

PRIMARY RESEARCH

Ease of use and Awareness to use as a Predictor of Confidence in E-Banking Leading to Adoption of E-Banking: The Case of Islamic Banks in Pakistan

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Abstract. In E-banking the customers' role is critical and important. Their inclination towards e-banking is of high importance to the banks as well. This study explored the behaviour of individual customers for their adoption of e-banking considering ease of use and awareness provided by the Islamic banks in Pakistan. Data was collected from 300 individuals. Process by Hayes (2012) was used for analysis. Results show that mediating role of confidence on e-banking between the relationship of ease of use and adoption of e-banking is significant. Variable of confidence on e-banking mediates the relationship between dependent and independent variable. The second mediating role of confidence in e-banking mediates the relationship between relationship of awareness to use and adoption of e-banking. This study has critical implications for the Islamic banks in Pakistan that they need to facilitate and create awareness among customers to go for adoption of e-banking which will not only be convenient for customers but would be resource saving for the banks.

KAUJIE Classification: I1, P1, V12

JEL Classification: G21, Z12

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INTRODUCTION

Banks play an important role as financial intermediaries in any economy and thus have a significant effect on economic development. They collect saving and convert them into investment. Efforts have been under the way during last 40 years to introduce Islamic banking in almost all regions of the world. In Pakistan, Islamic Banking Institutions (IBIs) covered around 15% of entire banking deposits and assets during 2002-2018 (SBP, IBB-Oct-Dec,

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2018). Over the last few decades, due to globalization and financial liberalization banks are facing challenges. The challenge is becoming severe with increasing technological development over the last decade. In response to these challenges the banks tend to expand their choice of services offered to the customers and increase their dependence on technology (Al-Smadi, 2012).

The effect of technological evolution on banks is very significant; competition between the banks forced them to find new markets for expansion. There are other financial institutions who offered electronic banking products. So, it is important for the banks to start electronic banking services to improve the effectiveness of distribution channel through reducing the transaction cost and expedite the speed of services. Now a days E-banking has become a way for the banks to develop the banking system, and its role is increasing rapidly in many countries. It provides opportunity to create services processes which need lesser internal resources and low cost. Moreover, it is easy for the banks to reach more customers. From the view point of the customers, e-banking allows customers to access financial services easily and save their time in managing their finance (Almazari & Siam, 2008; Tan, 2000).

The emergence of e-banking has provoked many banks to develop their information technology and marketing strategies in order to stay in competition. According to Venkatesh, Morris, Davis, and Davis (2003) the success of implementation of information system is dependent on the extent to which such system is used and ultimately adapted by the potential customers. In case the customers are unmotivated to use the information system, it is not considered the success of information system and ultimately might not bring any benefit to the organization.

In recent years, technological developments have reached at their peak and led to the development of the online banking system. Islamic banks are also adopting the technological innovation to facilitate their customers. According to Mehmood and Shah, (2006), E-banking began to grow in early 1990s. E-banking in Pakistan was first introduced by the City Bank and it played an important role in promoting E-banking in the country. E-banking has shown a significance growth in recent past years in Pakistan. A 32% rise in e-banking has been observed and reported by State Bank of Pakistan over the last decade.

The ease of use is an important factor regarding adoption of e-banking technique. Copper (1997) suggests that the more the website of any bank is friendly and easy to use, the more customers are willing to adopt e-banking. Ease of use depends upon that how much the software is user friendly and how the design of website motivates its customers to use any bank's services. Rogers and Shoemaker (1971) explains that the customers are willing to accept or refuse any service offered by an institution as long as they are fully aware of the service or the product.

In Pakistan, the main steps have been taken to promote Islamic banking since 2002 when the policy of transforming the whole banking system of the country was replaced with the new policy of developing Islamic banking working in parallel with the interest based banks. Since then Islamic banking is becoming increasingly popular among people in all parts of the country. As of December 2018, 5 full-fledged Islamic banks and 17 stand-

alone segments of the conventional banks were offering Islamic banking services in country through 2851 branched in 113 districts in the country. They are providing a variety of Islamic products to people both on deposits and financing sides. They are helping people to meet their financial requirements by offering products like *murābahah*, *mushārahah*, diminishing *mushārahah*, *muḍārahah*, *salam*, *istiṣnā'*, *ijārah* etc. People avail these products due to religious and economic benefits (Gait & Worthington, 2008).

