

Perceived Barriers Towards Adoption Of Internet Banking Among Non- Metropolitan Internet Users Of Pakistan

Hassan Danial Aslam, Islamia University of Bahawalpur, Pakistan

Mannan Khan, Islamia University of Bahawalpur, Pakistan

Asif Tanveer, Islamia University of Bahawalpur, Pakistan

Tazeen Amber, Islamia University of Bahawalpur, Pakistan

ABSTRACT

Internet banking is a vital component of E-banking flourished rapidly in developed countries unlike developing countries. This paper provides recommendations for the banks offering internet services after examining the barriers in adoption of internet banking perceived by the active internet users living in non-metropolitan areas of Pakistan. Various, significantly perceived barriers identified by previous studies are presented after an extensive literature review in order to form a basis for developing questionnaire and comparing the findings. Data were collected from 520 customers of the banks offering internet services. The respondent's selection criteria was being active internet user and living in non-metropolitan area of Pakistan. Findings show that the loss of personal service and one to one relationship with bankers, low perceived value of internet banking as compared to traditional banking and lack of knowledge, information are perceived to be the most significant barriers in adoption of internet banking among respondents. Unlike other studies lack of security, risk of hacking, fear of incomplete transactions and high financial risks are perceived to be moderately significant barriers. The study recommends that the banks should identify the information needs of the customers and establish the effective information channels to communicate the benefits and uses of internet banking services and develop long term relationship.

Keywords: Internet banking; Internet user; Pakistan

INTRODUCTION

Importance of internet in the banking system had been realized in its early developments and later on it played an important role in the globalization of banking system (Mavri and Ioannou, 2006). Internet banking service provides customers the facility to access their accounts and to gather information about the transactions and other services offered through bank's websites without any formal documentation (Thulani et al, 2009). It also has the features of retail banking like balance reporting, inter-account transfer, bill payment etc without sending and using the original documents and signature at anytime and from anywhere, which undoubtedly made ease for customers (Sathye, 1999; Ibrahim et al, 2006).

It has been observed in the developed countries in general and developing countries in particular that during the last decade, electronic banking has enjoyed remarkable multidimensional growth and better services as compared to traditional banking system (Lichtenstein and Williamson, 2006; Gonza'lez et al, 2008). Internet banking is considered as an important part of E-banking and has played a vital role in its growth (Gan et al, 2006). It has robust ability to provide benefits to both consumers and banks and can be characterized as time and cost saving mechanism. Major Benefits of the internet banking against the traditional banking include the requirement of less number of employees, low error rate and paper work, and better fund management for banks; and consumers enjoy

higher level of convenience and any-time availability of services (Howcroft et al., 2002; Riyadh et al., 2009; Hua, 2009).

According to Zeithaml et al. (2008), consumer perception plays a vital role particularly in pre-purchase decision making of services with high credence attributes as their pre-purchase evaluation is difficult. Although internet banking provides recognized benefits for customers over the traditional banking system, however, the customer's adoption of internet banking depends upon the pre-purchase perception of its proposed benefits instead of the potential benefits it can actually provide, due to its high credence nature (Eriksson et al, 2005). Underlying customer perceptions, satisfaction and other behavioral constructs have, therefore, become research-worthy subjects for the researchers and practitioners in this field of study, however, customer perception has been given an escalating importance in the empirical studies due to its significant role in service evaluation (Sathye, 1999; Howcroft et al., 2002; Mäenpää, 2010).

Various factors have been identified based on customer's perception as determinants of the adoption of internet banking, these include perception about: ease of use, access, availability and usefulness (Howcroft et al, 2002; Eriksson et al, 2005). Perception regarding security and privacy of information however are ranked as most influential by many of the studies (Wang et al, 2003).

These determinants do not identically influence the adoption all over the world; the impact is different in developing and developed countries. Similarly the impact of such determinants may be different in big metropolitans and remote areas within a country. Non-metropolitan areas should be given more attention in developing countries as more than half fraction of the population of any developing country lives in suburbs and rural areas. In Pakistan, for instance, about 70% population lives in rural areas (Khan, 2007; Qureshi, 2008).

