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Factors Affecting Customers' Adoption of Internet Banking in Pakistan

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Abstract: *Unlike many developed countries, internet banking is a new phenomenon for Pakistani consumers as majority of banking customers seems to be fairly unfamiliar with different aspects of this service. This can be due to the diverse educational backgrounds, level of internet access, personal experiences and different socio-cultural backgrounds of customers. The present study looked at various factors influencing adoption of internet banking in Pakistan. The study used survey methodology with a sample of 250 individuals. Results of the research revealed reluctance to change has no significant impact on adoption of internet banking. On other hand access to internet, ease of use and security and privacy are found to be critical factors influencing adoption of internet banking. The results of the present study may facilitate policy makers and bank management to advance electronic banking services in Pakistan in a befitting manner. Lastly, managerial implications, study limitations and future research directions are provided.*

Keywords: Internet Banking, Customers Adoption, Reluctance to Change, Ease of Use, Security and Privacy, Banks, Pakistan.

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1. Introduction

One of the major developments in banking sector of contemporary age is online banking through which banks can deliver information and a variety of services to their customers (Daniel 1999). Internet banking is acting as an electronic interface between customers and service provider and is an alternative channel of distribution of banking services (Bradley and Stewart, 2003; Hua, 2009). Banks have developed sophisticated web-based solutions for their retail customers (Aladwani, 2001). These web-based internet banking solutions have not only provided better customer services and retention of customers but have also reduced operating costs of banks such as reduction in branch networks and reduced operating and human resource costs (Parisa, 2006; Alam et al 2009; Ragoobur & Ayrga, 2011). Previous research has highlighted that flexibility, ease of transactions and avoidance of queues and restrictive branch operating hours encourage customers to adopt internet banking. Thus, online banking has helped traditional banks in retaining and improving customer services, alongside reducing administrative and operating costs and improving overall competitive positions (Khalfan et al., 2006; Almogbil, 2005; Al-Somali et al, 2009).

In many developed countries growth has been experienced in banking sector due to evolution of internet banking in last two decades (Parisa, 2006; Alam et al 2009). Huge investments have been made by different banks in interactive information systems in order to provide advanced services to their customers and in return expect increased profits and market share. However, if customers fail to accept or fully utilize such services than the chances of losses from these investments are likely (Yousafzai et al, 2003).

Internet banking is a new phenomenon in Pakistan as majority of banking customers are quite unfamiliar with this service. This could be because of different educational backgrounds, level of internet access, experience and environments (Hua, 2009). Understanding how people perceive online banking may help policy makers, bankers and managers to facilitate the prosperity of the electronic banking in Pakistan. Therefore, this research aims to look into the factors such as, resistance to change, access to internet, customer satisfaction, ease of use and security and privacy influence the adoption of internet banking. The purpose of the study is also to examine which of these factors are more significant in influencing process of adoption.

2. Literature Review

Previous research demonstrates that different factors influence consumers' adoption of internet banking. Internet has transformed the ways of business in modern world. Many organizations have utilized internet and enhanced their businesses across the world (Quelch & Klein, 1996). Banking sector has also benefited from internet technology by delivering information and a variety of services to their customers (Daniel 1999). Internet banking is acting as an electronic interface between customers and service provider and is an alternative channel of distribution of banking services (Bradley and Stewart, 2003; Hua, 2009), providing access to customers at their own convenience (Balachandher et al.,

2000; Suganthi et al., 2001). Literature does emphasize further investigation into the relationship between various factors and internet banking adoption (Black et al., 2002). Lee (2005) further proposes for investigation into consumer decision making related to internet banking adoption. He emphasizes that demographics strongly affect adoption patterns; therefore, different demographic sets should be investigated in this regard.

Behavioral intention has a positive impact on adoption of internet banking. Numerous studies have focused on the behavioral intentions of customers in adopting internet banking. For example, studies have found significant positive relationship between attitude, perceived ease of use, perceived usefulness and internet banking adoption (Tan & Teo, 2000; Celik, 2008; Nor & Pearson, 2008). Internet banking is now considered as one of the important operational activities and a source of multi-channel strategy (Black et al., 2002). However, to bring about growth in internet banking, banks have to address customer concerns regarding internet banking. Thus, banks need to understand the factors that affect customer's adoption of internet banking (Lichtenstein & Williamson, 2006).