According to Cheah *et al.* (2011) certain factors like perceived usefulness and perceived ease of use of software and website are considered as pillars while studying the adoption attitudes of customers regarding e-banking. Khan, Khan, and Iar (2017) studied factors like convenience, trust, perceived ease of use, perceived usefulness, social influence, gender and age and their impact on utilization of e-banking technique by the customers of Malaysia. Pikkarainen, Karjaluoto, and Pahnla (2004) suggested that adoption of e-banking technique by customers could be predicted by using technology acceptance model as proposed by Davis (1989). According to this study, customers' behaviours regarding acceptance of new technologies was studied. The factors affecting intentions of customers to adopt online banking were studied. There are other factors like social influence and confidence on e-banking which must be studied in a way that their involvement could lead to the positive or negative effect on adoption of e-banking. Such factors might affect the utilization of e-banking technique by the consumers. This study adds on to theoretically missing link identified by Khan *et al.* (2017).

LITERATURE REVIEW

With the development of information technology, many new business dimensions have been introduced playing significant important role in changing the nature of banking services. The banks have experienced rapid changes in their conduct (Laukkanen & Pasanen, 2008). In the past, banks used IT only to manage their internal business activities and to promote their product and services. Recently, IT services are used to serve the customers (Puklavec, Oliveira, & Popovic, 2014.). E-banking services increase the satisfaction and retention of customers and reduces the operating cost (Nui Polatoglu & Ekin 2001). This study is focused on impact of perceived ease of use, awareness on use and the confidence of customer on e-banking.

Perceived Ease of Use and Adoption of E-Banking

Earlier the banks had been using their websites for providing information regarding their products, services, charges, growth etc. But with the evolution of new technology and competition, banks are now using their website for transactional purposes also. E-banking facilities are now being enjoyed by customers that include services like ATM, payment of bills, transfer of money, Accounts statements etc. E-banking is considered vital for the long term working of banks in the world of online banking. It has been seen that e-banking facility is fully functional and productive in developed countries, but lacks in certain aspects in developing countries like Pakistan because of lack of competitive I.T. industry. Past studies

have shown a significant relation between perceived ease of use and adoption of e-banking facility (Chau & Lai, 2003; Venkatesh *et al.*, 2003). Wang, Wang, Lin, and Tang (2003) considered perceived ease of use as a key element in determining the adoption behaviour of customers.

According to Chung and Kwon (2009) the online banking customer does not have much physical interaction with the bank. All the dealing takes place with the assistance of internet. So, in this respect, an easy and user friendly website would aid in building a strong relationship between banks and the customers. In literature, there are mixed evidences; according to Amin and Isa (2008), when the website of the bank is easy to use the more customers would adopt e-banking. However, Eriksson, Kerem, and Nilsson (2005) suggest that factor of perceived ease of use has an insignificant impact on adoption of e-banking technique. Maduku (2013) proposed that a system relatively easier to use by the customers is largely adopted by people. Simple and easy to understand websites are preferred by customers. The proposed hypothesis is as follows:

H1: Perceived ease of use leads to adoption of e-banking.

Awareness to Use and Adoption of E-Banking

Rogers and Shoemaker (1971) explain that while choosing for any service provided by any bank or making decision regarding adoption of e-banking service, customers usually wish to be aware of that particular service. They keep themselves updated and manage to get required knowledge regarding any service before making final decision about its adoption.

