Degree Project

# Electronic banking & e-readiness adoption by Commercial Banks in Pakistan

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**Abstract**

This study firstly examines the current literature concerning the electronic banking problems during implementation of electronic problems in Pakistan and causes that hinders this process. To investigate in the real-time scenario we have taken the case study of Muslim Commercial Bank Limited in Pakistan in order to understand "why" and "how" the electronic banking could not be implemented successfully.

The data was collected via interviews, surveys and bank website. Both qualitative and quantitative research approach has been used to investigate and have proper understanding of current e-banking issues. We have sent questionnaire to bank employees and interviews were conducted by the bank mangers. The response of interviews and surveys shows that there are certain issues that hinder the use of e-banking in Pakistan. In-spite of the fact that internet banking has been started in Pakistan, people are still using the old manual system to do the banking transaction, popularity of cash system, waiting in long queues for hours and lacking of proper computer education and trust etc are the major problems that are hurdles in electronic banking. On the other side there are a lot of reasons that the banks did not concentrate on internet banking and cash flow is still popular in banks and internet banking was used by the banks for the limited services.

Last years a lot of changes has been done and a greater understanding have been developed and now banks are offering various online banking services but banks are facing the problem of customer awareness regarding security and privacy of using Internet banking services as still customers are reluctant to use the online banking services so they prefer to come to banks and deposit the money by hand. So we have investigated these hindrance in our research and also we put some light on what are the advantages in using electronic banking and the how the customers are getting benefit by using e-banking in Pakistan.

We have developed our own model based upon the prior research. The results were presented in detail based upon the interview and questionnaire and later on we have given recommendations so that e-banking concept can be implemented in Pakistan and suggestions which can be very helpful for the future research

**Keywords:** e-banking, electronic banking, internet banking, security, privacy, perceived usefulness, perceived ease of use, trust, Pakistan.

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# 1. Introduction

*This chapter highlights the topics covering the background of electronic banking, problem statement, objective, research question & justification of the study followed by scope and limitation of the study and ends with the disposition of the study.*

## 1.1. Background

Internet and www in the developing countries has greatly changed the business environments of today's world. In the developing countries consumers are now focusing into other substitute's channels like electronic commerce for shopping which are offering them more and more choices of products and services in order to help in cost savings and its ease. Rapid growth of online shopping stuff and changing fashion of consumer behavior is attracting more and more companies to join the bandwagon. Electronic commerce is not a new incident in developed countries however dispersion of electronic commerce is very low in the country like Pakistan (Shahzada, 2006).

Information and Communication technology is helping to reduce the transaction cost of the business firms by providing cards and business services. Banking sector is very ideal for the successful development of electronic commerce (Kardaras and Papathanassiou, 2001). Electronic banking would help financial institutions to lower cost which is very crucial for the long term survival of the banks (Burnham, 1996). It has been expected that those banks who are not responding to need electronic banking would more likely lose their customers (Orr, 1998). Financial institutions are now focusing on new delivery channels include virtual public and private networks, dial up connections, personal computers and ATMs. The websites of financial institutions plays a vital role in electronic banking and it should deliver sufficient information to customer.

According to Chaffey *et al.* (2006), the only way for the customer interaction is to provide an interactive website. Quality of services and contentment greatly influence services encounter and there is no single person contact in isolated service which provides more than one opportunities to firm. Mols (1998) stated that electronic banking provides a reduced amount of time as compared with traditional banking but in order to get benefits from these services, readiness of consumers to aim and accept new technologies must be issue because consumers demands much more from financial institutions. Worldwide economic sectors are intensely reliant on the technologies, government policy and officially authorized frameworks which run the business very efficiently and transparently (Ahmed, 2006). It's very difficult for the financial institutions to struggle except the customers are agreed upon certain services which are only possible with high-tech arrangements.

### 1.1.1. Electronic Commerce

The term electronic commerce refers to process of performing various business activities for products and services in which two parties interact with each other by electronic means, instead of interacting or having physical contact (Andam, 2003). Electronic commerce has the following major type's business-to-business (B2B), business-to-consumer (B2C), business-to-government (B2G), consumer-to-consumer (C2C). So technology can consider as the major force to ensure the growth of e-commerce. This helps in providing more efficient, faster and much easier way of communication. Having online access anywhere is one of the main advantages of electronic commerce. The banking sector can be considered as the ideal platform for successful

implementation of electronic commerce (Karadaras and Papathanassiou, 2001). According to (Reiser, 1997; Daniel, 1999) internet banking is the form of representing electronic channel for distributing and delivering the financial services at the virtual level.

Electronic banking in Pakistan is still in its mushrooming stage as compared to western countries. Commerce plays a vital role to boost the economy of the country and there is a high level of risk involved in this industry. "In many industries such as banking and telecommunications, it is virtually impossible for an organization to compete unless its customers are given the level of service that is only possible with high technology systems"(Kundi and Shah, 2009, p. 1).

So as compared to ordinary banking system electronic banking is providing the competitive advantage by lowering the cost and providing best satisfaction of customer needs (Daniel, 1999; Mols, 1998). In the world of electronic commerce, it is very important that banks should provide with the internet banking services in order to have the long-term survival (Burnham, 1996). So with the help of electronic commerce, internet banking is providing the benefits to its customers and banks. From the customer's point of view, electronic banking is providing convenient and valuable source to deal with funding because it provides convenience to access account 24/7 (Applegate *et al.,* 1996). Customers can use these services at anywhere i.e. homes, offices etc and anytime without visiting the banks. The banks can use the electronic commerce technology for meeting the competitive advantage and gaining the best level of profitability and providing best services to its customers. Awareness, information, customer protection, response time, reliability, security, technology readiness all are considered to be an important elements for electronic banking.

### 1.1.2.        Current Banking situation in Pakistan

The banking system in under developed countries is quite different from the banks operating in Europe. In Pakistan customers still face a lot of problems when they visit banks. In Pakistan, payment of utility bills by online means is not popular and even some banks are not offering the services. The utility bills are received by every home every month and these are gas, telephone and electricity bill. But the problem is that these bills are send to homes at the different dates of months so people need to visit banks in order to pay utility bills. So the problem that mostly people face is that they have to stand and wait in the long queues for their turn so that they can able to pay utility bills. For the person who is doing job or business is very difficult to manage the time as he or she did not know exactly at what time he is going to stand and wait for his or her turn. Mostly the banks do not allow the people to come inside the bank and pay the utility bills as then it will be a big mess inside the bank so two cashiers are sitting at the window and people are standing outside of banks in the queue. Sometimes the temperature is very high in the summer season but these people have no option either to pay fine on the late submission of the utility bills or to stand at the hot weather. If someone have any relation with the bank manager or with cashier then that person do not stand in the big queues and he or she will go inside the bank and give the utility bill and money to that person and the bank employee will go to cashier who is receiving the utility bills and cashier will stop entertaining the people in big queue and accept that person utility bill first.

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 e-readiness among the people to use electronic banking services (Kundi and Shah, 2009). 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 has right to supervise and regulate the activities of these banks. In 1997, there were some amendments in the banking laws. There was ordinance under section 40 (A) that it is the responsibility of State Bank to monitor every bank performance and to ensure that it is meeting the defined criteria, rules and regulations. In Pakistan, IT institutions are divided into three classes. Government institutes, private having foreign afflictions, and locally operated and owned institutes (Aslam, 2001).

## 1.2.    Problem Statement

The problem statement has been split in two sections on the basis on two distinct concerned factors i.e. operational problem and academic problem. Operational problem describes the problems of system and academic problem describes the users end problems

### 1.2.1.          Operational Problems

According to Shamshad (2006) 3,424 online branches are providing real-time online banking facility to the financial credit holders in Pakistan as compared to 7,406 branches of 41 banks which means that only 42.47% branches are working online. However this process is very slow due to several factors. Mobile Banking is already introduced which was started in 2006 but it is limited to retrieve Mini-statements (Bakhtiar, 2005).

According to Bakhtiar (2005) survey was conducted in Peshawar, Mardan and DI Khan which are the cities of North West Frontier Province which states that only 5% knows about ATM while 95% of the total population of North West Frontier Province which include people having their account in the banks don't know what is ATM. 8% are aware of online banking facility while 92% are not familiar.

Only 12% customers were familiar to use the debit and credit cards facility while 88% customers were not aware of debit and credit cards. Internet users are increasing day by day which reached 12 million in 2007 from 0.01 million in 1997-98 with 2389 cities connected to internet (Pakistan Telecommunication Authority, 2007).

Personal computer access is very important for online banking. Personal computer penetration and electronic business is directly linked to each other (Heeks, 2002). It is the most important reflection for developing countries like Pakistan. A normal personal computer may cost 30'000 PKR which is the average salary of two months for the typical internet customer (Nizamuddin and Khalid, 2001). However there are several other issues like inadequate infrastructure, Software and Hardware, communication infrastructure which are the major obstacles for electronic business which will take years for the normal person to take advantage from online banking (Zarmeene, 2006). Most of the people are connected through telephone lines which is another aspect of infrastructures because broadband connections are very expansive and an average person cannot afford it. Pakistan Telecommunication Company is providing internet connections and telephone services control which resulted in high cost with poor service (Naeem, 2003) which restrain the usage of the internet in Pakistan. The reason is that Pakistan Telecommunication Company is the largest company run by the government of Pakistan which provides the backbone for all the telecommunication service providers which has the largest copper infrastructure spread all over the Pakistan with the million of installed lines for the users. Consumers are paying cash rather than using debit or credit cards. Lacking of ability to perform money transactions through debit or credit cards is one of the

obstacles in Pakistan which has resulted in lower the electronic business transactions (Qureshi, 2008).

Major concerns of electronic transactions are the issues of security and privacy. In the developed country like France, 3 out of 40 purchases online and the remaining 37 are reluctant to use online services and the reason is security and privacy which is the major threats to perform online business. It is not only the duty of industry but also the duty of government assuring people to perform secure electronic transactions (Abbasi and Zubair, 2001). Government of Pakistan has taken several steps to guarantee security and build self-assurance of the online community by announcing ETO-2000 and digital signatures but it is still insecure to attract the people for online business but Hussain (2001) says that besides legislation rules, the most important thing is education.

### 1.2.2.        Academic Problems

In the limited resources still Pakistan has short of quality education, qualified faculty members, expensive higher education system, government education sector having improper resources and private sector having high fee structure and not within the reach of every person. So IT educational problems are still playing an important role in implementing electronic banking environment in Pakistan.

Information Technology can play its role in managing and processing the data. IT implementation can be used to make up all the deficiencies and to lead the country in the right way and for this new educational reforms are very important so that new generation will come to know how to use this technology and so it requires the strong leadership and good governance that believe that IT is an investment not an expense. The lack of trained professionals in educational institutes, and poor educational infrastructure is an important reason of low literacy rate.

### 1.3.     Objective of the Study

From the customer's point of view, electronic banking is providing convenient and valuable source to deal with funding because it provides convenience to access account 24/7. For business consumer electronic banking is providing refined money management with the help of electronic banking which gives all the information within seconds (Applegate *et al.*, 1996).

Electronic banking is available in some bank while some of the banks are functioning to provide electronic banking solutions. Digital certificates accessibility and security concerns are impediment for the start of projects and interfering of the political parties in important plans of the bank to make decisions. Commerce plays a vital role to boost the economy of the country and there is a high level of risk involved in this industry. "In many industries such as banking and telecommunications, it is virtually impossible for an organization to compete unless its customers are given the level of service that is only possible with high technology systems" (Kundi and Shah, 2009,p. 5). Awareness, information, customer protection, response time, reliability, security, technology readiness all are considered to be an important elements for electronic banking. Nowadays employees are facing a lot of problems while facilitating the customers for doing transactions electronically. The banks have appointed customer relation officers for providing solutions of problems but customers are still reluctant to do online banking transactions.

The research aims to identify governmental, individual and financial institutions perspective of the electronic banking in Commercial banks of Pakistan and how to provide with customers enough knowledge so that they can start using electronic banking transactions.
The objective of the study is to find out why customer is reluctant to use electronic banking facility and to gives answer to the question:

### 1.4.     Research Question

> Q. What are the hindrance and facilitators for implementing electronic banking in Pakistan?

### 1.5.     Previous Research

As far as electronic banking is concerned, the research has been done and only internet banking positive aspects have been discussed and these positive aspects and some drawbacks are mainly focused by the developed counties like UK, Sweden, Singapore etc. Only a very limited amount of research has been done for the underdeveloped and developing countries like Pakistan. So our focus is to mainly discuss the factors that hinder the penetration of electronic banking in Pakistan and how these factors can be solved or minimized.

### 1.6.     Justification of Study

The term "e-" (electronic) is pretty used worldwide. They are very buzzing words, but electronic commerce is still in its immaturity stage in the economic sector especially in banks of emerging countries like Pakistan. The boom of internet has transformed societies. Distance is not more reality. Just clicking of mouse can connect people from all over the world which has resulted businesses to come up with the new idea of taking the advantage to internet by running business online i.e.

commerce, banking, etc. Competition and limitation of resources placed banks under pressure to lower cost and improve their services and maintain quality of service (Lucking-Reiley and Spulber, 2001). Hi-tech advances in bank industry modernize people to deal with their finance. Introduction of online banking facilitate people by gaining access to accounts anywhere at any time round the clock (Karjaluoto *et al.,* 2002, p.261).

With the introduction of online banking in 1995, it allows people to get benefits of online stuff by having every kind of information. It provides benefits for customers and banks as well. Banks have lowered their transactions costs and advertising services with the help of websites while the customers can enjoy online banking by accessing internet which is very relaxing, time saving and cost reducing (Pikkarainen *et al.,* 2004, p.226). Electronic banking provides reimbursement to customers including 24 hours access to their account and transferring of funds by just clicking of mouse seven days a week. Banks are facing demands within the banking sector and particularly from the non-banking economic services area because they are moving towards multi-channel banking services which provide innovative products and services with lower costs to their customers. Online banking is very attractive to banks and to consumers who now have higher approval of new technologies and progressively more understanding of complex products. Banks are using their product names with large consumer base and highly market shares of firm financial products to remain their existing clients and to attract new ones (Lucking-Reiley and Spulber, 2001).

## 1.7.    Scope and Limitations of the study

The scope of the research is to observe and analyze the e-readiness and online banking experiences of customers of Muslim Commercial bank Limited. There are different aspects of electronic banking which can be viewed from different views. e.g. banks perspective and customer's perspective. The time available to complete Masters Dissertation was very short and all the topics couldn't be covered due to time constraints so an attempt has been made to narrow down the topic and to focus on the customer's perspective rather than bank's perspective and to provide a good understanding of e-banking and e-readiness adoption among the customers of the commercial banks of Pakistan. The study is only limited to one bank which is Muslim Commercial Bank to gather empirical data with the help of questionnaire and interviews.

# 1. Theoretical framework

*This chapter presents the literature review and includes several parts. It starts with introduction of electronic banking giving the brief history of how electronic banking was introduced in Pakistan followed by e-readiness by giving the description how it is important for the country's economy. After that benefit and importance of electronic banking has been discussed which shows the importance of electronic banking, one can get a lot of advantages from electronic banking. The last part describes the Information and Communication technologies (ICT) growth in Pakistan by pointing out the role of government regarding implementation of Information and Communication technologies in Pakistan.*

## 1.8. Electronic banking

In Pakistan the introduction of the ATMs and credit card was done by foreign banks and in mid 1990s ATMs and credit card were introduced, then followed by the domestic banks in late 1990s. According to (Abid and Noreen, 2006) electronic banking is defined as "Any use of information and communication technology and electronic means by a bank to conduct transactions and have interaction with the stakeholders".

Electronic banking provides the facility to the customers to access their accounts and execute transactions electronically in a very easier way by visiting the bank websites at any time i.e. 24 hours a day, 7 days a week. By using this facility individual and companies are saving a lot of their time and money. Some banks are providing this facility free of cost while some banks have lower the costs for online transactions as compared to real life banking transactions (Karjaluoto *et al*., 2002, p.261). All the banking power is provided into the hands of customers and allow to self service them by fulfilling the different banking needs, so with the online services customers can facilitate themselves by a number of ways: like they can view their account details, re-viewing of their account histories, payment and transfer funds, order and re-order cheques, pay utility bills, get loans by filling the loan application form online, activate or replacement of credit card and get in touch with the customer care department of the banks (Amor, 1999).

In order to start the virtual banking, the customers need to have the computer or embedded device like Personal digital assistant (PDA), mobile phone connected with the internet.

## 1.9. E-Readiness

E-readiness is defined as "The ability to pursue value creation opportunities facilitated by the use of the Internet". Another definition of e-readiness what is the country's ability while promoting and supporting digital and information and communication technology (ICT) services" (Economist Intelligence Unit, 2008, p. 2).

e-readiness determines the quality of country's Information and Communications Technology and measure the ability of consumers, business and governments to use the Information and Communication Technology to their benefits. When country uses Information and Communication technology to carry out more of their activities, its economy can become more visible and efficient (Economist Intelligence Unit, 2008, p. 7). There are number of ways to achieve and sustain e-readiness which varied and interrelated, which are shaped by different factors like financial, political and social environment, as well as by the size and quality of Information and Communication Technology infrastructure and digital services that are in use. Policy makers have

to drag on several levels concurrently to form an environment where digital connections can propagate and where commerce and society get it suitable, well-organized and cost-effective to use digitals channels for their communication. According to Economist Intelligent Unit, "when measuring progress in the digital world, it is worth remembering that electronic commerce is really about commerce and that electronic government is primarily about government. Economist Intelligent Unit consider that an integral contributor to a country's e-readiness is its overall readiness to promote and facilitate business" (Economist Intelligent Unit, 2008, p. 10).

The "digital divide" is merely the latest demonstration of the socio-economic landscape of Pakistan. Most of the access to Information and Communication Technology is provided by means of traditional arrangement, such as dial-up connections using phone lines to connect with the internet. Except for basic telephony services, the telecom sectors of Pakistan stands almost fully liberalize. There are approximately 150 different Internet Service Providers operating throughout Pakistan. Pakistan is an under developing country and the availability of public internet access is very essential to make the internet accessible to greater number of individuals and organizations. The infrastructure of telecommunications in metropolitan areas can straightforwardly accommodate access of 56 Kilo bits per second and higher. Presently the use of computers in public schools is almost non-existent. Only private schools, which are English medium schools, can afford to encourage the use of computers. However, higher education institutes exploit the use of computers to train their students in Information & Communication Technology.

## 1.10. Benefits of electronic banking

Online banking is concerned with the Internet portal, providing the facility to its customers and allowing them to use different kinds of online banking services like payment of utility bills, purchasing the mobile recharge and making investments. It's essential for the banks to have the official bank website providing the possibility to do transactions so that banks can be qualified as providing the online banking services (Pikkarainen *et al.,* 2004). According to Giglio (2002) and Robinson (2000) for delivering banking products the cheapest delivery channel can be done only through the Online Banking. According to Karjaluoto *et al.* (2002) with the help of online banking services, the branch networks of banks have reduced and also the staff for working in banks and customers are satisfied to use the online banking services as it will save a lot of time and effort to go to branch of bank and perform these transactions. So the main reason behind accepting the online banking a service is the time, cost saving and freedom from the place (Polatoglu and Ekin, 2001). There are a lot of reasons which hinders the popularity of online banking services in spite of the fact that bankers and customers can get benefit from online banking. The majority of private banks are still lacking behind the online banking channel. According to Pikkarainen *et al.* (2004) the reasons behind banks are not using the online banking services are as follows:

- The internet connection is very important for the customers to start using the online banking services.
- Before using these online banking services the new users need to learn how to use these internet services.
- Some non user's complaint that the face to face banking situation is quite different from doing banking online so there are no social dimensions while doing online banking (Mattila *et al., 2003*).
- The security issue hinders some customers to use the online banking services.

Internet provides a platform for purchasing products and use online banking services and runs the business inside and outside the organizations. All companies whether they are small medium or large medium are using internet as a source to provide their companies products online with all the information on the internet which helps their customers to provide consumer support for making contacts for online purchasing. Business organization's are trying to uncover the new technologies coming from the electronic commerce applications which has a lower transaction cost which resulted to eliminate association in distributing channels. The cost can be reduced to zero in some services like information and manufactured goods information. Transaction of low cost and easiness provides to adopt the new trend of technology to trade information among different groups and business parties. Information and Communication technology adoption transformed business to go from local and global. According to SAARC, Pakistan is the only country that has come forward in the electronic adoption with the change level of +15 during years 2003-2004. However it has been said that electronic banking is vital in the banking sector of developing countries (Polatoglu and Ekin, 2001). According to Economist Intelligence Unit e-readiness ranking (2006) stated that developing countries are moving faster towards e-readiness. The online payment system is quite new in banking institutions and dispersion of these innovations can result in more competent online banking systems which resulted in lots of changes in the technologies of the banking sector.

According to Akinci *et al.* (2004) Internet banking can be categorized into following areas

1.  Retail banking service
2.  Distribution channels
3.  Consumer attitude
4.  Banks manager perception

According to Chou and Chou (2000) online banking provides the following services

1.  Viewing account balances and transaction histories.
2.  Paying bills.
3.  Transferring funds between accounts.
4.  Requesting credit card advances
5.  Ordering cheques

Black *et al.* (2002) argued that consumers' channel choice in financial services was determined by consumer, product, channel, and organizational characteristics in which product-channel interactions and consumer-channel interactions were of particular importance.

Thornton and White (2001) have compared seven distribution channels (ATM, EFTPOS, credit card, cheques, human teller, telephone, and Internet) with a view to a set of variables affecting their usage. They concluded that customer orientations such as convenience, service, technology, change, knowledge, computer, and Internet affected the usage of different channels. The usage of ATM, EFTPOS, and telephone increased as customers were more oriented towards change, knowledge, computer, and confidence. Quoting from Didio (1998), Nath *et al.* (2001) underlined that the average transaction cost of $1.07 at a full-service bank was reduced to $0.27 at an ATM, and fell to about a penny if the transaction was made on the Web. They also added that cost savings, access to additional services, and convenience were among the main benefits of the IB. Similar conclusions were reached by Ahmad and Buttle (2002) for telephone banking which provided convenience and control to consumers and lower costs to banks.