There are more than 18.5 million users of internet services in Pakistan with 10.6% penetration rate and 70% banks are offering internet banking services but adoption rate of the service is very slow (SBP, 2009). A study conducted by Khan (2007) in Pakistan revealed that due to big communication gap between the customers and banks, internet banking services are not matching the customers' expectation and needs, in addition to the consumer perception of high risk, privacy and security issues. Another study by Kaleem (2008) explored the bankers' perception about internet banking and revealed that bankers perceive that internet banking in Pakistan is more risky; lack of information, inconvenience and security issues are perceived to be other barriers in rapid growth of internet banking. However, no significant study was found with focus on identifying perceived barriers in adoption of such services among internet users of non-metropolitan areas of any developing country including Pakistan.

The purpose of this paper is first to identify and synthesize customer's perceived barriers in adoption of internet banking in meaningful categorize through extensive literature review. Secondly, to empirically measure the perceptions of the bank customers who are active internet users living in non-metropolitan areas of Pakistan. The researchers also identify the underlying connections between perceptions and various demographic characteristics including, age, gender, marital status, occupation, education and income level.

LITERATURE REVIEW

Studies have explored several barriers towards adoption of internet banking associated with internal control of the banks and in the external environment. Internally, major barrier include the organization's own willingness and abilities to effectively utilize the web technology (Chircu and Kauffman, 2000). Negative attitude of the managers towards benefits of IB creates hurdles in offering internet based services. Some other internal barriers include lack of management's commitment, lack of technological resources, lack of interest in adopting new technology by bank staff and shortage of infrastructure (Basu, 2002). External barriers are of major concern but are beyond the control of an organization including lack of governmental support, high implementation cost, lack of infrastructure, social, cultural, political and legal issues in a country (Van and Cavaye, 1999). Customer's perceived barriers towards the adoption of internet banking identified by the previous studies are categorized as psychological and technical barriers, their connections between the perceived barriers and the demographic characteristics of the customers are also presented below:

PSYCHOLOGICAL BARRIERS

Low Perceived Value

Adoption of the new technological products majorly depends upon the customer perceived value of a product or service (Ram and Sheth, 1989). It is customer's perception about the product or service performance to fulfill needs, and the associated costs to realize the perceived benefits among other available alternatives (Kotler and Keller, 2006). Despite these advantages, it has been observed in developing countries like Ghana that customer's perceived value for the internet banking is low as compared to traditional banking system (Adams and Lamptey, 2009). Internet banking subscribers perceive the service costlier as compared to the benefits it provides (Kuisma et al 2007). Low perceived value results in negative word of mouth and work as barrier towards the adoption of the services by new potential subscribers (Shamdasani, et al., 2008).

High Perceived Risk

Perceived risk has been identified by many studies as one of the most influential barriers towards the adoption of internet banking (Laforet and Li, 2005; Eriksson et al., 2008; Aldas-Manzano, 2009). Customers perceive the internet banking services more risky as compared to the conventional banking (Zhao et al., 2008). Researchers have identified several types of perceived risks including economic, functional, social and psychological risk influencing the pre-purchase decision making of a customer particularly in services (Ram and Sheth, 1989; Zeithaml et al, 2008)

Economic Risk

Most of the researches on the topic have identified a significant negative relationship between economic risk and adoption of internet banking (Nancy et al., 2001). Perceived economic risk is observed to be very customary and concern for financial loss during online transaction is found to be high (Wang et al. 2003).

Functional Risk

According to Almogbil (2005) perceived functional performance of internet banking has a positive relationship with its adoption. Due to its technical nature and self-service features the functional risk is found to be higher among the developing nations with high illiteracy, as compared to the developed countries, where perceived operating difficulty and chances of incomplete transactions due to internet speed failure are recognized to be higher (Agarwal et al., 2009; Kuisma et al, 2007, Aslam and Sarwar, 2010).

Social Risk

Most of the developing countries have soft and collectivist culture where concern for social values is high (Tayeb, 2005) and among nations where internet density is low its image and perception is negative as compared to the nations with high internet density (Durkin, 2004). The negative attitude of society towards internet in developing countries increases social concerns and results as barrier in its adoption which ultimately may cause slow diffusion of internet banking services (Kuisma et al., 2007; Ram and Sheth, 1989). Unlike traditional banking, using online banking is also perceived to hinder the social relationships which are developed during transactions based on interpersonal interaction at the physical servicescape (Jansson and Letmark, 2005).