Pikkarainen *et al.* (2004) suggest that decision of customer regarding adoption of e-banking services depends mainly upon the extent of knowledge and information which the customer possess regarding it. Whenever any customer accesses any website, detailed information about the products offered should be available to him. Such websites that are comprehensive in all respects will be preferred by the customers with regard to adoption of e-banking. Cai, Yang, and Cude (2008) explain that users must be aware of certain items like easy access, maximum information, time, etc that will readily affect their decision of adoption of any e-banking service. Maduku (2013) and Pikkarainen *et al.* (2004) indicated that customer's awareness, trust on online banking system and perceived self-efficacy combined with perceived usefulness and easiness to use are considered as important factors in adoption of e-banking services in South Africa. The proposed hypothesis is as follows:

H2: Sufficient awareness about any products leads to adoption of e-banking.

Confidence and Adoption of E-Banking

Elements of trust and confidence are also considered important for the customers while they are choosing for any service provided by any bank. Amin and Isa (2008) suggest that confidence on Islamic banks lies in the sense that they are truly following the Sharah rules and regulations, which ultimately builds customer's trust on that institution providing service. According to Chau and Lai (2003), certain factors like ability, compassion and integrity constitute the building blocks of the element of confidence among the customers on working of e-commerce. Bittner and Hubbert (1994) exhibited that confidence and trust of

customer on e-banking could be enhanced by pondering on certain factors like the ability of service provider to provide the commodities or services which are required or agreed, and the promise of the service provider to enhance the quality of the products being provided., if the quality of the products are not matched with the demand of the buyer, and the most important is to keep the personal data and information of the buyer confidential and secure.

Factors like reputation of the bank, awareness among customers regarding use of website and past experience with the bank are considered as important in constituting the confidence in customer and exhibiting the positive relationship between confidence and e-banking (Cai *et al.*, 2008). The proposed hypothesis is as follows:

H3: Perceived ease of use leads to confidence on e-banking.

H4: Awareness to use leads to confidence on e-banking.

H5: Confidence on e-banking leads to adoption on e-banking.

H6: Confidence on e-banking mediates the relationship between perceived ease of use and adoption of e-banking.

H7: Confidence on e-banking mediates the relationship between awareness to use and adoption of e-banking.

RESEARCH METHODOLOGY

In this research, measurement of variables is done by taking the responses of customers of Islamic banks of Pakistan, using e banking or not. In order to study these variables, researchers contacted the customers personally to fill the questionnaires. Questionnaires has been used order to determine the effect of related variables as has been done for the previous researches. This technique also saves cost and time of both respondents and researcher.

This study used convenient sampling because the population is large and unknown. Questionnaires were distributed among 400 customers as per guideline provided relevant to sample size by Sekaran and Bougie (2016). Some questionnaires were incorrectly filled while some not returned. Only 300 questionnaires were found usable on which research was conducted.

All of the study variables have been measured on a 5-point Likert scale ranging from Strongly Disagree = 1 to Strongly Agree = 5. Adoption of E-banking is measured using 5-items scale which is developed by (Mehmood & Shah, 2006). One sample item is "E-banking facility will support customers." Perceived Ease of Use is measured by using 4-items scale which is developed by Maduku (2013). One sample item is "I think it is easy to learn how to use Internet banking." Awareness to use is measured by using 4-items scale which is developed by (Al-Somali & Gholami, 2009). One sample item is "I receive enough information about electronic banking services." Confidence is measured by using 4-items scale which is developed by (Bomil Suh, 2003). One sample item is "The messages I receive are transmitted from the real site from which I want to receive from."

TABLE 1
Reliability of Scales

Variable	Reliability of Scale
Ease of Use	0.872
Awareness to Use E-banking	0.802
Confidence in E-banking	0.863
Adoption of E-Banking	0.894

Data analysis carried out in this study is based on the following: The mediation analysis has been done as proposed by Preacher and Hayes (2004). Since for regression analysis large samples are required, this study adopted bootstrapping to derive better and reliable estimates (Effron & Tibishirani, 1993). The power problem of asymmetry and non-normal sampling distributions of an indirect effect is subdued by the bootstrapping strategy of confidence intervals. Further, the study used the Hayes, (2009) model 4 for examining the afore-mentioned desirable hypotheses. For this purpose, regression analysis is done and results are deduced accordingly.