2.1 Reluctance to change

Internet banking has gained a prominent position in the banking sector throughout the world. Despite its global acceptance, customers find themselves reluctant in using internet banking. This is due to the fact that customers are mainly concerned with the security and privacy issues. Research points out that internet banking is not only susceptible to normal banking businesses but is also prone to compliance, transactional, fraud, liquidity and reputational risks as well (Nsouli & Schaechter, 2002) and for these reasons customers find themselves reluctant. Ragboor and Ayrga (2011) have also pointed out that customers are reluctant in adopting internet banking as they either not know how to use computers and internet or do not want to use new technologies. Reluctance to change is an index which takes into account the fact that people do not want to opt and use the new technology. In Malaysian Banking context, Lallmahamood (2007) found that perceived security and privacy issues were the most important factors influencing intention to use internet banking. Ragboor and Ayrga (2011) are of the opinion that internet banking is influenced by factors that are unique and exclusive to internet banking than the factors influencing general banking. Some of the customers may feel reluctant to use arms length technology, for example it may be the case that customers are not accustomed to pay bills this way (Fain & Roberts 1997). It may be the case that they might prefer personal customer service than that of self service (Heinonen, 2004). The need for a new complementary service channel may not be seen necessary by all the customers as they remain contented with the traditional banking services provided by their banks (Gerrard & Cunningham, 2003). Functional and technical issues can not explicitly explain the resistance to change (Laukkanen, et al. 2007). In fact it has been observed by Srijumpa et al, (2002) that either satisfaction or dissatisfaction with the internet banking is not tied to technology but adoption is influenced by the personality characteristics of the customers. Research points out that adoption of internet banking is influenced by the personality characteristics of consumers (Dabholkar & Bagozzi, 2002). For example, if customers want personal contact, readiness for adoption of technology driven services is found to be less (Walker et al., 2002). Thus, based on the previous literature, the first hypothesis of the study is

H₁: If customers are reluctant to change then they will not opt for internet banking.

2.2 Access to internet

For provision of web-based technological services, penetration of internet in the population is a pre-requisite. Similarly, for internet driven banking services, internet availability and access is essential. Sathye (1999) points out that extensive availability and access of computer and internet coverage would help in the possible use of internet banking. Durkin (2004) provides evidence that extensive use of internet at work place influences the use of internet banking. It has also been observed that customers having internet access at home are more likely to use internet banking rather than those who do not have access to internet. Overall, the perception of access to internet is found to be highly significant along with the need to have uncontested access (Lichtenstein & Williamson, 2006). Daniel (1999) points out that in UK and Ireland, there is low prevalence of internet banking mainly because customers do not have access to suitable personal computers to be used for internet banking. However, research provides contradictory evidences as well. For example, Ragoobur and Ayrga (2011), in their study observed that internet access at work does not appear to affect significantly the use of internet banking. Similarly, studies do indicate that internet is least cited factor causing any hindrances in the adoption of internet banking. Based on the above discussion, the second hypothesis of the study is

H₂: Customers will adopt internet banking if they have access to internet.

2.3 Customer satisfaction

Satisfaction has been described mostly by researchers as an attitude or an evaluation formed by the customer by analyzing the performance and through making a comparison between their pre-purchase expectations and their subjective perceptions of actual performance (Oliver, 1980). In relationship marketing research, the concept of customer satisfaction and loyalty plays a central role (Christopher et al, 2004). The paramount importance of retaining customers is supported by confirming the relevance of customer's satisfaction leading to customers' loyalty to a firm's profitability (Chen & Hitt, 2002). Many researchers kept the focus of attention and interest upon the close relationship between the service quality and satisfaction of the customer. Internet banking is a dynamic and modernized field so the dimensions of conventional service quality cannot be directly applied on e- banking. Zafar, et al (2011) have pointed out that if customers find themselves satisfied with the online banking services, they will be influenced to adopt internet banking.

