Internet Banking Services in Iran: An Exploratory Study of the Perceptions of Bank Management and Iranian Bank Customers

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ABSTRACT

Fast growing industry of banking and the increased demand for bank services require

a reliable infrastructure to meet the needs of customers through providing efficient

services. Development of computer technology, especially the internet has made the

banking industry offer services to customers in more efficient ways. This has been

started by a majority of banks in Iran although customers are late in taking advantage

of Internet Banking (IB) services. This thesis reports the findings of an exploratory

study concerning the current situation of IB in Iran from the perspective of Iranian

bank managers and customers. Ten out of eleven banks surveyed indicated that they

offered IB services in order to increase customer satisfaction and to gain a

competitive edge. From the customers' perspective, less than half of the respondents

used IB - mainly to pay bills or transfer money between accounts. More than half of

the respondents were not satisfied with IB services. Those who did not use IB

services reported that the main reasons were security concerns and lack of

Information Technology (IT) knowledge. Based on these findings, recommendations

for Iranian banks and their management are presented and a need for a more

comprehensive in the Iranian banking sector is mentioned.

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Keywords: Internet banking, Bank customers, Bank managers, Adoption, Iran.

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ÖZ

Bankacılık sektörünün hızlı gelişmesi ve aynı zamanda bankacılık hizmetleri

konusunda büyüyen talep, bu çalışmanın temelini oluşturmaktadır. Bilgisayar ve

bilişim konusunda, özellikle internet ile ilgili elde edilen gelişmeler, bankacılık

hizmetlerinin daha kolay bir şekilde verilmesini sağlamıştır. Müşterilerin büyüyen

bilgisayar becerisi ve merağı internet bankacılığının gelişmesine katkı koymuştur.

İran'daki bankalar ülkede büyüyen ve gelişen bilişim sektörüne paralel olarak

müşterilerine internet üzerine hizmet vermeye başlamışlardır. Bu çalışmada

İran'daki gelişmeleri ve verilen internet bankacılığı hizmet türleri hakkında çeşitli

konular tartışılmaktadır. Literatür ışığında hazırlanan anket formları İran'da seçilen

onbir bankaya ulaştırılmış ve banka müdürlükleri ile bir grup müşteriye dağıtılmıştır.

Onbir bankadan on banka tarafından yanıt elde edilmiştir. Banka müdürlüğünce

internet bankacılığı hizmetleri müşterinin memnuniyeti ve rekabet konusunda pilot

rol oynamaktadır. Müşteri açısından ise genel bankacılık işlemlerini rahatlıkla evden

veya işyerlerinden yapabilmeleri ve güvenlik konusu en önemli iki nokta olarak

saptanmıştır. Bu tezin sonunda İran'da gelişen ve hızlı büyüyen İnternet

Bankacılığının etkilerine de değinilmiştir.

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Anahtar Kelimeler: Internet bankacılığı, bankacılık sektörü, uyum.

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Chapter 1

INTRODUCTION

Since the 1980s, banking sector has played a pivotal role in the global economy and many external and internal forces have affected this sector in different countries (Gentle, 1993; Nellis, 1998). One of these external forces is technological changes (Daniel, 1999). Barra (1990) maintains that acceleration in technological innovation within this sector is back to four decades ago. The process of acceleration has led to introduce internet banking that utilizes the internet banking with an electronic and remote distribution channel. Meanwhile, it represents an electronic marketplace in which financial transactions are conducted with this distribution channel (Daniel, 1999). As internet banking becomes more popular, it will diversify delivery services that once traditional banks offered. However, electronic banking transactions are only a portion of these services conducted through the branches. Internet will enable customization of services. That is, it will enhance bank's competitive position in the marketplace by more perceived value to its customers, and in the long term, banks that adopt it will benefit from internet banking (Bradley & Stewart, 2003).

From a customer's point of view, internet banking gives the individual a 24-hour access to banking transactions at a cheaper price from wherever they are. Customer's adoption of IB services depends on individual expectation, perceived usefulness and security issues (White & Nitel, 2004). Developed countries are at the forefront of IB

service adoption whereas developing countries are still in the introductory stages (Mols and Nielsen, 1999). Hasan (2005) identified some internet adoption issues in developing countries as follows:

- 1- Banks customers do not have incentives to use online banking. Some customers fear to use technology due to security issues. Although many customers observe benefits, they have not transformed their traditional banking transactions toward the internet banking transactions.
- 2- Since a limited number of banks are using the internet, there is a lack of web services offered by the banks.
- 3- Privacy problems that include data security of the websites.
- 4- Internet awareness is an important factor to increase the use of internet banking transactions by bank customers because this service is still widely unaccepted. This awareness could clarify the benefits of adopting internet banking transactions.
- 5- Weak telecommunications and slow internet connections due to the lack of sufficient infrastructure.
- 6- Limitation of government policies, regulations and e-commerce laws are some important barriers.
- 7- Bank customers are afraid to use internet banking services because they think with a single mistake they will lose their financial resources.
- 8- Costs of establishing the connection, creating and maintaining the website.

Iran is one of the Middle Eastern countries and it is believed that people in these countries are late in the adoption of the internet applications useful to internet banking (Baraghani, 2007). Iran, like other developing countries, has the same problems and there is lack of studies that identify and explain factors affecting

internet banking adoption in this country. Currently, Iran is trying to join WTO to adopt new technologies that build the service industries such as e-Shopping, e-Governments, e-Commerce, etc. These services require a capable banking system, and this cannot be achieved without adopting these new technologies. It goes without saying that adopting internet banking services will encounter many difficulties. Although there are late adopters of the internet among Iranian customers, competition among Iranian banks is helping to the acceptance of internet banking (Baraghani, 2007).

According to Baraghani, "traditional branch-based retail banking remains the most widespread method for conducting banking transactions in Iran as well as any other country" (Baraghani, 2007, p.17). However, methods of personal financial services and their delivery ways are being rapidly changing by the internet technology. Currently, national banks in Iran are introducing internet-based banking services to reduce the costs and to improve their revenue in the competition. Although Iranian banks aimed at developing a better internet banking systems and making efforts to provide such services, these newly introduced internet banking systems are widely remained unnoticed by the customers. As a result, it is essential to map both customers and bank's acceptance of internet banking in designing these systems. Banking managers need to notice and design their marketing strategies based on the new facts with respect to the role of internet banking industry in the future.

1.1 Aim of the Study

Best to my knowledge, there are few studies on the implementation of internet banking in transitional and developing economies. Thus, there is a need to identify the actual status of internet banking - i.e., how many banks offer internet banking, what services they offer, and whether customers actually use them. The aim of this exploratory study is to enrich the knowledge and understanding of factors affecting adoption of internet banking services in Iran, a country that has been neglected in international research and is like a closed box to the outside world. This research is informed by the following objectives:

- 1- To investigate the adoption of internet banking from the perspective of bank managers in a country under the US imposed sanctions.
- 2- To investigate the adoption of internet banking by individual Iranian customers, and how they use internet for banking transactions.
- 3- To propose recommendations for improving the acceptance and use of internet banking in Iran.

1.2 Structure of the Study

Chapter one presents an introduction to the research topic and the aims of the study. Chapter two provides background information on the internet banking and its history. It presents the advantages and disadvantages of IB and factors affecting its adoption. Chapter three gives some information on Iran and its banking sector. The methodology is outlined in Chapter four. Findings of the research are dealt with in chapter five which are presented from the perspective of both managers and customers. The future of IB in Iran is discussed in chapter six, and conclusions and limitations of the research are presented in the last Chapter.

Chapter 2

Internet Banking

2.1 E-banking Terminology

Innovation in the technology within the banking sector has produced its own set of "cyber" technology. While some people may use the terms interchangeably to mean banking activities that are conducted through the use of a computer, they are in fact different from one another. The definitions of e-banking terminology are given below:

2.1.1 Electronic Banking

This is an umbrella term for the process by which banking transactions performed electronically by a customer without visiting a branch. A combination of electronic banking is gathered here: internet banking, online banking, personal computer (PC) banking, virtual banking, home banking, remote electronic banking and phonebanking. The most frequently used terms are PC banking and internet banking (Insley et al., 2003).

2.1.2 PC Banking

PC banking lets customers interact with their bank accounts from a PC via a modem, and it is a form of online banking. The bank offers a financial software program to their customers allowing them to conduct financial transactions from their home PC. The customers can dial the bank number via the modem, download and run special

programs which allow them to obtain account balances as well as credit card statements, to transfer funds between accounts and to pay bills (Insley et al., 2003).

2.1.3 Internet Banking

Also known as online banking, internet banking is a time branch of PC banking. The internet is the delivery channel for internet banking to conduct banking transactions. Some of these transactions and services offered by internet banking could be paying bills, transferring funds and viewing savings and checking account balances, purchasing financial instruments and paying mortgages. A customer who uses internet banking can access his or her account from internet browser that runs the program of internet banking through World Wide Web server of the bank. It is different from PC banking that runs the program from the customer's PC. There are some other terms that internet banks are also known with such as virtual, cyber, net, interactive, or web banks (Insley et al., 2003).

2.1.4 Internet Branch

"Internet branch" is the name of the platform where the online transactions are conducted. Bank's website is an entrance to the internet branch. Customers usually enter a bank's website and click on a link to the internet branch. Internet branches secure those required customer's authentications to enter and conduct transactions.

Banks that use their websites for informing the customers about their products and services are not counted as offering internet banking services. However, Banks meet the definition of an internet branch if they only provide a transactional website and not informational website.

2.2 Factors Affecting the Banking Sector

Both internal as well as external factors affect the activities of the banking sector (Nellis, 1998; Rajan, 1998). There are different categories of changes in political, economic, social and technological areas known as external forces which are beyond the control of the banks. Success of the banks has a direct relation to how well management is able to anticipate and manage these changes and how well they will be able to implement and manage their internet banks.

2.2.1 External Forces

Gandy (1998) asserts that "developments in technology have dominated the revolution in the banking sector during the early 90's" (p. 23). On the other hand Mols (1998b) argues that the diffusion of internet banking is determined by the technological development, the customers and the managers in the banks. It is a fact that if the technology becomes cheaper and more user friendly, more customers are likely to be attracted to and to develop a preference for internet banking. The expansion of connection technologies in the world has supported increased globalization of financial organizations. New consumer demands are met by growth of new products and services facilitated by Technology.

Many western countries have made an important trend towards deregulation in banking over recent years resulting from political and ideological changes (Nellis, 1998; Llewellyn, 1996). This deregulation has not been uniform worldwide, but the UK has been at the forefront of these changes. The most deregulated of all sectors in the economy is now the banking sector (Nellis, 1998). Productivity and efficiency improvements and the need for sustained profitability will intensify organizations competitive pressures. Industries deregulate to improve the efficiency,

competitiveness and to accelerate remedy for past recessions as well as to support public and private banking sectors. Demographic changes in social trends have shifted the regulatory and economic situations in recent years; meanwhile, more part-time and home workers will change the working patterns. While accepting the regulatory and technological changes, it is predicted that these two groups will have the great impact on the banking sector over the next decades (Llewellyn, 1996).