Psychological Risk

Psychological inconvenience while switching from routine products to adopt innovation is found to be another significant barrier (Arnould and Zinkhan, 2004). Similarly psychological risk to switch from conventional banking habits to the online banking system and to learn new technology impedes the adoption process (Ram and Sheth, 1989, Jansson and Letmark, 2005).

TECHNICAL BARRIERS

Security and Privacy

The banks with good functional performance, having accuracy in record keeping with secure transactions, keeping and maintaining privacy of information and providing the services within the due time have larger number of satisfied online subscribers (Ziethmal et al, 2002; McKinney et al, 2002). Security and privacy issues have been widely argued to be the most significant barriers in the adoption of internet banking. It includes protection against fraud and hacking of personal information which can provide third person an easy access to the financial accounts and its misuse (Mattila, et al., 2003). Security and privacy concerns raise trepidation among the customers regarding service quality, functional utility, adoption of internet banking and even bank selection (Mäenpää, 2010; Liao and Cheung, 2002;). Trout (1999), Hernandez and Mazzon, (2007), have also revealed the similar reasons for not using the internet banking.

Lack of knowledge

Lack of knowledge about the services offered on internet also hinders the account holders of a bank to adopt the online services. A study by Trout, (1999) revealed that only 76% customers of a bank knew nothing or very little about services offered on internet by their bank. On the other side, another study uncovered that almost 50% of bank managers were lacking clear understanding of their customers' online information needs (Newkirk, 2000). According to Doll (1995), interaction with information available on web layout is also a main source for satisfaction or dissatisfaction among customers, if customers find the first online interaction difficult they would not prefer to use it again. Many empirical evidences exist to recognize the lack of knowledge about internet banking services and its benefits as a factor which accounts for low adoption rate of internet banking (Howcroft et al. 2002; Laforet and Li 2005; Zhao et al., 2008). The adoption of internet banking requires the customers to have information regarding the privacy, passwords veracity, data encryption, protection of personal information and hacking issues. (Benamati and Serva, 2007). The adoption rate can be raised if customers are made cognizant about the functions of internet banking.

Access to Internet

Availability of computer, fast speed internet connection and their basic knowledge are prerequisites to access the internet banking services, in developing countries, it is one of the major factors behind the slow adoption of internet banking (Marlin, 2005). The adoption of internet banking is not possible without proper and straight access of the internet.

DEMOGRAPHIC CHARACTERISTICS

Studies have also explored the potential relationship between demographic characteristics of customers and adoption of internet banking, however, this relationship is not found to be as significant as with the psychological factors in determining the adoption (Gan et al., 2006, Howcroft et al., 2002, Yuan et al, 2010).

Age

Several researches found a negative relationship between age of a bank's customer and use of computer and internet as mature customers find it difficult to learn and use new technologies (for example Sathye, 1999; Howcroft, et al., 2002). According to Trout (1999) mature customers are more conservative than young customers and resist new technologies and ways of financial payments. It has been observed that the most of internet banking subscribers belong to young generation and the chance of its adoption among mature people is low (Wang et al., 2003; Yuan et al, 2010).

Education

Many studies have found that level of education has very significant impact on the adoption of internet banking, as the education level increases the likelihood of adopting online services increase, (Mattila, et al., 2003; Laforet and Li, 2005; Yuan et al, 2010). Low level of education and literacy is therefore identified as a very significant barrier in diffusion of internet banking services.

Marital status

Married customers have shown more tendencies towards using internet banking than singles or widows among mature customers. A study by Mattila, et al (2003) showed that 19.4 % of married customers use internet banking while 3.6 % of unmarried customers use internet banking. Similar findings have also been reported by Gan et al. (2006) that married people use the internet banking more than the unmarried people.

Gender

The research by Mattila, et al., (2003) found that men are more likely to use internet banking than woman as women are found to be more concerned for privacy and security issues, however, this relationship was observed to be moderately significant (Shergill and Li's ,2005).

