011; bukhari and rahimuddin, 2010). therefore, actual use and practical usage factors of the internet-based banking as a result of cognitive process has been given less attention in previous studies. this study is a modest attempt to fill this gap. this study reviews existing literature on e-banking and examined the factors that affect e-banking usage in Pakistan. this research is concerned with the adoption of e-banking services in the context of Pakistan using technology acceptance model or tam by davis (1989) that have considered perceived ease of use and perceived usefulness. this also focused on e-service quality and attitude towards e-banking that affect the satisfaction of customers and ultimately, leads towards the adoption of e-banking practices (ayo et al.,2016). attitude of the users is considered as most important factor for determining the technology adoption behavior in the developing countries (adesina and ayo, 2010). e-service quality and the satisfaction of customers are some other constructs which the cause of developing support in the technology adoption model are. organizations always look for improving the efficiency through incorporating high quality services through their operations and target is to achieve the satisfaction of customers. technology acceptance model is the most accepted model for predicting the consumer behavior in adopting technology davis (1989). according to geller et al. (2002), e-service quality is a major determinant of long-term benefit in the modern era. an easy and user-friendly service

with rich and interesting content gets the customers approval and attracts the customers to use the service again. on the other hand, poor service quality will be generating lower interest of the customers to use and thus, they will develop negative feeling for the technology like e-banking service adoption. thus, high e-service quality will develop higher satisfaction and therefore, more frequently usage of the technology will be noted by users..

Based on the above discussion, the objectives of the current study are: to measure the direct relationships of e-banking user attitude, e-service quality, and perceived ease of use, perceived usefulness and customer satisfaction with e-banking usage of customers and also measure the mediation of customer satisfaction between each antecedent (e-banking user attitude, e-service quality, and perceived ease of use, and perceived usefulness) and e-banking usage.

Literature review

E-banking was emerged in 1980s and started to expand in different countries in 1990s. internet banking reduces time consumption and money wastages to organize different things, it increases profits and increases convenience for the customers. Pakistani banks are now moving towards internet banking. some of them have adopted e-banking while some banks are adopting with their new policies towards it. its time and cost saving benefits are the motives behind its adoption by the banks. Banks in Pakistan started opening online branches in 2006 which integrated the entire banking system. banking sector in Pakistan is growing and this growth is also increasing e-banking. in the year of 2000, many regulations and improvements were introduced in the financial sector of the country which restructured the banking systems. state bank of pakistan (sbp) has implemented strict policies for the banks to control and regulate the financial flow in the country

individual attitude and use of technology

previous scholars have endorsed various antecedents of behavior. technology acceptance is related to perceived usefulness, easiness and other benefits from user adoption of information systems (davis, 1989; rogers, 1995). where the individual undertakes a series of events considerable through a favorable or an initial view of the basic knowledge for innovation throughout the formation to adopt the position of either side by a judge or reject, and through finally the adoption of innovation, which was adopted (rogers, 1995).

In extant literature, the study of seth et al. (2005) has identified the important research issues such as attitudes, expectations, and intentions of the service provider that concern about the concept of

service quality. technologies play an important role in the service sector in modern economies, however, academic researchers directed efforts to measure the customer's perceived service quality, but they are unable to understand how service quality contribute to customer satisfaction. there are studies that have found positive relationship between customer attitude towards adoption of technology and use of technology in the form of attitude and intention to use digital product (khalfan, asani, & adigun, 2013; davis, 1989).

Electronic service quality

Electronic services are the provision of services through the use of internet. the fact that the services provided poses some of the challenges of providing online service. the service staff and missing contact between the customer and the service is completely change the delivery setting. the quality of e-service is defined as the overall customer evaluation and decision-making service the market's default delivery (santos, 2003). good quality of internet service makes it easier for customers to compare the services offered by various traditional channels (santos, 2003).