Polatoglu and Ekin (2001) argued that early adopters and heavy users of IB services were more satisfied with the services compared to the other customer groups. According to Joseph and Stone (2003), the ability in order to deliver services via technology appears to be correlated with high satisfaction with services deemed most important to customers. Furthermore Moutinho and Smith (2000) emphasized that human and technology based delivery channels were greatly linked with the customers' perceptions of how these bank services were delivered to them and pointed out that these perceptual outcomes would affect the level of bank customer satisfaction, retention, and switching. Before the shift of technology customers were facing a lot of problems like handling a lot of money and transferring of that money, submission of utility bills and waiting in a long queue as there was no online transferring facility, and there was no information about new services offered by banks and mostly deposit holders were unaware of how to get benefits from bank products and services like bank loans, credit cards, ATM cards etc. So if we go back five to ten years we can see the quite difference between these two banking systems.

Liao and Cheung (2002) found that individual expectations regarding accuracy, security, transaction speed, user friendliness, user involvement, convenience were the most important quality attributes that perceived usefulness of internet based e-retail banking. Among these, the first five determined the willingness to use by consumers. Moutinho and Smith (2000) studied the behavior of established bank customer and concluded that ease of baking and convenience was the two important expectations.

Mattila *et al.* (2003) said that perceived difficulty in using computers combined with the lack of personal service in electronic banking were the main barriers while Sathye (1999) identified the security concerns and lack of awareness about Internet Banking as the main obstacles to non-adoption. He pointed that young, educated and wealthy groups of customers were the most relevant customer segments for the rapid development of Internet banking market.

Polatoglu and Ekin (2001) pointed out nine factors that influenced the diffusion of Internet Banking. They were
- Relative advantage
- Observablity
- Triability
- Complexity
- Perceived risk
- Type of group
- Type of decision
- Marketing effort

He concluded that those customers, who use Internet banking for the longest time or who use more of its services, find Internet banking to be very reliable.

Lockett and Litter (1997) presented a study of the adoption of direct banking services in UK using a model of the perceived innovation attributes and the personal characteristics of adopters and non-adopters. Their results indicated that the most important perceived positive attribute of direct baking was its 24-hour-a-day availability, whereas complexity and risk of service were the two negative attributes. Patricio *et al.* (2003) underlined the critical importance of understanding and improving the contribution of each channel within the overall service offering rather than concentrating efforts on improvement to each service delivery channel in isolation.

Based on UK evidence, Li (2001) claimed that the integrated banking models around which traditional banks have built their strategies in the past were showing signs of fragmentation. Thus he described four emerging Internet banking models in UK. The first model was based on accepting the Internet as a "new distribution channel" which was onto the existing model. The second model, also called "electronic banking" was based on multi-channel banking in which the Internet was the integrative component. The third model consisted of creating "baby e-banks" with their own e-brand name and product range. The fourth model was entirely a new business model without a physical network while Aladwani (2001) highlighted security, regulations, consumer privacy and bank's reputation as the main future challenges in the adoption of Internet Banking by Kuwaiti banks. Parasuraman (2000) proposed that flexibility, convenience, efficiency and enjoyment are examples of major positive themes in the online environment. Negative themes included security concerns, risk of obsolescence, impersonalisation and lack of control.

## 1.11. Importance of E-banking in Pakistan

According to Hagel and Hewlin (1997) the Internet banking became very attractive to customers and lots of banks because the technology is being accepted by them and they can now understand and have information about the complex products. Nowadays banks are also facing a lot of competition and need a high market share and provide better services to its customers so that they can attract the new customers and old customers do not try to leave them.

While using the online banking there are a lot of advantages that customers are getting. These benefits are customers can access to their bank accounts at anytime and anywhere, twenty four hours and seven days a week. The management of funds and availability of banking services can be carried out by customers very easily. Online banking provides benefits to users and also to the banks. Users can use online services dependent on convenience which is independent of time and place constraints. Online banking helps banks to reduce transaction costs and cost of operation in the form of reducing staff and physical branches. In developing countries like Pakistan, e-banking initiatives are taken to utilize the technological benefits that can be harvest along with many other e-readiness measures being taken. Pakistan has been among the late entrants into e-banking. The first ATM switch was setup in 1999 and in 2000 Internet Banking was introduced (Ahmed, 2006).

When the government of Pakistan started initiatives of Information technology and e-commerce in early 2000, the banks were leading in e-commerce. However the banks are the leading on Information and Communication Technology but the most of the progress had been made in electronic government. Some business to business portals are available which are designed more for information rather than transactions. The act of de-regulation helped many foreign and private banks to established strong end user by adopting the electronic commerce techniques thus utilizing the first mover advantage fairy tale (Ahmed, 2006). However, Government of Pakistan needs to play a vigorous role by creating awareness among the regulatory infrastructure, legislation and consumers for making such initiatives successful. Government of Pakistan has already taken steps for the working towards the formation of information society and to create awareness among the people but the pace of this process is very slow. The Ministry of Science & Technology has been taking number of measures to promote electronic commerce and electronic Banking in Pakistan, Technology helps to catalyze efficiency in the provision of financial services and ultimately in determining the winners in the intensely competitive financial markets of the future. In Pakistan, high technological diffusion have enforced the fundamental changes in the financial industry, new considerable business plans have open the new ways for doing business, launching electronic

business and use of Information and technology for the development of better internal controls and more complicated risk management systems, better and superior convenient customer services (Akhtar, 2006).

Hence it is critical that the financial industry of Pakistan adopts an appropriate organizational model that supports business process re-engineering and customer centric approach to create cost efficiencies and economies of scale to exploit technology (Akhtar, 2006). Inter-connectivity of switches and establish networks of ATMs makes it possible to use ATM and electronic banking services which is gaining currency. Services offered by ATMs and their better outreach will enhance the customer base and provides more alternatives to the customers which will open up new avenues for them. Smaller banks will be able to vie with large banks to retain their market presence by using technology more efficiently. Technology tends to have a high degree of obsolescence. Thus, the financial institutions of Pakistan need to empower heavily in the development of their Information Technology systems, which might initially load their resources. For this purpose, the financial industry will have to optimize their resources for technology applications. The immediate solution might lie in sharing of services. The banks of Pakistan are already cooperating broadly in using ATMs services.

At the same time, financial institutions of Pakistan will also have to raise sufficient safeguards to deal with the coupled operational risks. This would invite special focal point of their management in the future (Akhtar, 2006). Almost 90% of the branches in the urban areas had been computerized by August 2006. Different banks and exchange companies are offering funds transfer facilities from overseas. Few banks are also providing mobile phone banking where utility bills can be paid by the customers using their mobile phones.

There is an urgent need to create awareness amongst the business group of people about the importance of electronic commerce and to prepare people to accept the challenge which electronic commerce offers. Most of the business concern people use computers as a typewriter and data storage. The computers in their offices are not even linked through a common communication server. Internet is considered a luxury instead of necessity. Pakistani entrepreneurs would have to change this attitude if they are serious in accepting the challenges of globalization (Abid & Noreen, 2006).

## 1.12. ICT growth in Pakistan

Innovation in technologies helped electronic commerce to add extras and nurture around the globe. As the electronic commerce has matured so it has become an important means for all those living in highly developed countries. In developing countries there are varieties of forces for the successful implementation of electronic commerce and one of these forces is the trust on the system. There are other issues like technological dependence, economic issues and parameter of local authorities which manipulate the trust level among the developing countries like Pakistan (Aljifri *et al.,* 2003). According to Khan and Bawden (2005) as compared with most of the developing countries, the growth of Information and Communication Technology in Pakistan has been pretty slow. The national policies of Pakistan constantly focused to develop the domestic Information and Communication technology sector for the development of electronic commerce in the nation. Government of Pakistan established seven "IT universities" and one virtual university under the national Information Technology Policy to create more and more qualified professionals and staff to conform to current needs of information and Communication Technology age. Similarly, the

National Education Policy (1998-2010) seeks to modernize education in Pakistan through the use of Information and Communication Technology to guarantee that the young generations of all ages get aware of Information and Communication Technologies. Some Foreign companies like Microsoft, Cisco and Oracle are also investing in Pakistan for the promotion of ICT (Shahzada, 2006).

The diffusion of internet is growing with rapid increase which started from 10,000 users in 1998 reaching to 1.3 million in 2001 and by the end of 2005 it was 7.5 million in response to the government policy. Pakistan has been ranked in 26th place on the list of those countries having highest Internet diffusion with United Stated is on dominant (Shahzada, 2006).

Under the Electronic Transaction Ordinance 2002, the promotion of electronic banking is done by the Government of Pakistan. Today in Pakistan almost all commercial banks have installed their own ATM network machine and issued debit and credit card to its customers and have joined one of the two operating ATM Switch Networks.

According to Kolachi (2006), the following online banking services and products are provided by the banks of Pakistan:

1.        **Inquiry:**
            Inquiry about the following things:
- Bank Statement
- Checking of the balance
- Statement check inquiry
- Fixed deposit inquiry

2.        **Payments:**
- The funds transfer
- Payment of credit card
- Direct payments
- Payment of Utility bills

3.        **Request:**
- Request for Cheque book
- Stop payment requests
- Demand Draft request
- Request for Credit/Debit card

4.        **Download:**
- Personal Profile
- Bank Statement

These are the basic facilities provided by the banks in Pakistan which includes inquiry regarding checking of balance, online payments via internet and requests for cheque book, demand draft, debit and credit cards. It also provides facility to download personal profile and bank statements.

## 1.13.  Technology Acceptance Model (TAM)

Different studies have been done to develop methods for measuring the acceptance of technology, a willingness to make use of technology, and the dispersion of innovations, which gives directions to understand why customers are not using electronic banking.

- Technology Acceptance Model (TAM) which was developed by Davis (1986),

- Technology Readiness Index (TRI) of Parasuraman (2000)

- Pioneering diffusion literature of Rogers (1962) and Ostlund (1974).

Technology Acceptance Model (TAM) (Davis *et al*., 1989; Mathieson, 1991; Davis and Venkatesh, 1996; Gefen and Straub, 2000; Gahtani, 2001, cited in Pikkaranien *et al*., 2004) was introduced by Davis (1986) is based on adaptation theory of Reasoned Action (TRA) particularly customized for modeling user acceptance of IS (Gerrard *et al*., 2006).

It provides a foundation intended for tracing the impact of external reasons on internal beliefs, attitudes, and goals (*Davis et al*., 1989). According to Davis *et al.* (1989) TAM was formulated in an attempt to achieve these goals by identifying a small number of fundamental variables suggested by previous research dealing with the cognitive and affective determinants of computer acceptance.

According to Davis *et al.* (1989) TAM defines the two constructs that is perceived usefulness (PU) and perceived ease of use (PEOU) that are of primary significance for computer acceptance. Perceived usefulness (PU) is defined as the degree that using a specific system will increase the job performance while Perceived ease of use (PEOU) refers to the degree to which the user thinks that the target system is to be free from effort. According to (Eriksson *et al*., 2004) it has been found that TAM's ability to explain attitude toward using an information system is better than other model's. Technology Acceptance Model can be considered very appropriate for studying the usage of internet banking (Eriksson *et al.*, 2004).

Technology readiness index (TRI) of Parasuraman (2000) construct refers to people's tendency to hold and use novel technologies for completion of their goals.The TRI contains four factors: optimism, innovativeness, discomfort, insecurity (Gerrard *et al*., 2006). Optimism is the degree to which people with a positive view of technology believe it offers increased control, flexibility and efficiency in their lives. Innovativeness is the degree to which people are technological pioneers and thought leaders. Discomfort is the degree to which people perceive a lack of control over technology and feel overwhelmed by it; and insecurity: the degree to which people distrust technology and are skeptical of its ability to work properly. These findings recommend that, if the customers are not mentally prepared to use electronic banking, they are likely to express discomfort and insecurity about the service and feel less hopeful and innovative about the technology (Gerrard *et al*., 2006).

| TRI (Parasuraman, 2000) | TAM (Davis, 1986) | Diffusion (Rogers, 1962; Ostlund, 1974) |
|---|---|---|
| Discomfort | Easy of use | Complexity (Rogers) |
| Optimism | Usefulness | Relative advantage (Rogers) |
| Innovativeness | Ni | Innovativeness (Rogers) |
| Ni | Ni | Compatibility (Rogers) |
| Ni | Ni | Trialability (Rogers) |
| Ni | Ni | Observability (Rogers) |
| Insecurity | Ni | Perceived risk (Ostlund) |

*Note: Ni means not identified*

Source: Gerrard, 2006

Table 1. A comparison of the TRI, TAM and Diffusion models

**Figure 2.1 – TRI, TAM and Diffusion model comparison table (Rogers, 1962)**

Even though earlier researchers have explored and replicated the Technology Acceptance Model (TAM) which is applicable to predict the individual's acceptance. However the Technology Acceptance Model primary construct doesn't completely cover the exact persuade technological and usage-context factors that can adjust the customer approval (Moon and Kim, 2001).

The main purpose of (TAM) model is to search in detail what is the customer's acceptance and why the customers accept or reject the electronic banking system. According to Davis (1989) the goal of this model is to explain in general the determinants of computer acceptance, so that user behavior across the broad range of end-user computing technologies and user populations can explained, while at the same time both are parsimonious and theoretically justified. Therefore having the track of the impact of external factors on internal beliefs, attitudes, and intentions is the key purpose of this model (Davis, 1989). In order to achieve these goals this model was put together with the different electronic banking factor by recognizing the small number of fundamental variables which are proposed by the previous research dealing with the cognitive and affective determinants of computer acceptance. The main constructs are the information of online banking, security and privacy. Roboff and Charles (1998) stated that people understands about the risks but they have pathetic thoughtful of online banking protection risk. It has been stated that customers are full confident on the banks and they are very anxious about privacy and protections issues. Finally they argue that although customer's confidence on their bank was very strong but their confidence on the technology was very weak (Howcroft *et al.,* 2002).
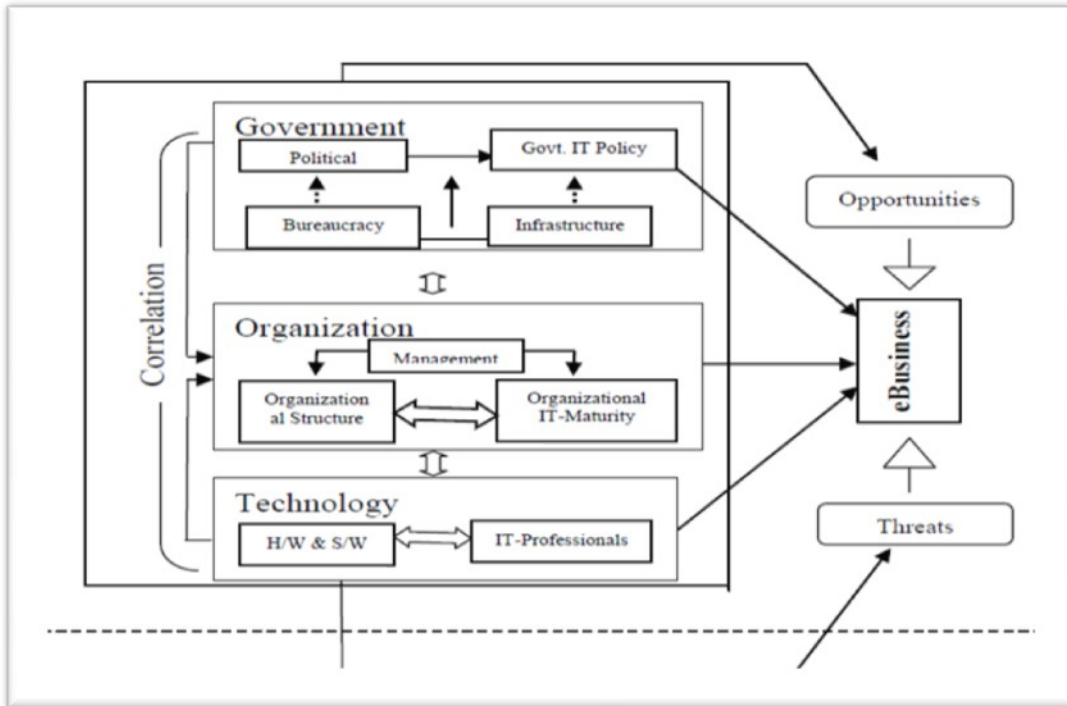
Figure 2.2 – Conceptual Framework by (Kundi and Shah, 2009)

(Kundi and Shah, 2009) used a conceptual model in his study see (Figure 2.2) they have taken e-business as dependent variable and the other three categories of "government, organization and technology" and under these three main categories there are ten major independent variables. They performed ANOVA, t-test, correlation and regression analysis to analyze the statistics of primary data. Out of 31 propositions, 22 were validated and the remaining was rejected. The sample population was chosen from those organizations who were involved in electronic business. They stated that there is no separate electronic business policy.

The reason behind using this model is that it best suites the current Pakistan's banking situation. As government, bank organizations and technology are the major issue/hurdles in e-banking. Pakistan is fleeting in the course of digital manner of supremacy and commerce. It has been passing all the way from fine to awful practices. According to (Kundi and Shah, 2009) TAM model is designed in two different stages, having independent and dependent variables. Our study is based on survey. According to them Information Technology policy exists in Pakistan but electronic business/commerce is included as a sub part of it, yet it do not fulfill the requirements. The study found that Information technology policy is inconsistent which results in low rate of Information Technology dispersion and expansion of electronic business (Kundi and Shah, 2009).

## 1.14. Proposed Model

We have taken our inspiration from the conceptual model of (Kundi and Shah, 2009) as shown in (figure 2.2). The proposed model see (figure 2.3) identifies the main antecedents of electronic banking recognized from previous studies as discussed in literature review. It includes information of online banking, security and privacy, quality of internet, perceived usefulness, perceived ease of use, trust, awareness, government policies, banks, infrastructure and technology. These all are the identified problems for the implementation of electronic banking in Pakistan.

- *Information of online banking* is very necessary for the customer, because it helps the customer to know about the electronic banking.
- *Security and privacy* are the major elements of electronic banking because the security and privacy issues are very important for the customer if the customer is satisfied with the security and privacy of the bank the customer will then used electronic banking service.
- *Quality of internet* is also important because the internet is not good in Pakistan and electronic banking needs good internet connection to perform complete transaction.
- *Perceived usefulness* & Perceived usage are also important elements of the electronic banking which is related to the enjoyment and satisfaction of the customer.
- *Trust* plays an important role to build the confidence on the technology provided by the banks to its customers.
- *Government policies* can play a vital role to successfully implement the policies for the banks regarding secure payments, low cost and regulatory frameworks for the implementation of electronic banking.
- *Quality of services* can be only provided by good infrastructure with the adoption of latest technology.
- *Banks* also need to adopt legal frameworks for the successful transformation of electronic business in Pakistan.
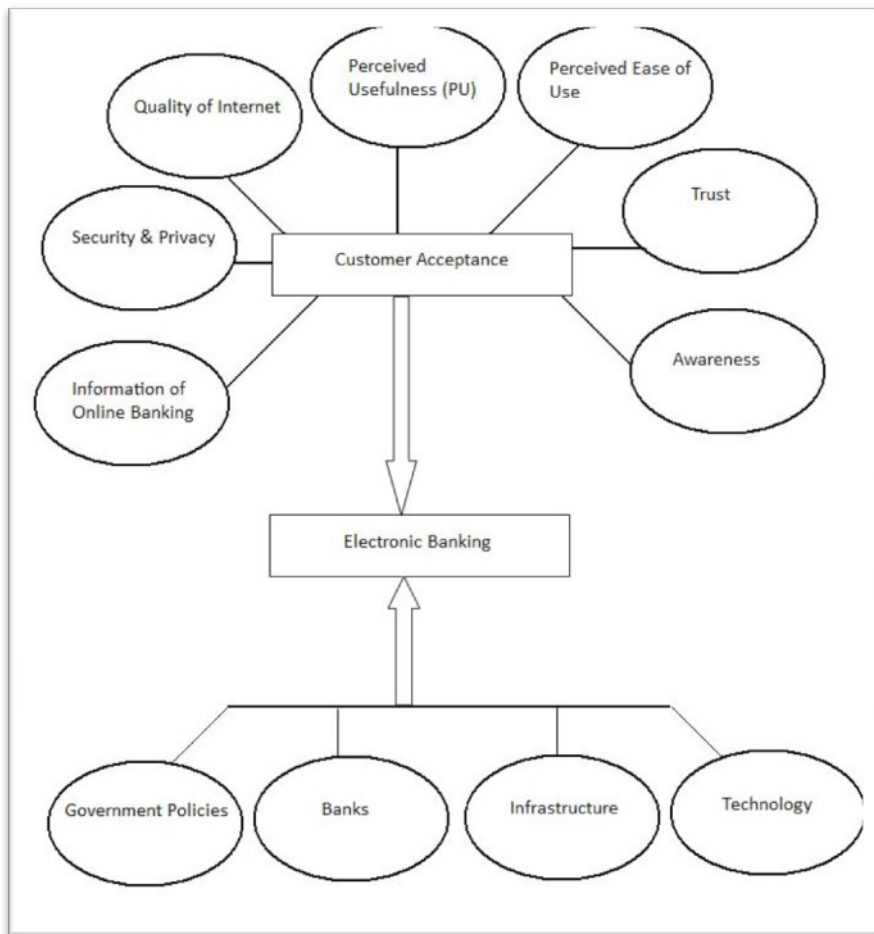


**Figure 2.3 – Proposed Model for electronic banking acceptance**

The model that we have proposed is named as model for the electronic banking acceptance. This proposed model is based on the research question and the literature review and then based upon this

we will able to conduct the exploratory research and collect the data by means of questionnaire and telephonic interviews of bankers of Muslim Commercial Bank Pakistan.