Income level

Income level is found to be another significant demographic determinant for the adoption of internet banking. It has been observed that adoption of internet banking is high among middle and upper income groups as compared to the low income groups (Laforet and Li, 2005; Yuan et al, 2010). Similarly use of internet banking is also found high among customers with larger deposits in their accounts (Mattila, et al., 2003; Yuan et al, 2010). Using internet banking also requires a user to bear an extra cost in the form of personal computer with high speed internet facility which can be afforded by the high and moderate income groups (Mattila et al, 2003).

METHODOLOGY

The current study was conducted in Southern Punjab, representing the non-metropolitan cities of Pakistan where most of the banks are offering internet banking services. A sample of 520 customers from 10 banks offering internet banking was selected. Selection criteria were to have an account with the bank offering internet service and familiarity with the internet and being its active user as these are the prerequisite for every customer to subscribe the internet banking IB services.

A structured questionnaire was designed as data collection instrument. The data was collected by visiting various branches of the 10 chosen banks situated in various cities of Southern Punjab, including Rahimyar Khan, Bahawalpur and Bahawalnagar Districts. Each respondent was given questionnaire to fill in after a preliminary interview to ensure that the respondent was well aware of the internet and was its regular user with an active email ID but was not an active subscriber of internet banking services.

In order to measure the respondents' perceptions on 13 variables identified by the prior studies they were asked to express their attitudes on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). Categorical variables were also included in questionnaire to develop demographic profiles of the respondents in order to identify the possible links between their demographic characteristics and adoption of IB. A pilot survey was conducted on the students having their own bank accounts in order to examine the reliability and validity of the questionnaire. The data was then analyzed using descriptive statistics using SPSS.

FINDINGS AND DISCUSSION

Table 1
Demographic Profile of Respondents

		N=520	%
Age	Below 25	162	31.2%
	25-35	150	28.8%
	35-45	113	21.7%
	45-55	45	8.7%
	55 and Above	50	9.6%
Gender	Male	293	56.3%
	Female	227	43.7%
Marital Status	Single	269	51.7%
	Married	251	48.3%
Occupation	Professional Employment	151	29.0%
	Businessman	90	17.3%
	Student	115	22.1%
	Landlord	48	9.2%
	Others	116	22.3%
Education Level	Matriculate (10 years) or Below	98	18.8%
	Bachelors (14 years)	242	46.5%
	Masters (16 years) or Above	180	34.6%
Income Level (PKR Per Month)	Below 20,000	205	39.4%
	20,000-30,000	165	31.7%
	30,000-50,000	67	12.9%
	50,000-70,000	44	8.5%
	70,000 and above	39	7.5%

Table 2
Perceptions of Internet Users About The Factors Hindering Their Adoption of Internet Banking

Statements	Mean	Std. Deviation
1. Personal Computer is required to subscribe IB	2.18	1.526
2. Lack of access to internet	2.34	1.560
3. Lack of privacy	2.82	1.403
4. Extra associated costs	2.73	1.495
5. Loss of personal service and one-to-one relationship with bankers	3.55	1.267
6. Fear of incomplete transactions	3.32	1.239
7. High financial risk	3.24	1.257
8. Lack of security and risk of hacking	3.35	1.283
9. Lack of knowledge about the products and services offered on internet	3.39	1.234
10. Traditional banking offers more benefits as compared to IB	3.41	1.110
11. Lack of technical knowledge about using IB	2.96	1.538
12. Inconvenience of adopting new technology	2.65	1.292
13. It is time taking and difficult to learn IB online interface	2.49	1.396

The study examined the perceptions of 520 account holders of various banks who were active users of internet and associated with different demographic characteristics outlined in Table 1. The table shows that out of 60% percent male and 40% female respondents the largest respondent group 31.2% was from the age group below 25 as most of the customers using internet actively were found in this age group. Most of the respondents were single that is 56%. Although in the targeted areas most of the population belongs to the agricultural farming, however, very few were found active users of internet that is why their proportion in the sample is 9.2% with highest proportion of professional employees 29%. Most of the respondents, 46.5% in the study sample were graduates with 14 years of education. Due to the weak economic conditions of the non-metropolitan areas large proportion of the respondents 39.4% belonged to income group below 20, 000.