Satisfaction and trust were identified as important antecedents of loyalty. User's adoption of online banking is also influenced by online shopping experience of the customers. Drivers such as intense competition, demanding customers and so on are the reason behind increased relationship marketing. This has increasingly attracted the attention of researchers and practitioners (Sheth & Parvatiyar, 2002).

H₃: Customer satisfaction influences customer's adoption of internet banking.

2.4 Ease of use

Perceived ease of use is one of the critical factors that determines the success of internet banking and is also critical for the development and as well as delivery of internet banking services to the customers of internet banking (Al-Hajri & Tatnall, 2008; Sathye, 1999). In a study of electronic banking in United Kingdom and Ireland, Daniel (1999) identifies ease of use as one of the factors for customer acceptance. In terms of customer's perception, perceived ease of use is considered as "the extent to which a customer of internet banking thinks that using the internet banking is free of effort". Adoption of the internet has been observed to be influenced by understanding and ease of use (Cheung et al, 2000). Complexity can be described as the accurate opposite of ease of use in the Technology Acceptance Model, that has been considered as the most important factor. Thus it directly affects the adoption of the internet banking. The lesser the requirement of technical skills the more likely the customer would be to adopt a new technology (Lederer et al, 1999).

Accordingly the adoption of Internet banking is likely to be more when the level of difficulty or complexity of the process of Internet banking is less. However a different trend was observed that no correlation was found between ease of use and Internet technology due to the high visibility of technology (Agarwal & Prasad, 1997). Wang et al. (2003), found that there is a significant positive impact of perceived ease of use on behavioral intentions of internet banking customers. Contrary to above it has been found that perceived ease of use is not positively correlated with internet banking (Pikkarainen et al, 2004). This research indicated that there is no significant affect of perceived ease of use on the adoption and use of internet banking. Sometimes there is a negative image in the minds of customers, regarding computers in general and internet channels in particular (Fain & Roberts 1997).

H₄: Perceived ease of use results into an increased customer's adoption of internet banking.

2.5 Security and Privacy Issue

Security and Privacy is an index used to compute and determine the perceived security and privacy of Internet banking (Taylor & Todd, 1995). It has been supported by research that a major role is played by trust in acceptance and use of the internet banking by the customers, particularly when it is the case of developing countries (Benamati & Serva, 2007). It has been considered very important to build up the trust among customers for online banking adoption. Privacy and security issues are the two critical factors for trust building, which has been considered and pointed out as the top two factors that are manipulating and deploying user's adoption of internet banking. Privacy as well as security is under discussion in academia and in practice (Belanger et al, 2002). Potential damages could be stopped by security concerns, ensuing from insecure transactions, hacking, or poor access control to important data of the customers (Hesson & Alameed, 2007).

In various studies it has been described that winning the trust of customers regarding the problems of security and privacy is a great challenge for the electronic banking sector (Furnell & Karweni, 1999; Bestavros, 2000), as the negative perception of the security of electronic banking seems to remain one of the major obstruction for the adoption of internet banking. Cyber-consumer perception of lack of control over the access, that

others have, to their personal information during online navigation, causes lack of trust (Hoffman & Bateman, 1997). Research has suggested that there is a need to convince the customer about security concerns in the sector of internet banking, as the customer believes that the Internet transaction channels are not protected and can actually be intercepted (Jones et al., 2000).

H₅: If security and privacy concerns are addressed by banks then customers will be attracted towards internet banking.

3. Methodology

For this study, population consisted of banking customers. These customers belonged to various public and private organizations as well as self-employed people. Due to unavailability of the database of all customers and also to protect the confidentiality of customers, banks were reluctant in providing the details of their customers. Therefore, to overcome this impediment, non-probability sampling technique was adopted. Survey instrument was hand delivered to 350 respondents of Rawalpindi and Islamabad. Responses from 320 respondents were gathered. Survey questionnaire was directly administered to participants at their work places. The technique of direct questionnaire administration was adopted to avoid data loss through postal. Email or online method was also not preferred as it would have excluded non-adopters of the internet from the research. Data analysis was conducted on a final set of 250 respondents indicating a response rate of 71.42 percent.