The reason behind using of this model is to analyze the customer acceptance of using the online banking service and at the same time having better knowledge of the government policies, infrastructure problems and lacking behind of technology that hinders the electronic banking. So the Customer acceptance and electronic banking are two main concepts that hinders or facilitates the use of internet banking in commercial banks of Pakistan.

According to Kundi and Shah (2009) they have categorized into three different categories which are government, organizations and technology and each title has subheading with independent variables. The government variable includes political, government IT policy, bureaucracy and infrastructure. Second variable is organization which includes management, organizational structure and organizational IT maturity. Third is technology which includes two independent variables. One is hardware/software and the other is IT professionals.

Kundi and Shah (2009) interrelated all these with the electronic business but there are some important things missing in this model which allows the people to perform electronic business which includes technology, security, awareness and privacy which is included in our proposed model and they are also important reasons for electronic banking hindrance in the commercial banks of Pakistan.

The main problem with Kundi and Shah (2009) model is that they discussed "organization" only at managerial level which discusses management perspective only. Another thing is that Kundi and Shah (2009) model doesn't cover the security and privacy aspects of the proposed technology for the electronic business.

Bank commerce is also one of the influenced industries adopting technology which is providing better services to the customers. Technology innovation can help banks to improve their quality of services. Electronic banking saves time and reduces the cost. A study of Booz *et al.* (1997) shows that regarding internet banking, 20% of trade and 30% of entrepreneur will use various shapes of online banking with the growing trend of consciousness and learning. Many people are attracting towards online banking and they are ready to accept its advantage. Internet Banking allows customers to access accounts from anywhere at any time with minimum cost because it gives plentiful return to clients in terms of charge and easiness (Ekin *et al.,* 2001). According to Sathye (1999) Customer acceptance is the key element determining the rate of change in the financial sectors. The main purpose of this study is to enlighten the user's reluctance factors of the electronic banking information system in the light of proposed model.

### 1.14.1.        Government Policies

In Pakistan the banking system suffered a lot because the political situation is not good. Especially when making the decisions there was a lot of pressure from political parties and they interfere in making important banking decisions. In a large extent these political parties take advantage from banking sector. The support at the government level is very essential in promoting the culture of IT in a country that will help in increasing the technology driven electronic banking. Currently Pakistan is facing a lot of problems in IT penetration and it is a big challenge for Pakistan to adopt IT in every aspect of life. 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 its customers but if we compare it from developed countries like Sweden, UK, Denmark, USA and these countries are enjoying the benefits of online banking system, Pakistan is still lacking behind and government should need to have strong IT infrastructure.

### 1.14.2.        Banks

Though Pakistan is among the late entrants into electronic banking but during the few years of Pakistan's history, it has achieved much more than expectations. When internet banking was introduced in 2000, State Bank of Pakistan started providing serious interest towards the encouragement of electronic banking. Information Technology and telecommunications in Pakistan has exposed in record growth which has a very positive stream on the economic sector. The major mechanism for the development of these policies introduced by the government of Pakistan from time to time included:

•          De-regulation Policy
•          Privatization
•          Introduction of competition

The financial sector has taken advantage from these developments made in the telecom and Information Technology sector. Most of the commercial banks are operating on single switch providing ease of use to the customers to access accounts on any banks that are operating on the link infrastructure which helped the banks to lower their business costs to enlarge their market into new perspective (Ahmed, 2006). Nearly all the developments in the financial sector have been made in the urban areas. Electronic banking and other electronic channels provided choices and handiness to middle and upper income groups. These groups are the main targets of commercial banks and other commercial institutions. Rural sector which makes 65-70% of the total population have been largely unobserved by the commercial institutes regardless of the government's interest in uplifting rural areas which is the big challenge for the financial institutions to reach the rural areas. As a strategy matter, the exploitation of ICTs for individual and public progress is nonexistent. This challenge can be overcome with the help of advancement in technological and modern delivery. Electronic banking and electronic commerce can be extended to rural areas if appropriate infrastructure is implemented. Banks are also taking advantage of the global network of service providers by obtaining connectivity to Society for Worldwide Interbank Financial Telecommunication (Ahmed, 2006).

### 1.14.3.        Infrastructure

According to Pauline (2001) the availability of sufficient infrastructure has been measured and he found that it is a significant predictor of e-Business success and failure. The infrastructure plays a very vital role and in order to establish, the infrastructure the internet infrastructure is very important and some serious steps should be taken for the effective growth of internet. If the current infrastructure is compared with the 5 years before then we can see that there a lot of changes that have been conducted by the Government of Pakistan in an attempt to improve infrastructure and it was mainly done after privatizing the banks of Pakistan. Recently the infrastructure has been increased like the payment system, the increase in the number of online branches and ATM machines and due to this reasons the transactions that have been conducted from ATM cards have

been increased (State Bank of Pakistan, 2003). Pakistan Telecommunication Company Limited is responsible for the infrastructure and is the largest copper infrastructure provider in Pakistan.

### 1.14.4. Technology

Banks grip the financial property of clients and manufacturer which are very important for the economic growth. The main objective of the strategy creator is to smooth the progress of banking system that paramount to promote economic effectiveness and constancy. The banking systems using wide varieties of technologies like IT, Telecom. However the achievement and utilization of technology is a problem in Pakistan. Financial restrictions are the barrier to adapt up to date technologies. Studies have found that if someone afford, they lack expertise to ensure the optimal use of technology. Pakistan is lacking behind the qualified information technology professionals. Studies have stressed on viable use of Information Technology and the focus is on acquirement of the right person for the right job at right time (Damanpour and Evan, 1984). Electronic business needs hybrid managers who are expert in managing the affairs of organization and human but are also knowledgeable in computer -based technology to run the business smoothly and efficiently because it is a socio-technical activity (Dudeja, 1985). Lack of Information Technology know-how in the management of the organizations is another issue in Pakistan because management leads the business to success or failure and computer know-how is required for managers to manage the human resources, time and physical equipment.

# 2. Methodology

*The chapter covers the research method used in the study. It describes selected research method, research approaches, research strategy, data collections and methods followed by analysis approach, validity and reliability.*

## 1.15. Choice of Research Method

According to Yin (1996) while conducting the research there are three types of Research purpose used for solving the research problem. These are exploratory, descriptive and explanatory research. The brief description of this research purpose is as follows

### 1.15.1. Exploratory Research

When the investigator/researcher has no control over the problem and it is not defined in a clear manner then exploratory research will be used. The research goal is to explain the occurrence of a phenomenon or when there is a prediction that certain outcomes will occur (Yin, 1994).

There is much growing trend of using IS in the organization and employees environment, it becomes visible that the issue of electronic banking accepted by the customer of banks could be of much significant because if such facility is provided by the banks then why people still go to banks to pay utility bills and waste their times by waiting in the queues for so many hours. In comparison with the global tendency, the economic systems of Pakistan have been deficient in mounting modern products to congregate diversify wishes of the consumers.

Exploratory research is very valuable to look for "fresh impending" to enlighten sketch of person, event or situation. Exploratory studies try to explore the information within the context of the studies which could be best option to investigate the problem.

### 1.15.2. Why we chose Exploratory Research

We chose exploratory research to add the substantial amount of information to the previous studies done in the context of electronic banking and e-readiness adoption in commercial banks of Pakistan. It can help us to identify the potential causes of the problems of using electronic banking because it gives elucidate idea of the concept. The aim of exploratory research is to give helpful foundations intended for promotion of electronic banking. The reason for selecting exploratory research is to find out the reasons for people being hesitant to use electronic banking and to provide the baseline for the acceptance of electronic banking by the customers of Commercial banks of Pakistan. Both qualitative and quantitative techniques are applied in exploratory research. It pinpoints the situation by viewing different alternatives and find out the fresh thoughts. The aim of exploratory study is to illuminate vague problems.

## 1.16.  Research Approach

The Research Approach is classified into two types of Research methods: These are Qualitative research and Quantitative research method. There is a reasonable difference between these two Research Approaches.

### 1.16.1.          Qualitative Research

According to (Myers and Avison, 2002, p.50) **"**the qualitative research methods were developed in the social sciences to enable researchers to study natural phenomena". Qualitative studies are mostly concerned with case studies and the objective is to obtain systematic sequence of information to get into the depth of research problems.

### 1.16.2.          Quantitative Research

The quantitative research methods were used to investigate and develop in the natural sciences and did the study of natural phenomena. The example of quantitative research methods are survey and experiments, laboratory experiments and formal methods (Benbasat, 1987).

To validate our results qualitative and quantitative research is our choice to carry out the research where the aim is to get systematic understanding of the research question, the reason behind of using both research methods is that we are going to conduct telephonic interviews from bank employees and will give them questionnaire to fill. First we will study that what are the factors that hinders the electronic banking throughout the country and then we focus on the major issues like technology, trust, security and privacy for MCB so our method will be based upon deductive approach to conduct empirical part of the study. Conclusions will be made after the analysis of empirical data and new knowledge will be created by providing evidence from the existing theories which is then used to do the empirical study and thus draws conclusion based on general principles to specific.

## 1.17.  Data Collection

According to Yin (2002) there are six different sources to collect the qualitative data for the case study.
- Documents
- Archival records
- Interviews
- Direct observations
- Participating observations
- Physical artifacts

The data collection methods that we proposed for this research are observations, interviews, questionnaire and different existing files of the organization which is very critical for the research.

### 1.17.1.          Interview

Interviews techniques are the best way to acquire deeper information from the participants. The main objective of the interview is to authenticate the findings which are obtained with the help of questionnaires. We had telephonic conversations with the employees of the Muslim Commercial bank who are working in Muslim Commercial Bank Limited. We interviewed two managers of the

bank who are working in MCB with more than 25 years. Constant contacts were made in order to get the broad picture of the organization.

We had telephonic interviews with two bank managers. One is branch manager and the other is operation manager. Both have had working experience of more than 25 years in Muslim Commercial Bank limited. We had telephonic conservation with both the managers which was the primary method for the data collection. One interview was conducted by Kashif Sardar and the other was conducted by Salman Shamim who are the author's of Master's thesis. Each interview took an hour to accomplish the task. Interviews were recorded by establishing call logs on Instant messengers. All the participants and interviewers have been informed about the aim and goal of the research.

On the basis of electronic banking and e-readiness adoption in the commercial banks of Pakistan we have to conclude mature suggestions in our research for the future work. Results and findings were interpreted that affects or influence the customers and employees of banks.

### 1.17.2.        Choice of participant for Questionnaires

There were total 60 members working in the bank includes branch office and head office. 22 staff members were working in branch office while 38 were working in head Office. Out of 60 employees we got response from only 49 employees. Three questionnaires were distributed to bank workers, customers and clerks. In Pakistani banks clerks are called cashiers and we have considered cashiers as a bank employee while clerks are not a part of bank workers so we constructed different questionnaires for the clerks because the vending machine service is available on the point of sale (POS) is only available for the clerks on the point of Sale in Pakistan.

Vending machines are available on the Point of Sale services which are supervised by the clerks.
So our target is 49 staff members of Muslim Commercial Bank, 46 regular customers of the bank which was the random number of selected participants from the bank manager and 7 clerks were selected from other source to accomplish the questionnaires. We targeted the employees of MCB head office and the branch office. They have different educational backgrounds and the manager of the bank helped us to gather staff and customer response.

We used web-based questionnaires which include employees questionnaire form, clerk's questionnaire form and strategical questionnaire form which has to be filled by the bank employees, customers and clerks. So the employees, customers and clerks can complete the assessment successfully when they have time. For our research which require individual's personal response about the customers reluctant of using electronic banking. We used this data source as a primary source and we can get in-depth information by using this technique. Customers and employees feel confident to convey their ideas.

While conducting the telephonic interviews we faced the problems like expensive call from Sweden and sometimes we have to call the same person again because he was busy in meetings and other stuff and we were given some other time to make him a call. The response rate was slow because it took more than two months to complete the data collection.

We distributed the three questionnaires individually to **EMPLOYEES**, **CLERKS and CUSTOMERS** so that we can analyze the result more clearly and precisely. The employee's

questionnaire was filled by the bank employees, clerk's questionnaire was filled by the clerks and strategical issues questionnaire was filled by the customers of the bank.

### 1.17.3. Documentation

Another method of collecting data is through using the documentation that the banks already have. This will help us to have a thorough understanding and working of electronic banking sector that we will use later on for our empirical research. After studying this we can analyze and give better suggestions to banks. We will take help from banks annual report, state bank of Pakistan annual report, banks, articles, brochures, etc.

### 1.17.4. Questionnaire

This is very important source for collecting the qualitative data. We will prepare questionnaires form and then with the help of our colleagues working in banks of Pakistan, we will distribute among the employees, customers of the banks and clerks. We will design three web based questionnaires forms. The questionnaires had been segregated into three, one for bank managers, one for clerks and one for customers. The questionnaire will be based upon the multiple choice questions and short descriptions to have our better understanding regarding banks and its customers. These questionnaires were sent to MCB head office and MCB branch office. For using the questionnaire we have used the centralized email address mcb0279@mcb.com.pk. By focusing on research question simple and general questions that will be asked to minimize complexity of the questionnaire, and it will help us to have the exact analysis.

### 1.17.5. Direct Observations

Yin (1994) stated that direct observations include observation of meeting, sidewalks activities, classroom. One must use more than a single observer to enhance the trustworthiness. Since our childhood we have been visiting the banks so we had some observation like how people were facing problems for waiting their turn in long queue. Likewise observation cannot be done by formal visiting the bank so by taking interview and after visiting the websites and reading articles we had indirect observation.

## 1.18. Case study Design

By using the case study the researcher can answer the how and why questions and the processes that have been taking place can be understood. According to (Benbasat *et al.,* 1987) the case study helps in examining the phenomenon in its natural settings and the multiple numbers of data collection methods are used and by utilizing the one or a few entities the information has been gathered. In case study the investor has little or no control over the events and participants were brought in the role of making the decisions and finding out the results (Schramm, 1971).

In many situations the case study is used to contribute to our knowledge of individual, group, organizational, social and political phenomena (Yin, 1994). Both the single and multiple case studies are included in the case study research.

### 1.18.1. Why we chose One Case Study

Case study approach helps to analyze the situation more in depth and rational. It describes the method and condition more in details because it gives full picture of the situation with the help of direct studies from multiple sources and the focal point is on modern actions it is an adaptive approach with variety of subject matters (Isaac and Michael, 1980).Case study can be single or it can be multiple. We chose Single case study which is Muslim Commercial Bank limited because MCB is the only bank which is providing all the facilities of electronic banking as compared with other banks of Pakistan. Secondly it was not possible for us to collect data within short period of time from the two banks so we tried to focus on single case study which is MCB bank.

Darke *et al.* (1998, p.275) recommended "single cases provide for in-depth investigation and rich description while multiple case-designs allow literal or theoretical replication and cross-case comparison". According to Greenhalgh (1997, p.742) the outcomes attained from the case study are reliable and realistic. Case study defines the problem of evaluation of reliability in qualitative studies." "It often takes little more than plain common sense to determine whether the results are sensible and believable and whether they matter in practice".

Walsham (1995) proposes to use interviews as a primary data source for interpretive case-study, "since it is through this method that the researcher can best access the interpretations that the participants have regarding the actions and events which have or are taking place".

## 1.19. Validity and Reliability

Yin (1994) stated that there are four criteria which have been commonly used to judge the quality of research design which includes internal validity, construct validity, external validity and reliability. According to (Silverman, 2002) validity can been as alternative meaning of the truth in the research design. It defines the truthfulness which describes the score observed and documented actually correspond to the true score of the object (Churchill, 1999), while Malhotra and Birks (2003) stated that reliability refers the degree to which a quantity repeat reliable result if process is repeated over and over while Yin (1994) stated that if another investigator follow same path as illustrated by previous researcher and carry out the similar studies again, the researcher should reach to the same result and conclusion. Reliability indicates the measures of quality because it highlights the impact of inconsistency in the measurement of the outcomes (Churchill 1999).

For the validity of study collection of data was done by the trustworthy resources like the human resources who are working in the banks. Interviews were supported by literature review to make sure the validation and all the questionnaires were tested before taking interviews from the respondents. Native language of the respondents was used to evade misapprehension and mistakes.
For study to be reliable it is necessary that interviewee should know some basics about the online banking. First of all demo interview was tested in order to avoid most important and biased questions which is then followed by better and well planned interviews. For the developing of case study, audiotapes, chats and logs will be established. To minimize the errors in the research study, simple language and simple words have used in the questionnaire. All the theories chosen for the study are discussed clearly and research questions are constructed on prior theories. For the reliability of the studies the aim was to generate the same results if a different investigator investigates the research with similar case study, the result generated will be the same.

## 1.20.   Ethical Issues and Problems

While conducting a case study we should clearly describe the project and who will be involved like researchers, assistants or company employees. According to Benbasat *et al.* (1987) two key points need to be addressed in order to gain cooperation or confidentially and the benefits to the organizations.

We will provide assurance that the organization will not be harmed by our participation. The organization and its employees will come to know that we will not betray their confidence. On the other hand, we will try to seek assurance that reasonable candor will be provided and that essential data will be made available. The benefits to an organization participating in a research project are varied. They may include learning more about the organization, getting feedback and new insights from the researcher, and developing the relationship with the researcher. In addition, there is the opportunity to contribute knowledge and business research.

As being the student of Växjö University our actions should not be in the way that it will create the bad image of students or overall university. We are well aware of ethical issues like Plagiarism. Our entire dissertation work, our ideas will be differentiated with the other authors ideas and if we want to write some author ideas then we will quote it with proper reference, as it is required by University to follow Harvard system so we will write with proper Harvard referencing system. In this way, reader will come to know that what is our contribution and what we have taken from other literature.

# 3. Empirical Data

*The chapter presents the observed information gathered from the case study and to give answer to our research question. We have used "Questionnaire" as a primary data to gathered information and to validate results obtained from the questionnaires followed by interviews from the bank employees. Data presentation track the investigation model and questionnaires use with the Muslim Commercial Bank. This section starts with Bank introduction and there after data collection is presented.*

## 1.21. Brief History of MCB Bank

Muslim Commercial Bank was registered in Calcutta India as the commercial bank in July 1947. In 1948, after the Indian Pakistan partition the bank was shifted to the Dacca Bangladesh and then in 1956 the bank was shifted to Karachi Pakistan and it is still working there. In 1974 this bank was nationalized.

In 1990, the banking sector changed its direction and it was Nawaz Sharif government when first time two public sector banks were privatized. These two banks were Muslim Commercial Bank and Allied bank. MCB was sold out to Mian Mansha of Lahore at a very low bid. Since then the performance of these banks have been changed and there was major change in the policies of banks and marketing strategies.

Now MCB became one of the leading banks of Pakistan and have a total deposit of about Rs. 280 billion. MCB has network of 1,026 distributed branches and over 300 ATMs machine has been installed and working in the different parts of Pakistan. Since the last few years the bank main emphasis is to improve the quality service and the bank has invested a lot of money in technology and people.

## 1.22. Questionnaires

Questionnaire is very important to gathered information and it is very useful when there are a huge number of respondents. According to (Malhotra, 1996; Schwartz and Sudman, 1996; Craig and Dauglas, 2000) "the design and structure of the questionnaire should be adopted according to the education level or cultural backgrounds of the respondents. Questionnaire format and use of different scales also helps to get accurate information required". The negative aspect of the questionnaire is that it provides bias information which direct to erroneous decision. For our research which require individual's personal response about the customers reluctant of using electronic banking. We used this data source as a primary source and we have got in-depth information by using this technique. Customers and employees feel confident to convey their ideas.

Three different questionnaires were designed (1) bank employees, (2) clerks and (3) Strategic issues. There was a need to segregate our questionnaire into three factors that affect internet banking either internally or externally.

*Questionnaire 1* given in Appendix A is designed for bank employees and the bank employees are personals who directly work in the bank and manage day to day activity in banking operations it

includes everyone in the management hierarchy from top-level management to bottom-line workers, as being the internal factors.

***Questionnaire 2*** given in Appendix B is designed for clerks. Clerks are the personal who are not bank personal but they work as service provider or operator of the bank devices that are made available on different outlets for convenience of people.

***Questionnaire 3*** given in Appendix C is named as Strategic Issues. The questionnaire is made for banks direct customers who are directly involved in internet based services provided by bank.

### 1.22.1.        Factors of Questionnaire

In order to obtain our required information we set our questionnaires format base on the factors as given in Table 4.1. These are the essential factors to evaluate the current electronic banking situation in Pakistan and after studying these factors we can evaluate the electronic banking adoption rate in Pakistan. Such factors fetch up information represents direct/indirect impact of the customer using electronic banking in the commercial banks of Pakistan. We have figured out important factors that helped us to support our study and then we developed questions appropriate to each factor.

