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# A Theoretical Review of the Factors Affecting Customer-Acceptance of eBanking

Muhammad Siddique  
KPK, Pakistan.

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### ABSTRACT

Taming information and communication technologies (ICTs) for eBanking is one of the contemporary challenges confronted by the financial and banking sector. Given that, the development of necessary management skills to ensure the sustained success the new processes are very indispensable. Globally, the banking industry is increasingly getting turbulent and competitive, characterized by internationalization, mergers, takeovers and consolidation of the banks. Several non-banking companies are entering eBanking through their financial products and services thereby giving the customers a list of options to choose banking services. Thus, a strong banking industry has become very important for every country for supporting economic development through efficient financial services. In this regard, rigorous research is undergoing all over the World to successfully implement eBanking. This research is mainly focused on identifying the factors which may affect the Customer-acceptance of eBanking in Dera Ismail Khan, KPK, Pakistan.

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### Introduction

In the world of electronic commerce, it is very important that banks should provide with the internet banking services (Burnham, 1996). As compared to ordinary banking system eBanking is providing the competitive edge by lowering the cost and providing best satisfaction of customer needs (Daniel, 1999; Mols, 1998). Internet and Web in the developing countries has greatly changed the business environments. Their consumers are shifting their focus towards substitute channels like electronic commerce for shopping, which offers more choices of products and services with cost reduction and easy shopping. eCommerce is not novel in advanced states however its dispersion is very low in a country like Pakistan (Shahzada, 2006).

In Pakistan, at present the listed banks are 41 in number; Development Finance Institutions are 6 and 2 micro finance banks are working. There are 3 commercial banks which are nationalized banks, 15 banks are private, 14 foreign banks, 2 provincial scheduled banks and 4 specialized banks. In 1962, under the banking companies' ordinance, the State bank of Pakistan had the right to supervise and regulate the activities of all these banks. In 1997, amendments were introduced in the banking laws. Under ordinance section 40 (A), State Bank is responsible to monitor every bank's performance to ensure that it is meeting the defined criteria and following the rules and regulations (Aslam, 2001). However, eBanking in Pakistan is still in its infancy as compared to western countries (Kundi & Shah, 2009).

### Literature review

#### Banking: Concepts and Definitions

*eBanking is defined as internet-based electronic banking. It has remained very risky in the beginning, for example; in 2001 America alone has spent about \$17 billion on the information-security of their products and services (Hertzum et al., 2004). Online banking is concerned with the Internet portal, providing online facility to its customers and allowing them to use different kinds of banking services like payment of utility bills, purchasing the mobile recharge and making investments. Thus,*

*in order to qualify for eBanking the banks must have their official website to provide online banking services to customers (Pikkarainen et al., 2004).*

Internet provides a platform for using online banking services without any geographical restrictions thus, ICT-adoption is gradually transforming businesses to go from local to global (Polatoglu & Ekin, 2001). According to Giglio (2002) for delivering banking products the cheapest delivery channel can be done only through the online banking. With the help of online banking services, the branch networks of banks and staff have reduced and customers are satisfied to use the online banking services as it saves a lot of time and effort in performing bank transactions (Karjaluo et al., 2002). According to Akinci et al., (2004) internet banking can be categorized into: a. Retail banking service, b. Distribution channels, c. Consumer attitude, and d. Banks manager perception.

#### Banking in Pakistan

As compared to other developing countries, the growth of ICT in Pakistan has been pretty slow. The national policies of Pakistan constantly focused to develop the domestic ICT sector for the development of electronic commerce in the country. Government of Pakistan has already established seven 'IT universities' and one virtual university under the national Information Technology Policy to create qualified professionals and staff to meet the current needs of digital society (Khan & Bawden, 2005). Similarly, the National Education Policy (1998-2010) seeks to modernize education system in Pakistan through the use of ICTs to enable the young generations to become digitally literate. Some of the foreign companies like Oracle, Microsoft, and Cisco are also investing for the promotion of ICTs in Pakistan (Shahzada, 2006).

The Government of Pakistan took digital initiatives in early 2000. Banks were leading in eCommerce but most of the progress had been made in eGovernment. Some business to business portals were available which were designed more for information rather than transactions. The act of de-regulation

Tele:

E-mail addresses: [mpasiddique@yahoo.com](mailto:mpasiddique@yahoo.com)

helped many foreign and private banks to establish strong end user by adopting eCommerce techniques (Ahmed, 2006). In Pakistan, high technological diffusion has brought fundamental changes in the financial industry. The new business plans have opened new ways for business. It has launched electronic business and the use of Information technology for the development of better controls and more complicated risk management systems with superior customer services (Akhtar, 2006).