The respondents were asked to rate the statements presented in Table 2 on their perception being reason for hindering their use and adoption of internet banking. The analysis of the results presented in the table shows that '*Loss of personal service and one-to-one relationship with bankers*' emerge with the highest mean score 3.55 which implies that for the people in non-metropolitan areas it is important that they should be served personally by the bank staff and interpersonal relationship with bank officers are important to them, fear of loosing such relationships initiate the trust deficit and hinders them adopting internet banking services. This finding substantiates the findings of Wan et al., (2005). Lichtenstein and Williamson (2006) also found that customer's routine attachment with conventional banks is perceived to be as a major barrier by them in the adoption of the internet banking.

Second highest score of 3.41 belongs to the statement '*Traditional banking offers more benefits as compared to IB*' which surprisingly shows that the banking customers perceive the traditional banking providing more value as compared to the internet banking. The reason behind it can be the lack of education and marketing about the features, existence, advantages and benefits of internet banking from the banks and bankers (Lichtenstein and Williamson 2006). Third highest mean score of 3.39 also favors this finding that the respondents perceive '*Lack of knowledge about the products and services offered on internet*' to be the barrier in their adoption of Internet banking and are verified by similar findings of Sathye (1999); Howcroft et al. (2002); Laforet and Li (2005); and Zhao et al. (2008), which revealed that lack of knowledge about the internet banking service and its benefits is a major factor in causing customer not to adopt it. Banks in Pakistan provide online banking services and products like, online balance inquiries, transfer of funds, payments of credit cards, utility bills, online applications and for information download, however, very small proportion of customers was found to be aware of these services (Kolachi 2006).

Lack of security and risk of hacking, Fear of incomplete transactions and High financial risks received the average scores of 3.35, 3.32, and 3.24 in limiting the use and adoption of internet banking among the customers. This finding is opposite to many other studies here these risks were found to be the most determinantal in limiting the adoption of internet banking (Sathye, 1999; Nancy et al. 's,2001; Howcroft et al., 2002; Laforet and Li, 2005; Khan, 2007; Qureshi et al, 2008; Zhao et al., 2008). The reason might be the lack of awareness about online transactions as e-commerce in general is very rare in the study population of interest.

Perception of '*Lack of technical knowledge about using IB*', '*Lack of Privacy*', '*Extra associated costs*' and '*Inconvenience adopting new technology*' to be the barriers in adopting technology was found to be moderately significant with mean scores of 2.96, 2.82, 2.73 and 2.65 respectively and these results are similar to the findings of Benamati and Serva, (2007). Unlike previous studies of Mavri and Ioannou, (2006) and Adams and Lamptey (2009) '*Lack of access to internet*' and '*need for personal computer*' are not perceived as significant barriers in adoption of internet banking among the respondents belonging to the non-metropolitan areas.

Table 3 below furthers the analysis by examining the responses across various dimensions of demographic characteristics. The lowest and highest mean scores in each category are expressed as bold digits in the table. Developing relationships with bank staff seem to be important determinant for not adopting IB among young and old age customers. Customers of mature age are more concerned about the risk, extra costs and lack of knowledge about the online offerings by their banks. Male respondents rated the lack of awareness about the online services and female respondents were found to be more concerned about loosing the interpersonal relationships and on-branch services similar observations were true for respondents living as singles, however, lack of security and risk of hacking were rated highest by married respondents.