We categorized each heading into different factors regarding electronic banking that can support the study. Different questions have been made by taking these factors into consideration for our web based questionnaires. Whereas our maximum concern had been regarding questionnaire made for bank employees. The following table i.e. Table 4.1 shows the factors of information and corresponding question number in the questionnaire as available in questionnaire can be seen in appendix-A.

| Factors | Question Number |
|---|---|
| a)  Background Information | 1,2,3,4,5,6 |
| b)  Transactions/ month | 7 |
| c)  Information of Online Banking | 8,9,10,11 |
| d)  Security & Privacy | 12-13,14,15,16,17 |
| e)  Perceived Usefulness | 18,19,20,21,22 |
| f)  Perceived Ease of Use | 23,24,25,26,27 |
| g)  Trust | 28,29,30,31,32 |
| h)  Awareness | 33,34,35,36 |
| i)  Government Policies | 37,38 |
| j)  Banks | 39,40,41,42,43 |
| k)  Infrastructure | 44,45 |
| l)  Technology | 46,47,48,49,50 |
| m)  Purpose of e-banking | 51 |
| n)  Place to use e-banking | 52 |
| o)  Benefits from e-banking | 53 |
| p)  Overall utilization of e-banking | 54 |

Tabel 4.1 – Factors for Questionnaires

## 1.22.2.         Employee questionnaire

1) Background Information:   Chart Wizard

|  | Percentage | Responses |
|---|---|---|
| Male | 63.3 | 31 |
| Female | 36.7 | 18 |
| **Total responses:** | | **49** |

**Figure 4.1 – Background Information**

2) Education   Chart Wizard
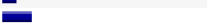
|  | Percentage | Responses |
|---|---|---|
| Primary [ ] | 0.0 | 0 |
| SSC[ ] | 0.0 | 0 |
| HSSC[ ] | 0.0 | 0 |
| BA[ ] | 0.0 | 0 |
| BSc[ ] | 32.7 | 16 |
| MA[ ] | 12.2 | 6 |
| MSc[ ] | 20.4 | 10 |
| MBA[ ] | 28.6 | 14 |
| MCS[ ] | 2.0 | 1 |
| MIT [ ] | 4.1 | 2 |
| **Total responses:** | | **49** |

**Figure 5.2 – Education of Employees**

From the following information of the sample survey it shows that the most of the bank employees working in the banks are male. The female are less in number. We can see that the percentage for male is 63.3% and the female is 36.7%. The male employees are double in number as compared to female employees. There were total number of 40 male employees and 20 female employees.

The above figure shows that the most of the employees have done Bachelor of Science (BSc) which is of 2 years. Percentage for BSc is 32.7% , MA is 12.2%, MSc is 20.4%, MBA is 28.6% .The percentage for computer post graduates are very low which shows 2.0% for MCS and 4.1% for MIT. It shows that Information Technology graduates working in the banks are very less in number.

4) Salary in Pakistani Rupee  📊 Chart Wizard

|  | | Percentage | Responses |
|---|---|---|---|
| Below 9,999 [ ] | | 0.0 | 0 |
| Between 10,000 to 19,999 [ ] | | 71.4 | 35 |
| Between 20,000 to 34,999 [ ] | | 0.0 | 0 |
| Above 35,000 [ ] | | 28.6 | 14 |
| Undisclosed [ ] | | 0.0 | 0 |
| | **Total responses:** | | **49** |

**Figure 6.3 – Salary of Employees**

The following response highlights the people who are working in banks they have salary between 10,000 PKR to 19,999 PKR with percentage of 71.4%. This shows that the average salary of the bank employee is very less. People having more than 30,000 PKR salaries are either Senior Vice President (SVP) or Vice president (VP) and the percentage is 28.6%. The result for people having salary from 20,000 to 34,999 is null.

5) Years of Experience  📊 Chart Wizard

|  | | Percentage | Responses |
|---|---|---|---|
| Less than 5 years | | 55.1 | 27 |
| 6 – 10 years | | 12.2 | 6 |
| 11 – 15 years | | 0.0 | 0 |
| 16 – 19 years | | 0.0 | 0 |
| 20 years and more | | 32.7 | 16 |
| | **Total responses:** | | **49** |

**Figure 7.4 – Employee's Experience**

We found from our sample that the most of the peoples have less than 5 years experience they are working as Officers Grade 3 which shows 55.1%.People having experience from 6-10 years have a 12.2% which shows that they were Officer Grade 2. No one is having experience from 11-19 years. The percentage for people having 20 or more than 20 years of experience shows 32.7%.This percentage shows the senior management of the bank. They are Officers Grade 1, bank managers or Senior Vice presidents.

6) On Average what age of customers are coming to bank on daily basis? 📊 Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Under 20 | | 44.9 | 22 |
| 21 – 29 | | 36.7 | 18 |
| 30 – 39 | | 18.4 | 9 |
| 40 – 49 | | 0.0 | 0 |
| Over 50 | | 0.0 | 0 |
| | **Total responses:** | | **49** |

**Figure 8.5 – Customer Frequency of coming**

According to our sample the following figure shows 44.9% of customer who visited the bank their age was under 20. The graph shows 36.7% for the average age from 21-29, 18.4% for age from 30-39. According to the sample it shows that the people who visit the bank their ages are from under 20 to 39.

11) Do they know that how to pay utility bills electronically? 📊 Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Strongly disagree [ ] | | 91.8 | 45 |
| Disagree [ ] | | 8.2 | 4 |
| Moderate [ ] | | 0.0 | 0 |
| Agree [ ] | | 0.0 | 0 |
| Strongly agree [ ] | | 0.0 | 0 |
| | **Total responses:** | | **49** |

**Figure 9.6 – Knowledge of e-payments**

The customers didn't know how to pay bills electronically. 91.8% shows that people strongly disagree that they know how to pay bills electronically while 8.2% disagree with it. It means that people are lacking important information to use such services.

12) Security and Privacy
Are they concerned about their private information?
📊 Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Strongly disagree [ ] | | 0.0 | 0 |
| Disagree [ ] | | 0.0 | 0 |
| Moderate [ ] | | 0.0 | 0 |
| Agree [ ] | | 100.0 | 49 |
| Strongly agree [ ] | | 0.0 | 0 |
| | **Total responses:** | | **49** |

**Figure 10.7 – Security and Privacy**

100% shows that all the people are highly concerned about their private information. They want to keep their information secret so that other cannot misuse it. Their private information includes their address, phone numbers, account number and more importantly their National Identity card information (NIC).The high ratio of security policy shows those customers are very concerned about the security policy. They want their information to keep confidential.

14) Is the User privacy policy is mentioned on the website to strengthen the trust of customer? 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 49 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 11.8 – Privacy Policy**

100% result shows that they don't have information regarding user privacy policy which can strengthen the trust of the customer on the website. It shows that some important information is missing on the website and people are not aware of such important information.

19) Do they intend to use electronic banking facility in future? 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 100.0 | 49 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 12.9 – Intension of usage**

Result shows that People do want to use electronic banking because they think that it can help them in many ways but they don't have information about the electronic banking so that's why they are not using such facility. 100% result shows that they are intended to use electronic banking because they know it is helpful for them.

20) Do they think that using electronic banking facility saves their time? 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 8.2 | 4 |
| Strongly agree [ ] | 91.8 | 45 |
| **Total responses:** | | **49** |

**Figure 13.10 – Time saving using e-banking**

91.8% shows that people think that it saves their time a lot if everything is working perfect. Respondent think that it provides strong hold on the time instead of going to bank and waiting in the queues for their turn.

24) According to customers learning of electronic banking is easy [icon] Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 8.2 | 4 |
| Moderate [ ] | 91.8 | 45 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 14.11 – Learning e-banking**

We received negative responses regarding learning of e-banking. 91.8% said that they don't know about the learning of e-banking while 8.2% stated that the learning is not easy. They have complicated electronic banking website section that people get confused and facing a lot of problem in using it.

25) According to customers the instructions on the website to use e-banking services is not fuzzy [icon] Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 49 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 15.12 – Intension of using e-banking**

The response highlights that people are confused to follow the right instructions. We received 100% response from the people. According to them, instructions provided on the site are not understandable. It means that information provided is not clear and instructions are not easy to follow on the website so that the people can use electronic banking facility.

27) Are they providing help assistance on their website to use electronic banking for the novice user? [icon] Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 100.0 | 49 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 16.13 – Provision of help assistance**

Showing negative response, a new user cannot get help from the instructions provided on the website if he or she wants to use electronic banking. A novice user cannot use electronic banking without getting help from the bank services. Bank hasn't provided any instruction medium for the new user of electronic banking.

34) Is the bank provides training awareness programs for the customers to use electronic banking? [icon] Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 100.0 | 49 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 17.14 - Awareness**

The following graph shows that there is no such training awareness program provided to the customer from the Bank or bank employee to use the electronic banking facility. They are not providing any information to the customer regarding electronic banking.

35) According to customers the bank is providing the guidelines on the website to use electronic banking facility  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 49 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 18.15 – Guide Lines**

This survey shows they don't know about the guidelines provided on the website of the bank. The 100% result shows that people didn't find the relevant information on the website regarding electronic banking facility.

36) Is the bank provides demo tour for electronic banking on the website?  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 49 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 19.16 – Demo of E-banking**

The 100% result shows that people are not aware of the demo tour provided on the website. Electronic banking Demo provides the instruction to use the site and services. It is an important element to use and learn electronic banking.

39) Banks
Is the bank provides training facility to the customers to use the ICT?
📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 91.8 | 45 |
| Disagree [ ] | 8.2 | 4 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |
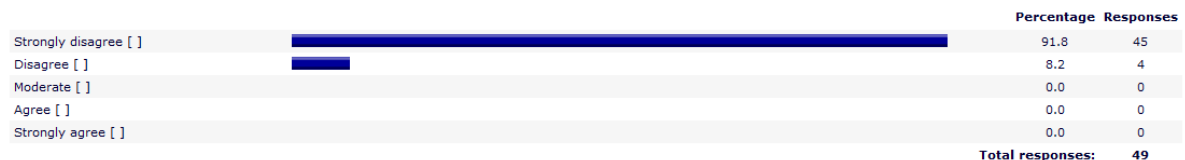
**Figure 20.17 – Training of ICT**

From the result we can conclude that the bank is not providing any training facility or help for the encouragement of the customers to use Information and Communication Technologies. Bank is only providing the electronic banking facility. There is no attempt from the banks to encourage its customer to use e-banking services.

40) Are they able to get access to bank in their area?  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 91.8 | 45 |
| Agree [ ] | 8.2 | 4 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **49** |
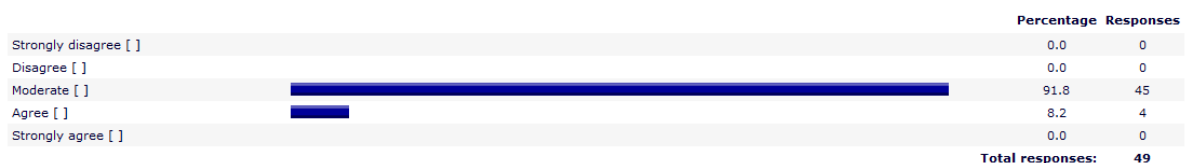
**Figure 21.18 – Ease of Access**

Following graph shows that only 8.2% agreed that they were able to get access to the bank in their area. It shows that people have difficulty to get access to the bank in some areas while 91.8% didn't know that that they have access to the bank in their area.

41) According to customer use of electronic banking is the way not to interact with the people  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 100.0 | 49 |
| Strongly agree [ ] | 0.0 | 0 |
| | **Total responses:** | **49** |

**Figure 22.19 – Interaction**

According to this survey, 100% result shows that people know that by using electronic banking facility they do not need to go to bank and pay their utility bills in the bank by waiting in the queues for long hours.

42) According to customer the bank provides electronic funds transfer, bill payments, SMS banking  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 8.2 | 4 |
| Strongly agree [ ] | 91.8 | 45 |
| | **Total responses:** | **49** |

**Figure 23.20 – Availability of services**

The result shows that almost all the people agreed that they know about all the services provided by the banks to its customer. However the bank didn't provide the instruction of how to use these technologies. The figure shows that all the customers have information of funds transfer facilities, bill payments and SMS banking.

45) Do the customers think that the infrastructure provided by the banks is proper to utilize the electronic banking efficiently?  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 49 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| | **Total responses:** | **49** |

**Figure 24.21 – Provision of Infrasturcture**

It shows that people don't have much information regarding infrastructure provided by the banks. They only know about some services provided by the banks. It means that the infrastructure provided by the banks is not proper so that customer can better utilize the electronic banking efficiently.

51) What is the main purpose to use the electronic banking services? 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Paying Utility Bills | 0.0 | 0 |
| Checking the Account Balance | 100.0 | 49 |
| Transferring money online | 0.0 | 0 |
| Investment purpose | 0.0 | 0 |
| Online payment | 0.0 | 0 |
| Applying for loans | 0.0 | 0 |
| Other | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 25.22 – Purpose of Usage**

The response shows people only use electronic banking to check their balances. The rest of the services are unnecessary for the customers because they don't trust the technology. All the people that use electronic banking were to check online account balance. Paying utility bills, transferring money online, investment purpose, online payments, applying for loans are not used by the customers because they feel insecure to use such services.

52) If yes then where do they mainly use the online banking service? 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| at home | 8.2 | 4 |
| at work | 46.9 | 23 |
| at school | 0.0 | 0 |
| in bank | 44.9 | 22 |
| in library | 0.0 | 0 |
| friend home | 0.0 | 0 |
| other place | 0.0 | 0 |
| **Total responses:** | | **49** |

**Figure 26.23 – Usage of e-banking services**

8.2% shows that there were only few peoples used electronic banking at home. 46.9% people used it in the office while 44.9% used in the banks which shows that they didn't have access to computers in their homes.

53) Overall what kind of benefits they're getting from e-banking 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Increase in Productivity | 0.0 | 0 |
| Increase in Performance | 0.0 | 0 |
| Increase in Efficiency | 0.0 | 0 |
| Easier to use | 0.0 | 0 |
| Safes a lot of time | 8.2 | 4 |
| Funds transfer | 51.0 | 25 |
| Check balance | 38.8 | 19 |
| Recharge mobile balance | 0.0 | 0 |
| Virtual Banking | 0.0 | 0 |
| Don't know | 2.0 | 1 |
| **Total responses:** | | **49** |

**Figure 27.24 – benefits received from e-banking**

The following graph shows that 51.0% used electronic banking for funds transfer and 38.8% used to check balance. 8.2% of users stated that they used electronic banking because it saved their time. According to survey we can conclude that if a person use electronic banking he only use it for balance check or transfer of money while 0% shows that according to them electronic banking was not easy to use.

54) How do they rate the overall utilization of the online banking services 📊 Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Bad [ ] | | 63.3 | 31 |
| Good [ ] | | 32.7 | 16 |
| Excellent [ ] | | 0.0 | 0 |
| Don't know [ ] | | 4.1 | 2 |
| | **Total responses:** | | **49** |

**Figure 28.25 – Rating of banking services**

The final survey shows that the customers were not satisfied by the online banking services provided by the banks. 63.3% shows that it was very bad to use electronic banking services. 32.7% shows the positive result with good response while 4.1% stated that they didn't have information of overall utilization of online banking services.

## 1.22.3.          Clerks questionnaire

1) Background Information: 📊 Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Male [ ] | | 57.1 | 4 |
| Female [ ] | | 42.9 | 3 |
| | **Total responses:** | | **7** |

**Figure 29.26 – Background information of Clerks**

The following graph shows the background information of clerks. 4% respondents were male and 3% respondents were female.

2) Education 📊 Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Primary [ ] | | 0.0 | 0 |
| SSC[ ] | | 0.0 | 0 |
| HSSC[ ] | | 0.0 | 0 |
| BA[ ] | | 57.1 | 4 |
| BSc [ ] | | 42.9 | 3 |
| MA[ ] | | 0.0 | 0 |
| MSc [ ] | | 0.0 | 0 |
| Undisclosed [ ] | | 0.0 | 0 |
| | **Total responses:** | | **7** |
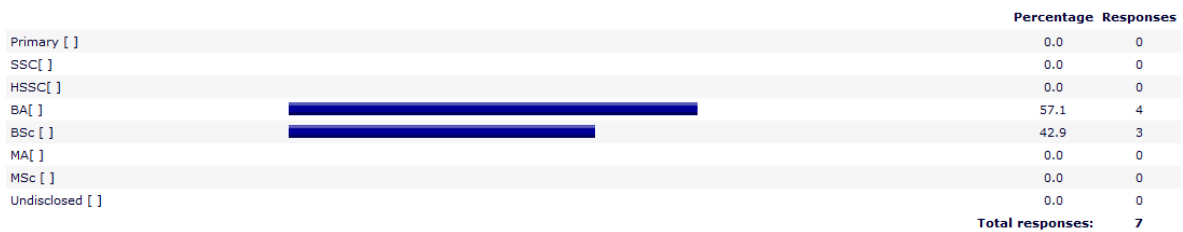
**Figure 30.27 – Education of clerks**

It shows the clerks who were working they have completed graduation in Arts (BA) with 4% while 3% shows that they have completed graduation in Science (BSc).it means that people designated as clerks have good educational background.

3) Salary in Pakistani Rupee (PKR) 📊 Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Between 6,000 to 12,000 [ ] | | 100.0 | 7 |
| 12,000 to 15,000 [ ] | | 0.0 | 0 |
| 15,000 to 20,000 [ ] | | 0.0 | 0 |
| Above 20,000 [ ] | | 0.0 | 0 |
| Undisclosed [ ] | | 0.0 | 0 |
| | **Total responses:** | | **7** |
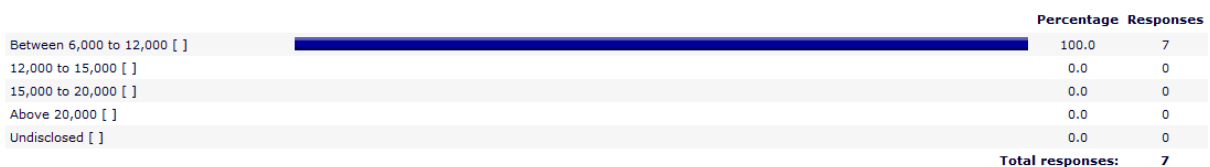
**Figure 31.28 – Salary of Clerks**

From the survey we can say that they have salary from 6,000 PKR to 12,000 PKR.

4) Years of Experience as a Clerk [chart] Chart Wizard

|  | | Percentage | Responses |
|---|---|---|---|
| Less than 5 years [ ] | | 57.1 | 4 |
| 6 – 10 years [ ] | | 42.9 | 3 |
| 11 – 15 years [ ] | | 0.0 | 0 |
| 16 – 19 years [ ] | | 0.0 | 0 |
| 20 years and more [ ] | | 0.0 | 0 |
| | **Total responses:** | | **7** |

**Figure 32.29 – Experience of Clerks**

It shows the years of experiences with 4% respondent had less than 5 years experience while 3% respondents had experience from 6-10 years as a clerk. It also shows that most the people have working experience of less than 5 years.

5) On Average what ages of customers are coming? [chart] Chart Wizard

|  | | Percentage | Responses |
|---|---|---|---|
| Under 20 [ ] | | 0.0 | 0 |
| 21 – 29 [ ] | | 100.0 | 7 |
| 30 – 39 [ ] | | 0.0 | 0 |
| 40 – 49 [ ] | | 0.0 | 0 |
| Over 50 [ ] | | 0.0 | 0 |
| | **Total responses:** | | **7** |

**Figure 33.30 – Age group of clerks**

The result shows that average ages ranging from 21-29.

9) Do they feel secure performing transactions over vending machine? [chart] Chart Wizard

|  | | Percentage | Responses |
|---|---|---|---|
| Strongly disagree [ ] | | 0.0 | 0 |
| Disagree [ ] | | 0.0 | 0 |
| Moderate [ ] | | 100.0 | 7 |
| Agree [ ] | | 0.0 | 0 |
| Strongly agree [ ] | | 0.0 | 0 |
| | **Total responses:** | | **7** |

**Figure 34.31 – Secure Transactions**

7% respondent stated that they didn't have enough information about the secure payment method. It means that they don't have much information regarding secure payment of electronic banking over vending machines.

11) Are customers satisfied by using such facility? [chart] Chart Wizard

|  | | Percentage | Responses |
|---|---|---|---|
| Strongly disagree [ ] | | 0.0 | 0 |
| Disagree [ ] | | 0.0 | 0 |
| Moderate [ ] | | 100.0 | 7 |
| Agree [ ] | | 0.0 | 0 |
| Strongly agree [ ] | | 0.0 | 0 |
| | **Total responses:** | | **7** |

**Figure 35.32 – Level of Satisfaction**

The result shows that they didn't know about the satisfaction level of the facility of the vending machines provided by the banks to the customer which shows 7% of the respondent.

12) Did they know how to use the card? **Chart Wizard**

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 7 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **7** |

**Figure 36.33 – Knowledge of usage**

7% respondents stated that they didn't know about using of card because the customers didn't use it.

13) Did they encounter real time problems regarding transactions? **Chart Wizard**

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 7 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **7** |

**Figure 37.34 – Problems in Operation**

This result shows that 7% respondents didn't know that they have much information regarding real time problems during the use of electronic banking services.

14) Person who used card for the first time was satisfied with the service? **Chart Wizard**

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 7 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **7** |

**Figure 38.35 – Satisfaction on first time use**

Following graph shows that the clerks didn't know about the satisfaction level of customer after using the service of using the card for the first time and the result shows 100%.

15) According to the customers, is it a good way to use debit or credits cards for online transactions? **Chart Wizard**

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 100.0 | 7 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **7** |

**Figure 39.36 – View point of using Debit-Credit Cards**

From this survey we can conclude that customer thinks that it is a good way to use credit and debit cards for online transactions because they think it is an easy to use debit/credit cards.

16) According to the customers, is it a good way to use debit or credits cards over vending machines? **Chart Wizard**

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 100.0 | 7 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **7** |

**Figure 40.37 – Usage on Vending machines**

100% result shows positive result that using of debit/ credit cards over vending machines is a good way.

17)  What was the Overall response of the customer after using the online service?  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Satisfied[ ] | 0.0 | 0 |
| Not Satisfied[ ] | 0.0 | 0 |
| Don't know[ ] | 100.0 | 7 |
| **Total responses:** | | **7** |

**Figure 41.38 – Overall response**

This result shows that customers were not satisfied by the services after using the online service of vending machines. 100% respondent stated they didn't know about the overall response after using the services.

18)  How do they rate the overall utilization of the vending machine  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Bad [ ] | 85.7 | 6 |
| Good [ ] | 14.3 | 1 |
| Excellent [ ] | 0.0 | 0 |
| **Total responses:** | | **7** |

**Figure 42.39 – Overall usage of Vending Machine**

The negative result indicates that overall deployment of vending machine was very bad with a result of 85.6% which shows that customer was not satisfied by the deployment of the vending machine because the customer didn't trust the technology provided to them by the banks.