2.2.2 Internal Forces

"The slogan "the customer is king" has never been truer for the banking sector than it is today" (Hagel et al., 1997, p. 17). Customers' rights have increased, and technology and competition have increased the choice of products for customers. One of the most important factors is the internet that will change the living conditions, working environment, and usage patterns of banking (Hagel et al., 1997). These changes will force customers to change their behavior, i.e., it will meet the users' more sophisticated financial needs. As information becomes more accessible, customers will spend more time over the internet and it is easy for them to switch their financial institutions and to choose products at the press of a button without visiting their branches like traditional style (Rogerson et al., 1999). Different skills of the bank staff are required as the bank searches for more profits outside traditional banking. Furthermore, the impact of new technology has already reduced the staffing levels in the banking sector. Also, more changes will be expected with implementing internet delivery channels. The attractiveness of internet banking to a wide range of potential customers has increased as a result of the above changes. Meanwhile, financial institutions are attracted by the unique capabilities of electronic banking and are thinking of moving their resources through World Wide Web solutions (Hagel et al., 1997).

2.3 History of Internet Banking

The history of the electronic distribution of retail banking services goes back to "the introduction of automated teller machines (ATMs), a technology pioneered by Barclays Bank in 1967", (Ba'tiz-Lazo & Wardley, 2007). The services of internet banking were provided first in the early 1980s by Nottingham Building Society and the Bank of Scotland (Davis, 1989). Consequently, these services were not broadly accepted by the customers of banks. Subsequently, "the 80s saw the rise in popularity of personal computers and the launch of a new electronic banking channel called PC-banking, first offered to clients by Citibank in 1984" (Shapiro, 1999). High costs and complexity of using PC banking made it successful only in the corporate market segment (Giannakoudi, 1999; Daniel, 1999; Flier et al., 2003). Banks began to launch services of internet banking again in the early 1990s with the rapid growth of information technology and electronic services (Daniel, 1999). Many believed that internet services such as bill payments, viewing banking transactions and online loan applications will be standards of the industry by the late 1990s. These estimations were realized in a very short time. Later, standardized web browsers used by internet users helped them to carry out banking transactions with no additional software. Soon, banks recognized the potential of the internet delivery channel and employed it to the customer's benefit. California-based Wells Fargo was the first bank in 1995 to start online transactions by establishing the first virtual bank with no physical branches (DeYoung et al., 2007). A decade later, almost all of the big USA and Western European banks offered internet banking services to their customers (DeYoung et al., 2007). Today, e-banking has experienced explosive growth and transformed traditional banking dramatically (Hernando & Nieto, 2007).

2.4 Internet Banking Web Sites

A website is essential to provide services of internet banking. The website attributes make it unique. In a website multimedia content is integrated by hypermedia with hypertext connection. Multimedia content is referred to information whereas hypertext connection is related to navigation (Bornman & Solms, 1993). Website features will determine user satisfaction (Doll, 1988); as a result, web features of banking services such as speed of download, content and design, interactivity, navigation and security become crucial (Jayawardhena & Foley, 2000).

2.4.1 Speed of the Website

There is an important correlation between web user satisfaction and website download speed (Muylle et al., 1998). While speed is more often a factor out of the control of a site owner, an inefficient host server and the know-how of managing high-resolution graphics has a significant negative impact on the speed. Moreover, it is important to realize that method of connection and user's computing hardware are determining the speed.

2.4.2 Bank's Website Content and Design

User satisfaction is effected by content and design. Muylle et al. (1998) found that the following attributes are important in web user's satisfaction:

- (1) product information content
- (2) amount of product information
- (3) product information format
- (4) language(s)
- (5) Layout features.

Also these factors were found to affect the relevance of information:

- 1- Accuracy.
- 2- Comprehensibility.
- 3- Comprehensiveness.
- 4- Perceived language customization, (Doll et al., 1995).

2.4.3 Navigation Factors of Banks Websites

"Navigation refers to the hypertext connection of the multimedia content", (Gatian, 1994, p. 19). The Amount of web pages, homepage hyperlinks, hyperlink encoding and personal contact possibilities are the elements of connection. These will shape user satisfaction (Gatian, 1994; Doll et al., 1995). Providing interactive loan calculators, exchange rate converters, mortgage calculators, etc. on World Wide Web sites are technically feasible. These facilities should benefit the banks in several ways. First, an internet banking site has the capability to place itself as the base point of electronic banking. Second, the customers can decide for themselves for their commitments to obtain a loan. Otherwise, they require the assistance of the bank's staff. Thirdly of these programs can draw non-customers of the bank into the bank (Muylle et al., 1999).

2.4.4 Security of Banks Websites

One important question in the mind of every bank customer is that how safe it is to use the internet banking Website of the bank. Different sites make use of a multitude of security measure such as "encryption technology" which "is the most common feature at all bank sites". This is supplemented by a combination of different unique identifiers, e.g. for a password, mother's maiden name, a memorable date, a favorite destination, etc" (Muylle et al., 1999, p. 19). For some sites they require information to be input in a random order and with each user's log in the order will be changed. In addition to that, most of the sites use a method where after five minute's

interactivity the user is logged off. Many internet banking facilities are in developing stage due to the appearance, features and functions which are continually changing according to the preferences (Muylle et al., 1999).

2.5 Advantages and Disadvantages of Internet Banking

Both users and providers benefit from internet banking alike (Jayawardhena & Foley, 2000) "Offering internet banking is no longer regarded as a competitive advantage but a competitive necessity" (Gan et al., 2006, p. 12). Furthermore, there is a consensus that "internet banking provides banks with a competitive advantage by improving the quality of customer services and reducing the operational costs" (Jourdan & Katz, 1999, p. 21). Surprisingly, the number of banks that recognized the advantages and benefits of internet banking services and consequently adopted internet banking increased within last decade. Banks maintain a close interaction with their customers with the help of internet banking to reduce fixing and operating costs (Mols, 2000). Internet banks preferred making an efficient financial performance for the banks (DeYoung et al., 2007). However, while many banks and customers have embraced internet banking, others have not because they have been differed by the disadvantages associated with IB. Among these disadvantages, security problems are one of the major concerns (Gan et al., 2006).

2.5.1 Advantages of Internet Banking from the Bank Perspective

Bruno (2003) showed that internet banking can boost retention, increase customer satisfaction, provide a competitive edge and improve profits. Yet in another study Jayawardhena & Foley (2000) listed some of the advantages of internet banking adoption for banks as cost savings, increased customer base, mass customization, marketing and communication, innovation, and development of non core business.

2.5.1.1 Cost Savings and Improved Financial Performance

Banks were already using technology for their automating back office operations purposes before development of the internet. Innovation of automated teller machines (ATM), mobile devices, digital TVs and internet banking have shown to be attractive to banks because of the advantages such as cost saving they provide. Virtual banks have no branches; replacing physical facilities and their employees with IB will help them to reduce operating and fixed costs substantially. This cost saving will help internet banks to offer a lower or no service fees and higher interest rates than traditional banks Polatoglu and Ekin (2001). Also they reported that the average cost of transactions on internet was \$0.10 in comparison with teller Machine that is \$2.1 in Turkey. Similarly, Polasik (2006) reported that the average cost of internet transactions was e0.08 and a traditional transaction costs \$\psi 1.08\$, where an online internet transaction cost is approximately \$\psi 13\$. Currently, the cheapest distributions channel for bank's transaction is the internet according to the findings of some studies carried out on banking industry in European countries (Hernando and Nieto, 2007). Hasan et al. (2005) also indicated that internet banking service provision would improve the financial performance of banks, and this financial improvement arises from the reduction in overhead expenses that lead to a more , perfo. efficient and enhanced financial performance.

2.5.1.2 Preserves the Image of the Bank and Customer Retention

Thornton & White (2001) suggest that although retaining the customer and attracting new customers is important, developing distribution channels like internet banking is as important as it is for reducing costs and improving competitiveness. Furthermore, internet banking services preserve the overall image of the bank through "the variety of services offered", "accessibility of these services", "enhanced level of security as perceived by the customers" and "its consistency with all the elements and actions that make up the reputation of the bank "(Flavian et al., 2004, p.19). Customers will find out the topics and bank services that interest them by themselves through the usage of internet banks. With the technology of internet, it is possible to track customers' usage patterns. This knowledge can be used for different marketing purposes such as contacting customers and sending them relevant information by email especially when customers' preferences vary. Thus, satisfied customers are more likely to stay with the bank and recommend the bank to other customers.

2.5.1.3 Providing a Competitive Edge

In service industries, in general, and in the banking industry, in particular, the internet has been explored and exploited as a means of improving service provision, (Jun et al., 2004). Banks are not only competing in traditional banking services, but they have also expanded the scope of competition to an e-environment with internet banking services (Gonzalez et al., 2004). These banks are introducing internet banking as an assurance to their customers in order to enable them to maintain a competitive quality of service in the future, and to enhance their efforts to avoid losing their customers to the branches of foreign banks (Jenkins, 2007). In addition, the competitive advantage of the internet for banks is coming from the reduction of costs and satisfying the needs of consumers (Jenkins, 2007).

2.5.2 Advantages of Internet Banking From the Customer's Perspective

Customers found internet banking as an attractive service since it's possible to conduct banking transactions 24-hour, anytime and anywhere, with lower fees and faster compared to transaction done in traditional banking Lockett & Litter (1997). Polatoglu & Ekin (2001) stated that customers found internet banking to be a reliable delivery channel and that they could fulfill their information requirements by internet banking like the way they do at their bank's branches. In contrast to non-users, these customers believed that completed transactions by IB were accurate like their presence at their branches and with lower cost. Sayar and Wolfe (2007) conducted a research on the UK bank's customers and revealed that the internet channel is saving their time and is helping them to gain control over their personal financial management. Similarly, Mols et al. (1999) found that one of important factors for customers to use IB is less waiting time for transactions. Consumers benefit from internet banking with respect to enhanced control, ease of use, and reduced transaction charges from their perspective (Unsal & Movassaghi, 2001).

2.6 Disadvantages of Internet Banking

In spite of the fact that the number of internet users has increased and "despite all the apparent advantages of internet banking for customers, in many countries the growth rate of internet users who adopt internet banking has not risen as strongly as expected" (White and Nteli, 2004, p.20). However, security has remained as a concerning issue and there are still different worries such as the privacy of personal information and financial loss. It is the bank's duty to make customers aware of the threats and the ways of protecting them against these threats. Meanwhile, some

programming firms are working on the ways to develop solutions for the security (Sayar, Wolfe, 2007).

Ostlund (1974) argues that one of the barriers that prevent the propagation of innovation is the perceived risk. Also, the level of it is negatively related to the attitude that customer have toward banking on World Wide Web (Black et al., 2001) and people may not easily accept it due to fears or discomfort in dealing with new technology (Lin & Hsieh, 2006; Parasuraman, 2000).

A bank's internet branch could be substituted as a "partial alternatives" to other types of services such as physical branches, ATMs and phone banking. This is true due to the partial transactions done by customers on the internet branches. For example, the requirements for signatures for mortgages and the need for ATMs to withdraw cash cause this partial usage. In addition, there are personal perceptions about the internet and internet banking that prevents customers from full usage (Sayar & Wolfe, 2007).