The importance of providing high-quality e-services has been recognized by many companies, but the question is, how the quality of services through internet can be measured in reality? the study of zeithaml(2002) define the concept of quality services through its seven service attributes namely security, location, integrity, status, availability, and train services. lehtinen&lehtinen (1982) explain service quality based on three points; physical quality, interactive quality and size. quality refers to the solid content of the service, the interaction between the customer and the employee, the quality of the interaction between the company, including the provision of quality service. the positive corporate image affects the customer's view. in addition to service quality, customer satisfaction and service organization is an important part of the standard service (cronin and taylor, 1994; spreng and mackoy, 1996).

Perceived ease of use and satisfaction and e-banking usage previous studies have shown that perceived as ease of use affect electronic usage satisfaction (lin, 2008). davis et al. (1989) argued that improved ease of use leads to business performance. in addition, social status through electronic media improve the use of electronic banking services as compare to traditional banks. previous studies have confirmed comparative advantages (taylor and todd, 1995). meuter et al., (2000) showed that users choose to use technology to save time or to avoid direct contact those providing the services.

Previous studies have investigated the use of mobile service for internet banking. for instance, laforet&li (2005) investigated the impact

of attitudes, drivers, motives and culture of users on the adoption of online banking in china. another study of khalfan et al., (2006) measured the impact of e-banking usage among the oman users. the study found that privacy and data security are the major obstacles in using online banking while senior management support factors are barriers to the use of e-business applications. nasri and charfeddine (2012) study factors such as security, privacy, perceived benefit, self-efficacy, technology support, attitudes and social norms, sensible behavioral control and intention that affect the adoption of online banking. there are studies that have found that effectiveness, social quality and social risk factors influence the adoption of mobile banking services and their satisfaction (riquelme & rios, 2010).

Perceived usefulness and customer satisfaction

Perceived usefulness concept is defined as the perception of individuals regarding a technology that whether its usage will be acceptable or not (lin, 2008). previous researchers have found that perceived usefulness has positive relationship with customer satisfaction (davis, 1989; ajzen and fishbein, 1980)). davis (1989) argued that perceived usefulness is positively related with business performance (arbaugh, 2000; chiu et al., 2009; lin, 2008).

Customer satisfaction and e-banking usage

In a highly competitive marketplace, the company competes in order to satisfy its customers. studies have identified that customer satisfaction leads to increased customer loyalty and is a key for successful organization. many people believe that the banking sector have not a standard to measure and defined quality of banking service (anderson & sullivan, 1993; boulding et al., 1993). satisfactory service is the result of perceived value of the customer. customers evaluate their results according to their own experience and the expectations of service (williamson, 1993). customer satisfaction is the result of a customer's value received from the service or processing provider (chiuet al., 2004).

hypotheses

h1: e-banking user attitude has positive effect on their e-banking user satisfaction.

h2: e-service quality is positively related with e-banking user satisfaction.

h3: perceived ease of use has a positive effect on e-banking user satisfaction.

h4: perceived usefulness has a positive effect on e-banking user satisfaction.

h5: e-banking user satisfaction has positive effect on e-banking usage.

h6: e-service quality is positively related with e-banking e-banking usage.

h7: perceived ease of use has a positive effect on e e-banking usage.

h8: perceived usefulness has positive effect e-banking usage.

h9: e-banking user satisfaction mediates the relationship between e-banking user attitude and e-banking usage.

h10: e-banking user satisfaction mediates between e-service quality and e-banking usage.

h11: e-banking user satisfaction mediates between perceived ease of use and e-banking usage.

h12: e-banking user satisfaction mediates between perceived usefulness and e-banking usage.

Research methodology

The primary data was collected from users of banks using e-banking service in Pakistan by using social media sources like Facebook, WhatsApp. The researcher has collected back 314 questionnaires that were used for further analysis using SPSS and Smart PLS 3.6.2.

Measurement of variables

In this study attitude towards e-banking, e-banking usage satisfaction and e-banking usage were adapted from the study of Ayo et al., (2016), e-service quality were adopted from the study of Chui et al. (2012), perceived ease of use and perceived usefulness were adopted from the study of Koufaris (2002).