The survey instrument consisted of items that measured the perceptions of the respondents related to different factors that affect adoption of internet banking. The items were measured using 5 point Likert scale and were adapted from various authors as indicated in Table 1.

Table 1: List of Variable Sources

| Variables | Items | Sources |
|---------------------------|-------|--------------------------------------------------------------------------------------------|
| Resistance to Change | 04 | Laukkanen et al, (2007); Pardo & Martinez (2003); Al Somali, et al. (2009) |
| Access to internet | 04 | Ragoobur & Ayrga, (2011); Hoppe et al. (2001); (Laukkanen et al, 2007); Al Somali, (2009). |
| Customer Satisfaction | 04 | Laukkanen et al, (2007); Hoppe et al, (2001); Al Somali, et al. (2009). |
| Ease of use | 05 | Hoppe et al, (2001); Al-Somali et al. (2009). |
| Security and Privacy | 03 | Hoppe et al, (2001). |
| Internet banking adoption | 05 | Anckar & D'incau (2002). |

The instrument was sent for face and content validity. This step was crucial as the items that were used in the instrument were all adapted from previous studies and were reliable as well but these studies were conducted in western settings and thus, were required to be culturally congruent in the developing country context especially Pakistan. The questionnaire was sent to a panel of six experts both in academia and industry to remove

all the ambiguities and difficulties regarding the items so that the questionnaire was easy to understand and to be filled in by the respondents. The length of the items as well as questionnaire was kept appropriate for the ease of respondent as well as to save time.

To check for the internal consistency of items, pilot test of the questionnaire was conducted on a sample of 50 respondents belonging to various organizations. The alpha reliability statistics of pilot study ($\alpha = 0.81$) indicated that the items were internally consistent and the instrument could be used for further data collection. Final data analysis was done on a sample of 250 respondents. The alpha reliability on a data set of 250 respondents was found to be above 0.88.

The questionnaire consisted of two sections: section 1 was related to the demographic profiles of the respondents including a dichotomous item on use of internet. This item was included in order to access the percentage of people who are the users of internet banking as well as the percentage of non-users of internet banking. As the study covers all the banking customers i.e. the users and the non-users of internet banking, for that reason data was collected from the users and the non-users of internet banking in order to find out the possible reasons for adoption as well as non-adoption of internet banking.

The demographics included gender, age, education level and organization of the respondent. Second section of the survey instrument captured the perceptions of the respondents regarding variables of the study. The demographics indicated that 57.2% were male and 42.4% were females. Age categorization revealed that 51.6% were less than 27 years; while 37.2% were between the age 28-37 years; whereas, only 2% were above 48 years of age. In the education category, it was found that majority of the respondents were masters degree holders and 36% had done undergraduate studies. One of the items included in the demographics was related to internet banking measured on a dichotomous scale. The result for this particular item indicated that 75.2% of the respondents did not use internet banking; while only 24.8% of the respondents had used internet banking to some extent.

4. Results and Discussion

Descriptive statistics indicate that variables such as access to internet (mean = 4.22, SD = 0.663), ease of use (mean = 4.023, SD = 0.731), and customer adoption of internet banking (mean = 4.08, SD = 0.651) have been rated towards agreement by majority of the respondents; whereas, variables such as customer satisfaction (mean = 3.92, SD = 0.777) and security and privacy (mean = 3.68, SD = 0.958) have been rated uncertain by majority of the respondents; while variable of resistance to change (mean = 2.20, SD = 0.662) has shown disagreement by majority of the respondents. The results are shown in Table 2.

Table 2: Descriptive Statistics and Correlation

| | Mean | Std. Dev. | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------------|--------|-----------|---|----------|----------|----------|---------|----------|
| 1. Resistance to change | 2.2020 | .66216 | | -0.571** | -0.506** | -0.557** | -0.150* | -0.381** |
| 2. Access to internet | 4.2220 | .66331 | 1 | | 0.683** | 0.678** | 0.432** | 0.621** |
| 3. Customer satisfaction | 3.9287 | .77784 | | | | 0.785** | 0.598** | 0.693** |
| 4. Ease of use | 4.0234 | .73144 | | | | | 0.491** | 0.715** |
| 5. Security and privacy | 3.6880 | .95899 | | | | | | 0.580** |
| 6. CAIB | 4.0848 | .65160 | | | | | | |

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

** shows correlation is significant at the 0.05 level (2-tailed).

CAIB - Customer Adoption of Internet Banking

The correlation matrix for the variables indicates (Table 2) that there exist moderate to strong relationships between the variables. Furthermore, the correlation also indicates that there exists no multicollinearity among the independent variables. Multiple regression results are provided in Table 3.