2.6.1 Privacy and Security Issues

Most of the customers are not aware of the dangers associated with using the internet (Sayar, Wolfe, 2007). There are security issues like accessing the private information that are shared between the bank and customers which is an important issue from the customer's side since it is easier to attack the customer's profile. However, banks have developed systems that protect them from the hackers attack their databases. Thus, it is easy to make fraud with software like screen logger and key loggers as two common spy software (Sayar, Wolfe, 2007). "Phishing" is another threat that works when some fake e-mails are received by customers that look like they are sent by their banks asking them to give some personal information by filling some forms

out. They may request formation such as passwords, customer numbers, memorable data, etc. In some cases, they might send an e-mail that the customer has won a big prize and they need more information about customer in order to continue banking online (Rotchanakitumnuai; 2005). White & Nteli (2004) found that the most important attribute of internet banking service quality ranked by the UK customers was the security of the banks website. Sathye (1999) also reported that security issues of electronic banking have almost been three-quarter of Australian respondents' first concern. Therefore, security is an important issue in using the internet in general, and it would be an essential issue when it comes to online banking transactions (Singh, 2004). There are many instances of "identity theft" from the customer's information online such as credit card numbers, birthdates, driving license numbers, etc. Customers seem to make a trade-off between the risk of poor online security and convenience of the online transactions (Lee et al., 2005).

2.6.2 Lack of Trust in E-banking

Trust is essential where risk and uncertainty exist (Gerrard et al., 2006). Trust plays a crucial role in determining consumers' initial and continued use of the e-banking services (Liu, 2003, p. 14). Research findings show that "trust not only affects intent to use e-banking", (Liu, 2003, p. 16), but also "trust in e-banking has also been found to be an antecedent to commitment to e-banking", (Kassim & Abdulla, 2006; P. 21). When the trust increases, it means that attitudes of a person towards a certain behavior - i.e., internet banking are positive. The lack of customers' trust in internet banking has risen from the nature of online service delivery. There is no face to face contact between the customer and the bank in online banking. Customer cannot use factors such as "observing the sales people" or the "physical office space" in order to

decide about trustworthiness of the service and the institution (Kassim & Abdulla, 2006)

2.7 E-Service Quality in the Banking Industry

Although customers who use online services do not have face-to-face interaction with staff, they still expect valuable information on the website and to receive reliable services (Jun & Cai, 2001). Jayawardhena & Foley (2000b) illustrated that website features such as speed, website content and design, navigation, interactivity and security all contribute to user satisfaction. In contrast, Roderick and Doll et al., (1998) found that service qualities such as tolerance of customers understanding the roles and emotional response towards the customers will determine the level of customer participation in using the internet banking services. Similarly, Doll and Hendrickson (1998) identified five service quality dimensions that have an impact on internet banking customer satisfaction: content, accuracy, format, ease of use and timeliness. The validity of these dimensions were confirmed by and Zeithaml et al. (2001) who developed e-SERVQUAL for measuring 11 dimensions of service quality and identified them as access, ease of navigation, efficiency, flexibility, reliability, personalization, security/privacy, responsiveness, assurance/trust, site aesthetics, and price knowledge. Jun & Cai, 2001 investigated the relationships between customer satisfaction, service quality, and customer retention by using the SERVQUAL in online banking in Korea and emphasized that there exists a positive relationship between service quality of online users and overall internet banking service quality. Thus, in order to reach to a high level of customer satisfaction the service quality is essential. For example, if the website design is not user friendly,

the customers' perceptions of service quality of internet banking will reduce (Yang et al., 2004) and this will tarnish the image of the bank.

2.8 The Adoption of Internet Banking Services

Bughin states that "for banks the decision to introduce IB is mostly effected by new revenue potential, cost reduction, security and access through other distribution channels", (2003, p. 22). Traditional banking is suffering from low service quality (Black et al., 2001), fee structure of the branches and an insufficient number of branches (Centeno, 2004). Moreover, unsuitable opening hours of branches positively affect the usage of internet adoption by the banks (Yeung, 2003). Lockett & Litter (1997) showed that a 24-hour availability of the internet branch is an important attribute of adopting internet banking. The process by which customers switch to internet banking is determined by the individual customer's expectations such as security, accuracy, transactions speed, user-friendliness, user involvement and convenience - all are components of "perceived usefulness" (Liao & Cheung, 2002; White & Nteli, 2004). These researchers found that the most important attribute for UK internet banking customers is "security" then "responsiveness of service delivery ", "ease of use", "credibility of the bank", and finally "product variety" (Liao & Cheung, 2002; White & Nteli, 2004, p.44). Figure 1 indicates the Juston factors affecting the individual customer's decision to adopt internet banking:

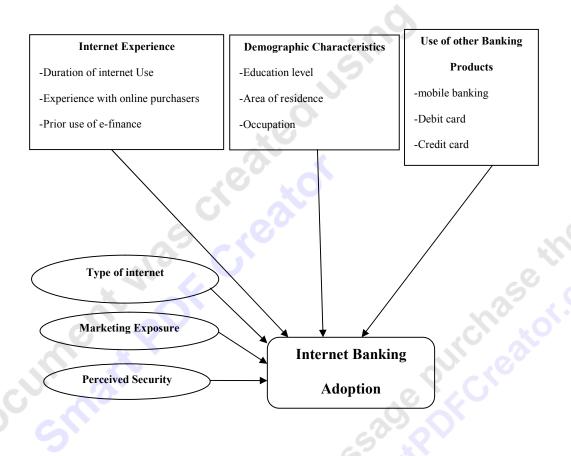


Figure 1.Emprical analysis of internet banking adoption in Poland (Polasik & Wisniewski, 2008)

It is very important to understand that bank customers have an already established personal banking norms, lifestyle, finance management system, and account monitoring mechanism before the introduction of the new delivery channel of internet banking.

2.8.1 The Adoption of Internet Banking in Developed and Developing Countries

There are many researches that studied the present state of products and services of internet banking in the developed countries such as Egland et al. (1998) in US, Sathye (1997) in Australia, Diniz (1998) in USA, Jayawardhena and Foley (2000) in UK, Chung and Paynter (2002) in New Zealand, Bojinov (2003) in Bulgaria, Hamid et al. (2007) and Floros (2008) in Greece. Also, studies were carried out in the developing countries such as Furst et al. (2000a, b), Sullivan (2000) and Carlson et al. (2001) in India, Suganthi et al. (2001), Guru et al. (2003) and Vijayan and Shanmugam (2003) in Malaysia, Jasimuddin (2001) in Saudi Arabia, Awamleh et al. (2003) in Jordan Awamleh & Fernandes (2005) in United Arab Emirates (Ayadi ,2006) in Tunisia and (Thulani et al., 2009) in Zimbabwe. All these studies investigated the status of banking products, services and states of internet banking offered by internet banks in the developed and developed countries. The developed countries have been ahead in adopting internet banking systems (Fisher, 2001) whereas the developing countries banks fell behind in adopting internet banking services. However, the developing countries are adopting these services from the banking systems and technology in developed countries quickly. Although banks in developing countries are still behind, they have been successful in introducing internet banking services in their countries.

2.8.2 Internet Banking In Developed Countries

BlueSky International (1999) found that frontline country in internet banking in Europe is the UK. In the UK, 16.9 million customers used internet banking services in 2006. Along with eight other western European countries, Germany had the most internets banks. USA had the fastest expansion of internet banking and the most noticeable internet banking among developed countries. A study by

Sathye (1999) identified that one of the barriers to IB adoption by customers in Australia is the lack of awareness. In Poland, "the rate of adoption currently lag behind the EU wide averages by about four years and are expected to increase steadily in the future" (Polasik, Wisniewski, 2008, p. 33). In New Zealand, the first bank to offer internet banking service was the Auckland Savings Bank (ASB) in 1996. "During the last quarter of 2001, there were approximately 480,000 regular internet users utilizing internet banking facilities to conduct their banking transactions. This reflects a 54 percent growth from 170,000 users during the same quarter of 2000" (Taylor, 2002, p. 53). Finally, a study conducted by the Economist in 2000 revealed that Sweden is the world leader in internet banking. Moreover, the Nordic countries have the highest rate of IB penetration (43 percent of Nordic Region population) in Europe (Celik, 2008).

2.8.3 Internet Banking In Developing Countries

Internet banking adoption in developing countries appears to be growing at a slower pace. Despite the different limitations, banks in developing countries are increasingly offering internet banking services in recent years (Abeido, 2004). A research carried out on adopting internet banking services in North Cyprus over a two year period showed that although North Cyprus has a very small market share, it has moved consistently towards offering internet banking services. This research revealed that North Cyprus banks in 2006 started the process of internet banking in order to be able to maintain a competitive quality of service in the future. "Internet banking services increased remarkably from 8.7 percent of total banks in 2004 to 30 percent of total banks in 2006 in North Cyprus" (Jenkins, 2007, p. 6).

In Bangladesh, Bangladeshi banks do not have interests to adopting internet banking activities. Nationalized commercial banks are behind adopting internet banking systems compared to private and foreign banks. Infrastructural constraints to internet banking could be solved if current laws and regulations are implemented for new demands in this country (Khatibi, et al., 2007).

In Malaysian internet banking context Poon (2008) found that security and privacy are the main sources of customer dissatisfaction in IB while convenience, accessibility, content and website design are the main sources of satisfaction.

In Taiwan, Shi & Fang (2006) showed that the attributes such as information quality, transaction speed, and security have important roles in shaping the attitude towards the adoption of internet banking.

In Estonia, perceived usefulness by banks customers is an deterministic factor to continue the use of internet banking services and that individuals who are young, male, well educated, and higher income earners use the internet to a greater extent in Estonia (Eriksson & Nilsson, 2007).

In India, The size of the bank, experience of the bank in offering internet banking, financing pattern and ownership of the bank were found to be important for Indian banks. In India the smaller banks have less aggressive plans to offer internet banking services in the future than larger banks, and one of the reasons that customers are not interested in internet banking is due to its unsafe nature (Pooja and Balwinder & Singh, 2007).

In Brazil, the growth rate of internet banking has exceeded the use of internet itself over the past years (Hernandez & Mazzon, 2007).

In Turkey, several leading Turkish banks have embraced full service internet banking successfully since 1997 (Polatoglu & Ekin, 1999). In Turkey, 58% of all banks, or 27 out of a total of 47, were providing their customers with the internet banking services in 2006 (Banks Association of Turkey, 2006). Polatoglu & Ekin (1999) discussed that the efforts made into marketing had a positive reaction on accepting e-Banking in Turkey. The Turkish internet banks have a large portfolio services such as paying traffic fines, insurance premiums, university fees and online top ups for mobile phones.

In Saudi Arabia, the majority of the population is young and internet penetration is raising the internet infrastructure increased from 200,000 internet users in year 2000 to 2.54 million internet users by 2005 which shows a growth rate of 1,170 per cent (internet World Stats, 2005). This will create a higher demand for online banking that motivates the banks to have increasingly been offering internet banking services. Security is the main concern of the bank customers in Saudi Arabia that have been solved with features such as advanced encryption technology, five minutes of inactivity and a combination of different unique identifiers (Sohail & Shaikh, 2007).

In the case of Iran, Iranian banks have introduced e-banking services in recent years rapidly by developing a number of new e-banking services. Almost all of the Iranian banks have invested in introducing new IT systems. Unfortunately Iranian customers are not aware of the existence of e-banking in Iran. It is important then that banks raise their customers' awareness with respect to the power and capability of

technology in banking services. However, bank customers are gaining a gradual confidence to use technology and to feel comfortable with it. This situation shows that Iranian banks have a long way to go. Bankers and practitioners should try to introduce e-banking effectively in Iran (Salehi & Alipour, 2010).