Table 3

	1	2	3	4	5	6	7	8	9	10	11	12	13
Age													
Below 25	.27	.78**	.97	.48	.96*	.49	.02	.91	.79	.27	.08	.41	.29
25-35	.57**	.53	.06	.63	.50	.57	.32	.47	.88*	.66	.89	.83	.55
35-45	.28**	.87	.27	.01	.88	.63	.19	.94*	.59	.58	.06	.38	.52
45-55	.91**	.24	.96	.38*	.36	.20	.42	.89	.02	.84	.87	.11	.80
55 and Above	.36**	.52	.52	.68	.08*	.68	.68	.48	.44	.20	.68	.04	.56
Gender													
Male	.93**	.97	.73	.40	.11	.29	.94	.23	.31*	.16	.18	.42	.11
Female	.51	.82**	.95	.17	.11*	.35	.63	.50	.50	.73	.99	.93	.97
Marital Status													
Single	.97	.70**	.81	.26	.58*	.38	.99	.95	.71	.35	.81	.25	.07
Married	.41**	.03	.84	.24	.52	.25	.52	.77*	.04	.47	.13	.07	.92
Occupation													
Professional Employment	.76**	.77	.22	.52	.60*	.91	.17	.34	.75	.28	.17	.67	.79
Businessman	.87**	.26	.90	.64	.97*	.52	.92	.18	.49	.48	.69	.82	.69
Student	.12	.88**	.74	.50	.05*	.54	.30	.92	.77	.37	.69	.46	.42
Landlord	.08**	.31	.54	.23	.23	.88	.40*	.92	.96	.02	.23	.67	.46
Others	.77**	.91	.46	.82	.36	.63	.06	.67*	.54	.28	.07	.24	.60
Education Level													
Higher Secondary (12 years) or Below	.17**	.34	.67	.37	.94*	.66	.64	.51	.51	.84	.00	.51	.34
Bachelors (14 years)	.99**	.23	.50	.91	.69*	.59	.36	.08	.90	.61	.28	.65	.59
Masters (16 years) or Above	.43**	.49	.66	.98	.14	.48*	.85	.45	.31	.44	.34	.24	.89
Income Level													
Below 20,000	.85**	.08	.89	.36	.89	.16	.80	.68	.45	.47	.57	.94	.93
20,000-30,000	.58**	.71	.58	.27	.09	.58	.82	.24	.35	.47*	.73	.30	.98
30,000-50,000	.82	.76**	.77	.64	.64	.94	.60	.73	.27	.36*	.31	.19	.27
50,000-70,000	.59**	.05	.43	.84	.73*	.32	.39	.14	.18	.70	.73	.39	.98
70,000 and above	.36	.33**	.95	.49	.31	.67	.03	.36	.69*	.67	.10	.54	.13
	*Highest mean score in category						** Lowest mean score in category						

Loss of personal services and interpersonal relationship were found to be the major concerns among employees, businessmen and students; however, the concern was higher among students. Risk factor was observed

higher among the landlords and respondents from ‘other occupation’ category. Respondents with education level ‘Bachelors and below’ also showed concern for loosing relationships, however, fear of incomplete transactions was found higher among highly educated people. Concern for financial loss was found to be high among respondents with income level below 20,000. The perception of traditional banking being better than IB was found to be stronger among the people with income ranging from 20,000 to 50,000. Concern for loosing relationship and lack of knowledge about online offerings were found higher among higher income groups.

The perception of need for personal computer and lack of access to internet were found to be least concerning issues in not using IB across most of the categories.

CONCLUSION & RECOMMENDATIONS

The escalating trend towards adopting E-banking and offering internet banking services by Pakistani banks makes it principally important for them to identify the barriers perceived by their customers in the adoption of internet banking, particularly for big fraction of customers living in non-metropolitan areas. The study was designed to explore the perceived barriers in adoption of internet banking through literature review and to investigate the perceived barriers among bank customers of non-metropolitan areas who were active internet users. The study also examined how perception about these barriers varies across customers with various demographic characteristics. The study revealed that getting service directly from bank’s personnel and developing one-to-one relationship with them is a major concern for the customers and internet banking perceived to be a possible cause for losing such opportunities unlike on-branch interactions. Security, privacy and high associated risks are significantly perceived barriers after low perceived value and lack of knowledge about online benefits and offers.

The findings show that customers perceive more value and satisfaction in conventional banking system as compared to internet banking, customer-banker communication gap seems to be the most significant factor behind it. In light of the findings it is suggested that banks should understand the information needs of their non-metropolitan customer and effective communication channels should be developed in order realize potential benefits of internet banking and to remove the perceived concerns associated with it. The online offerings can be promoted through emails and mobile phone short messaging services; however, an interpersonal communication channel is essential to converse benefits and basic information about internet banking which will also help in removing the customer’s concern for losing the personal service and one-to-one relationships. The website interface should be secure, simple and convenient leading towards enjoyable experience. The offerings must be designed while considering the specific needs of the non-metropolitan customers. Finally banks need to develop synergy between traditional banking system and internet banking.