Table 3: Regression Results

| Variables | R | R ² | Adj. R ² | F-stat | Sig. | B | t-stat | p |
|-----------------------|------|----------------|---------------------|--------|-------|-------|--------|-------|
| Model | .782 | .612 | .604 | 75.896 | 0.000 | | | |
| Resistance to change | | | | | | 0.037 | 0.708 | 0.480 |
| Access to internet | | | | | | 0.185 | 3.083 | 0.002 |
| Customer satisfaction | | | | | | 0.138 | 2.211 | 0.028 |
| Ease of use | | | | | | 0.328 | 5.238 | 0.000 |
| Security & privacy | | | | | | 0.154 | 4.368 | 0.000 |

Dependent: Customer adoption of internet banking

R² value is .612 that shows 61.2% impact independent variables have on variable of interest and 38.8% impact is of other variables that are not discussed in this study so researchers should explore and work on such factors. The value for adjusted R square is very important here as if the value of adjusted R square is less than .30 than inferential statistics cannot be applied on the data. The value of adjusted R square for the current study was computed to be .612 which shows that there exists a significant relationship between the variables. The coefficient of main interest in table 3 is P-value because it shows significant relationship between variables and tells us how confident we can be

that each independent variable has some relationship and significant impact on dependant variable. As it has been shown in the table above that P-value for all the variables is less than 0.05 except resistance to change, that directs to the conclusion that a significant relationship exists between dependent variable and all the independent variables except resistance to change. Only resistance to change do not have any significant impact on adoption of internet banking as P value is 0.48 that is greater than 0.05. This depicts that resistance to change does not play a role in adoption of internet banking and our first hypothesis H1 is rejected.

People resist adopting new technology as they do not know how to cope up with new technology and its applications. Same is the case with adoption of internet banking as people do not know how to use internet banking and how to control the operation of their financial transactions. Resistance to change can also be due to customer inertia, need for personal interaction or technology phobia as demonstrated by Daniel (1999). As more and more customers migrate to Internet banking, the resistance of the remaining customers might disappear (Sathye, 1999).

Possibly one important reason for no significant impact of resistance to change is that the study sample included well educated banking customers, thus these educated customers welcome new technologies and are capable of making use of such technologies. Educated people are more likely to use internet banking facilities as they are more acquainted with a computer and the internet (Ragoobur & Ayriga, 2011). With the increased knowledge and skills, people are no more reluctant to accept the change and new inventions and innovations. The findings of this study are not in support of the findings by Ragoobur & Ayriga, (2011). According to their research reluctance to change is a major obstacle to the use of internet banking that impedes the adoption of internet banking but findings of current research suggest that resistance to change have no significant influence on the adoption of internet banking and is not a major obstacle. The results of current study are in consensus with the results of Rogers (2003) who found that if the adopter of a new technology is having suitable level of education than he/she will be more reactive to new innovation as compared to the non-adopter, so resistance will be less.

Access to internet has significant influence on customer adoption of internet banking as P value was 0.002, thus, our second hypothesis H2 has been accepted. These findings are contrary to the findings of Sathye (1999) who in his study found that access to internet was the least cited of all the factors responsible for non-adoption of Internet banking, because customers have access to Internet, at home or office or both. Lichtenstein and Williamson (2006) concluded that the main issue influencing internet banking was not the computer access but the access to internet, thus the results of this study is aligned with the results of Lichtenstein and Williamson (2006). However, on the other hand it has been observed that internet access does not appear to affect significantly the use of internet banking (Ragoobur & Ayriga, 2011), thus, the results of current study are against the findings of Ragoobur and Ayriga (2011). Internet banking allows customers to access their bank accounts 24 hours a day i.e. all the time so customers need not to visit to banks in banking hours for their transaction. They can access their accounts while sitting at their homes anytime. Internet speed is also found to be very important for the customers.