2.8.4 Non Adopters of Internet Banking

Internet banking studies suggest that the complexity of the service is preventing some customers to adopt the internet banking services (Gerrard & Cunningham, 2003). In their research on the reasons for internet banking resistance Kuisma et al. (2007) found that some of the non-adopter customers of the banks consider internet banking difficult, inconvenient and slow. Also Gerrard et al. (2006) reported that the risk associated with the internet banking services is the most frequent factor that prevents customers from using the internet banking. For example, some customers mentioned connection breaks as a potential risk for their online banking activities. Black et al. (2001); Kuisma et al. (2007); & Poon (2008) stated that some customers do not use internet banking to avoid making mistakes in their banking activities via a computer or a mobile phone. Laukkanen et al. (2007) & Poon (2008) reported that some bank customers have a fear of hackers' access to their internet bank account using their password. Also, from the other perspective in banking relationships, it is hard to replace personal services fully by the internet Howcroft (2000). Ram & Sheth (1989) noted that consumers have some routines, family values and social norms as their traditional behaviors that are important to them and cannot be replaced. Not all customers necessarily see the need for new, complementary service channels as they are content with the way they currently conduct their banking transactions, indeed, desire for personal contact is found to have an impact on the use of arms-length financial services such as internet banking and telephone bill paying (Gerrard et al., 2006).

Lack of access to internet or absence of computer seems to be an important factor affecting the diffusion of internet banking innovation (Im et al., 2003; Flavia'n et al., 2006). Some of the bank customers may disagree with the idea of banking online due to their low educational level or lack of information about IB (Im et al., 2003 ;Gerrard et al., 2006). Finally, general security issues may discourage many potential To remove this message purchase the product at www. Smarth Dr. Creator. Com IB customers (Sathye, 1999; White & Nteli, 2004).

Chapter 3

ADOPTING INTERNET BANKING SERVICES IN

IRAN

3.1 Background on the Islamic Republic of Iran and the Banking Sector

The name Iran (Persia), officially called the Islamic Republic of Iran, comes from *Aryan* which means "Land of the Aryans". This name has been used internationally since 1935. Before that Iran was known as Persia. With 1,648,195 km² area, it is the 18th largest country in the world. Iran is located in central Eurasia and the Middle East. The capital as well as political, cultural, commercial, and industrial center of Iran is Tehran. Iran has large reserves of petroleum and natural gas that let it to play an important role in international energy security and world economy. This country consists of people from different religions and ethnic backgrounds. However, the main religion is Islam and Persian is the official and main language of all. Iran's population reached 75 million in 2009. More than two-thirds of the population is under the age of 30, and the literacy rate is 83%. It is worth noting that about five millions of Iranians migrated to other countries since 1979 revolution (www.wikipedia.org, 2010).

3.1.1 The Iranian Economy

Economic development of Iran was rapid in 1970 when Iran had achieved significant industrialization and economic modernization. The growth rate of the economy degraded dramatically in 1978. Just before the Islamic revolution, a massive capital

of \$30 to \$40 billion US dollars flew from Iran to other countries. After the 1979 revolution, Iran's objectives were economic independence and full employment that have not been achieved yet as they were planned. The population of Iran doubled from 1979 onwards and, as a result, the youth make up the majority. From the 1960s to the late 1990s, many people moved to cities from villages. The rate of unemployment and inflation is within the range of 9.9% annually. The Iranian government faces many difficulties in creating opportunities for a better educated labor. After the war with Iraq in 1988, the Iranian economy incurred a loss of at least \$500 billion, and the government rapidly developed the manufacturing, communication, transportation, education, health care and energy infrastructures. Recently, it has tried to integrate the communication and transport facilities with neighboring countries.

Today, the economy of Iran is the sixteenth largest economy in the world by purchasing power parity (PPP). It is a transition economy with a large public sector with an estimated 50% of the economy centrally planned. Exports are dominated by oil and gas which constituted half of the government revenue in 2006. A unique feature of Iran's economy is the large size of the religious foundation whose combined budgets make up half that of the central government. Iran is one of the few major economies that did not suffer directly from the 2008 global financial crisis (http://www.cbi.ir). Distortions resulting from a combination of price controls and subsidies, particularly on food and energy, continue to weigh down the economy, and contraband, administrative controls, widespread corruption, and other rigidities undermine the potential for private sector's growth. Iran's educated population, economic inefficiency, and insufficient foreign and direct investment have prompted

an increasing number of Iranians to seek employment overseas, resulting in significant "brain drain". In the early 21st century, the service sector contributed the largest percentage of the GDP, followed by the mining, manufacturing and agricultural industry (www.wikipedia.org, 2010).

3.1.2 The Banking Sector in Iran

Iran's unit of currency is the Riyal and the official exchange rate averaged 1, 0480 Riyal to the U.S. dollar in 2010. However, the Riyal is exchanged on the free market at a higher rate. The Government nationalized private banks and established a new banking system 1n 1979 just after the revolution. The banking system consists of the central bank also known as bank Markazi, which regulates all of the state and private banks and issues foreign currency; loans and credits are supplied to industrial and agricultural projects by banks. "Accounts of the state-owned commercial banks are dominated by loans to state and Bonyad enterprises, large-scale private firms and four thousand wealthy/connected individuals who don't always repay their loans" (http://www.cbi.ir). The government initiated to privatize the banking system in 2001 when licenses for two new private banks were issued.

3.1.3 Iran's Banking History

New East Bank" was the first bank established in Iran in 1850, which was an originally British owned bank. Later, "Kingdom Bank" was established in 1872 by a British named Powell Juluos Reuyter, executing banking operations in Iran up to 1942. Some years later, "Loan Bank" was established by a Russian Jacque Polia Koof in 1890 to conduct banking operations for more than 75 years. The first Iranian bank with Iranian capital of 388,395 tomans started working in 1925 and was called "Bank Sepah". In 1960, bank Refah with the purpose of providing a monetary and banking constitution was established. It was a rule to manage this bank by economic

authorities in order to validate Iranian currency and to preserve monetary policies in accordance with Note 39 of 1959 Budget Law (http://www.parstimes.com).

3.1.4 Payment Systems

The central Bank of Iran and the Iranian banks were obligated by the Iranian government to establish regulatory, hardware and software infrastructures in order to fully operate e-money in Iran by March 2005. Local debit/credit cards are now common and have removed the obstacles for e-commerce and e-government in this country. The Central Bank of Iran has introduced and developed a system called (SATNA) Real Time Gross Settlement System. SATNA is a center for settling Iranian banks' transactions in Riyal. Upon implementation of the first and second phases of this system in 2006/07, another system called Interbank Information Transfer Network system (SHETAB) as the only electronic banking clearance and automated payments system used in Iran, started to operate in that year. Bank-tobank and customer-to-customer payments were also settled through SATNA by 2007/08. There are further plans to connect Iran's SHETAB to information transfer networks of other neighboring countries. The system was introduced with the intention of creating a backbone for the Iranian banking system to handle ATM, POS and other card-based transactions. Some of the Iranian banks were issuing cards that only worked on the issuing banks ATMs and POS machines before introducing the SHETAB. All banks must obey its standards and be able to connect to it. Furthermore, all issued credit or debit cards must be adapted to SHETAB system. By the end of 2003, the SHETAB system had 2,926 ATMs and 16,070 POS units connected to it (www.wikipedia.org, 2010).

3.1.4.1 Cheques

Iranian customers were not allowed to withdraw more than \$15,000 from banks by January 2010, but they could still write checks for larger amounts. The government wants to replace the cash transactions with giving incentives to customers to use bank checks and electronic banking systems. It is worth mentioning that the proportion of cheques bouncing has risen to about 10.7 per cent (more than one in ten) in 2009 (www.wikipedia.org, 2010).

3.1.4.2 Debit/credit Cards

Tetra-Tech IT Company announced using VISA and MasterCard for online sales in Iranian e-card terminals at shopping malls, hotels, restaurants, and travel agencies was limited to domestic use and in some neighboring Arab countries such as Bahrain, Qatar and the UAE in 2007. It is not possible to use this service in other foreign countries now although some negotiations are underway. Iran's electronic commerce reached 10,000 billion Riyals (\$1 billion) in March 2009 (www.wikipedia.org, 2010).

3.1.5 US Sanctions and the Iranian Banking Sector

The US treasury department restricted trade and financing of foreign investment with Iran in January 2006 followed by Swiss bank UBS and Credit Suisse, and they froze all of their financial operations in Iran. Also 12 Chinese banks have decreased their financial volume with Iranian banks since early September 2007. Bank Melli, Saderat and Sepah are Iran's three largest banks which have been affected by UN and US sanctions over the past two years. The following Iranian banks were blacklisted from 2006 to 2008 period by the US treasury department: Bank Saderat, Sepah bank and its British subsidiary, Melli bank and Mellat bank. These Iranian

transaction with US financial banks banned from any system This document was created using (www.wikipedia.org, 2010).

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Chapter 4

Methodology

4.1 Questionnaire Design

In order to get a better understanding of internet banking usage in Iran, three important dimensions were examined:

- 1- Bank managers' views about internet banking services.
- 2- Bank customers' views about internet banking services.
- 3- Bank's individual websites.

The questionnaire used in this research to collect information about internet banking services from managers was taken from Jenkins (2007) who looked at the adoption of internet banking in a small island state. The questionnaire was adopted to fit the characteristics of the Iranian banking sector and was translated into Farsi language. The questionnaire was cross checked by 2 academicians who were fluent in both Farsi and English languages. The questionnaire for bank managers consisted of 2 sections: the first section collected general information about the bank, and the second section contained questions about the bank's internet banking services. In total 17 questions were asked. The questionnaire used in this research to collect information about internet banking services from customer was based on findings in the bank literature on customer adoption of internet banking services (Polatoglu and Ekin, 2001) and was translated into Farsi language. It consisted of 2 sections: the first section gathered demographic information about the respondents, and the

second section contained questions about internet bank usage. Overall, there were 14 questions. Both questionnaires were cross checked by 2 academicians who were fluent in both Farsi and English languages.

4.1.1 Questionnaire Distribution

Seventeen questionnaires were prepared to be distributed to the bank managers in Tehran. Managers were phoned prior to questionnaire delivery in order to get an appointment. All managers refused to meet face to face and asked for the questionnaire to be left with their secretary. A total of 11 questionnaires were returned. The overall response rate was 64%. One manager agreed to be interviewed over the phone if his name and bank was kept anonymous. Although he refused to answer questionnaire, he commented on the future of internet banking in Iran. These comments are summarized in the findings section. The information collected from the bank managers were cross checked with information from each individual bank that was prepared in the annual reports of the Iranian Central Bank (2008). Also the individual website for each bank was examined. Two hundred questionnaires were prepared for distribution on the streets of Tehran in the populated area close to banks and on the main streets where most businesses and offices were located. Non probability convenience sampling was used. In a non probability sampling, the selection of elements for that sample is not necessarily made with the aim of being statistically representative of the population. Whether the researcher uses the subjective methods such as personal experience, convenience or expert judgment to select the elements in the sample, the probability of any elements of the chosen population is not known (Chang and Samuel (2004). People were approached randomly on the street and were asked if they would like to participate in the study,

and whether they were banks customers. Some questionnaires which were left with employees of offices were later picked up in the same afternoon. A total of 142 questionnaires were completed and returned .Of these 142 questionnaires, 11 contained missing data so they were not suitable for further analysis. A total of 131 making customer questionnaires were analyzed making the response rate of 66%.