REFERENCES

1. Adams AN, Lamptey AO (2009). *Customer Perceived Value in internet banking in Ghana*. Department of business administration and social science. Division of System Sciences. Luela university of technology Sweden.
2. Agarwal R, Rastogi S, Mehrotra A (2009). Customers’ perspectives regarding e- banking in an emerging economy. *Journal of Retailing and Consumer Service. Forthcoming*.
3. Aldas-Manzano J, Lassala-Navarre C, Ruiz-Mafe C, Sanz-Blas S (2009). The role of consumer innovativeness and perceived risk in online banking usage. *International Journal of Bank Marketing*. 27 (1): 53–75.
4. Almogbil A (2005). Security, perceptions, and Practices: Challenges facing Adoption of online banking in Saudi. Washington. PhD Thesis. George Washington University.
5. Arnould E, Price L, Zinkhan G (2004). *Consumers, 2nd edition*. McGraw-Hill companies. Inc.
6. Aslam HD, Sarwar S (2010). Improving Performance Management Practices in IT Firms of Pakistan. *Journal of Management Research*. Vol. 2 (2).
7. Basu V, Hartono E, Lederer AL, Sethi V (2002). The impact of organizational commitment, senior management involvement, and team involvement on strategic information systems planning. *Information and Management Journal*. Vol. 39(6): 513-24.

8. Benamati JS, Serva MA (2007). Trust and distrust in online banking: Their role in developing countries. *Information Technology for Development*. 13(2): 161–175.
9. Chircu AM, Kauffman RJ (2000). Limits to value in electronic commerce-related IT investments. *Journal of Management Information Systems*. Vol. 17(2): 59-80.
10. Doll WJ, Raghunathun JS, Gupta YP (1995). A confirmatory analysis of the user information satisfaction instrument. *Information system research*. 6(2): 177-188.
11. Durkin M (2004). In Search of the Internet-banking Customer: Exploring the Use of Decision Styles. *International Journal of Bank Marketing*. Vol 22(7): 484-503.
12. Eriksson K, Kerem K, Nilsson D (2005). Customer acceptance of Internet banking in Estonia. *International Journal of Bank Marketing*. 23 (2): 200-216.
13. Eriksson LT, Hultman J (2008). Small business e-commerce development in Sweden - an empirical survey. *Journal of Small Business and Enterprise Development*. 15(3): 555 - 570.
14. Gan C, Clemes M, Limsombunchai V, Weng A (2006). A Logit Analysis of Electronic Banking in New Zealand. *International Journal of Bank Marketing*. 24 (6): 360-383.
15. Gonza ´lez ME, Dentiste MR, Rhonda MW (2008). An alternative approach in service quality: an e-banking case study. *The Quality Management Journal*. 15 (1): 41.
16. Hernandez JMC, Mazzon JA (2007). Adoption of internet banking: Proposition and implementation of an integrated methodology approach. *International Journal of Bank Marketing*. 25 (3): 72–88.
17. Howcroft B, Hamilton R, Hewer P (2002). Consumer attitude and the usage and adoption of home-based banking in the United Kingdom. *The International Journal of Bank Marketing*. 20(3): 111-21.
18. Hua G (2009). An Experimental Investigation of Online Banking Adoption in China. *Journal of Internet Banking and Commerce*. 14(1).
19. Ibrahim EE, Joseph M, Ibeh KIN (2006). Customers’ perception of electronic service delivery in the UK retail banking sector. *International Journal of Bank Marketing*. 24(7): 475-493.
20. Jansson M, Letmark E (2005). Customer Loyalty In An Internet Banking Context. Sodertorns Hogskola University College.
21. Kaleem A, Ahmad S (2008). Bankers’ Perceptions of Electronic Banking in Pakistan. *Journal of Internet Banking and Commerce*, 13(1).
22. Khan S (2007). Adoption issues of internet banking in Pakistani firms. Department of Business Administration and Social Science. Division Of System Sciences. Luella University Of Technology Sweden.
23. Kolachi N (2006). Internet Banking System In Pakistan: Some Crucial Weaknesses And Suggestions For Improvement. *Journal of Institute of Bankers Pakistan*. 73(2): 23 – 32.
24. Kotler P, Keller KL (2006). *Marketing Management, 12th Edition*. New Jersey. Pearson Education Inc .
25. Kuisma T, Laukkanen T, Hiltunen M (2007). Mapping The Reasons For Resistance To Internet Banking: A means-end approach. *International Journal of Information Management*. 27: 75-85.
26. Laforet S, Li X (2005). Consumers' attitudes towards online and mobile banking in China. *International Journal of Bank Marketing*. 23(5): 362-380.
27. Lichtenstein S, Williamson K (2006). Understanding consumer adoption of internet banking: an interpretive study in the Australian banking context. *Journal of Electronic Commerce*. 7 (2): 50-66.
28. Mäenpää K (2010). User Perceptions of Internet Banking. Academic Dissertation University of Tampere. Department of Management Studies. Finland.
29. Marlin S (2005). Banking for the 21st Century. *Bank Systems and Technology*.
30. Mattila M, Karjaluo, Heikki P (2003). Internet Banking Adoption Among Mature Customers: Early Majority Or Laggards. Working Paper.
31. Mavri M, Ioannou G (2006). Consumers’ Perspectives on Online Banking Services. *International Journal of Consumer Studies*. 30(6): 552–560.
32. McKinney V, Yoon K, Zahedi FM (2002). The Measurement of web customer satisfaction: An expectation and disconfirmation approach. *Information System Research*. 13(3): 296-313.
33. Nancy B, Lockett A, Winklhofer H, Christine E (2001). The adoption of Internet financial services: a qualitative study. *International Journal of Retail & Distribution Management*. 29(8): 390-398.
34. Newkirk K (2000). Web banking boom. *Independent Banker*. 40(4): 17.
35. Qureshi TM, Zafar MK, Khan MB (2008). Customer Acceptance of Online Banking in Developing Economies. *Journal of Internet Banking and Commerce*. 13(1).