## 1.22.4.  Strategic Issues questionnaire

1)  Background Information:  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Male [ ] | 52.2 | 24 |
| Female [ ] | 47.8 | 22 |
| **Total responses:** | | **46** |

**Figure 43.40 – Background information of Customers**

The following figure shows the background information of male respondents with 52.2% while female respondents were 47.8%.

3)  Salary in Pakistani Rupee (PKR)  📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Below 10,000 [ ] | 0.0 | 0 |
| Between 10,000 to 20,000 [ ] | 100.0 | 46 |
| Between 20,000 to 35,000 [ ] | 0.0 | 0 |
| Above 35,000 [ ] | 0.0 | 0 |
| Undisclosed [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 44.41 – Salary of Customer**

The salary level of the customers shows that most of the customers had salary between 10,000 PKR to 20,000 PKR with 46% respondents.

4) Years of Experience 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Less than 5 years [ ] | 100.0 | 46 |
| 6 – 10 years [ ] | 0.0 | 0 |
| 11 – 15 years [ ] | 0.0 | 0 |
| 16 – 19 years [ ] | 0.0 | 0 |
| 20 years and more [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 45.42 – Years of Experience**

It shows that the all the respondents have less than 5 years experience in their respected fields.

6) Electronic banking gives more control over accounts 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 100.0 | 46 |
| **Total responses:** | | **46** |

**Figure 46.43 – Control over Accounts**

According to this survey it shows that customers think that by using electronic banking they have more control to manage their accounts through online banking and the result shows 100%.

8) Using electronic banking avoid to interact with bank employees 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 100.0 | 46 |
| **Total responses:** | | **46** |

**Figure 47.44 – Usage of E-banking and interaction of bank employees**

The customer thinks that it ends the communication between bank employees and the customer because in this way customer can do all of the transactions online like paying of utility bills, transfer of money etc and it can safe his or her time to wait for the employee for the turn because they have social relationships with the employees and the employees can do everything which e-banking doesn't.

17) Do you have easily access to ATM machine? 📊 Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 100.0 | 46 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 48.45 – Access of ATM machines**

All the customers stated that they have easily access to Automatic Teller Machines (ATM) which means that banks are providing ATM facility to all its customers to make sure that people can withdraw money anytime, anywhere from the bank account.

20) What type of connection are you using for the e-banking? ▮▮▮ Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Dialup [ ] | 100.0 | 46 |
| Broadband [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 49.46 – Type of Connection for e-banking**

This survey was supposed to ask customers about the type of internet connection used for the electronic banking which shows 46% response from the customers.
 It doesn't mean that all the customers use electronic banking. Dialup connection provides 33.6kbps connection over regular telephone line which is very slow internet connection.

21) Is the internet connection good enough to perform online transactions? ▮▮▮ Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 100.0 | 46 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 50.47 – Degree of agreeing regarding goodness of net connection**

This survey shows that all the customers agreed that the internet connection which they used for electronic banking was very poor to perform electronic transactions. It shows negative result with 100% response from the customers.

23) Is the bank provides Consumer Protection Act? ▮▮▮ Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 46 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 51.48 – Customer protection Act**

The entire respondent stated that they don't have much information about the consumer protection Act. This means that the customers don't know about the consumer protection act.

24) Are they providing skilled IT professionals? ▮▮▮ Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 46 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 52.49 – Skilled IT professionals**

Customers don't have much information regarding IT professionals because the percentage shows 46%. Here the customers don't know about the Skills of the Information Professionals working in Banks.

27) Are they using cookies to collect information? Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 63.0 | 29 |
| Agree [ ] | 37.0 | 17 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 53.50 – Usage of cookies to collect information**

37.0% respondent stated that the website is using cookies while 63% didn't know about cookies. We can say that this feature is good for the bank website because it gives you protection of what you are doing.

29) Are they providing rich user interface on the website? Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 63.0 | 29 |
| Agree [ ] | 37.0 | 17 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 54.51 – Using Rich user interface**

63.0% respondent agreed that the website is providing rich user interface while 63.0% answered that they didn't have information about the rich user interface provided on the website. It means that if the customer is using dialup connection having slow speed it can slows down the speed of the web browsing.

31) Are they providing security schemas for the online transactions? Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 0.0 | 0 |
| Moderate [ ] | 100.0 | 46 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 55.52 – Security Schemas for online banking**

100% result shows that the customers didn't have information regarding security schemas for the online transactions.

32) Are they providing self help services to support services? Chart Wizard

| | Percentage | Responses |
|---|---|---|
| Strongly disagree [ ] | 0.0 | 0 |
| Disagree [ ] | 100.0 | 46 |
| Moderate [ ] | 0.0 | 0 |
| Agree [ ] | 0.0 | 0 |
| Strongly agree [ ] | 0.0 | 0 |
| **Total responses:** | | **46** |

**Figure 56.53 – Self-help services for support**

We can conclude from this survey that the bank is not providing any kind of help to its customers. They are not considering the complaints of the customers which show negative feeling for the customers.

33) Is the bank providing customized services?    Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Strongly disagree [ ] | | 0.0 | 0 |
| Disagree [ ] | | 0.0 | 0 |
| Moderate [ ] | | 0.0 | 0 |
| Agree [ ] | | 100.0 | 46 |
| Strongly agree [ ] | | 0.0 | 0 |
| | **Total responses:** | | **46** |

**Figure 57.54 – Provision of Customized Services**

The bank provided customized services to the customers which show 100% result.

34) Are they providing customer services?    Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Strongly disagree [ ] | | 0.0 | 0 |
| Disagree [ ] | | 0.0 | 0 |
| Moderate [ ] | | 100.0 | 46 |
| Agree [ ] | | 0.0 | 0 |
| Strongly agree [ ] | | 0.0 | 0 |
| | **Total responses:** | | **46** |

**Figure 58.55 – Availability of customer services**

100% result shows that the customers were not aware of customer services which were provided by the bank.

35) Is the bank providing informational services (Bank products and services)?    Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Strongly disagree [ ] | | 0.0 | 0 |
| Disagree [ ] | | 0.0 | 0 |
| Moderate [ ] | | 0.0 | 0 |
| Agree [ ] | | 100.0 | 46 |
| Strongly agree [ ] | | 0.0 | 0 |
| | **Total responses:** | | **46** |

**Figure 59.56 – Availability of information of bank products**

The positive result shows that the bank is providing information services about the bank products and services with 100% result from the respondents.

36) Is the bank providing communicative services (Email, account inquiry, change of address, loans applications)?    Chart Wizard

| | | Percentage | Responses |
|---|---|---|---|
| Strongly disagree [ ] | | 0.0 | 0 |
| Disagree [ ] | | 0.0 | 0 |
| Moderate [ ] | | 0.0 | 0 |
| Agree [ ] | | 100.0 | 46 |
| Strongly agree [ ] | | 0.0 | 0 |
| | **Total responses:** | | **46** |

**Figure 60.57 – Availability of communicative services**

All the respondents agreed upon this survey that the bank provided communicative service on the website for the change of their address, loan applications, account inquiry and email address.

## 1.23.    Interviews

Two Interviews were taken from banks managers for data collection. Branch manager and Operation manager were interviewed for accomplishment to the task.

The first interview was conducted by a telephonic conversation through detailed questionnaire with the (respondent -A) Mr. Naseem Jan, who is working as a Branch Manager in Muslim Commercial Bank. He has been working in MCB more than twenty five years.The second interview was conducted by a telephonic interview conversation through detailed questionnaire with the (respondent-B) Mr. Shamsher Khan, who is working as an Operation Manager in Muslim Commercial Bank. He has been working in MCB more than twenty five years. Table 4.2 shows the name of respondents, designation and date of interview conducted.

|              | Name               | Designation       | Date of Interview |
|--------------|--------------------|-------------------|-------------------|
| Respondent A | Mr. Naseem Jan     | Branch Manager    | 11.July.2009      |
| Respondent B | Mr. Shamsher Khan  | Operation Manager | 18.July.2009      |

**Tabel 4.2 –  Respondents of Interview**

From the interview of the two respondents a detailed description of the current scenario with respect to our subject matter, comes forward, with a number of considerable factors to discuss and to proceed with our study. The respondents gave detailed feedback on number of important factors regarding facilitation and hindrances in e-banking readiness. The respondents discussed factors like security & privacy, perceived usefulness & perceived ease of use, trust, awareness, government policies, technology, banks and infrastructure.

### 1.23.1.            Internet Banking Information

Regarding internet banking information the respondent A mentioned that internet banking information is most important element for electronic banking. He mentioned that the customer who wants to use electronic banking he must know all the basic information regarding the internet banking. When online banking information is provided to the customers then it will motivate the customers to use electronic services and in this way they can save their time.

Respondent A stated that unfortunately when the customer visits the bank. The customer only comes to open an account, re-issues a cheque book, check balance or deposit money in their accounts. They never wanted to ask about the information regarding electronic banking. The customer is not interested to ask information about the electronic banking. Almost all the customer only comes for some reason but no one is interested in electronic banking. Respondent B mentioned that all the information is provided on the website of the bank so that customer can read the information of the online banking by using internet and visit the website of the bank. He said that the bank employees are very busy in their own work so they don't give much time to the customers. The website provided to the customer is very simple and without graphics or heavy contents.

### 1.23.2.            Security and Privacy

Regarding the issue of Security and Privacy of electronic banking the respondent A mentioned that the security of the transactions is very necessary in electronic banking. He mentioned that completion of transaction is very important from start till end. When the transaction was successful it will create the trust of customer and customer can use this online banking service again and again, but for this the transaction must be 100% percent secure and on time. According to respondent A it was not an easy job to complete the transaction because it gives very tough time to the customers.

He used to check the balance account again and again. "Whenever I use electronic banking I am hesitating to use electronic banking because it's like I am killing my own time". According to this reason he said that he only uses online banking for balance check. He cannot take the risk to transfer amount from one account to another because it takes more than two or three days. According to him using electronic banking is very problematic in Pakistan.

### 1.23.3.        Perceived Usefulness & Perceives Ease of Use

According to respondent A perceived usefulness and perceived ease of use both are very important factors that can influence the customer to use electronic banking. He mentioned that by giving different options to the customer like MCB Mobile Banking, SMS banking, Bill payments, Exchange rates, news and events can attract customer to use the electronic banking facilities. He thinks that extra features can provide customers a chance to use the electronic banking. He mentioned that there are only some banks who are completely aware of strategically and practical issues of electronic banking. Respondent B mentioned that response time is also very important for electronic banking because it's very problematic when you are browsing within electronic banking facility. It was very difficult for him to find out how to use electronic banking. He thinks that learning is an important element and website should be easy to learn. It was difficult for him to learn electronic banking.

### 1.23.4.        Trust

Respondent A mentioned that trust and security both have an important relationship between them in strengthen the customer relationship with bank so that he or she can use the banking online services. Trust can be defined as the person perception about something and it can be based upon the personal experience. When there is a change in technology, this change brought the new benefits to its customers and new risks and without using the new service the customer cannot have trust on this new service. For the customers the main risks are security and privacy and if customer has experienced the successful transaction before then the customer has developed some trust on the electronic banking services. Respondent B mentioned that he has level of trust on the bank employees due to social relationships but the respondent don't trust the technology provided by the bank. They keep their information secret.

### 1.23.5.        Awareness

According to respondent A for the achievement of electronic banking to be successful it is very important that customer should be aware of what electronic banking is and what kind of benefits one can take from using electronic banking. All the important information is provided on the website for the customers to enhance the customer awareness and that's why all the new products or services information is provided on the website of the bank.

### 1.23.6.        Government Policies

According to respondent B government polices plays a vital role in successful implementation of electronic banking and to facilitate convention of Information and communication technologies. He stated that banks are very optimistic for the promotion of electronic banking throughout the country. State Bank of Pakistan which is operating under government policies can develop regulatory frameworks for the successful implementation of e-banking and awareness.

It can also help to improve the foundation of skills of the Information Technology resources because it can encourage and facilitate the electronic banking inside the country. Respondent A said that "government policies can strengthen consumer's protection which can be followed by best practices". Avoidance of redundant rules and regulations of the government can lead to best practices of the government policies. He further stated that quality of education in schools, colleges and universities is very essential for advancement in Information Technology and human resource development.

### 1.23.7.        Technology

According to respondent A the most important element of the electronic banking is technology. Banks are using wide range of technologies. Information technology is the most vibrant sector. People want to stick into the latest technology and they enjoy it when there is something new in the latest technology and it can run the e-business very smoothly and it can paramount the promotion of electronic banking with effectiveness and constancy. Technology know-how is also important for the management of businesses. Without technology it is impossible for the organizations to compete and provides value added services. The function of the program should be design in the way that can easily solve the task. Banks need to design programs that best fits the culture of the organization and the requirement of the customers.

### 1.23.8.        Banks

State Bank of Pakistan (SBP) is the only bank in Pakistan which is the central bank in Pakistan. The duty of State Bank of Pakistan is to keep checks on all the banks to check the progress of the banks. All the banks activities and performance are supervised by the State bank of Pakistan. It has taken some measures for efficient payment systems done by the customer through websites to decrease the operational risk by developing regulatory frameworks for payment systems and Electronic Fund transfer Act (2007). It covers up the EFT, electronic banking, fines and penalties. It has also initiated steps to Commercial banks for management of Automatic Teller Machine to continuous the Automatic Teller Machine services on special days and occasions.

Respondent stated that Banks should provide the facility to market their products and services on the website and they should provide all the related information about their business over the website.

Urdu is the national language of the country so it would be easier to read the website by the customer which provides Urdu language as a second option for the people who are not able to understand Urdu language. Website should be design in such a way that it can provide multi language support.  By providing transactional, communicative and information services on the website can attract customer to use electronic banking. It can retain the customer to use electronic banking services. Bank should provide the facility for disable peoples who cannot go to the banks to pay the bills. He said that consumer can access their account from anywhere at any time by using electronic banking so it is very necessary that if a person uses electronic banking, the downloading speed of the website is very good.

 According to respondent A the downloading speed of the website, getting more information in less time, different languages support, website environment and customer complaint management system and feedback are very important for doing electronic banking.

He also added that rich user interface can also attract customers to use their website for online banking but there should be options for the user to choose standard interface or graphical user interface (GUI). Banks should be checked on monthly basis in order to check the progress of the banks. Banks should follow the State Bank of Pakistan policies for implementation of appropriate electronic banking. They must provide guarantee that their banks account are safe and they are providing safety measures for their accounts who are the customers of the bank. Banks should provide all the facilities in rural and urban areas as well.

## 1.23.9.        Infrastructure

According to respondent B privatization of banks can lead to improve the infrastructure and it can lead to the success and failure of electronic business. Proper infrastructure is very necessary to provide quality of service within the system. He said that proper infrastructure can attract customers to perform online transactions and use electronic banking. He mentioned that internet based applications are working on giant infrastructures so those infrastructures needs to be reliable and secure so that people can used it without any hesitation. It is very necessary to cover the rural areas for the expansion of industrial and up to date delivery. Information Technology connectivity is very important in remote areas. Respondent A mentioned that Telecommunication infrastructure, high internet speed connectivity, up to date systems, access to personal computer are very important for successful implementation of electronic banking.

# 4. Analysis

*This chapter presents the analyzed data based on the empirical data that has been collected with the help of in-depth interviews with the bank managers and questionnaires. This chapter also presents the disadvantages of electronic banking in Pakistan followed by the discussion.*

## 1.24. Information of Online Banking

From our purposed model, information of online banking entity acts as both hindrance and facilitators.

According to respondent B when customers visit the MCB web site then all the important information that customers can take into consideration is provided in horizontal links on the top and it includes all the new information and up-coming important events and also all the important links to pages have been provided on the main page so that customer needs not to invest precious time in browsing different pages for collecting important information and for him this is the facilitator that bank is providing such facility to make their loyal customers. By providing proper information to the customers, the customers comes to know what are the major concerns of doing transactions online and then later on they will save a lot of their time by conducting all of the transactions online and it will be a great convenience to the customers.

It shows the hindrance for e-banking that Respondent B stated that the customer goes to MCB bank for opening the bank account and while filling up the form. No such information regarding online banking is provided to customer by customer relation officer who is helping the customer in completing the form and no brochure is given to customer that will help customer to use internet banking after reading such kind of supportive document. So if the customer did not have computer at home or did not able to visit the website would not be able to get the internet banking information that has been provided on the bank website. So when the customer is getting all the important information about using the ATM card, the customer must be provided with some information that will enable him to use the Internet banking in future.

According to respondent A the websites are not providing the clear information to customer and when the customer uses the bank website the customer does not able to trust on the information that has been provided on the bank web site so customer left using this website.
According to respondent A the use of rich interfaces on the websites is making the website slow to browse.

The findings reveal that the information of electronic banking is the most important element when the customer makes a decision to use electronic banking services. Efforts are supposed to put by the bank employees to their customers and provide all the information at the time of opening of the bank account by the customers. All the necessary information should be provided from login into bank account till the end of the transaction. Website information should be clear and precise so that customer can easily understand.

## 1.25.    Security and Privacy for Bank Customers

From our purposed model, security and privacy acts as hindrance and facilitators.

For doing transaction through Internet banking customer gives a lot of importance to security and therefore security is the main challenges because customer is doing the financial transaction through banking web site and he is not sure about the successful transformation or hacking of important personal information.

As far as the customer trust is concerned, the hindrance from customer point of view is that they can use the internet banking services with confidence if and only if customer knows that banks are very well aware of online thefts and banks deal with all kinds of unauthorized access to the personal information of customer so if all the security issues are taken into consideration then customer can use these online banking services without any hesitation.

According to respondent A while transferring money from one bank to another bank by getting online access to his account from the bank web site, he is not sure that the money will be transferred to that person's bank account as he did not get any kind of response from the bank web site and then in this case he needs to talk with the other person to whom the money has been sent and he has to wait for two or three days and if he needs to send money to the another bank account urgent then he does not transfer money by using the online bank web site account and he prefers to visit the bank by himself and then he prefers to transfer it by using Telegraphic Transfer and this process is very time consuming to visit the bank and to wait for his turn and it still takes a day to transfer. In some other cases if he needs to give money on the same day then he prefers to take the money in cash to that persons address and he visits the bank and then withdraw the money from bank in terms of cash and then travel to that person, even though this is not secure and that person can face a lot of problems like theft of money so it's also a bit risky.

The main facilitators are that MCB is using the industry standards and have some security measures while keeping and maintaining the information record on systems and this is mainly done by the encryption and decryption technique by using the special code or key. The main advantage of using this encryption technique is that it provides the great protection when the data was flowing through the internet. In the MCB website all the precautionary information of security and privacy regarding the online banking services is provided to the customers so that the customers can aware and have trust in using the online banking services. In order to tackle the security issues firewalls have been used as an important security measure in order to protect the internal network of bank. So it is an essential tool and act to protect the unauthorized access.

Regarding using the bank website the facilitator is that if the customer did not use the MCB web site and he or she is still login on the web site then that customer will be automatically log out after some time due to inactivity in using that account, and it assures to customer that no other person able to use his or her login while he or she is away and this is the important measure of bank web site in order to secure the privacy.

The findings reveal that security & privacy are the most important issues for the customers to use electronic banking. Bank should provide security measures to their customers that demonstrates full authentication, privacy, completion of transaction from start to end and its confirmation. The bank should adopt the industry standards regarding security issues by considering the customer's requirements for the using the specific systems.

## 1.26.   Perceived usefulness (PU) and Perceived Ease of Use (PEOU)

According to respondent A, the hindrance is when he accesses the account over the internet, the login time to connect to his account was very slow. It also happened when he tried to logout from his account and he was very unhappy with that. He is reluctant to use online banking because it wastes his time and the process is very slow. If it happened again he will stop using electronic banking again. He stated that he didn't able to get any feedback from the website when he was supposed to perform any task on the website on Muslim Commercial Bank which is very un-useful and un-safe measures to do any kind of transaction. They haven't provided any technical assistance online that can help the customer in any regard which is very negative aspect to discourage the customer to visit the website and they have discarded the complaints section.

According to respondent when the customer visited the website for the first time, he faced a lot of difficulty to use the electronic banking. He stated that it's very difficult to learn and then to use the electronic banking for the first time. It's not that easy to use electronic banking because it requires efforts to perform transactions and to use electronic banking. He stated that he is an expert user of computer and he faced difficulty. If a person is unaware of computer then he would not be able to use electronic banking. According to respondent it is very important that the system should be effortless, valuable and reliable.

The facilitators that he mentioned is that he is very happy to use the services which are provided on the bank website like MCB Mobile, ATM's, SMS banking, Bill Payments, Exchange rates and News and Events that Muslim Commercial Bank is offering. Most of the time, he uses SMS banking without accessing to internet. He said that it is the quickest way to get a mini statement on his mobile instantly. He stated that there are many facilities which are provided by the MCB and he uses these facilities two or three time weekly which saves his time a lot. He is more satisfied with the banking services provided on the mobile rather than services provided on the internet. He thinks it is easier to access his account from mobile phone and he can manage his account more efficiently by using mobile phone. He is taking benefits from SMS banking without any hesitation. He stated that he is very determined to use the electronic banking in the future if the services offered were good and reliable.

It is very important that the e-banking authorities who are creating the systems for electronic banking need to build up those systems which are useful and are easy to use without taking any efforts.

Findings reveal that reliability, learning and feedback are very important for the satisfaction of the customer. Bank website should provide quick response of the user using electronic banking. If the response time is slow then the bank can lose its customer.

Website learning is also very important. Website should be easy to learn and to understand the overall functionality of the website. If the customer is used to it then it will be easy to navigate within the website.

Findings also reveal that customer is not satisfied by the downloading time of the website. The website is supposed to be up all the time with proper functionality. Giving regular Feedback and providing option to its customer's how to improve its services. Bank employees should response speedily to its customers regarding their queries.

## 1.27. Trust

Respondent A stated that customer can only have trust in using the online banking services if bank assures that all the personal information of that customer will be kept private and give grantee of successful transformation of any transaction and MCB is taking a lot of consideration while maintaining the trust of customer in securing and putting the personal information private.