Result and analysis

Descriptive statistics

Table 1 demographic information of the study

characteristics	number	percent
gender of the respondents:		
male respondents	204	65%
female respondents	110	35%
age of the respondents:		
less than 20	11	3.50%
21 to 30	189	60.19%
31 to 40	45	14.33%
41 to 50	26	8.28%
51 to 60	11	3.50%
above 60	32	10.19%
education:		
primary school	0	0%
high school	12	3.82%
university graduate/ polytechnic degree	198	63%
post graduate degree	104	33%

Table 1 described the respondents profile showed that majority of the respondents were male having 65% portion in their sample size. majority of age group in the sample was 21 to 30 having 60.19%. most of the respondents (60%) were graduate degree in this study.

Outer model measurement

Table no.2 measurement model analysis

variables	factor loadings	cronbach's alpha	composite reliability	ave
attitude towards e-banking		0.70	0.75	0.52
atb1	0.750			
atb2	0.734			
atb3	0.688			
e-service quality		0.84	0.81	0.58
esq1	0.728			
esq2	0.783			
esq3	0.774			
perceived ease of use		0.74	0.84	0.54
pe1	0.811			
pe2	0.745			
pe3	0.735			
perceived usefulness		0.90	0.95	
pu1	0.752			
pu2	0.786			
pu3	0.775			
e-banking usage		0.78	0.73	0.573
satisfaction				
s1	0.730			
s2	0.752			
s3	0.788			
e-banking adoption		0.71	0.70	
eba1	0.747			.60
eba2	0.833			
eba3	0.750			

The reliability measured through factor loading values fulfilled the acceptable criteria as the reported values were higher than 0.6 (hair et al., 2016). all the cronbach's alpha values were greater than 0.70 that have confirmed internal consistency between the variables. the composite reliability values have fulfilled the acceptable criteria. discriminant validity is measured through cross loading and fornell-larkcer test respectively provides satisfactory results.(hair et al., 2016).

inner model results

Table 3: r square results

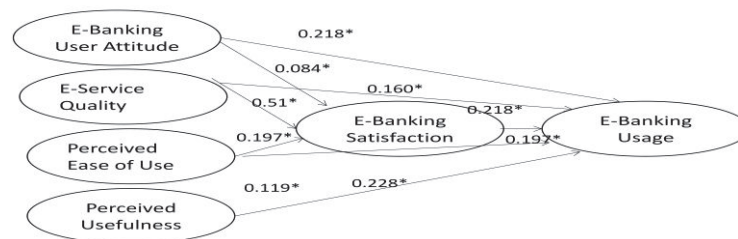
	assessment	r square
e-banking adoption	moderate	0.725
satisfaction	moderate	0.586

these values are categorized as 0.25 = weak ,0.50 = moderate, 0.75 = strong(hair et al., 2016). in this study, r² indicated moderate predictive accuracy as the values range from 0.58 to 0.72(hair et al., 2014)..

Table 4 results of study

hypothesis	variable paths	path coefficient	t-values	p-values
h1	attitude towards e-banking ->e-banking satisfaction	0.084	4.429	0.000
h2	e-service quality ->e-banking satisfaction	0.51	3.130	0.002
h3	perceived ease of use ->e-banking satisfaction	0.197	4.944	0.000
h4	perceived usefulness ->e-banking satisfaction	0.119	2.583	0.010
h5	e-banking satisfaction -> e-banking usage	0.180	7.729	0.000
h6	attitude towards e-banking -> e-banking usage	0.218	3.56	0.000
h7	e-service quality ->e-banking usage	0.160	4.66	0.000
h8	perceived ease of use -> e-banking usage	0.197	6.58	0.000
h9	perceived usefulness -> e-banking usage	0.228	5.56	0.000

table 4 reported the results of the hypothesized direct relationships among the variables through path coefficient, significance (t-values) and probability values (p-values). path coefficients are the estimates of proposed relationships between the constructs. the results indicated that the tested path coefficient values for hypothesized relationships showed a positive relationship among the variables. t-value higher than 2.58 with p value greater $p < 0.01$ showed significant relationships. in this study, the relationship are significant as t-values are higher than 2.58. thus, the hypotheses are significant as showed in table 4.