36. Ram S, Sheth JN (1989). Consumer resistance to innovations: the marketing problem and its solutions. *The Journal of Consumer Marketing*. 6(2): 5-14.
37. Riyadh AN, Bunker D (2008). An Electronic Finance Adoption Framework for Small to Medium Enterprises (SMEs) in Bangladesh.. University of New South Wales. Australia: 1-12.
38. Sathye M (1999). Adoption of Internet banking by Australian consumers: an empirical investigation. *International Journal of Bank Marketing*. 17(7): 324-334.
39. Shamdasani P, Mukherjee A, Malhotra N (2008). Antecedents and consequences of service quality in consumer evaluation of self service internet technologies. *The Service Industries Journal*. 28 (1):117.
40. Shergill GS, Li B (2005). Internet banking- an empirical investigation of customers behavior for online banking in New Zealand. *Journal of E-Business*. 5(1).
41. State Bank of Pakistan. (2009). *State Bank of Pakistan annual reports*. Karachi. Pakistan.
42. Tayeb MH (2005). *International Human Resource Management*. New York. Oxford University Press.
43. Thulani D, Tofara C, Langton R (2009). Adoption and Use of Internet Banking in Zimbabwe: An Exploratory Study. *Journal of Internet Banking and Commerce*. 14(1).
44. Trout P (1999). Customer attitudes survey. *Australian Banking and Finance*. 8(2).
45. Van AJ, Cavaye ALM (1999). Factors affecting entry-level internet technology adoption by small business in Australia: An Empirical Study. Proceedings of the 10th Australasian conference on information systems. Wellington. New Zealand: 1-3.
46. Wan WN, Luk CL, Chow CW (2005). Consumers' adoption of banking channels in Hong Kong. *International Journal of Bank Marketing*. 23(3): 255-272.
47. Wang YS, Wang YM, Lin HH, Tang I (2003). Determinants of user acceptance of internet banking: an empirical study. *International Journal of service industry management*, 14(5): 501-519.
48. Yuan X, Lee HS, Kim SY (2010). Present and Future of Internet Banking in China. *Journal of Internet Banking and Commerce*. 15(1).
49. Zeithaml VP, Parasuraman A, Malhotra A (2002). Service Quality Delivery through Web Sites: A Critical Review of Extant Knowledge. *Journal of the Academy of Marketing Science*.
50. Zeithaml V, Bitner M J, Gremler D (2008). *Services Marketing*. New York. McGraw Hill.
51. Zhao AL, Hanmer-Lloyd S, Ward P, Goode MMH (2008). Perceived risk and Chinese consumers' internet banking services adoption. *International Journal of Bank Marketing* 26 (7): 505–525.

NOTES