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Chapter 5

FINDINGS

The introduction and emergence of electronic banking in Iran goes back to late 70s when two banks installed the first automatic Teller Machine (ATM) in Tehran. Later because of major changes in Iran's banking and economic system besides the US embargo in Iran back in the 80s, ATM machines no longer were used. By the early 90s the Iranian banks upgraded their automation systems and once again started setting up ATM machines for their banks. With the popularity of using internet and introduction of online networks, protocols and connections to transmit these data and by setting the sufficient regulations for electronic banking projects across the country, banks could take advantage of the first steps in developing electronic payment devices such as Automatic Teller Machine (ATM), electronic cards and Point of Sales (POS). "In recent years, most of Iranian banks have undertaken initiatives towards electronic banking services and official predict that electronic banking system will become fully operational by 2010 in Iran" (quoted from Iran Daily, 2008). It is important to note that in Iran many efforts were also made to improve electronic trade, but due to lack of essential technical, cultural and official background the traditional methods of banking and trade are preferred. The results of Iranian bank managers and bank customers' responses to questionnaire on the adoption of IB are presented below.

5.1 The Adoption of Internet Banking Services in Iran

Iran is served by 18 Banks in which no foreign banks operate currently although the process of negotiation for establishing foreign banks started in 2009. This research examined all of these banks for the adoption of internet banking. Internet banking services are offered by 17 out of 18 banks. One bank has no intention to offer internet banking and 2 more banks offering internet banking in the informational website scale are in the process of establishing internet banking services into a transactional scale. The survey of bank managers indicated that Iran is suffering from the sanction issue and that local banks are unable to transfer funds out of the country and interact with other banks directly. Managers stated that this problem is a discouraging threat for expansion plans particularly in internet banking.

5.1.1 Managers Perspective of the Current State

The results of bank managers' responses to the questionnaire are given individually for each bank. Managers' responses were cross checked with information provided by the Iranian Central Bank. A snapshot of some IB websites is also shown in Appendix 1. The current states of internet banking for each of the 11 banks are given below, and a summary of their electronic services is provided in Appendix B.

5.1.1.1 Sepah Bank

Sepah Bank, as the first Iranian bank, was established in 1925 with asset size of \$389 in Rasht city in north of Iran. Its current asset size is \$23 billion. Sepah bank has 1729 internal branches and 3 external branches. They have installed their ATM network in 2003 and launched their informational website in 1999. It took approximately 2 years to become transactional from informational website. The internet banking of Sepah bank called SHABA offers services in Farsi such as transfer and exchange of money between accounts of Sepah bank and other local

banks that are subscribed to SATNA and SHETAB banking system, summary of bank account, balance, cheque amount notification, and last transactions done in the account, buying charge cards, hotel reservation and other shopping with Sepah credit card, bill payment, etc. (http://www.banksepah.ir, 2010).

5.1.1.2 Melli Bank

Melli Bank of Iran is a large and well-developed bank which was established in 1927 and currently serves about 6 millions customers; these are served by 3261 internal branches and 12 external branches. They have installed their ATM network in 2000 and launched their informational website in 1998. It took approximately 2 years to become transactional. The internet banking of Melli bank of Iran is called SABA and gives services in Farsi like exchange of money between the Melli and other banks subscribed to SATNA and SHETAB clearance system, summary of bank account, balance, cheque amount notification, and last transactions done in the account, etc. However, these services are offered in Persian language (www.bmi.ir, 2010).

5.1.1.3 Saderat Bank

Established in 1952, Saderat Bank Iran is the first private bank with asset size of \$2000 in Tehran with the vision of gathering fund for industrial, mine extraction and agricultural development. Its current asset size is \$38 billion. Saderat bank has 3097 internal branches and 20 external branches. They have installed their ATM network in 2003 and launched their informational website in 2000. It took approximately 2 years to become transactional. The internet banking of Saderat bank is called SEPEHR offering services such as transfer and exchange of money between accounts of Saderat banks and other local banks subscribed to SATNA and SHETAB banking system, summary of Saderat bank account, balance amount, cheque amount notification, and last transactions done in the bank account, bill

payment etc. Their services are offered in Persian language, (http://www.bsi.ir, 2010).

5.1.1.4 Tejarat Bank

Tejarat Bank was established in 1979 with merging 11 private internal and foreign banks starting to operate with 367 branches in Tehran and 658 branches in five main of Iran .Its current asset size is \$30 billion. Tejarat Bank has 1965 internal branches and 2 external branches in France and England. They have installed their ATM network in 2003 and launched their informational website in 2000. It took approximately 2 years to become transactional. The internet banking of Tejarat Bank is called SABA provides customers with services such as transfer and exchange of money between accounts of Tejarat banks and other local banks that are subscribed to SATNA and SHETAB banking system, summary of last three transactions done on Tejarat bank account, balance amount, cheque amount notification, buying charge cards, bill payment etc. Their services are offered in Persian, English, Arabic, Dutch and Francis languages, (http://www.tejaratbank.ir, 2010).

5.1.1.5 Mellat Bank

Bank Mellat was founded in 1979 with merging of 10 private internal and foreign banks currently having 1905 branches locally and 5 branches outside Iran with starting asset size of \$3.3 million which reached to its current asset size of \$1.31 billion. Mellat Bank with its continuous effort has succeeded to allocate enough fund resources to different economic departments of government to cater for Iran's fast growing economy. They have installed their ATM network in 2003 and launched their informational website in 2000. It took approximately 2 years to become transactional. The Mellat's website of internet banking is a user friendly website which succeeded to get SSL certificate for a secure transaction and offers services

such as transfer and exchange of money between accounts of Mellat Banks and other local banks that subscribed to SATNA and SHETAB banking system, summary of Mellat bank account, balance amount, cheque amount notification, and last transactions done in the bank account and credit card of Mellat, buying charge cards of Irancell, bill payment report the closed personal accounts etc. their services are offered in Persian and English languages,(http://www.bankmellat.ir,2010).

5.1.1.6 Keshavarzi Bank

Established on 11 Jun 1933, Bank Keshavarzi is offering variety of banking services nationwide. The bank uses national scientific findings to benefit from international banks experiences in order to offer the best services. Keshavarzi Bank is an innovative bank that has its roots in the agricultural sector and moving rapidly to an effective financial institution. In 2005, the bank doubled its net profits and won the prize of that year. Keshavarzi Bank provides new products and services, such as: call centers and certificate deposit bonds. The bank is the first to fully automate and allow for new delivery channels of its banking services. The bank has 1873 branches locally with asset size of \$ 17 billion. In the year 1992, they have installed their ATM machines. They launched their internet banking in the transactional scale by the year 2006 and the system offering the services such as: transfer and exchange of money between accounts of Keshavarzi banks and other local banks that are subscribe to SATNA and SHETAB banking system, summary of Keshavarzi bank accounts, balance amount, cheque amount notification, and last transactions done in the bank account and bill payment, receiving SHABA (IBAN) account number, etc. Their services are offered in Persian language, (http://www.agri-bank.com, 2010).

5.1.1.7 Saman Bank

Saman Bank initially was established as credit institution in September 1999. They received their banking license and changed its name to Saman Bank in August 2002. Their first branch was opened on November 22, 1999. In 2002, Saman was the third third private financial institution to receive a banking license in Iran. They are operating 54 branches all around of Iran. The founding shareholders of Saman bank aimed at establishing a bank that could provide financial and banking facilities to the private sector without bureaucracy. Saman Bank aims at reaching the leading private corporate bank in Iran. Saman Bank is trying to observe Iranian banking sector specific needs and developing banking solutions accordingly. Saman Bank improves its financial services scope every year. The bank is serving the needs of individuals and corporate clients. Saman Bank has been at the forefront of developing of electronic banking in Iran. They have installed their ATM network and internet banking by year 2003 and launched their transactional website by that year .Their internet banking system is offering the services such as: transfer and exchange of money between accounts of Saman banks and other local banks that are subscribe to SATNA and SHETAB banking system, summary of Saman bank accounts, balance amount, cheque amount notification, and last transactions done in the bank account, booking airplane and train tickets online hotel reservation system SAMA, bill payment, receiving Shaba (IBAN) account number, paying installments, etc. these services offered Persian, English and Arabic languages, (http://www.sb24.com,2010).

5.1.1.8 Parsian Bank

In March 2002, Parsian Bank was set up with four branches. The bank's capital is (7,500,000,000,000,000 Riyals). That is divided into seven billion five hundred million as common shares. The bank has 167 branches locally. They have installed their ATM network and internet banking in 2004 and launched their transactional website by that year and is offering the services such as: transfer and exchange of money between accounts of Parsian banks and other local banks that are subscribe to SATNA and SHETAB banking system, summary of Parsian bank accounts, balance amount, cheque amount notification, and last transactions done in the bank account, closing a credit card, request of cheques and registering the amount of cheque, bill payment, receiving SHABA (IBAN) account number, list of received banking services, etc. Their services are offered in Persian and English languages (http://www.parsian-bank.com, 2010).

5.1.1.9 Maskan Bank

Maskan Bank was established in 1938, and after the Islamic revolution it was merged with Bank Rahni Iran, Bank Sakhteman, Iranian Banks Construction Investment Co., and 13 saving and loan associations. Currently it has 1061 branches locally with asset size of \$17.2 billion. They have installed their ATM year 2006 and launched their transactional website by that year. Maskan Bank is giving the services such as: transfer and exchange of money between accounts of Maskan banks and other local banks that are subscribe to SATNA and SHETAB banking system, summary of Maskan Bank accounts, balance amount, cheque amount notification, and 10 last transactions done in the bank account, cancel the internet account, applying for lost banking documents, bill payment, changing the password, paying

installments, etc. their services are offered in Persian language,(http://bank-maskan.ir,2010).

5.1.1.10 Tose Saderat Iran Bank

Tose Saderat Bank Iran was established in 199. Their current asset size is \$3.5 billion. The bank acts as Iran's Ex-Im bank and provides banking services to Iranian exporters and the buyers of the goods and services of Iranian origin. The Bank network is comprised of 34 local branches (5 branches in Tehran and 29 branches in main provinces) and one Representative Office in Kazakhstan along with a wholly owned bank in Caracas, Venezuela and a subsidiary partially owned bank in Minsk, Belarus. In the meantime, bank plans for establishment of other foreign branches and subsidiaries in other countries. They have installed their ATM network and internet banking called SAFIR by year 2003 and launched their transactional website during that year. Tose Saderat Iran bank is offering the services such as: transfer and exchange of money between accounts of Tose Saderat banks and other local banks that are subscribe to SATNA and SHETAB banking system, summary of Tose Saderat Bank accounts, balance amount, cheque amount notification, and last transactions done in the bank account, bill payment, etc. their services are offered in Persian and English languages, (http://en.edbi.ir, 2010).

5.1.1.11 Kar Afarin Bank

Kar Afarin Bank was initially established as Kar Afarinan Credit Institute with having 64 local branches. It is the first truly privately-owned bank in Iran established since the 1979. Its shareholders are among the leading industrialists and contractors in Iran. (Kar Afarin in Persian means creator of jobs). They have installed their ATM network by year 2004. They do not provide any services of internet banking and are considering adoption of IB in the near future. They refused to explain further. A

summary of website IB activities and the web addresses for each bank is given in the appendix (see Appendix C).