From the analysis of various tests applied on the sample data it has been proved that there is a positive and significant relationship between customer satisfaction and adoption of internet banking, thus we are in a position to accept our third hypothesis H3. Customers

adopt internet banking if they are satisfied with internet banking services. Customer satisfaction comes from responsiveness and reliability of internet banking services. Responsiveness refers to timely provision of services to customers, and banks offering prompt services will have an edge over banks with delayed service response.

The services of internet banking should be efficient and effective in order to cope with customer perceived expectations from internet banking, in this way the customer will be delighted and will prefer internet banking over traditional system of banking. Resistance to alternatives increases and likelihood of adoption reduces by satisfaction with existing performance (Laukkanen, et al. 2008).

Service quality is a very important factor that leads to customer satisfaction. It is very obvious that when customer finds the quality adequate and good enough to meet his/her demands than a preference gets created in his/her mind regarding the product or service. Same is the case with internet banking that when the provider of internet banking services will provide as well as maintain the quality standards than customer's loyalty will increase and customers will stay fasten to their respective banks. The significant and positive relationship between customer satisfaction and adoption of internet banking is also because of the reason that these days' banks are focusing more towards customer experience management. Best online services are being offered to customers so that banks can retain their customers by providing them better experiences regarding internet banking. People prefer to manage their own financial transactions through online banking that requires better service delivery.

Internet banking services provide better alternatives and options to customers, in terms of fast service delivery rather than long queues for carrying out financial transactions or opening of bank accounts etc. Through internet banking, it is just a click of mouse for the customers to operate their accounts online. As stated in previous researches "the fundamental assumptions are that Internet based services will boost up customer satisfaction and magnify customer retention" (Khalifa & Li, 2003), this study also affirms the same assumption. Other possible reasons for customer satisfaction with internet banking are that internet banking is economical as the cost for internet banking operations is low. Internet banking is also flexible i.e. customers can operate their accounts anywhere and anytime and need not to depend upon third party (bank personnel) for the operations of their accounts.

Ease of use is found to have a significant and strong positive relationship with adoption of internet banking so our fourth hypothesis H4 is accepted, because banking customers consider it more feasible to manage their accounts online rather than visiting banks for carrying out their financial transactions. Internet banking is user friendly that is it is easy to use and does not require lot of mental effort and interaction with online banking website is clear and understandable. Customers consider traditional banking system tiresome and hectic that requires lot of time and personal interaction with banking personnel. On the other hand customers consider internet banking more practicable for them to manage their finances. Ease of use is an important factor that determines adoption of internet banking because if the interaction with online banking services is not clear, understandable and user friendly for the customers than customers will move towards other alternatives and one of the alternatives is traditional banking system. For this reason, internet banking has an edge over the traditional banking system. From the responses of the respondents it has been observed that banking customers are skilled at

using internet banking and overall they expect that internet banking is easy for them to use. Interaction with banking website is very important here because banking customers are more focused towards use of internet banking as banking websites are easy for them to identify with.

Some banks require downloading of software of their websites before Internet banking can be used and customers find it difficult process to access internet banking. The problem of difficulty regarding the use of internet banking can be tackled by appropriate customer education as described by Sathye, (1999). It has been observed in case of products as well as services that if they are not easy to use than people hesitate to use or even abandon to use such products and services. However a different trend was observed that no correlation was found between ease of use and Internet technology due to the high visibility of technology (Agarwal & Prasad, 1997) and research by Alam et al, (2009) also states that ease of use has no significant impact on adoption of internet banking. The results regarding ease of use goes in consensus with research by Ragoobur and Ayrga, (2011) and is against the results of researches by Alam et al, (2009); Agarwal and Prasad, 1997).