The facilitators are that the Respondent mentioned is MCB taking a lot of consideration while maintaining the trust of customer in securing and putting the personal information private and this is the major facilitator in electronic banking. All the internal and external policies of MCB are made on the basis of State bank of Pakistan legal framework so that customers can have a full trust on these new or existing policies and they are giving a lot of importance to Ethical behavior but it covers only twenty to thirty percent of the legal framework issued by the State bank. Respondent B stated that that bank has assured and given guarantee that their important personal information will not be given to any other person or company who can use this information and hence the bank has provided with the layer of trust for their customers. For him trust is the completion of transaction according to their expectations.

Respondent A said that there are some banks that are providing the personal information of customers to other banks so that these banks can use this information for marketing purposes, like nowadays people having bank accounts are receiving the calls from bank call centre that if they are interested to get the bank credit card or personal loans etc even though they do not have any restrictions of having bank account in the same bank so in this case MCB has assured and given guarantee that all of the customer personal information will not be given or sold to any other person or company who can use this information for their own benefit and hence the bank has provided with the layer of trust for their customers. For the customers the trust is the successful transmission of transactions according to their expectations.

Findings reveal that customer's do not trust the technology provided by the banks. They only trust the customers due to social relationships. It is very necessary that bank should take some security measures regarding policy for protection of customer's account, bio data and personal records. They should improve their services with proper risk management. High risk is involved in electronic banking. They should provide more sophisticated security measures to win the confidence of the customers.

Banks should ensure to its customers that they are delivering accurate transactions, within the required time and if banks are providing the services that the customers can rely on it then it will create and strengthen the trust and customers can do the business over internet and can do the financial transactions over internet without any hesitation.

## 1.28. Awareness

The hindrance about awareness of e-banking services is that, customers are not aware of e-banking services. Due to this reason they did not want to know what are the advantages and disadvantages of doing transactions online and customers are reluctant to use online banking services and even banks are not providing much information so that customers can very well aware of online banking services.

Respondent B stated that the banks are providing the information on their website like personal loan, home loan and they don't provide much information about how to use the e-banking services. Even due to competition banks have appointed a lot of Tele-Sales Representative (TSR) that are doing marketing and they are calling a lot of customers for credit card and personal loans but they are not providing any awareness or information of new technology and existing banking electronic services.

According to respondent A, customers are having information of products that have been provided by MCB, but customers are not much aware about the usage of electronic banking services that the bank is providing so bank should need to provide proper awareness to services.

Findings reveal that the information is only provided on the website and TSR's only promote the products in the market. They are not promoting the services provided by the banks that can provide awareness to the customers of the bank. It is the duty of the concerned staff to provide all the information to its customers. They should provide all the materials to the customer that demonstrates how to use electronic banking.

## 1.29. Government Policies

From our purposed model, Government policies act as hindrance. People who uses internet banking services according to them not all of these services are up to dated with current policies of the banks within the country. The main issues are the cases of bankruptcy and fraud prevention needs to be cleared in the government policies which are not clearly mentioned in the Electronic Transaction Ordinance (ETO) 2002, Data Protection Act and Electronic Crimes Act (ECA) 2007.

Respondent A stated that "electronic banking brings lawful risk for the banks because banks grow up very fast when it comes to electronic banking as compared with the conventional banking system". Government of Pakistan is not providing legal framework to facilitate customer from protection of electronic commerce local and international.

Respondent B said that authorization of such services is very important according to rigid transformation. Failure of laws and regulations can result into the easy access of person's private and public information. Each country has their own policy when customer opens bank account. It can also damage the repute of the bank if the delivery channel is not reliable and bank can lose its customer.

Government is helping to promote Information Technology culture in financial institutions but this pace is very slow and the professionals Information Technology graduates are limited for the promotion of Information Technology culture. For the accomplishment of successful electronic banking system, nationwide, provincial and worldwide set of laws and conventions are necessities. Authorized support is needed to protect the safety of financial institution and consumers in the diverse area of electronic banking operations.

According to respondent A there is no proper policy for deployment of electronic banking services from the government of Pakistan. As far as use of electronic banking service is concerned, the websites of all the banks provides English language support only .Peoples aren't not able to read information which is in English. Literacy rate of education is very low so people are not able to read and write in English. It is the duty of government of Pakistan to educate people especially in

villages and urban areas so that they can communicate in English. The main reason is that most of the people living in rural areas are poor and they cannot afford the expenses of education.

He stated that people who are living in urban areas they are educated but they don't have much information about usage of electronic banking services. They only know how to use Automatic Teller Machine. If a person uses electronic banking, he/she feels unsecure because he/she is afraid of losing the money which is very unsafe means of payment.

According to respondent B, he is serving his services in Muslim Commercial Bank but he feels insecure to use electronic banking. He thinks that electronic banking is an unsecure means for payment. He is not satisfied by the government policies for the protection of consumers regarding electronic payment.

He thinks that lack of ability to understand English language leads to the widespread poverty in rural areas and that is why people are not able to use online banking services due to inability to understand English.

According to respondent people are not well-educated. Quality of science and Information Technology teachers in schools, colleges, universities is very poor and curriculum which is taught in the schools, colleges, universities and formal and un-formal institutions is out of dated. According to him out of dated curriculum without any need are the major barriers for advancement in Information Technology. Human resource development hinders the users to use the Information and Communication Technology and to use electronic banking facilities.

Findings reveal that the role of government can lead to successful implementation of electronic banking. Government should provide authorized services that support the full legal framework. Ministry of Science and Technology and Information Technology Commission has to play a leading role to overcome and refine the Information Technology policies both at public and private level. Supervision of authoritarian responsibility must increasingly guarantee that effective risk management systems are in place to manage all the systems. Legislation is lagging behind the electronic revolution which is more than century old and it is the main problem of Pakistan. The laws are not enough to provide for conditions in relation to cyber crimes.

To take lead in worldwide trade it's very important to provide user's of electronic business with the legal Infrastructure to develop into operationally and commercially workable. Government is responsible to come up with different ideas so that people can learn English. Modern curriculum should be followed in the institutions.

## 1.30. Banks

From our purposed model, Banks acts as hindrance and facilitators. According to respondent the hindrance is that Muslim Commercial Bank is not providing customer complaint management system which can respond to the complaints of the customer. It is the major drawback to manage the complaints of the customers. Customer cannot talk to the person to take help if something goes wrong. There is no feedback forms provided on the website. Bank is not providing training facility for the customers or provides any such kind of information that helps the customer to use electronic banking and electronic banking services who is a new customer of the bank. He stated that they have easy access to the banks in the city but it is very difficult to visit the bank in the village because there is only one branch in that particular village.

Web-based technology is more useful to state the level of satisfaction or dissatisfaction as compared to the features of the product and quality of service because it gives more response to the staff of the bank and expose chances of improvements in the quality of service.

According to respondent the bank staff is very rude sometimes and the customer is not satisfied by the act of the bank towards customer-oriented approach which can create a required culture for the promotion of bank services.

There is no such facility provided on the website that can facilitate customer to use electronic banking in different languages. Website provided by the bank is in English so people who can read and understand English language they can only use electronic banking. There is no such facility provided for disable peoples who are not able to visit the banks to pay their bills using electronic facility.

According to him the Automatic Teller machines are not working sometimes due to shortage of electricity and people can't do transactions and withdraw the money.

According to respondent all the information regarding electronic banking provided on the website is clear but when the customer wanted to use electronic banking he was not able to use it because it was a very difficult task for the customer. According to customer the website was not providing clear information regarding electronic banking and he was lost in the website. The website downloading speed was very slow and sometimes the webpage was not responding. The website was full of rich interface and due to slow internet speed he was not able to perform transaction.
Bank is only providing graphical user interface without animation and so much stuff but it takes time to navigate within the website which is time consuming. The downloading speed of dialup is 4kb/sec which is not quite good to navigate within the website which provides rich user interfaces.
From our purposed model, banks act as facilitators.

Answering question regarding performance of the bank, the respondent stated that Bank is improving the services and it will take time to get hold of all the services up to date to facilitate customer. He said that Muslim Commercial Bank is the only Bank which is providing all the electronic services. They are following the frameworks developed by the State Bank of Pakistan regarding efficient payment system. He said that they are covering only 20% to 30% of framework which involves finances and resources to standardize legal frameworks and it will take more time to cover the 100% level.

Respondent mentioned that Muslim Commercial Bank is the member of Secure Socket Layer (SSL) but it is not mentioned in the website so people are unaware of SSL and they don't have information about secure payment using Secure Socket Layer (SSL). The Content of website is missing very important information and most of the people in banks don't know about the SSL technology. Each bank has its own system, rules and regulations to operate.

Findings reveal that the respondent stated that website contains all the important information provided to the customers while customer stated that information is not clear all the information should be provided in clear and precise form which can help the customer for proper guidance of the customer. The website should be provided in different language support so that customer can easily understand if there is any problem in English language. The bank employees should give proper time to the customers to know about their requirements and queries. There should be a

customer management system to support and help the customers of the bank and solve their problems.

## 1.31.   Infrastructure

In our proposed model the infrastructure hinders the use of electronic banking adoption in commercial banks of Pakistan.

Pakistan Telecommunication Corporation Limited (PTCL) is also providing Digital Subscriber line connections over normal telephones connection which is providing 1.54 Mbps for the normal and corporate users but surprisingly the cost is too high.

According to respondent A internet propagation is slow which the major hindrance for electronic banking. Pakistan Telecommunication Corporation Limited (PTCL) is providing access to internet through copper infrastructure which connects millions of customers through landline phones. The infrastructure to provide internet facility is very poor and it is providing 36 kbps over copper wires and sometimes it is connected to 24 kbps and it gives the downloading speed of 4kb/sec. it shows the main reason of the electronic banking barrier.

Normal person cannot afford broadband connections however it is necessary to get access to personal computer and after that a person can use internet connection. According to him he is using DSL connection in the bank but the customer always uses Dialup Connection which is much cheaper and affordable but the quality is very poor and it is unreliable for data communication. Lack of need to use internet is staying away the customer to enjoy the benefits of electronic banking. He stated that infrastructure is available at satisfactorily level but it is not reliable so that's why people don't want to use electronic banking and the cost of being associated with electronic banking is very high so people are not able to carry out credit business over the internet. Bank is providing its services at its best level. Bank is involved more in traditional banking than electronic banking.

The fragile management coordination and lower level of common perception among the commerce people and Information Technology people hampers the expansion of new thoughts. Bank is working on central system for Information technology and if problem is encountered, all the services stops working. Bank only agrees on those Information Technology offered for aggressive compensation and sustain industry actions than to support consumer efficacy and return on investment. Electronic banking is near to the beginning step of the Bank. According to respondents most of the information is provided to the customer is about the services and products.

Website of the bank typically updates the information regarding products which are more sophisticated which permit consumer to appear in more complicated inquires. It shows the preliminary phase of electronic business growth (Frost, 1999). Carrying for automated payment is moderately immature that accredited to lack of confidence from the customer concerning new technology and communication infrastructure dilemmas.

Telecommunication infrastructure is immature in financial institutions which hinders the modes of digital communication within the electronic business. Infrastructure is the primarily requirement for the electronic banking to thrive. Services offered consist of poor quality which hampers the use of electronic banking.

High cost of access to the devices that give access over the networks to purchase is relatively very high like costly internet connection, wireless local loop infrastructure. Merchants don't want to spend money in terminals which is rejecting the consumers to use electronic banking systems.

Findings reveal that Proper Infrastructure and Quality of Service are the most important factors for running the electronic business. It should be decentralized system for each bank to handle the problems more efficiently. The quality of Dialup internet connection should be reliable if it is provided by Internet Service Providers. Every service should be provided with more efficiently.

## 1.32. Technology

Banks are facing problem in the adoption of Information Technology which shows the hindrance for electronic banking adoption. The level of experienced Information Technology professionals is very low. Their training is very limited. They are provisioning Information and Communication Technology (ICT) instruments without adequate training and skills.

Technology know-how is very important in the organization. Technology is useless without having professional skills in the respective field. Information Technology professionals are working in Banks like Database Administrator and system administrator, network administrator but whenever a serious problem is encountered, the Information Technology workers are not professionals in their work so that they are not able to resolve the problem and this is causing delays in the daily routine of electronic banking which bothers a people a lot.

Respondent A stated that there are only few computers in the Bank department. He is reluctant to use personal computer and he was happy to use traditional banking because he was used to performing his routine job in traditional way. He thinks it is very difficult to use personal computer. He is reluctant to attain new skills. He does not think that he needs a personal computer in the bank because he is a novice user and he faces difficulty to use personal computer.

Another reason of electronic banking hindrance is that it is not economical to buy personal computer because the prices are very high. Due to financial constraints he can't afford to buy personal computer. It is beyond his expectations. There is also a lack of sufficient physical resources which includes hardware and software to run the electronic business smoothly. Costly internet surfing and slow internet speed makes it difficult to browse the website of the bank and perform online transactions.

According to respondent B authentication process needs to be done in the way to take full advantage of auto-generation of the passwords that should meet the requirement of consumers and banks. Fake authentication can lead to the loss of money, customers and misuse of identity information. People fear to login by a single password provided by the banks.

Findings reveal that adoption of latest technology and its acceptance is very important to run the electronic business more smoothly and efficiently. Inability to attain new skills can damage the repute of the organization which can result into the collateral damage of the organization. It is very important that the employees should learn new skills and the bank staff should hire professional and expert graduates in the banks to handle the business competently and who are capable of solving the problems with adequate knowledge.

## 1.33. Disadvantages of Electronic Banking

In spite of the fact that electronic banking has lot of advantages, there are some disadvantages or hurdles of electronic banking. The main disadvantages are as follows:

### 1.33.1. Customer Skills:

The customers should have strong computers and browsing skills for using the internet banking and conducting the transactions online. Sometimes customers with the less sufficient knowledge get confusion of how to use the electronic banking. Another reason in customers finding difficulty in using the online banking is when the page layout of bank website is change and then customers have to face confusion and have to invest more time and this cause delay in conducting the online transaction.

### 1.33.2. Security Risks:

Security is an important issue in online banking. The major security risks are as follows:

### 1.33.3. Fraud in Transactions

Nowadays the fraud is common on internet and it has a lot of effect on the electronic banking in a number of ways:

### 1.33.4. Fake Bank Websites/email:

Sometimes there are emails from banks or emails from the banks managers etc in which the title of banks or used having fake email addresses and when customers tried to give personal details then all the necessary information is hacked by the people who have sent these fake emails and then they might use these emails according to their own wish.

### 1.33.5. Use of Trojan Programs:

The Trojan horse programs are used by the hackers to hack the important personal information of customers. So when the customer opens the unknown and suspicious email address or web site, the Trojan horse will automatically install in the computer and customers did not have any knowledge of that and when customer opens the bank website then customer becomes a victim of hackers and they hack the account and passwords.

### 1.33.6. Power Failure

Nowadays under developed countries like Pakistan is facing a lot of problems like light fluctuation and mostly people don't afford generators or UPS (Uninterrupted power supply) at homes and customers are scared of conducting transactions at homes because they might loss the money when they are doing financial transactions and light fails.

### 1.33.7. ATM Theft

The robbery of money when people are doing transaction by ATM machines also became common in Pakistan and in big cities like Karachi and Lahore these incidents happened a number of times

when a person in going to complete transaction from ATM machine and some unknown people came there with pistol in their hand and they snatch the money from that customer and even though they check the receipt if the customers have still money in his or her account then these people forced him or her to make more transactions for them and a number of times these bad incident is captured by the cameras installed near ATM machine and some of the videos are posted online on YouTube by the users. Now people left with conducting transactions at the night time because they are scared of such bad incident and they can do nothing if they need urgent money.

# 5. Discussion

*Based upon the interviews and questionnaire answered by the selected group of people (Employees, Customers and Clerks) all the necessary information has been gathered and form this we came up with the hindrance and facilitators for electronic banking and now we will have discussion in relation with our Theoretical framework. After this discussion we have presented a new model.*

During the past years, the IS society considered technology acceptance model a frugal and influential theory (Lucas and Spitler, 1999; Venkatesh and Davis, 2000). Technology Acceptance Model has been applied to different technologies (e.g. word processors, emails, WWW, GSS, Hospital Information Systems) under different situations (e.g., time and culture) with different control factors (e.g., gender, organizational type workers), leading its proponents to believe in its robustness. Despite its great success, however, few previous systematic efforts trace its history or investigate and evaluate its findings, limitations and future (Doll *et al.*, 1998; Gefen and Straub, 2000; Legris *et al.*, 2003).

TAM has an important contribution towards IS and understanding its usage and acceptance behavior of users (Robey, 1996). Davis (1986) model has highlighted the importance of developing knowledge and to help in this process they have suggested a theoretical base. But this model is more focus on the system characteristics design. The social influence that help in the adoption and how to utilize the new information systems is not included in that model.

Adams *et al.* (1992) extended the model proposed by Davis (1989) and added the validity and reliability for measuring PU and PEOU across different information systems and different settings. As suggested by Adams *et al.* (1992), the moderating effects for Technology Acceptance Model variables such as culture, gender, task, user type and Information System type needed to be examined. For example Straub (1994) applied the Technology Acceptance Model in two countries with different cultures and found that culture played an important role in the attitude toward and choice of communication media. Grefen and Straub (1997) also investigated the effect of gender difference on acceptance of Information System that determined that gender significantly moderates the effects of Perceived Usefulness, Perceived Ease of Use and social presence. They found that men are more affected by Perceived Usefulness, while women are more affected by Perceived Ease of Use and subjective norms. Similarly Moon and Kim (2001) applied Technology Acceptance Model in the context of Internet usage, differentiating duties into entertainment and job-related task. They found that the significant factors affecting internet usage depend on the type of the task.

Kundi and Shah model (2009) has included the study of technical and non-technical issues. Like Davis (1989) model it is also based on dependent and independent variables. In our proposed model we have a Government policy that is affecting the eBusiness infrastructure. We have taken Government policy as hindrance, while Kundi and Shah model has not mentioned it as hindrance and they have taken it as opportunities. From the literature review it is clearly identified that government policies are a big hindrance in promoting electronic banking. In Pakistan, IT policy already exists, but there is no separate policy for eBusiness and it did not fulfill the requirements. The bureaucracy is misusing its power and their attitude is not good and they are not playing a leading role in promoting the eBusiness. Policy makers are worried in finding out the ways of educating the people in accepting the e-banking as poor bureaucratic structure is not allowing them to do so.

Websites can be counterfeited, online identities can be forged and electronic documents can be falsified (Ba, 2001). The lack of adequate regulatory control also leads to the customer's perception that their personal information may be used without their knowledge during or after navigation. All these factors heightened the risk perceptions of the customers and affect their level of trust towards electronic banking system. The distant and impersonal nature of the online environment and the implicit uncertainty can bring about several risks that either are caused by functional defects or security problems in information and communication technical systems or are caused by the conduct of actors who are involved in the online transaction. In the situation of e-banking, market vagueness arises because the financial institution has a chance to behave in an opportunistic way by taking benefit of the remote and impersonal nature of e-banking and the government's inability to adequately monitor all transactions. Examples include misrepresentation of the product and service, demonstration of false identity, confusing advertisement and leakage of private information.

Retails banks can build mutually valuable relationships with clients through a trust-based relationship process (Dayal *et al.*, 1999). The lack of adequate regulatory control also leads to the consumer's observation that their personal information maybe be used without their knowledge during or after navigation. All these factors heightened the risk perceptions of the customers and affect their level of trust towards online banking system. Using of infrastructure for doing online transactions can bring several risks that are caused by functional imperfection or it may be caused due to security problems in ICT technical systems or it may be caused by the actors involved in performing online business. Although financial institution has very important influence on the security of the transaction source with the help of different techniques like encryptions, authentication and firewalls, there is still a possibility for the third parties to compromise the process of transaction. Examples of system dependent insecurity include breach of private information, theft of credit card information and stealing information by the hackers.

Technology is a threat as mentioned by Kundi and Shah and in our model we have presented it as the hindrance as well as facilitator. In Kundi and Shah Model, technology threat is based upon hardware and software and IT professionals. As discussed in the literature review these are no more major threats in Pakistan as more and more IT professionals are graduating from IT institutes and local market is fulfilling the software and hardware requirement. But the major threat is quality of Internet. Due to expensive cable internet, people are using dialup connections and they are not reliable due to internet disconnection problems. Technology also acts as facilitator as there is a radical change in technology if we compare it with past few years. There is an increase in mobile penetration and multi-national companies have started their operations in Pakistan. The availability of DSL internet in the cities, mobile broadband is becoming facility to use e-banking.

Security and Privacy an important issue that has been neglected by Kundi and Shah model. In our proposed model it acts as hindrance and facilitator. Nowadays bank is using industry standards and have proper security measures and have used encryption and decryption technique having a special code or key. In the MCB bank website all the precautionary information of security and privacy of online banking services is provided to the customers so that customers can aware and have trust in using the online banking services. In order to tackle the security issues, the firewalls have been placed which also protects the internal network of bank. MCB is the member of Secure Socket Layer (SSL) but it is not mentioned anywhere on the website. The customers don't have any kind of knowledge about these security features so they did not able to develop trust to use bank electronic services.