5.1.2 An Iranian Bank Manager's comments on the Future of Internet Banking in Iran:

One of the bank managers in the study refused to fill out the questionnaire but accepted to give his point of view on the future of IB if his name were kept anonymous. This manager pointed to the timeline of electronic trade in 3 stages: the first stage from 1955 to 1974 represents the time of electronic data processing that customers used ATMs and credit cards. The second period between 1975 and 1995 indicates the period of management information systems (MIS) to transfer funds between banks, and the third period 1995-2014 is the time of internet and electronic trade. He commented that the electronic trade in Iran is traditional style, and explained the essential ways to go out of traditional to modern trade. The first step to do so is having an exact and stable banking system and this cannot be done without changing the current vision. He continued pointing to the importance of cultural work for customers and society in order to accept electronic transactions. He said that we need to let all the customers' categories access internet instead of only advertising that. The next incentive to have internet banking is to show them that using the technology has a benefit for them. He concluded that while internet banking has found its niche in national economy, many customers still hold huge cash with them instead of depositing it in the bank which is a barrier for money circulation. If this money enters their branches, it can be a potential for the economic growth.

5.1.3 Developments in the Electronic Services Offered by Iranian Banks:

The average number of the swift branches for Iranian banks was 19, 9 which reached to 29, 6 by end of year 2007. Meanwhile the number of ATM machines reached from 161 thousand in the year 2003 to 776 in 2007. Also from the number of online branches which is more than tripled in a 4 year period it is obvious that there is a fast growing of Iranian banks inclination towards internet banking (See Table 1).

Table 1: Development in Electronic Bank services 2003-2007:

Period 2003						
	Swift	ATM	Pin	Online	Credit	Card
Name	Branch	Machines	Pad	Branch	Issued	
Bank Melli Iran	14	527	830	1284	1583791	
Sepah	32	369	3169	754	3169	
Saderat	43	305	1103	1103	226	
Tejarat	26	146	0	0		
Mellat	45	99	375	0	0	
Refah		0	0	635	0	
Keshavarzi	8	299	301	301	76	
Tosee saderat	26	12	19	0	410	
Kar afarin	0	0	0	12	0	
Saman	4	22	0	21	0	
Parsian	1	0	0	31	0	
Avrage	19.9	161.727	527	376.455	158767	
			6			
Period 2005						
	Swift	ATM	Pin	Online	Credit	Card
Nama	Dwanah	Machines	Dad	Duanah	Legnod	

				1/5		
Period 2005						
	Swift	ATM	Pin	Online	Credit	Card
Name	Branch	Machines	Pad	Branch	Issued	
Bank Melli Iran	9	798	1757	1372	2842840	
Sepah	37	682	1287	1315	5024	
Saderat	58	718	1757	1842	6022	
Mellat	58	718	1725	1896	0	
Tejarat	33	643	1089	786		
Keshavarzi	15	503	517	505	2431	
Maskan	0	48	249	399	7431	
Tosee saderat	36	13	28	0	934	
Kar afarin	1	20	0	26	12554	
Saman	30	63	0	41	370	
Parsian	1	0	0	102	191472	
Avrage	25.2727	382.364	764.45	753.091	306908	

Period 2007					
	Swift	ATM	Pin	Online	Credit Card
Name	Branch	Machines	Pad	Branch	Issued
Bank Melli Iran	21	1521	2284	2411	5114847
Sepah	37	1232	2284	1688	5201
Saderat	69	1655	4719	3271	21276
Tejarat	35	1011	1497	1968	NA
Mellat	67	1331	2645	1906	1709879
Keshavarzi	14	992	1270	815	5118
Maskan	2	403	1012	1012	813574
Tosee saderat	29	15	29	0	1186
Kar afarin	3	59	0	64	53553
Saman	48	181	60	73	3671
Parsian	1	141	334	167	231198
Avrage	29.6364	776.455	1466.7	1215.91	795950

Source: (Mohammad Omidi Nejad (2008). *Performance of Iranian Banks*. Iran: Central Bank of Iran. 21-22).

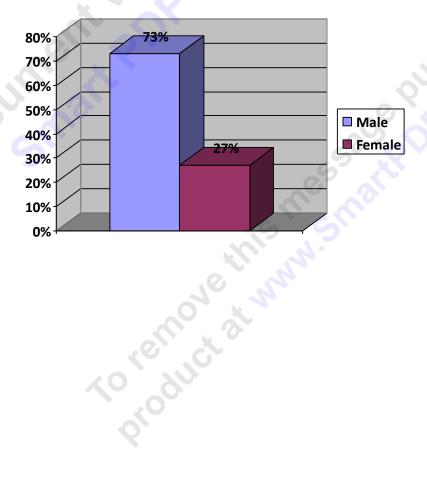
5.2 The Perceptions of Iranian bank customers toward internet banking services:

Iranian bank customer responded to a questionnaire regarding their perceptions on IB services in Iran. The answers are summarized below according to each question asked.

5.2.1 Gender: The number of males (73 percent) is more than females (27 percent) participated in the study, (See Table 2).

Table 2: Gender of respondents

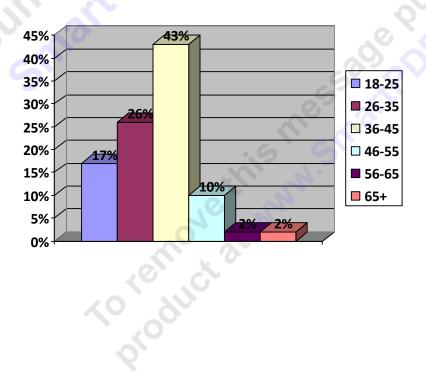
	Frequency	Percentage
Male	96	73%
Female	35	27%
Total	131	100%



5.2.2 Age: Ages ranged in six groups, from 18 to 65. Over 43% percent of participants belonged to the second age group that is from 36 to 45, (see Table 3).

Table 3: Age of respondents

	Frequency	Percentage
18-25	22	17%
26-35	34	26%
36-45	56	43%
46-55	13	10%
56-65	3	2%
65+	3	2%
Total	131	100%

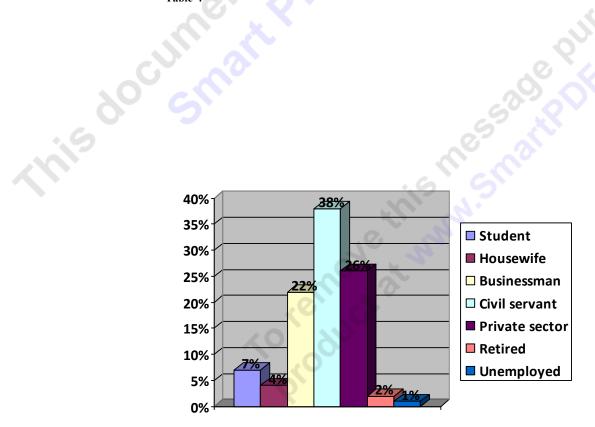


5.2.3 Occupation

The large number of respondents belonged to three main customer categories, i.e. Civil servants, businessman and the Private sector. In this study the highest percentage belonged to Civil servants, with more than 38 percent participation, (see Table 4).

Table 4: Occupation of respondents

	Frequency	Percentage
Student	9	7%
Housewife	5	4%
Businessman	29	22%
Civil servant	50	38%
Private sector	35	26%
Retired	2	2%
Unemployed	1	1%
Total	131	100%

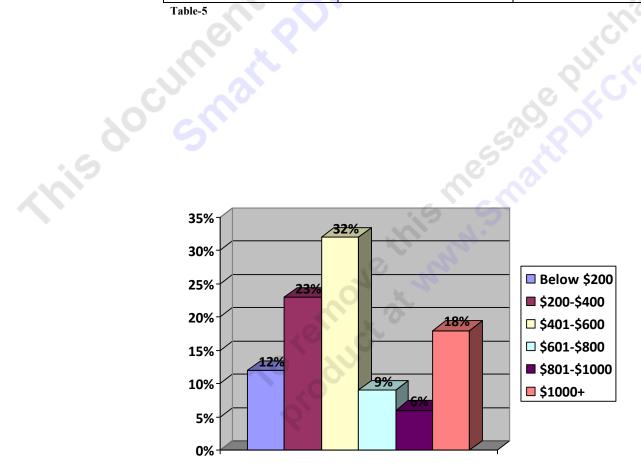


5.2.4 Income Level

The highest number of respondents earned a monthly income of between \$401-\$600. The next highest income bracket was \$201-\$400, earned by 23% of the respondents, (see table 5).

Table 5: Income Level of respondents

	Frequency	Percentage
Below \$200	16	12%
\$201-\$400	30	23%
\$401-\$600	42	32%
\$601-\$800	12	9%
\$801-\$1000	8	6%
\$1000+	23	18%
Total	131	100%

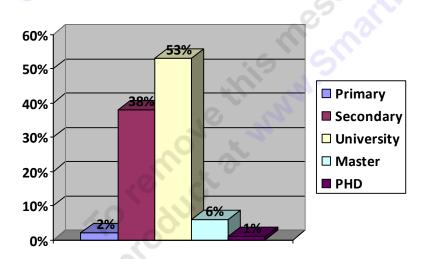


5.2.5 Education Level

The education level of 53 percent of the respondents was a University degree approximately, (see Table 6).

Table 6: Education Level of respondents

	Frequency	Percentage
Primary	2	2%
Secondary	50	38%
University	69	53%
Master	9	6%
PHD	- 1	1%
Total	131	100%

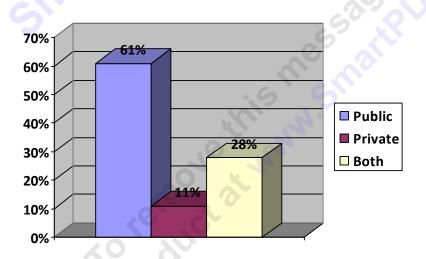


5.2.6 Type of the Bank

Since the internet banking environment is a traditional-based system in Iran, more than 61 percent of respondents use public banks as they did in the past, (see Table 7).

Table 7: Type of Bank used by respondents

	Frequency	Percentage
Public	80	61%
Private	14	11%
Both	37	28%
Total	131	100%

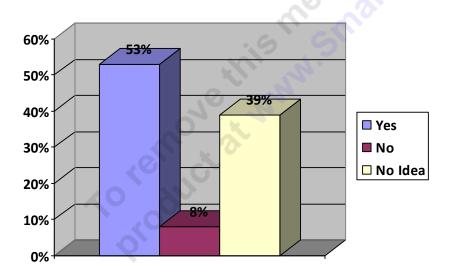


5.2.7 IB Awareness

Whilst 53% of respondents were aware of internet banking services offered by their bank, 39% indicated that they did not know whether their bank offered such services, (see Table 8).

Table 8: Awareness of Internet banking of respondents

	Frequency	Percentage
Yes	69	53%
No	11	8%
No Idea	51	39%
Total	131	100%



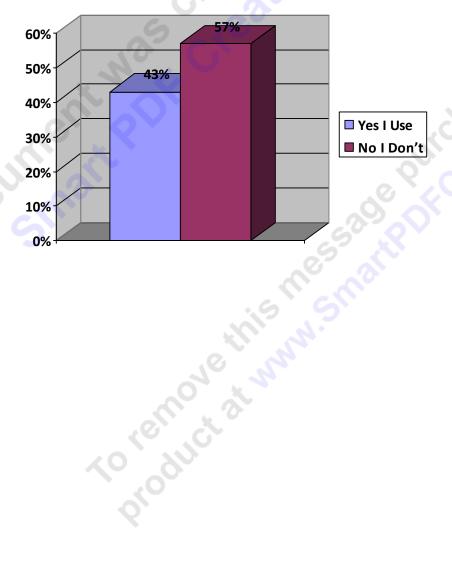
5.2.8 Usage of IB

A majority of the respondents (57%) indicated that they did not use IB services, (see Table 9).