RESULTS

- Ease of Use and Adoption of E-Banking.
- Ease of Use and Confidence in E-Banking.
- Confidence in E-banking and Adoption of E-Banking.
- Mediating Role of Confidence in E-Banking between Ease of Use and Adoption of E-Banking.

TABLE 2
Mediating Role of Confidence on E-Banking between Ease of Use and Adoption of E-Banking

Paths		SE	T	P	LL99%CI	UL99%CI
	Direct and total effects					
Path C, total effect	0.57	0.05	11.33	0.00	0.47	0.67
Path a	0.42	0.05	8.05	0.00	0.32	0.52
Path b	0.27	0.05	4.96	0.00	0.16	0.38
Path C', showing mediation	0.46	0.05	8.57	0.00	0.35	0.56
			B	SE	LL99%CI	UL99%CI
			Indirect effect using bootstrap			
			0.11	0.04	0.05	0.19

N = 300, unstandardized coefficients of regression have been reported. Bootstrap Sample size = 5,000. LL = Lower Limit; CI = Confidence Interval; UL = Upper Limit

The Table 2 shows that when we look at path 'c', which is basically representing impact of Ease of use on Adoption of e-banking in the absence of mediating variable Confidence on e-banking, thus it can be justified as main effect relationship between Independent variable and dependent variable, the values ($\beta = 0.57, t = 11.33, p < .01$) of this relationship support hypothesis H1. Ease of use leads to Adoption of e-banking.

Path 'a' represents the relationship between Ease of use and Confidence on e-banking. It is basically the relationship between independent variable and the mediating variable; the values ($\beta = 0.42, t = 8.05, p < .01$) show that the relationship between Ease of use and Confidence on e-banking is significant and positive. Thus supporting hypothesis H3 Ease of use leads to Confidence on e-banking.

Path 'b' represents the relationship between Confidence on e-banking and Adoption on e-banking, it is basically the relationship between mediating variable and dependent variable, the values ($\beta = 0.27, t = 4.96, p < .01$) show that the relationship between Confidence on e-banking and Adoption of e-banking is significant and positive; thus supporting hypothesis H5 -Confidence on e-banking leads to Adoption of e-banking.

Path C' represents the direct effect relationship of independent variable ease of use and dependent variable Adoption of e-banking when mediator Confidence on e-banking is part of the model. The values ($\beta = 0.46, t = 8.57, p < .01$) show that the relationship is significant when the mediating variable Confidence on e-banking is playing its part. But the values of indirect effect ($\beta = 0.11, LL99\%CI = 0.05, UL99\%CI = 0.19$) show that mediation of Confidence on e-banking exists between the main effect relationship of Ease of use and Adoption of e-banking.

As per the findings of direct effect Path C and Indirect effects it can be concluded that hypothesis H6 - Confidence on e-banking mediates the relationship between Ease of use and Adoption of e-banking is supported Partially with regard to path a, path b are significant but path C is also significant and the indirect effect is significant with no zero value in lower level and upper level confidence intervals.

The results show that path C' is significant with lower beta value and indirect paths are significant, the mediation is partially valid (Hayes, 2009; Shrout & Bolger, 2002). As we can see that in path C' the value of coefficient has become less in comparison to the total effect. Thus this relationship is partially mediated.

- Awareness to Use and Adoption of E-Banking.
- Awareness to Use and Confidence in E-Banking.
- Confidence in E-banking and Adoption of E-Banking.
- Mediating Role of Confidence in E-Banking between Awareness of Use and Adoption of E-Banking.