Although trust is electronic banking is a new and emerging area of interest in the financial services research. Aladwani (2001) identified trust as an important future challenge for the electronic banking. The particular case of electronic banking that lacks the physical presence of bank branch and a physical interaction between the bank personnel and the customer, render a unique environment in which trust is of paramount importance. It is proposed that the trust can improves the customer's attitude towards electronic banking and the associated infrastructure which can reduce the perceived level of risk associated with the process of transaction. In Pakistan the greatest challenge for the adoption of electronic banking is to win the trust of the customers over the issues of privacy and security. Some international experts think that the security concerns arise from the use of an open network, i.e. consumers are afraid that their personal financial information will become available to other peoples over the World Wide Web that can be used for fraudulent purpose. The fast progress in technological tools has made significant contributions to secure the internet for e-banking. However, the major challenges and security concern remains a substantial issue for the development of electronic business. Several technologies have been adopted to provide the secure electronic transactions that can easily flow across the internet. A digital certificate provides the ability to identify the identity more easily and conveniently. Then the question arises what is the thing which keeps the customer away to use e-banking? The answer is awareness and education of the customer which is very important in electronic business. According to (Furnell and Karweni, 1999) customers with the greater awareness of security will be more like to use internet based services such as banking and shopping. Their results imply that awareness is the key in increasing customer confidence.

Survey shows that bank needs to provide training programmes to the customers regarding electronic banking. Banks are not doing much in this regard. The result shows that customer is completely unaware of how to take benefits from the technologies provided by help of electronic banking. Customer is not satisfied by the quality of service, infrastructure of the Internet Service Providers provided by the banks. Bank has adopted the latest technology and standards but they do more trust on the bank employees due to social relationship.

Survey result shows that the customers don't use cards over vending machines because they think that the merchant can hack their password and it can be misused in other activities. The response time of the real time transaction is very slow that shows poor quality of infrastructure provided to its customers which are the hindrance of electronic banking in the commercial banks of Pakistan.

So summing up discussion we have made a new model 6.1 for customer's acceptance to use internet banking. This new model was made by taking into consideration the factors of questionnaire (see Figure 4.1). This model is in-fact the extension of Kundi and Shah (2009) model for electronic banking acceptance (see Figure 2.3). This model is quite different from Kundi and Shah (2009) model as we have distributed the issues into facilitators and hindrances that effects the customer attitude towards internet banking. So by minimizing the hindrances electronic banking can be successfully implemented in Pakistan. For this banks and Government policies can play a major role in changing the people thought about electronic banking concept but it is a big challenge for them and it requires a lot of hard work and devotion and once this concept has been implemented in Pakistan then it will help in making the Pakistan's economy very strong by running the electronic business very easily and efficiently.
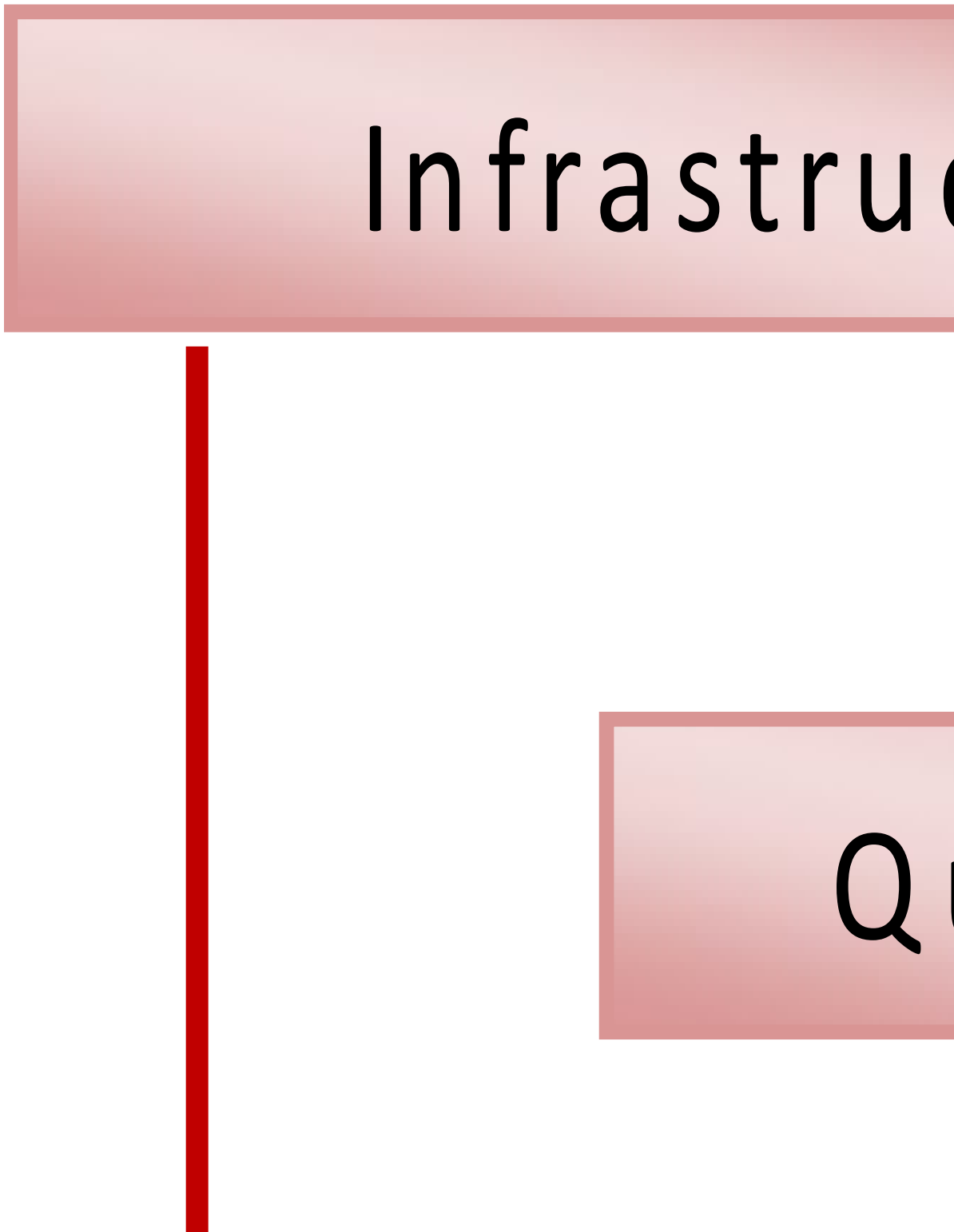
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**Figure 61.1 – Proposed Model for customer acceptance to use e-banking**

# 6. Findings, Conclusion and Recommendations

*Firstly, findings have been discussed which is then followed by recommendations, limitations of research and thereafter future research has been discussed. This study has covered issues related to electronic banking and e-readiness adoption by Commercial banks in Pakistan. It is composed of explanation and analysis of electronic banking in commercial bank of Pakistan. A case study was taken to discuss the issues regarding electronic banking. Final chapter presents answers to the research questions. Firstly, findings have been discussed which is then followed by conclusion.*

The study contributes to the adoption of electronic banking by the customers of commercial banks of Pakistan. The core theme of this study was "electronic banking & e-readiness adoption by Commercial banks in Pakistan". We make an effort to investigate the apparent problems which are declining customers to use electronic banking services in Pakistan. It also requires supervising and improving the performance of the services. By this way they can produce faithful consumers. The banks could be benefited by having loyal consumers and managers should get used to contacts with the different consumers to influence properly. Since the electronic banking bring vivid transformation which has an important impact on quality of service. It can help the bank to change their strategies which can facilitate the customers to boost the acceptance pace of electronic banking in commercial banks of Pakistan.

The research gives more confirmation on the adoption of electronic banking focusing on the adoption rate of the electronic banking by the financial institutions in Pakistan. The result shows that financial institutions are supposed to focus on the endorsement actions which are intended for the consumers and by doing so the banks will attain high acceptance of electronic banking from the customers.

From the analysis, we can come up with the conclusion that there are several factors that need to be considered and it is the duty of government and banks to make sure that people start using the electronic banking services and for this all the problems that hinders the use of electronic banking should be minimized.

This study concluded that the major impact of the customer choice depends upon the economic situation and its nature of particular dealings. Though there is an improvement in the acceptance of electronic banking products and services but this pace is slow because the consumer feels insecure to perform electronic transaction due to different factors. The factors are slow internet connections, low bandwidth, poor government policies for telecommunication infrastructure, inability to use electronic banking, insecure method of payment, difficult to learn electronic banking, no proper training provided by the banks to use electronic banking, dissatisfaction from services, technology, incapability to access computer, slow response of transaction speed, high risk is involved and most of the time the website is down.

With the introduction of Information and Communication technologies, it has caused significant changes in the business of the financial institutions because it facilitates the customers to access their accounts from anywhere. The boom of Information Technology in the financial institutions has created demand for the experienced human resource including new work practices and it is having implications on educational background and professional skills. The ability of financial institutions to match the products to the requirements of the customers can lead to come close to potential customers.

The findings of the studies have a significant inference for the research and financial institutions contributing to offer electronic banking services and for those banks that are setting up their minds to start electronic banking services. Giving high-quality of customer services by convincing the clients concerning the comparison of credit and debit cards with notes will incline the adoption of electronic banking in Pakistan. Findings of the studies give opening view in favor of Human Resource approach of the banks which necessitate adjustment of Information Technology strategies within it. Staff of the bank can endorse an efficient power to the trade and marketing of the electronic banking artifact which can be perceived only by the help of valuable electronic banking for the routines of the actions which can benefit both the banks and consumers.

## 1.34.   Recommendations

The objective of the study was to analyze the "electronic banking & e-readiness adoption in commercial banks of Pakistan". The findings from the respondents stated the security, privacy and trust as a primary concern for adoption of electronic banking in commercial banks of Pakistan. Financial institutions should provide powerful methods for security issues, risk management, technological enhancement and attract the consumers by developing their trust. Autonomy of the judiciary is supposed to be re-established to get better supremacy and to stop the political intervention. The financial institutions should provide modern electronic banking mediums that can eradicate the troubles that include distrust on technology, unreliable transactions, slow response time and security. Financial institution needs to establish a link with the customers to determine their requirements that can lead to successful electronic banking solutions. Electronic banking can abolish the problems of processing notes, cheques, theft and waiting in the queues for hours.

Website and the outlook of the bank plays an important role to attract the customer's if the detailed information provided is understandable and brief. Demo provides help to use the electronic banking. Customer complaint management system can boost customer constancy and trust on the electronic banking. Bank can develop an attractive website to provide handiness for the consumer's. Proper awareness can produce more results by creating awareness to all the people to use the electronic banking facility. These actions might aid to attract the customers to use electronic banking which can result in considerable amount of profits and low transaction costs.

## 1.35.   Limitation of Research:

While conducting research we come up with some limitations
- The generalization of our research may be affected because it is not possible to conduct interviews from every customer.
- Changing the customer's attitude towards using the electronic banking is very difficult. Customers have more faith in using the conventional internet banking system rather than using the internet banking.
- Customers may vary from bank to bank and it is very difficult for us to target the customers from all the MCB branches of Pakistan.

## 1.36.   Further Research

Electronic banking in Pakistan is new. It includes a lot of issues that can be considered for various perspectives. In our study we have highlighted all the issues that were important for electronic banking and e-readiness adoption in the commercial banks of Pakistan. There is still a room for an

area of research, how to develop the new electronic payment systems that can attract the customers which is more reliable and secure means of payment.

Make comparison of different European banking websites and Pakistani's websites, another possibility is contribution to conduct a Comparison of electronic banking between two countries to discuss the technological innovation between two countries.

Another area of research that is how to resolve the issues of people having low income that could possibly not pay for personal computers to survive in this modern era.

# 7. References

Abbasi and Zubair (2001), "ESecurity issues in Pakistan", *Spider*, 1 August 2001: p. 29.

Abid, H. and Noreen, U. (2006), "Ready to E-bank: An exploratory research on adoption of e-banking and e-readiness in customers among commercial banks in Pakistan", *Spider*, 31 (2), pp. 1-31.

Adams, D.A. Nelson, R.R. and Todd, P.A. (1992), "Perceived Usefulness, Ease of Use, and Usage of Information Technology: A Replication", *MIS Quarterly,* 16(2), pp. 227-247.

Ahmed, A. (2006), "Policies & Regulations for Expanding e-banking to the Poor", *The First MicroFinanceBank Ltd*, 24 (1), pp. 1-8.

Ahmad, R. and Buttle, F. (2002), "Retaining telephone banking customers at Frontier Bank", *International Journal of Bank Marketing*, 20 (1), pp. 5-16.

Akinci, S. *et al.* (2004), "Adoption of Internet banking among sophisticated consumer segments in an advanced developing country", *The International Journal of Bank Marketing*, 22 (3), pp. 212-232.

Akhtar, S. (2006), "Financial sector of Pakistan- the roadmap", *BIS review*, 42 (1), pp. 1-5.

Aladwani, A.M. (2001), "Online banking: a field study of drivers, development challenges, and expectations", *International Journal of Information Management*, 21 (4), pp. 213–225.

Aljifri, H.A., Pons, A. and Collins, D. (2003), "Global e-commerce: A framework for understanding and overcoming the trust barriers", *Information Management and Computer Security*, 11 (3), pp. 130-138.

Amor, D. (1999) The *E-business Evolution*. 2nd ed.  New York: Prentice Hall.

Andam, Z.R. (2003), "e-Commerce and e-Business", *e-ASEAN Task force UNDP-APDIP*, 2 (1), pp. 1-47.

Applegate, L.M. *et al. (*1996), "Electronic commerce: Building blocks of new business opportunity", *Journal of Organizational Computing and Electronic commerce,* 6 (1), pp. 1-10.

Aslam, S.M. (2001) *Information Technology: Moving in the Right Direction*. [Online] Available from: http://www.pakistaneconomist.com/issue2001/issue31/cover.htm. [Accessed 16 May 2009]

Ba, S. (2001), "Establishing online trust through a community responsibility system", *Decision Support Systems,* 31 (3), pp. 323–336.

Bakhtiar, K. (2005), "*Privatization of banking sector in Pakistan: A case study of MCB and ABL*. Un-published Ph.D thesis in Management Studies, DIKhan: Gomal University Pakistan.

Benbasat, I., Goldstein, D.K. and Mead, M. (1987), "The Case Research Strategy in Studies of Information Systems", *MIS Quarterly*, 11(3), pp. 369-386.

Black, N.J., Lockett, A. Ennew, C. Winklhofer, H. and McKechnie, S. (2002), "Modelling consumer choice of distribution channels: an illustration from financial services", *International Journal of Bank Marketing*, 20 (4), pp. 161-73.

Bolongkikit, J. *et al.* (2006), "An Exploratory Research of the Usage Level of E-Commerce among SMEs in the West Coast of Sabah Malaysia", *Journal of Internet Banking and Commerce*, Vol. 11 No. 2, pp. 1-14.

Booz, Allen and Hamilton (1997) *Internet banking: a global study of potential*. New York: Booz, Allen & Hamilton Inc.

Burnham, B. (1996), "The Internet's Impact on Retail Banking", *Booz-Allen Hamilton*, pp. 1-10.

Chaffey, D. (2006) *Internet Marketing: Strategy, Implementation and Practice*. 3rd ed. USA: Prentice Hall.

Chandio, F.D. (2001), Evaluating User Acceptance of Online Banking Information Systems: An Empirical Case of Pakistan.

Chou, D. and Chou, A.Y. (2000), "A guide to the Internet revolution in banking", *Information Systems Management*, 17(2), pp. 51-7.

Churchill, G.A. (1999) *Marketing Research: Methodological Foundation*. 7th ed. Orlando: The Dryden Press.

Christopher, G., Mike, C. Visit, L. and Amy, W. (2006), "A logit analysis of electronic banking in New Zealand", *International Journal of Bank Marketing*, 24 (6), pp. 360-383.

Damanpour, W. and Evan, W. (1984), "Organizational Innovation and performance: The problems of Organizational Lag", *Administrative Science Quartely*, 29 (2), pp. 392-399.

Daniel, E. (1999), "Provision of electronic banking in the UK and the Republic of Ireland", *International Journal of Bank Marketing*, 17 (2), pp 72-82.

Davis, F.D. (1986), "A technology acceptance model for empirically testing new end-user information systems: theory and results", Sloan School of Management, MIT, Cambridge, MA.

Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly,* 13(1), pp. 319-339.

Darke, P. Shanks, G. and Broadbent, M. (1998), "Successfully Completing Case Study Research: Combining Rigour, Relevance and Pragmatism", *Information Systems Journal*, 8 (1), pp. 273-289.

Dayal, S. Landesbeg, H. and Zeisser, M. (1999), "How to build trust online", *Marketing Management,* 8 (3), pp. 64–69.

Didio, L. (1998), "Beta testers endorse e-checks", *Computerworld*, 32 (12), pp. 57-58.

Doll, W.J., Hendrickson, A. and Deng, X. (1998), "Using Davis's Perceived Usefulness and Easeof-use Instruments for Decision Making: A Confirmatory and Multigroup Invariance Analysis", *Decision Sciences*, 29(4), pp. 839-869.

Economist Intelligence Unit (2008) *E-readiness rankings 2008 maintaining momentum from the Economist Intelligence Unit written in co-operation with the IBM institute for business value* [Online]. Available from: http://a330.g.akamai.net/7/330/25828/20080331202303/graphics.eiu.com/upload/ibm_ereadiness_2008.pdf. [Accessed 14 August 2009].

Economist Intelligence Unit (2006) *The 2006 E-readiness rankings: a paper from the Economist Intelligent Unit* [Online]. Available from: http://a330.g.akamai.net/7/330/2540/20060424215053/graphics.eiu.com/files/ad_pdfs/2006Ereadiness_Ranking_WP.pdf. [Accessed 15 August 2009].

Eriksson, K. *et al.* (2004), "Customer acceptance of internet banking in Estonia", *International Journal of Bank Marketing*, 23(2), pp. 200-216

Ekin, S. et al. (2001), "An empirical investigation of the Turkish consumers acceptance of internet", *International Journal of Bank Marketing*, 19(4), pp. 156-159.

Frost, R. (1999) *Marketing on the Internet: Principles of On-Line Marketing*. USA: Prentice Hall.

Furnell, S.M. and Karweni, T. (1999), "Security Implications of electronic commerce: a survey of consumers and businesses", *Internet Research Journal*, 9 (5), pp. 372-382.

Gahtani, A.S. (2001), "The applicability of TAM outside North America: An empirical test in the United Kingdom", *Information Resources Management Journal*, 14 (3), pp. 37-46.

Gefen, D., Straub, D.W. and Boudreau, M. (2000), "Structural equation modeling and regression: guidelines for research practice", *Communications of the Association for Information Systems*, 4(7), pp .50-52.

Gefen, D. and Straub, D.W. (2000), "The Relative Importance of Perceived Ease of Use in IS Adoption: A Study of E-commerce Adoption", Journal of the Association for Information Systems 1.

Gefen, D. and Straub, D.W. (1997), "Gender Difference in the Perception and Use of E-mail: An Extension to the Technology Acceptance Model", *MIS Quarterly*, 21(4), pp. 389-400.

George, J.C. and Swap, W. (1982), "Measurement of specific interpersonal trust: construction and validation of a scale to access trust in a specific other", *Journal of Personality and Social Psychology*, 43 (6), pp. 1306–1317.

Gerrard, P. *et al.* (2006), "The diffusion of Internet banking among Singapore consumers", *The International journal of Bank Marketing*, 21 (1), pp.16-28.

Giglio, V. (2002), "Privacy in the world of cyber banking: emerging legal issues and how you are protected", *The Secured Lender*, 14 (3), pp. 48-60.

Greenhalgh, T. and Taylor, R. (1997), "How to read a paper: papers that go beyond numbers (qualitative research)", *British Medical Journal*, Vol. 315, pp. 740-743.

Hagel, J., Hewlin, T. Hutching, T. (1997), "*Retail banking: caught in a Web*", *The McKinsey Quarterly*, Vol. 2, pp. 42-55.

Heeks, R. (2002), "Information systems and developing countries: failure, success, and local improvisations", *Information Society*, 18(2), pp. 101-123.

Howcroft, B., Hamilton, R. and Hewer, P. (2002), "Consumer attitude and the usage and adoption of home-based banking in the United Kingdom", *International Journal of Bank Marketing*, Vol. 20 No. 3, pp. 111-121.

Husain, I. (2005) *Banking sector reforms in Pakistan*. [Online] Available from: http://www.sbp.org.pk/about/speech/financial_sector/2005/BANKING_SECTOR_REFORMS.pdf. [Accessed 17 July 2009]

Hussain, S. (2001), "Learning from the neighbors", *Spider*, 20(1), pp. 26-27.

Ibrahim, Q. (2004) IT business growing fast, *Daily Dawn*, 11 May 2005: p. 4.

Jayawardhena, C. and Foley, P. (2000), "Changes in the banking sector: the case of Internet banking in the UK", *Internet Research: Electronic Networking Applications and Policy*, Vol. 10 No. 1, pp. 19-30.

Joseph, M. and Stone, G. (2003), "An empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in the banking sector", *International Journal of Retail & Distribution Management*, Vol. 31 No. 4, pp. 190-202.

Karadaras, D., & Papathanassiou, E. (2001), "The development of B2C e-commerce in Greece: current situation and future potential", *International Journal of Information Management,* Vol. 23, pp. 41-53.

Kardaras, D. and Papathanassiou, E. (2001), "Electronic commerce opportunities for improving corporate customer support in banking in Greece", *International Journal of Bank Marketing*, 19 (7), pp. 292-298.

Karjaluoto *et al.* (2003), "Individual differentness in private banking: empirical evidence from Finland, *Proceedings of the 36th Hawaii International Conference on System Science (HICSS)*, Big Island, Hawaii, p.196.

Karjaluoto, H., Mattila, M. and Pento, T. (2002), "Factors underlying attitude formation towards online banking in Finland", *International Journal of Bank Marketing*, ISSN 0265-2323, Vol. 20 No. 6, pp. 261-272.

Kazi, A.U. (2007), "Small and Medium Business Enterprises and the Use and Adoption of Information and Communication Technology: A study of Legal Issues and legal Perspectives", *International Journal of Organisational Behaviour*, 12 (1), pp. 144-160.

Khan, N.S. and Bawden, D. (2005), "Community informatics in libraries in Pakistan: Current status, future prospects", *New Library World*, 106 (11), pp. 532-540.