Table 9: Usage of IB by respondents

	Frequency	Percentage
Yes I Use	56	43%
No I Don't	75	57%
Total	131	100%

Table-9

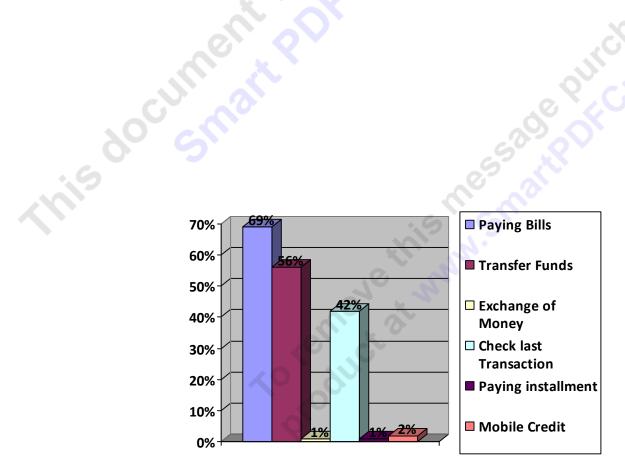


5.2.9 Types of Transactions

Paying bills and transferring fund is the most frequent use of the banking services among Iranian customers. Meanwhile, a very low percentage of customers use internet banking for exchanging money or paying installment purpose, (see Table 10).

Table 10: Types of IB Transactions

	Frequency	Percentage
Paying Bills	91	69%
Transfer Funds	74	56%
Exchange of Money	2	1%
Check Last Transactions	55	42%
Pay Installment	2	1%
Mobile Credit	3	2%
Total	227	171%

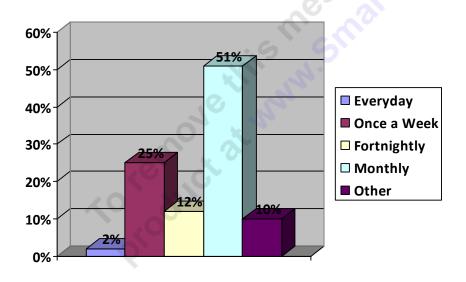


5.2.10 Period Usability

A majority of the respondents used IB services on a monthly basis (51%), since most customers use the IB services to pay bills, this result can be expected. Daily IB usage was very low at only 2% of respondents, (see Table 11).

Table 11: Frequency of IB Usage by respondents

	Frequency	Percentage
Everyday	1	2%
Once a Week	14	25%
Fortnightly	7	12%
Monthly	29	51%
Other	5	10%
Total	56	100%



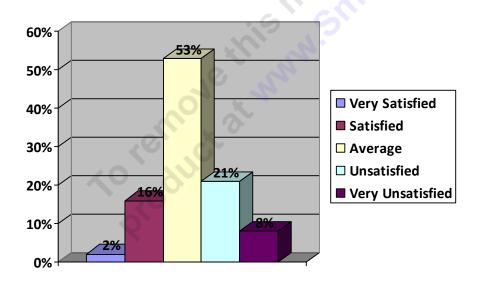
5.2.11 Degree of Satisfaction

53% of respondents expressed average scores in their satisfaction with IB services.29% expressed various degree of dissatisfaction with the services only 18% showed to be satisfied with the IB services offered by their banks, (see Table 12).

Table 12: Degree of Satisfaction with IB Services.

	Frequency	Percentage
Very Satisfied	1	2%
Satisfied	9	16%
Average	29	53%
Unsatisfied	13	21%
Very Unsatisfied	4	8%
Total	56	100%

Table-12



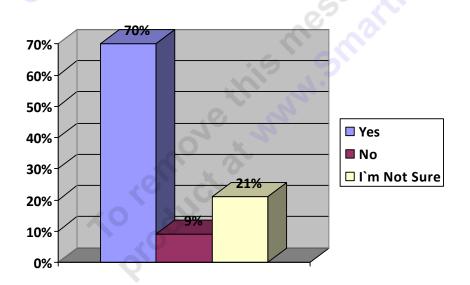
5.2.12 Security Issue

Internet security is a major issue of concern for users all around the world, 70% of respondents indicated that they believed their transactions were secure.21% were not sure, (see Table 13).

Table 13: Security of IB Services.

	Frequency	Percentage
Yes	39	70%
No	5	9%
Γm Not Sure	12	21%
Total	56	100%

Table-13



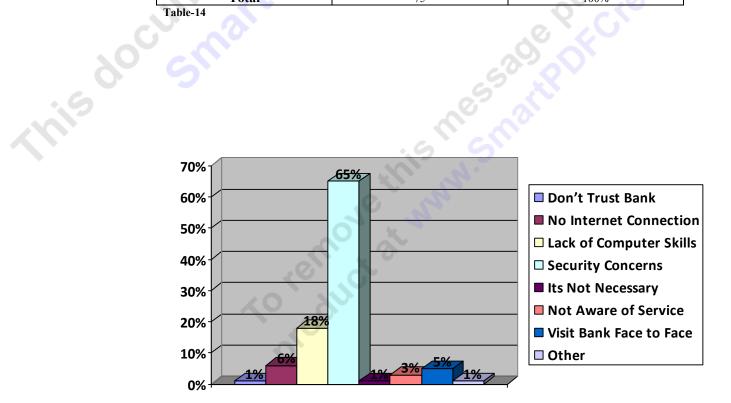
5.2.13 Why Not IB

The main reason for refusing to adopt IB services in Iran was security concerns (65%). This finding is in line with studies conducted in other developing countries. A further 18% of non IB users indicated that they lacked the necessary computer skills to be able to bank online. A further 6% did not have access to an internet connection and 5% indicated that they still preferred the traditional way of banking and personally visiting the bank (See Table 14).

Table 14: Reasons for not Adopting IB Services

	Frequency	Percentage
Don't Trust Bank	1	1%
No Internet Connection	4	6%
Lack of Computer Skills	13	18%
Security Concerns	48	65%
It's Not Necessary	1	1%
Not Aware of Service	3	3%
Visit Bank Face to Face	4	5%
Other	1	1%
Total	75	100%

Table-14



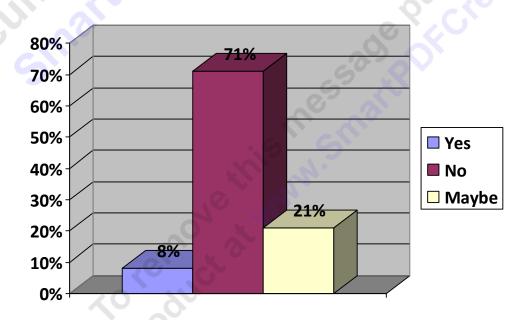
5.2.14 Future IB Intention

Interestingly, 71% of non users indicated that they had no intention of adopting IB in the future and 21% of the respondents were not sure about it, (see Table 15).

Table 15: Intention to Adopt IB Services in the Future.

	Frequency	Percentage
Yes	6	8%
No	53	71%
Maybe	16	21%
Total	75	100%

Table-15



Chapter 6

DISCUSSION

6.1 The Future of Internet Banking in Iran

Part of this research examined bank managers' perception of the current status and the future of internet banking in Iran. The survey results indicated that from all local banks surveyed 10 out of 11 banks surveyed provided internet banking. All managers stated that the reason for offering IB was to deliver higher level of satisfaction to their existing customers and to provide them with a competitive advantage against other competitors. This questionnaire also gives the opportunity to examine whether Iranian banks are currently maintaining an informational website or a transactional one. The theory was suggested by Deupree (1998). The authors argued that there are four possible phases that a bank may go through in adopting internet banking:

- Phase 1: The creation of the informational website where the bank will start providing basic information about their bank and services.
- Phase 2: Extending into a transactional website in which customers can conduct basic banking operations.
- Phase 3: Adding additional features which allow for a relationship orientation whereby the bank can do targeted marketing to classes of individuals.
- Phase 4: One to one banking in which personal web pages for individual customers can be created dynamically.

The 10 banks that did offer IB services are all in the 2nd phase. They started with informational website and late introduced transactional websites. Managers commented that progressing to Phase 3 is very different due to lack of infrastructure and cultural barriers to technology adoption. Most bank managers commented that customers still prefer traditional banking methods and prefer to come to the bank branch to conduct their banking transactions face-to-face with staff. Managers believe that customers feel more secure this way.

It was not possible to get any answers concerning the total number of customers of each bank and the cost of setting up an IB system. It is interesting that all 11 bank managers left these questions blank on their questionnaire and most likely because they perceived them to be a sensitive security issue for the bank. As a recommendation, bank managers could offer incentives to customers to use internet banking services. One motive could be to offer free training to customers. Not only does this strengthen the banks relationship with customers, but also it reduces customer anxiety about using internet facilities. This would be an important step to becoming more customer-focused.

Additionally website management is also an important aspect with regards to gaining customer confidence about IB. Iranian managers need to evaluate their website in terms of accessibility, layout, navigability, ease of use, and security features. They must remember that the younger generation of IT users in Iran are technological savvy and able to pit faults in websites that prevent them from being user-friendly. This research also examined customer's perceptions of IB services in Iran. Internet banking users are supposed to enjoy the ease of conducting their financial services, cost reductions, time saving, better control of their accounts and other features. So, internet banking is a good alternative to other traditional banking means. In this case

it was not necessarily true. First, not everyone is aware of the availability of IB. Those who use it mainly do so in order to pay bills and those who do not are afraid of security issues. Second, internet banking in Iran is restricted by the presence of additional components such as computer and fast internet connection. These are not available for everybody and many people are not familiar with technology. When banks analyze the potential demand for internet banking services, they need to decide what kinds of consumers will use it, what specific services they need, is it feasible to offer what they demand, and whether the existing telecommunication infrastructure is available.

Holbrook (2006) found that the demand for electronic media to obtain banking services rises with higher level of education. In addition, younger customers tend to use computerized financial services the most. In the same vein, Iran has a young population whose education levels are steadily increasing. This is the potential niche market that banks need to target IB services. The result of the research showed that a majority of bank customers are not satisfied with the IB services offered. This shows that banks have to improve service quality in this area.

IB security is mainly assured by the bank and certified by the regulatory authority. The role of Iranian banks is to obtain the system with the latest secure technology which has to be followed by proper promotional campaigns to convince their customers that their money will be kept in safe hands in an online environment.