### **Determinants of the Customer Acceptance**

#### **Government ePolicies**

According to Zarmeene (2006) the IT policy is very important and government should take care of it seriously otherwise it will create serious bottlenecks if it was not addressed properly. Currently Pakistan is working on to change the manual to digital modes of doing banking transactions. So without technology it is impossible virtually for the banking organizations to compete in competition only if banks customers are provided with the value added services and high level of service which will be possible if high technology is used. Now some banks are offering online banking services to their customers but if we compare with the developed countries like Sweden, UK, Denmark, and USA. These countries are enjoying the benefits of online banking system but Pakistan is still lacking behind and government should need to have strong IT infrastructure (Shahzada, 2006; Akhtar, 2006).

#### **Quality of Internet**

eBanking has a potential of reducing the maintenance costs because it uses the web browser for the user interface and the Internet for data transfer and download of software (Hertzum et al., 2004). At first sight the Internet is the ideal medium for carrying out banking activities due to its cost savings potential and speed of information transmission. From a technological and cost-driven standpoint it may seem quite logical for banks to shift as many banking activities online as possible. At the same time, the question of how to foster customer loyalty arises when the relationship between the bank and the user becomes a virtual one (Floh & Treiblmaier, 2006).

eReadiness of Customers (CA, PEOU, PU, QOS, TOC, and S & P)

The eReadiness of the customers is defined as their ability to avail and use the online services offered by various financial and commercial institutions and it also refers to a country's ability to promote and support the development of information and communication technologies (Economist Intelligence Unit, 2008:2). Likewise, organizational eReadiness consists of its infrastructure, relevant systems, and technical skills. Moreover, eReadiness is not only a problem with the lower level workforce, but also a great challenge for the senior management (Riyadh et al., 2009).

#### **Customer Awareness (CA)**

The researchers tell that there is important statistical relationship between awareness, access to Internet facility, length of banking relationship, people working in the Internet banking/finance sector, education level in the category 'post graduate' and also income group with the usage of internet banking (Padachi et al., 2007). A research tells that the key reason why customers are reluctant to use Internet banking is information dissemination between the banks and their customers. This problem was expressed this way "the youth are more likely to use Internet banking than the older citizens because they are more familiar with the Internet but for older customers, there is a need to entice them through Internet awareness programs (Andoh-Baidoo, & Osatuyi, 2009)."

### **Perceived Ease of Use (PEOU)**

It is widely documented that user acceptance is significantly related with the 'perceived ease of use and usefulness of new technologies. If user values them negatively, their attitude towards change will also be negatively influences. Moutinho and Smith (2000) studied the behavior of established bank customer and concluded that ease of baking and convenience was the two important expectations. Furthermore, the diversity of e-banking users and the absence of any special training prior to becoming one make ease of use a prime concern as well (Hertzum et al., 2004). From the viewpoint of technology, ease of use is generally considered an important quality attribute in technical computer services (Treiblmaier, 2006; Shih, 2007; Al-Hajri, 2008; Riyadh et al., 2009; Amin & Ramayah, 2010; Adesina & Ayo, 2010).

#### **Perceived Usefulness (PU)**

The user resistance to change can be reduced if they consider a technology useful and have positive expectations from the new digital devices. Perceived usefulness is defined as 'the degree to which a person believes that using a particular system would enhance his or her performance' (Al-Hajri, 2008). Perceived usefulness basically depends on the level of customer awareness about the features and functions of new technologies. If they have insufficient information about the utilities provided by the new devices, the users may underestimate the usefulness of a particular eBanking device and as a result user resistance to change may prevail (Riyadh et al., 2009).

#### **Quality of Services**

Thornton & White (2001) compared several electronic distribution channels available for banks in the USA and concluded that customer orientation – towards convenience, service, technology, change, knowledge about computing and the internet – affected the usage of different channels. Howcroft et al. (2002) found that the most important factors encouraging consumers to use online banking are lower fees, less paperwork, and reduced human errors, which subsequently minimize disputes (Pauline, 2001; State Bank of Pakistan, 2003).