Security and privacy concerns are found to be the most significant factor influencing adoption of internet banking as the p value is 0.00, thus our hypothesis H5 is accepted. Security and privacy issues should be adequate and reliable because banking customers are very much concerned about their finances and if they do not feel secure in carrying out their financial transactions via internet banking than they are not going to adopt internet banking. Financial matters are very sensitive matters so complete security should be provided to the customers. Majority of the respondents were satisfied with the security concerns of internet banking in Pakistan and they trust that their account information cannot be tempered by others. To ensure the security of internet banking, an undertaking and responsibility has been included by some banks to indemnify the customer in case of losses incurred via illegal use under certain state of affairs. Customer confidence can be enhanced by taking such steps. In addition, the information of the customer's account should be personalized completely and should not be assessable to others. The results of current study regarding security concerns are aligned with that of Alam et al, (2009) and Hua (2009).

5. Conclusion

Internet has revolutionized the business organizations around the world and financial institutions are no exception to it. Internet banking is a relatively new in Pakistan. Pakistani retail banking sector is becoming highly competitive in provision of services through internet. However, there still remain many hurdles in the adoption of internet banking in Pakistan. The purpose of this study was to investigate the factors that affect internet banking adoption by customers. The results do reveal that the biggest hurdle in adoption of internet banking is the access to internet. This is mainly due to electricity shortages witnessed by the country in recent years and still experiences it. In many areas, electricity is not available for more than half of the day. The access to internet is a prerequisite and essential element for the adoption of internet banking. If there would be extensive access to computers and internet than there would be greater possibility of use of internet banking.

The results of the present study highlight that critical factors affecting adoption of internet banking by customers are ease of use and security and privacy. Another important factor that has been highlighted by the results of the study is the customer satisfaction. Customer satisfaction is an essential ingredient towards adoption of internet banking in Pakistan, until and unless customers are not satisfied from internet banking services offered by banks, they would not opt for it as their preferred way of carrying out financial transactions. Therefore, banking organizations need to be effective and responsive to the needs of customers for internet banking.

Current research has wide scope in terms of its implications as this study investigates the impact of different factors on customer's adoption of internet banking and also suggests other variables to be included in future researches. The research provides an insight into adoption of internet banking and also suggests how internet banking adoption rate can be increased. One of the goals of this study was to provide the banks and the bankers with a framework to take effective steps to increase the adoption rate of internet banking. Ease of use and security and privacy are found to be critical factors in adoption of internet banking therefore Pakistani commercial banks need to ensure deliberate security and privacy in order to achieve customer's trust.

Commercial banks need to encourage customers by using various types of advertising media such as print media, electronic media through leaflets, brochures, SMS marketing and e-mail etc to increase the awareness about internet banking. As the service of internet banking is still quite new and unfamiliar for a large number of customers hence by using widespread promotion tactics existing customers as well as potential customers will be attracted towards internet banking as internet banking is more favorable and beneficial for them.

Banks should focus their attention towards access to internet because the increased availability of broadband connection throughout the country would lead to greater adoption of internet banking in Pakistan. Lack of infrastructure in Pakistan plays an important role in adoption of internet banking by Pakistani customers. With the advancement in infrastructure of internet connection the adoption rate will increase to a great extent. On the whole if banks promote the benefits and security features of internet banking along with increased access to internet via broadband provision then actual as well as potential customers will be more attracted toward internet banking.

Although current research effectively examines the factors that are influencing customer's adoption of internet banking but like every research this study also has some limitations. The first and the foremost limitation of this study is sample size. Sample size for current study was 207. By increasing the sample size more detailed and elaborated results can be found. Secondly, data has been collected from the banking customers working in different organizations of Rawalpindi and Islamabad, therefore results of the research may not be effectively applied to other areas of Pakistan. Thus, there the results of the study cannot be generalized over a larger population. As the literacy level for population of Rawalpindi and Islamabad is high but literacy level in other cities as well as in rural areas is not as high for that reason by including banking customers from other cities and from rural areas the direction of the research results may vary. Questionnaires were used as an instrument for the collection of data in the current study and by using other methods of data collections like interviews etc more rich data can be gathered. In demographics age, gender, education has been catered for only in this research thus by including other

demographical characteristics like income etc, the results of the research can be elaborated further.

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