TABLE 3

Mediating Role of Confidence on E-Banking between Awareness to Use and Adoption of E-Banking

Paths	B	SE	T	P	LL99%CI	UL99%CI
	Direct and total effects					
Path C, total effect	0.07	0.03	2.09	0.04	0.00	0.13
Path a	0.15	0.03	4.47	0.00	0.08	0.21
Path b	0.27	0.05	4.96	0.00	0.16	0.38
Path C', showing mediation	0.03	0.03	0.85	0.39	-0.04	0.09
			B	SE	LL99%CI	UL99%CI
			Indirect effect using bootstrap			
			0.04	0.02	0.02	0.10

N = 300, unstandardized coefficients of regression have been reported. Bootstrap Sample size = 5,000. LL = Lower Limit; CI = Confidence Interval; UL = Upper Limit

The Table 3 shows that when we look at path c, which is basically representing the impact of Awareness to use on Adoption of e-banking in the absence of mediating variable Confidence on e-banking, it can be justified as the main effect relationship between Independent variable and dependent variable; the values ($\beta = 0.07, t = 2.09, p < .01$) of this relationship support hypothesis H2-Awareness to use leads to Adoption of e-banking.

Path a represents the relationship between Awareness to use and Confidence on e-banking. It is basically the relationship between independent variable and mediating variable; the values ($\beta = 0.15, t = 4.47, p < .01$) show that the relationship between Awareness to use and Confidence on e-banking is significant and positive. This supports the hypothesis H4 Awareness to use leads to Confidence on e-banking.

Path b represents the relationship between Confidence on e-banking and Adoption on e-banking, which is basically the relationship between mediating variable and dependent variable. The values ($\beta = 0.27, t = 4.96, p < .01$) show that the relationship between Confidence on e-banking and Adoption of e-banking is significant and positive; thus supporting hypothesis H5 - Confidence on e-banking leads to Adoption of e-banking.

Path C' represents the direct effect relationship of Independent variable Awareness to use and Dependent variable Adoption of e-banking when mediator confidence on e-banking is part of the model. The values ($\beta = 0.03, t = 0.85, p > .01$) show that this relationship is insignificant when the mediating variable confidence on e-banking is playing its part. But the values of Indirect effect ($\beta = 0.04, LL99\%CI = 0.02, UL99\%CI = 0.10$) show that mediation of Confidence on e-banking exists between the main effect relationship of Awareness to use and Adoption of e-banking.

As per the findings of direct effect Path C' and Indirect effects it can be concluded that hypothesis H7 Confidence on e-banking mediates the relationship between Awareness to

use and Adoption of e-banking. It is supported with full effect as path a and path b are significant. Path C' is insignificant and the indirect effect is significant with no zero value in lower level and upper level confidence intervals.

The results show that path C' is insignificant with lower beta value, while indirect paths are significant and the mediation is fully valid (Hayes, 2009; Shrout & Bolger, 2002). As we can see that in path C' the value of coefficient is less and insignificant in comparison to the total effect, hence this relationship is fully mediated.

DISCUSSION

The research results show that perceived easiness is magnitude wise exceedingly, significantly and positively related to the adoption of e-banking. Same is the case for the confidence on e-banking with significant P value. Based on the above results, the hypothesis H1 that Perceived ease of use leads to Adoption of e-banking is accepted. This result is in consistence with the past studies which exhibit a significant relationship between perceived ease of use and adoption of e-banking (Chau & Lai, 2003; Venkatesh *et al.*, 2003; Wang *et al.*, 2003). This study also accepts hypothesis H2 that Awareness of use leads to Adoption of e-banking, which is in line with past studies (Pikkarainen *et al.*, 2004). Hypothesis H3 that there is a significant relation between perceived ease of use and confidence on e-banking is also accepted. Hypotheses H4, H5, H6 and H7 are also accepted. A past study also suggests that the easier to use computers, more the customers would be confident while using them, which would in turn make them to adopt e-banking facility (Thornton & White, 2001).

All of the results are justifying the gap identified by Khan *et al.* (2017); Islamic Banks need to create awareness among their customers regarding use of e-banking for making the best use of services for the customers and resource saving for the banks themselves.

LIMITATIONS & DIRECTIONS FOR FUTURE RESEARCH

This study has been conducted considering relatively a small scope of E-banking adoption. It is suggested that more factors like customers' time constraints and customers' convenience with technology may also be studied to elaborate more about E-banking usage. In addition to this study can also be replicated on conventional banks as this research has taken into account only Islamic banks in Pakistan.

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