Note: * the results are significant at $p < 0.01$

Figure 1 results of the study

Mediation analysis

As e-banking satisfaction measured a mediator in the model of the study, results for mediation analysis were reported in table 5. the results showed

that the hypothesized mediation of e-banking satisfaction has partial mediation among the relationship.

table 5: results for mediation analysis

hypotheses	paths	indirect	total	vaf	t-value	result
h9	attitude towards e-banking -> e-banking satisfaction> e-banking usage	0.249	0.508	0.49	5.270	partial mediation
h10	e-service quality -> ->e-banking satisfaction> e-banking usage	0.251	0.409	0.61	5.465	partial mediation
h11	perceived ease of use -> -> e-banking satisfaction> e-banking usage	0.234	0.389	0.60	5.347	partial mediation
h12	perceived usefulness -> -> e-banking satisfaction> e-banking usage	0.045	0.156	0.29	5.433	partial mediation

vaf= variance accounted for.

Discussion and conclusion

This study has examined the impact of the variables namely attitude towards e-banking services, e-service quality, perceived ease of use and perceived usefulness on the e-banking usage as adoption of e-banking. more specifically, the technology acceptance model variables includes customer attitude towards e-banking services, e-service quality, perceived ease of use and perceived usefulness were hypothesized to have positive relationship with e-banking satisfaction. this satisfaction is hypothesized to affect the e-banking adoption.

The results of current study showed that tam factors found to have significant positive relationships with e-banking satisfaction and e-banking usage behavior. this indicated that when users feel that technology is easy, beneficial to use, and they feel quality in service is good, this in turn increase their satisfaction to use that service and technology and then they use that technology. this can apply to e-banking usage or adoption behavior in this case. this study found a significant positive relationship of attitude towards e-banking and e-banking satisfaction and e-banking usage. the results showed that users' positive attitude towards e-banking increase individuals e-banking satisfaction and e-banking usage. this study also found significant positive relationship of e-service quality with e-banking satisfaction and e-banking usage. the results indicated that e-service has good quality, then customers will be more satisfied. the results of this study confirmed the results of rogers (1995) that e-banking systems delivers high value to the

customers that in turn increase their satisfaction and usage behavior. this showed the importance of e-service quality in the technological oriented service organizations. the study also confirmed the results of davis (1989) that tam factors increase satisfaction of a customer. this implies that when customer feel more benefits and ease of use for using this technology, then he becomes satisfied while using that technology. the results of this study indicated that banks are actively follow tam factors that affect customer satisfaction because satisfaction leads to the actual use of a technology. in this study, the satisfaction is found to be affecting e-banking adoption. the results indicated that majority of bank customers are attracted towards the usage of e-banking. moreover, the banks can attract more customer by offering wide range of quality e-banking services for several type of customer. the banks can offer their services by keeping in view the types of bank accounts, it will help the banks to figure out the nature of banking usage by the people. when the quality of the e-service banking increases, then customers are more likely to use the online services of banks as they are more likely to develop customer satisfaction. the major challenge for the banks is to design such services which should be sufficiently fulfil and meet the customer's satisfaction and expectations.

Research limitations and future direction

There are some limitations to this study which limits its scope. firstly, this research has investigated e-banking practices only on 314 samples. this model can be tested on greater sample to increase the generalizability of the results. secondly, the respondents of this study were mainly from the big cities who are educated people, its generalizability is limited as the persons from less developed areas don't use this technology too much. thirdly, this study collected cross-sectional data while future studies can focused on longitudinal data.

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