#### **Trust of the Customer**

In any transaction trust plays a key role (Harris & Spence, 2002). Liao and Cheung (2002) found that individual expectations regarding accuracy, security, transaction speed, user friendliness, user involvement, and convenience as the most important quality attributes to describe the perceived usefulness of internet based banking. These attributes basically determined the willingness to use by consumers. The cash tradition is still ubiquitous in the banks of Pakistan. The most important reasons are lack of trust, non-availability of infrastructure, security and service charges. Consumer trust can play a vital role for the eReadiness among the people to use electronic banking services (Kundi & Shah, 2009).

#### **Security & Privacy**

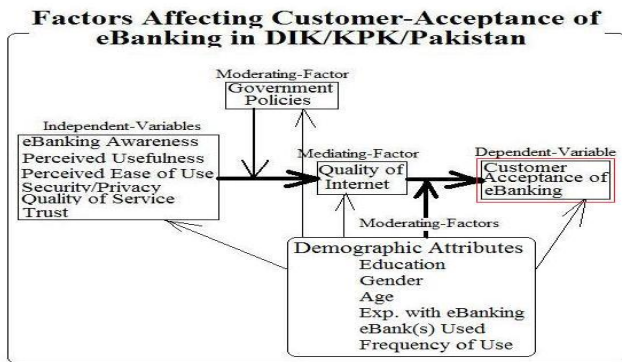
There are several major challenges and issues facing the eBanking industry today. First, and perhaps most important is the security concern (Ziqi & Michael, 2003). Customers are certainly concerned of giving their bank account information online or paying an invoice through internet. Another challenge facing eBanking industry and the eBusiness in general is the quality of service delivery – including both delivery and speed (i.e., short advance time required in ordering) and delivery reliability (i.e., delivery of items/services on time) (Furst et al., 2000), which caused many eBusiness failures in the earlier dot.com era (Roboff & Charles, 1998; Howcroft et al., 2002; Hertzum et al., 2004).

**Demographic Impacts on Customer Behavior**

The researchers have explored and tested several demographic attributes however; some of these are very commonly used by researchers on eBanking. These attributes include: gender, education, marital status, position (Ramayah et al., 2003); gender, age, involvement, seeking behavior and technophobia (Treiblmaier, 2006); age, education, and income (Padachi et al., (2007); experience of using the Internet, experience with eBanking, and usage frequency of at least once a week (Shih, 2007); gender, marital status, education level, and religion (Amin & Ramayah, 2010). In this research we have found the following as relevant for testing: Education, Gender, Age, Experience with eBanking, eBank(s) used, and Frequency of Use.

**Theoretical Framework**

**Figure 1 Schematic Diagram of the Theoretical Framework**



**Research Methodology**

**Survey Approach**

Surevey approach has been used to measure the user attitudes towards new technologies. For example, researches are available on "Usable Security and E-Banking: Ease of Use vis-à-vis Security (Hertzum et al., 2004)", "What keeps the e-banking customer loyal? Role of consumer characteristics on e-loyalty (Treiblmaier, 2006)", "Analyzing the Factors that Influence the Adoption of Internet Banking in Mauritius (Padachi et al., 2007)", "SMS banking: Explaining effects of attitude, social norms & perceived security & privacy (Amin & Ramayah, 2010) are a few projects to quote.

Research shows that survey approach to data collection is the "most frequently used mode of observation in the social sciences and the potential of survey is the questionnaire technique (Babbie, 1993:256-257), which enables the researcher to collect every kind of data to answer every question about the topic (Yin, 1994:6). Given the human and social nature of the research project (Customer-Acceptance), the researcher will apply survey approach since surveys are "excellent vehicles for measuring attitudes and orientations in a large population (Sekaran, 1999:257)."

**Population & Sample**

The population of this project is infinite in the sense that customers of eBanking are increasing day by day and every bank is trying its level best to shoot up the size of their customer-banks. We used a pilot study to measure the level of error in responses and then used the same pilot data for determining the size of the required sample. Following table details the results of pilot study and the use of statistics for determining the sample for this study, which is 178.