Klein, H.K. and Myers, M.D. (1999), "A set of Principles for conducting and evaluating interpretive field studies in information systems", *MIS Quarterly*, Vol. 23 (1), pp. 67 – 94.

Kolachi, N. (2006), "Internet banking system in Pakistan: some crucial weaknesses and suggestions for improvement", *Journal of Institute of Bankers Pakistan*, Vol. 73 No. 2, pp. 23 – 32.

Kotler, P. (2003) *Marketing Management.*6th ed. Prentice Hall.

Kundi, G.M. & Shah, B. (2009), "IT in Pakistan: Threats & Opportunities for e-business", *The Electronic Journal on Information Systems in Developing Countries,* 36 (8), pp. 1-31.

Kundi, G.M. & Shah, B. (2007), "eBusiness in Pakistan: Opportunities and Threats", *Journal of Internet Banking and Commerce*, 12 (3), pp. 1-23.

Lee, M. and Turban, E. (2001), "A trust model for consumer Internet shopping", *International Journal of Electronic Commerce*, 6 (1), pp. 75–91.

Legris, P. Ingham, J. and Collerette, P. (2003), "Why Do People Use Information Technology? A Critical Review of the Technology Acceptance Model", *Information & Management,* (40), pp. 191-204.

Li, F. (2001), "The Internet and the deconstruction of the integrated banking model", *British Journal of Management*, Vol. 12, pp. 307-22.

Liao, Z. and Cheung, M.T. (2002), "Internet-based e-banking and consumer attitudes: an empirical study", *Information & Management*, Vol. 39 No. 4, pp. 283-95.

Lockett, A. and Litter, D. (1997), "The adoption of direct banking services", *Journal of Marketing Management*, Vol. 13 No. 8, pp. 791-811.

Lucas, H.C. and Spitler, V.K. (1999), "Technology Use and Performance: A Field Study of Broker Workstations", *Decision Sciences*, 30(2), pp. 291-311.

Lucking-Reiley, D. and Spulber, D.F. (2001), "Business-to-Business Electronic Commerce", *Journal of Economic Perspectives*, 15 (1), pp. 55-68.

Malhotra, N.K. and Birks, D.F. (2003) *Marketing Research: An Applied Approach*. 2ⁿᵈ Ed. London: Pearson Education.

Mathieson, K. (1991), "Predicting User Intentions: Comparing the Technology Acceptance Model with the Theory of Planned Behavior", *Information Systems Research*, Vol. 2, pp. 173-191.

Mattila, M., Karjaluoto, H. and Pento, T. (2003), "Internet banking adoption among mature customers: early majority or laggards?", *Journal of Services Marketing*, Vol. 17 No. 5, pp. 514-28.

Mccole, P. (2002), "The role of trust for electronic commerce in services", *International Journal of Contemporary Hospitality Management*, 14 (2), pp. 81-87.

Memon, G.R. (2007), "Education in Pakistan: The Key Issues, Problems and The New Challenges", *Journal of Management and Social Sciences*, Vol. 3, pp. 47-55.

Mols, N.P. (1998), "The Behavioral Consequences of PC banking", *International Journal of Bank Marketing*, 16 (5), pp.195-201.

Monsuwe, T.P. *et al.* (2004), "What drives consumers to shop online? A literature review", *International Journal of Service Industry Management*, Vol. *1*5, pp. 102-121.

Moon, J. and Kim, Y. (2001), "Extending the TAM for a world-wide-web context", *Information and Management*, Vol. 28, pp. 217-230.

Moutinho, L. and Smith, A. (2000), "Modeling bank customers' satisfaction through mediation of attitudes towards human and automated banking", *International Journal of Bank Marketing*, Vol. 18 No. 3, pp. 124-34.

Myers, M.D. and Avison, D. (2002) *Qualitative Research in Information Systems*. London: Sage Publications Ltd.

Naeem, A. (2003), "Capacity-constraints of eCommerce in Pakistan", *Quarterly Science Vision*, 8 (3), pp. 114.

Nath, R., Schrick, P. and Parzinger, M. (2001), "Bankers' perspectives on Internet banking", *E-Service Journal*, Vol. 1 No. 1, pp. 21-36.

Nizamuddin, S. and Khalid, R. (2001) Pakistan sustained efforts in IT sector needed. *Proceedings of the International Conference on the Future of Pakistan,* Karachi, January 2001, pp. 23-24.

Orr, B. (1999), "At Last, Internet Banking Takes Off", *ABA Banking Journal,* Vol. 91, pp. 32-34.

Pakistan Telecommunication Authority (2007) *Annual reports of PTA*. [Online] Available from: http://www.pta.gov.pk/index.php?

option=com_content&task=view&id=361&Itemid=590&bold=reports. [Accessed 14 July 2009]

Papathanassiou, E. (2000), "The development of B2C e-commerce in Greece: current situation and future potential", *Internet Research: Electronic Networking Applications and Policy*, Vol. 10 No.4, pp.284-294.

Parasuraman, A. (2000), "Technology readiness index (TRI): a multiple-item scale to measure readiness to embrace new technologies", *Journal of Service Research*, 2 (4), pp. 307-320.

Patricio, L., Fisk, R.P. and Cunha, J.F. (2003), "Improving satisfaction with bank service offerings: measuring the contribution of each delivery channel", *Managing Service Quality*, Vol. 13 No. 6, pp. 471-82.

Pauline, R. (2001), "Electronic commerce adoption in Australia and New Zealand", *Malaysian Journal of Computer Science*, 14 (1), pp. 1-8.

Payne, J.E. [no date] *E-Commerce Readiness for SMEs in Developing Countries: A Guide for Development Professionals* [Online]. Available from:
http://learnlink.aed.org/Publications/Concept_Papers/ecommerce_readiness.pdf. [Accessed 19 May 2009]

Pikkarainen, T., Pikkarainen, K. Karjaluoto, H. and Pahnila, S. (2004), "Consumer acceptance of online banking: an extension of the technology acceptance model", *Internet Research*, Vol. 14 No. 3, ISSN 1066-2243, pp. 224-235.

Polatoglu, V.N. and Ekin, S. (2001), "An empirical investigation of the Turkish consumers acceptance of Internet banking services, *International Journal of Bank Marketing*, Vol. 19 No. 4, pp.156-165.

Qureshi, T.M. *et al.* (2008), "Customer Acceptance of Online Banking in Developing Economics", Vol. 13, No.1, pp. 1-8.

Reiser, S.J. (1997), "The Information highway and Electronic Commerce: What does it mean for you?", *Current Issues*, pp. 12-15.

Robey, D. *et al.* (1992), "Implementing information Systems in Developing Countries: Organizational and Cultural considerations, pp. 41-40.

Roboff, G. and Charles, C. (1998), "Privacy of financial information in cyberspace: Banks addressing what consumers want", *Journal of Retail Banking Services,* Vol. 20 No.3, pp. 55-59.

Rogers, E.M. (1962) *Diffusion of innovation*. 1st ed. New York: Free Press.

Sathye, M. (1999), "Adoption of Internet banking by Australian consumers: an empirical investigation", *International Journal of Bank Marketing*, Vol. 17 No. 7, pp. 324-34.

Schramm, W. (1971) *Notes on case studies of instructional media projects*. [Online] Available from: http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/35/2d/a1.pdf . [Accessed 14 July 2009]

Shahzada, A.M. (2006) *Country report of Pakistan on initiatives of information society by Pakistan Telecommunication Authority*. [Online] Available from: http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN006168.pdf. [Accessed 15 July 2009]

Shamshad, A. (2006) *Online banking. Address to financial seminar at Karachi*. [Online] Available from: http://www.dawn.com/2006/06/10/ebr15.htm. [Accessed 14 July 2009]

Siddiqui, A. (2008), "Financial contracts, risk and performance of Islamic banking", *Emerald Group Publishing Limited*, 34 (10), pp. 680-694.

Silverman, D. (2002) *Doing Qualitative Research: A Practical Handbook*. London: Sage Publications.

State Bank of Pakistan (2003) *Annual Reports of state bank*. [Online] Available from: http://www.sbp.org.pk/reports. [Accessed 10 March 2009]

Straub, D.W. (1994), "The Effect of Culture on IT Diffusion E-mail and FAX in Japan and the U.S", *Information Systems Research*, 5(1), pp. 23-47.

Tan, M and Teo, S.H. (2000), "Factors Influencing the Adoption of Internet Banking", *Journal of the Association for Information Systems*, Vol. 1 No. 5, pp. 1-42.

Thornton, J. and White, L. (2001), "Customer orientations and usage of financial distribution channels", *Journal of Services Marketing*, Vol. 15 No. 3, pp. 168-85.

Venkatesh, V. and Davis, F.D. (2007), "A Model of the Antecedents of Perceived Ease of Use: Development and Test", *Decision Sciences*, 27 (3), pp. 451-481.

Venkatesh, V. and Davis, F.D. (2000), "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies", *Management Science*, 46(2), pp. 186-204.

Venkatesh, V. and Morris, M.G. (2000), "Why Don't Men Ever Stop to Ask for Directions? Gender, Social Influence, and Their Role in Technology Acceptance and Usage Behavior", *MIS Quarterly* 24(1), pp. 115-139.

Wang, Y. and Tang, T. (2001), "An instrument for measuring customer satisfaction toward web sites that market digital products and services", *Journal of Electronic Commerce Research*, 2(3), pp. 1-16.

Yin, R.K. (1994). *Case study Reseacrh: Design and Methods*. 2nd edition. Thousand Oaks: Sage Publications, Inc.

Yin, R.K. (2002), *Case study research design and methods: Design and Methods*. 3rd ed. Thousands Oaks, CA: Sage Publications, Vol. 5, pp 9-18.

Zarmeene, S. (2006), "Phone Crazy: The ubiquitous cell phone can do so much more than just make a phone call", *Spider*, 8 (89), pp. 40-43.

Zeithaml, V.A., Parasuraman, A. and Malhotra, A. (2002), "Services quality delivery through websites: A critical review of extant knowledge", *Journal of the Academy of Marketing Science*, 30 (4), pp. 362-375.

# 8. Appendices

## 1.37.  Appendix A

Questionnaire for Employees

### a) Background Information

**1.**     **Background Information:**

Gender:     Male [ ]                          Female [ ]

Date of Birth (Year): _____

| **2.** | **Education** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Primary [ ] | SSC[ ] | HSSC[ ] | BA[ ] , BSc[ ] | MA[ ], MSc[ ], MBA[ ] , MCS[ ], MIT [ ] | | | | |
| **3.** | **Job Title** | | | | | | | |
| Senior Vice President [ ] | Assistant Vice President [ ] | Branch Manager [ ] | Operation Manager [ ] | OG-1 [ ] | OG-2 [ ] | OG-3 [ ] | IT officer [ ] | Clerk [ ] |

| **4.** | **Salary in Pakistani Rupee** | | | |
|---|---|---|---|---|
| Below 9,999 [ ] | Between 10,000 to 19,999 [ ] | Between 20,000 to 34,999 [ ] | Above 35,000  [ ] | Undisclosed [ ] |
| **5.** | **Years of Experience** | | | |
| Less than 5 years [ ] | 6 – 10 years [ ] | 11 – 15 years [ ] | 16 – 19 years [ ] | 20 years and more [ ] |
| **6.** | **On Average what age of customers are coming to bank on daily basis?** | | | |
| Under 20 [ ] | 21 – 29 [ ] | 30 – 39 [ ] | 40 – 49 [ ] | Over 50 [ ] |
| **7.** | **On Average Number of transactions performed by the customers per month** | | | |
| 0 transactions [ ] | 1-10 transactions [ ] | 11-40 transactions [ ] | 41 and above [ ] | |

### b) Information of Online Banking

**8.**     **Are the customers fully aware of electronic banking?**

Strongly disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**9.**     **Information provided to customer is accurate**

Strongly disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**10.        Did they have enough information about online banking service?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**11.        Do they know that how to pay utility bills electronically?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

## c) Security and Privacy
**12.        Are they concerned about their private information?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**13.        Is the customer concerned about the security policy?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**14.        Is the User privacy policy is mentioned on the website to strengthen the trust of customer?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

## d) Quality of Internet
**15.        Did they encounter any problems in electronic banking regarding internet?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**16.        Are the customers satisfied with the speed of internet provided by the Internet service providers to use electronic banking?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**17.        Is the bank provides basic view for the customers using electronic banking with low speed internet connection?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

## e) Perceived Usefulness
**18.        Are the customers aware of usefulness of the electronic banking?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**19.        Do they intend to use electronic banking facility in future?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**20.        Do they think that using electronic banking facility saves their time?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**21.        Is there any feedback form in the electronic banking section of the website in order to get feedback from customer about the quality of e-banking?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**22.        Do bank provides online technical assistance or 24 helpline to the customer?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

## f) Perceived Ease of Use

**23.**          **According to customers electronic banking is easy to use**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

**24.**          **According to customers learning of electronic banking is easy**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

**25.**          **According to customers the instructions on the website to use e-banking services is not fuzzy**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

**26.**          **Are the services adapted to disable peoples or elder peoples who are lacking computer experience?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

**27.**          **Are they providing help assistance on their website to use electronic banking for the novice user?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

## g) Trust

**28.**          **Are they satisfied with security of electronic banking provided by the banks?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

**29.**          **Are they satisfied by the information provided to them on the website?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

**30.**          **Do they feel secure when performing transactions through bank website?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

**31.**          **Are the customers satisfied by the electronic banking services provided by the banks?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

**32.**          **Do they have high degree of trust on the bank?**
Strongly disagree [ ]          Disagree [ ]   Moderate [ ] Agree [ ]     Strongly agree [ ]

## h) Awareness

**33.** **Do you enthusiastically work to influence customers to use electronic banking?**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

**34.** **Is the bank provides training awareness programs for the customers to use electronic banking?**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

**35.** **According to customers the bank is providing the guidelines on the website to use electronic banking facility**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

**36.** **Is the bank provides demo tour for electronic banking on the website?**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

## i) Government Policies

**37.** **According to customers they are not satisfied by the government policies implemented for electronic banking**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

**38.** **According to customers the consumer's protection is followed by the best practices**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

## j) Banks

**39.** **Is the bank provides training facility to the customers to use the ICT?**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

**40.** **Are they able to get access to bank in their area?**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

**41.** **According to customer use of electronic banking is the way not to interact with the people**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

**42.** **According to customer the bank provides electronic funds transfer, bill payments, SMS banking**
Strongly disagree [ ]          Disagree [ ]  Moderate [ ] Agree [ ]      Strongly agree [ ]

**43.** **Customer is satisfied by the Quality of Service (QoS) provided by the bank**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]   Agree [ ]        Strongly agree [ ]

## k) Infrastructure

**44.          Are the customers satisfied by the infrastructure of the internet provided to them by the Internet Service Providers?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]   Agree [ ]        Strongly agree [ ]

**45.          Do the customers think that the infrastructure provided by the banks is proper to utilize the electronic banking efficiently?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]   Agree [ ]        Strongly agree [ ]

## l) Technology

**46.          Customer has know-how of computer and internet**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]   Agree [ ]        Strongly agree [ ]

**47.          Customer has access to the personal computer**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]   Agree [ ]        Strongly agree [ ]

**48.          Customer has internet connection**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]   Agree [ ]        Strongly agree [ ]

**49.          Customer do not trust the technology provided by the banks**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]   Agree [ ]        Strongly agree [ ]

**50.          Is the bank adopted the latest technology and standards for the banking?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]   Agree [ ]        Strongly agree [ ]

## m) Purpose of e-banking

**51.** **What is the main purpose to use the electronic banking services?**

|   | | Almost Never | | Do not know | | Almost always |
|---|---|---|---|---|---|---|
| 1 3 5 | 2 4 | | | | | |
| 1 Paying Utility Bills | | | | | | |
| 2 Checking the Account Balance | | | | | | |
| 3 Transferring money online | | | | | | |
| 4 Investment purpose | | | | | | |
| 5 Online payment | | | | | | |
| 6 Applying for loans | | | | | | |
| 7 Other | | | | | | |

## n) Place to use e-banking

**1.** **If yes then where do they mainly use the online banking service?**

| at home | at work | at school | in bank | in library | friend home | other place |
|---------|---------|-----------|---------|------------|-------------|-------------|
|         |         |           |         |            |             |             |

On average they use online banking service _____ times per month

## o) Benefits from e-banking

**2.** **Overall what kind of benefits they're getting from e-banking**

| Increase in Productivity | [ ] | Increase in Performance | [ ] | |
|---|---|---|---|---|
| Increase in Efficiency | [ ] | Easier to use | | [ ] |
| Safes a lot of time | [ ] | Funds transfer | [ ] | |
| Check balance | [ ] | Recharge mobile balance | [ ] | |
| Virtual Banking | [ ] | Don't know | [ ] | |

## p) Overall utilization of e-banking

**3.        How do they rate the overall utilization of the online banking services**

| Bad  [ ] | Good  [ ] | Excellent  [ ] | Don't know [ ] |
|---|---|---|---|

**Any suggestions would you like to give**

_____

_____

_____

## 1.38.   Appendix B

**Questionnaire for Clerks**

**Background Information:**

Gender:        Male [ ]                                    Female [ ]

Date and Year of Birth:  _____

| **Education** | | | | | |
|---|---|---|---|---|---|
| Primary [ ] | SSC[ ] | HSSC[ ] | BA[ ], BSc [ ] | MA[ ] , MSc [ ] | Undisclosed [ ] |
| **Salary in Pakistani Rupee (PKR)** | | | | | |
| Between | | 12,000 to 15,000 | 15,000 to 20,000 | Above | Undisclosed |

| 6,000 to 12,000 [ ] | [ ] | [ ] | 20,000 [ ] | [ ] |
|---|---|---|---|---|
| **Years of Experience as a Clerk** | | | | |
| Less than 5 years [ ] | 6 – 10 years [ ] | 11 – 15 years [ ] | 16 – 19 years [ ] | 20 years and more [ ] |
| **On Average what ages of customers are coming?** | | | | |
| Under 20 [ ] | 21 – 29 [ ] | 30 – 39 [ ] | 40 – 49 [ ] | Over 50 [ ] |

**Do you have vending machine installed?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**Are the people using their debit or credit cards for online transactions?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**Do they prefer to use cash over card?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**Do they feel secure performing transactions over vending machine?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**Are they concerned about theft of their passwords?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**Are customers satisfied by using such facility?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**Did they know how to use the card?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**Did they encounter real time problems regarding transactions?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**Person who used card for the first time was satisfied with the service?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**According to the customers, is it a good way to use debit or credits cards for online transactions?**

Strongly Disagree [ ]     Disagree [ ]  Moderate [ ]  Agree [ ]     Strongly agree [ ]

**According to the customers, is it a good way to use debit or credits cards over vending machines?**

Strongly Disagree [ ]        Disagree [ ]   Moderate [ ] Agree [ ]      Strongly agree [ ]

**On average they use debit or credit cards** _____ **times per month**

**What was the Overall response of the customer after using the online service?**

Satisfied [ ]                    Not Satisfied [ ]                        Don't know [ ]

**How do they rate the overall utilization of the vending machine**

| Bad  [ ] | Good  [ ] | Excellent  [ ] |
|----------|-----------|----------------|

**Any suggestions would you like to give**

_____

_____

_____

## 1.39.   Appendix C

**Questionnaire for Strategic Issues**

**Background Information:**

Gender:      Male [ ]                              Female [ ]

**Date and Year of Birth:** _____

| Education | | |
|-----------|---|---|
| Primary [ ]    SSC[ ]    HSSC[ ]    BA[ ] , BSc[ ]    MA[ ], MSc[ ], MBA[ ] , MCS[ ], MIT [ ] | | |
| **Salary in Pakistani Rupee (PKR)** | | |

| Below 10,000 [ ] | Between 10,000 to 20,000 [ ] | Between 20,000 to 35,000 [ ] | Above 35,000 [ ] | Undisclosed [ ] |
|---|---|---|---|---|
| **Years of Experience** | | | | |
| Less than 5 years [ ] | 6 – 10 years [ ] | 11 – 15 years [ ] | 16 – 19 years [ ] | 20 years and more [ ] |

**Are you aware of e-banking?**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**Electronic banking gives more control over accounts**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**Electronic banking make easier to perform secure transactions**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**Using electronic banking avoid to interact with bank employees**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**Electronic bank cannot do everything for me as employees can do**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**More trust on the bank employees with communication than electronic banking**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**No risk involved to use electronic banking**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**Feel unsecure using electronic banking**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**Do you think that banks are highly influenced by political parties?**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**Are you satisfied by the IT policy for the e-banking in commercial banks?**

Strongly disagree [ ]        Disagree [ ]  Moderate [ ]  Agree [ ]        Strongly agree [ ]

**Do you think that good infrastructure can provide better facilities for e-banking?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Are you satisfied with the current infrastructure provided by the banks?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Do you think that websites providing e-banking should be available in different languages?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Do you have easily access to ATM machine?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Are you satisfied with the internet bandwidth provided for the e-banking transactions?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Are you satisfied with the quality of internet?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**What type of connection are you using for the e-banking?**

 Dialup [ ]    Broadband [ ]

**Is the internet connection good enough to perform online transactions?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Do you think that the technology provided by the bank is up to date?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Is the bank provides Consumer Protection Act?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Are they providing skilled IT professionals?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Website down during accessing account?**

Strongly disagree [ ]        Disagree [ ] Moderate [ ] Agree [ ]      Strongly agree [ ]

**Quick response of real-time transaction?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Are they using cookies to collect information?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Reliability of transactions**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Are they providing rich user interface on the website?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Are you satisfied with the bank's website downloading speed?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Are they providing security schemas for the online transactions?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Are they providing self help services to support services?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Is the bank providing customized services?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Are they providing customer services?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Is the bank providing informational services (Bank products and services)?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Is the bank providing communicative services (Email, account inquiry, change of address, loans applications)?**

Strongly disagree [ ]          Disagree [ ]   Moderate [ ]  Agree [ ]          Strongly agree [ ]

**Any suggestions would you like to give**