**Data Collection & Analysis Tools**

Two different methods will be used in this project. Preliminary literature survey was conducted to 'define and formulate the topic' into a research project. The questionnaire prepared from initial literature survey was used in the pilot

study. The pilot study helped in optimizing the 'constructs' used

z-Score	Std. Deviation	Std. Error	Error	Sample Size
1.96	0.28	0.021	0.04116	178

Formula for Sample-size =  $((z*z)*(sd*sd))/(e*e)$

to measure the variables. It also assisted to develop a structured questionnaire, the main instrument for collecting primary data. Literature survey will continue for updating the additions to literature during this study. Following data collection methods will be used:

1. Literature Survey: Initial literature survey provided concepts relating to the topic, their mutual relationships and the theoretical-model underlying these relationships. It will continue in the main research to further mature the research design and feed the topic.

2. Questionnaire: Questionnaire is instrumental to the survey research. A structured questionnaire has been prepared strictly according to the extracted variables and guidelines for questionnaire construction (Goode & Hatt, 1952:133; Babbie, 1993:146).

Data will be analyzed both in descriptive and inferential manners according to the requirements of hypothesis, generated from the literature. Descriptive statistics will explain the position and nature of the respondents and the research variables whereas; inferential tools will be used for hypothesis-testing (Levin, 1978). For testing hypotheses the researcher will use: Correlation analysis, Regression analysis (linear and multiple), t-Tests and ANOVA applications.

**Discussion**

During the current years, eBanking has been adopted quite extensively as a channel of distribution for financial services, and this is mainly due to speedy progress in ICTs and competitive banking markets. But in a developing state like Oman where banks persist to conduct most of their banking business using conventional methods (Al-Hajri, 2008). Similarly, in Libya, regardless of admitting the benefits of eBanking technology, the country has not adopted and integrated digital systems in its banking system rather continue to use the established or paper-based branch networks. Research tells that this is mainly due to the resistance of bank staff to new technologies. Moreover, the literature shows that there have only been a few studies about ICTs adoption in the developing countries (Abukhzam & Lee, 2010).

The researchers are engaged in identifying the widely used eBanking services and examining the factors influencing the practice of eBanking. These factors include cost of computers, cost of internet, accessibility to internet, willingness of customers, customer awareness about eServices, security of iBanking, convenience and ease of use play an important role for the adoption of eBanking (Padachi et al., 2007). Recognizing this, in May 1999, Taiwan's Bureau of Monetary Affairs in the Ministry of Finance proclaimed the Master Agreement of PC and Network Banking Services for commercial banks to offer eBanking services, such as fund transfers or account summaries (Shih, 2007; Pasquet et al., 2008). So far, majority of the banks have been allowed to build-up new communication networks based on iBanking (Hasan et al., 2010).

**Conclusions**

The eReadiness of the customers is defined as their ability to avail and use the online services offered by various financial and commercial institutions and it also refers to a country's ability to promote and support the development of information and communication technologies (Economist Intelligence Unit, 2008:2). Likewise, organizational eReadiness consists of its infrastructure, relevant systems, and technical skills. Moreover,

eReadiness is not only a problem with the lower level workforce, but also a great challenge for the senior management (Riyadh et al., 2009).

The introduction of web technology forms the new means of commerce which directly facilitate customers to avail various online services offered by banks without interacting with any employee (Shih, 2007). However, developing countries carry on most of their banking services and products by means of conventional, paper-based branch networks. This is mainly due to bankers' resistance to new technologies (Abukhzam & Lee, 2010).

### Recommendations

In Pakistan, there is a disparity between policies and ground realities. This requires IT integrated policies i.e. integration of commerce, trade, educational and legal policies with IT policy to meet the requirements of eBanking and eCommerce. Through efficient and effective ePolicies, the government can build up the required physical and legal infrastructure to win the confidence of businessmen (Kundi & Shah, 2009). Today is the era of important transformations where downsizing, re-engineering, and mergers of various firms take place. Similarly, the structures of our work places are also shifting from hierarchical closed systems to open, flexible and often virtual environments (Banan, 2010).

There are several vital decisions to be taken by the banks to develop eBanking services, including bank's privacy policy and procedures duly examined by the concerned regulatory bodies of the government. Due focus should also be given to eBanking disclosure policy to completely define bank's liabilities and responsibilities relating to eServices (Yang et al., 2005). Similarly, the management of Banks must analyze the cost portfolio of their existing IS and the associated benefits. If they experience lesser outputs with lower competitiveness due to the use of outdated technology, then they must not wait further to attain the probable financial returns from the use of their existing IS (Kuppusamy et al., 2009).

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