Chapter 7

Conclusion

7.1 Practical and Theoretical Value of This Research

The need to understand what factors are influencing the adoption of internet banking is important for managers, providers and researchers. In the technologically developed world, IT adoption is faced by barriers, such as the lack of top management support, poor quality IS design and inadequately motivated and capable users (Lee & Kwon, 2005). In the developing world, the same barriers appear to be often impenetrable (Cheung, 2000). In addition, problems found in developing counties are attributed to a lack of national infrastructure (Jun, M. and Cai et al., 2001), capital resources (Goodman and Press, 1995), or government policies set in place to prevent technology transfer (O'Reilly, 2004). Therefore, there will be some beneficial applications of this research to Iranian banks and researchers in Iran. Some of these practical applications are as follows:

- 1. The acceptance of internet banking is a new topic in Iran, and so it is worthwhile to conduct this study on a large scale so that results could be used to improve the banking sector, and enhance the quality of internet services in Iran for the future. Especially the study should be carried to other cities in Iran.
- 2. Helping bank managers to identify factors that influence the adoption of Interne banking would increase the use of the service, as well as encourage the general acceptance of new IT services. From the practical perspective, bank managers and other decision makers in the banking sector want information about how their

customers act and react. Consumer acceptance models are valuable to managers as they help to organize their learning about consumers and their behaviors. Thus banks are able to acquire a better understanding and build a stronger relationship with them. Iranian banks must understand who their customers are and how they behave. It is only through this knowledge of consumer that banks can satisfy the demands of consumers today and achieve a competitive edge.

3- The findings of this study also indicate that Iranian banks have to engage in aggressive marketing campaigns to make the public more aware of the benefits of IB usage. Since most non users are afraid of security issues, banks must emphasize that their online security system are the same as other international banks and that as long as customers show general sensibility to online transactions, they are safe in their transactions in Iran as much as they could be in any overseas countries. In the meantime, another research can be done regarding the association of customers' attitude and banks' employees' attitudes to use internet banking.

7.2 Limitations of Study

As with other studies that use questionnaire to collect perceptions of respondents, this study also suffers from self-report bias (Bakos, 1991). Accessibility of data is difficult when it comes to Iran study case. Many of the information needed for this study are protected and marked as security. Few managers will set appointments to be interviewed, and you need to convince many security offices in order to conduct a survey. In addition, many customers refuse to cooperate or give correct data. Iranian customers are not used to being surveyed and interviewed on the street. Many were afraid to respond to the questionnaire and were suspicious of the aims of the study. Moreover, the research has geographical limitations. All respondents were from Tehran, the capital city and it would be insightful to investigate the perceptions of

bank managers and customers in other cities of Iran and, in particular, in more rural This document por Creator areas.

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APPENDICES

Appendix A: Sample of Internet Banking Web Pages of Iranian Banks



Sepah Bank Iran



Melli Bank Iran



Saderat Bank Iran



Tejarat Bank Iran



Mellat Bank Iran



Keshavarzi Bank Iran



Saman Bank Iran



Parsian Bank Iran



Maskan Bank Iran



Tose Saderat Bank Iran



Kar afarin Bank Iran

Appendix B: A summary of electronic services provided by Iranian banks between years (2003-2007).

	k Melli Iran March 1920				
Description	2003	2004	2005	2006	2007
Swift Branch	14	10	9	5	21
ATM machines	527	571	798	1074	1521
Pin Pad	830	1128	1287	1634	2284
Online Branch	1284	1339	1372	1867	2411
Credit Card	1583791	2231861	2842840	3694337	5114847
issued					

Name: Sep Establishment: M	ah Bank arch 1925				
Description	2003	2004	2005	2006	2007
Swift Branch	32	35	37	37	37
ATM machines	369	394	682	1100	1232
POS Machines	3169	1128	1287	1634	2284
Online Branch	754	904	1315	1525	1688
credit card issued	3169	4874	5024	5188	5201

	ank Saderat Ir March 1952	an .	20.	, OO, -	
Description	2003	2004	2005	2006	2007
Swift Branch	43	49	58	64	69
ATM machines	305	529	718	1482	1655
Pin Pad	1103	1289	1757	3017	4719
Online Branch	1103	1146	1842	2784	3271
Credit Card Issued	226	666	6022	10665	21276

	ejarat Bank March 1979	0			
Description	2003	2004	2005	2006	2007
Swift Branch	26	30	33	34	35
ATM machines	146	481	643	731	1011
Pin Pad	0	602	1089	1407	1497
Online Branch	0	352	786	1550	1968

Name: Mellat Bank Establishment: 1979

Description	2003	2004	2005	2006	2007
Swift Branch	45	56	58	59	67
ATM machines	99	497	718	1195	1331
Pin Pad	375	383	1725	1915	2645
Online Branch	0	1183	1896	1960	1906
Credit Card Issued	0	0	0	327649	1709879

Name: Keshavarzi Bank Establishment: March 1979

Establishincht. IV	Tar ch 1777	ar cir 1777			
Description	2003	2003 2004	2005	2006	2007
Swift Branch	8	8 9	12	13	14
ATM machines	299	299 308	503	728	992
Pin Pad	301	301 311	517	1270	1270
Online Branch	301	301 333	505	669	815
Credit Card Issued	76	76 1639	2431	3214	5118
Online Branch	301	301 333	505	669	8

Name: Maskan Bank Establishment: 1938

Establishinent. 12	750				
Description	2003	2004	2005	2006	2007
Swift Branch	0	0	0	4	2
ATM machines	0	0	48	122	403
Pin Pad	0	0	249	773	1012
Online Branch	0	0	399	773	1012
Credit Card Issued	0	0	7431	213632	813574
		.69	9		

Name: Tosee Saderat e Iran Bank Establishment: 1991

Description	2003	2004	2005	2006	2007
Swift Branch	26	28	28	28	29
ATM machines	12	13	13	13	15
Pin Pad	19	28	28	28	29
Online Branch	0	0	0	0	0
Credit Card Issued	410	672	934	1206	1186
	. O				

	r afarin Bank 199		9		
Description	2003	2004	2005	2006	2007
Swift Branch	0	0	1	2	3
ATM machines	0	14	20	22	59
Pin Pad	0	0	0	0	0
Online Branch	12	18	26	45	64
Credit Card Issued	0	510	12554	26500	53553

	nan Bank 199				
Description	2003	2004	2005	2006	2007
Swift Branch	4	13	25	36	48
ATM machines	22	28	63	107	181
Pin Pad	0	0	0	12	60
Online Branch	21	30	41	54	73
Credit Card Issued	0	0	370	982	3671
)				K.G.	

Pin Pad	0	0	0	12	60
Online Branch	21	30	41	54	73
Credit Card Issued	0	0	370	982	3671
				K . C.	
70			40		
	sian Bank				
	01		69		
Description	2003	2004	2005	2006	2007
			20.		
Swift Branch	1	1	1	1	1
ATM machines	0	0	0	98	141
Pin Pad	0	0	0	0	334
Online Branch	31	66	102	134	167
Credit Card Issued	0	103788	191472	223554	231198
	7	N. W.			
40,	emo				

Appendix C: Internet Banking Activity

	Bank Name	Informati onal	IB Servic	Web Address	
	Sepah Bank	Website Yes	es Yes	http://www.banksepah.ir/Default.aspx?tabid=19	
	Melli Bank	Yes	Yes	http://www.bmi.ir/Fa/default.aspx	
	Saderat Bank	Yes	Yes	http://www.bsi.ir/	
	Tejarat Bank	Yes	Yes	http://www.tejaratbank.ir/portal/default.aspx?tabid= 19	
	Mellat Bank	Yes	Yes	https://ebanking.bankmellat.ir/ebanking/changeTab.bm	
	Keshava rzi Bank	Yes	Yes	http://www.agri-bank.com/Main.asp	
	Maskan Bank	Yes	No	http://bank- maskan.ir/HomePage.aspx?TabID=1&Site=Douran Portal⟪=fa-IR	
	Tose Saderat Iran	Yes	Yes	http://www.edbi.ir/	
	Bank Kar Afarin Bank	No	No	http://www.karafarinbank.com/MainF.asp	
C	Saman Bank	Yes	Yes	http://www.sb24.com/	
90	Parsian Bank	Yes	Yes	http://www.parsian-bank.com/index.html	
rhis do		40,4	ohio	http://www.parsian-bank.com/index.html	

Appendix D: Questionnaire For Customers

This questionnaire is part of my master's degree thesis in the department of banking and Finance at Eastern Mediterranean university in North Cyprus. I am trying to gather information about customer's view on the use of internet banking in Iran, Your answer will be kept strictly confidential and only used for my master's thesis, Thank you for your time and participation.

Section A:				
1- Gender:	М	F		
2- Age: 18-25 36-45 56-65		26-35 46-55	Olichase the on	
3- Occupation: Student Private sector Retire Unemployed		Businessman Housewife Civil Servant		
4- Monthly Income Below \$200 \$200-\$400 \$801-\$1000	<u>Level</u> :	\$601-\$800 \$401-\$600 \$1000 and above		
5- Education Level: Primary Secondary PHD		University Master		
Section B:				
6- Which type of bar Public Both	nk do you use?	Private		
7- Does your bank offer internet banking services?				
Yes No		No idea		

	8- Do you use Internet banking services?			
	Yes, I use			
	No, I don't			
	(If the answer to this question is No please go to question 13).			
	(If the answer to this question is Yes please answer the question 9).			
	(
	9- What types of internet banking services do you use?(tick as many as you			
	like).			
	Paying bills			
	Transfer fund			
Exchange money				
Check last transaction Paying installment				
	moone order			
	10- How often do you use internet banking services?			
	Once a weak			
	Fortnightly			
	Monthly			
	Everyday Once a weak Fortnightly Monthly Other			
	11-How satisfied are you with the quality of internet banking services			
	offered by your bank?			
	Very satisfied			
	Satisfied			
Average				
	Unsatisfied Very unsatisfied 12- Do you believe that the transactions you conduct online are secure?			
	Yes			
	No			
	I'm Not Sure			
	If you answered No to question No. 8 please answer the following			
	questions:			
	13- What is your main reason for not using internet banking?			
	I don't trust banks.			
	I don't have internet connection at home.			
	I am not very good with using technology / computers.			
	I am worried about the security of transactions			
	I don't find it necessary			
	I was not aware of this service.			
	I prefer to use the bank branch personally.			
	Other (Please specify).			
	14- In the future, would you consider adopting internet banking?			
	Yes			
	No —			
	Maybe			

Thank You

Appendix E: Questionnaire used for bank managers

Questionnaire used for bank managers in the research was adopted from sections (2010) that looked at the adoption of internet banking in a small island state. **Section A:**

a 1	T 0	
(tanaral	Intorn	notion:
General	IIIIOII	nanon.

1- Bank's Name :	
2- The date of establishment:	
3- The number of branches operating inside and outside of	Iran:
4- Approximately, what is the total size of your assets?	
5- Does your bank have a web site?	Yes No No
6- If yes, what is your bank's web site, www?	
7- When the web site was lunched?	
8- Do you offer "internet banking services" through your w	vebsite?
is monday	Yes No
9- When did you introduce ATM's?	
To leillore strum	

Section B:

1- Since when have you been offering internet banking services?		
2- Can you tell us how much it cost your bank to install banking system?		
3- Can you tell us how much your bank pay yearly to operate the system?		
4- How many online users do you have?		
5- Why did you decide to offer internet banking?		
6- Please tick the function that can be performed with your website:		
6- Please tick the function that can be performed with your website:		
View current balance Pay bills electronically Cash management Apply for loans Open a deposit account Apply for credit cards Other, please specify:		
7- What do you think about the future of internet banking in Iran?8- Any other comments?		

Thank You

Appendix F: Persian Version of Questionnaires

: پرسشنامه برای مشتریان

این پرسشنامه بخشی از پایان نا مه کارشنا سی ار شد اینجانی در دانشکده بانکیداری و امیور میالی در دانشگاه مدیترانه شرقی در شمال قبرس می باشد. در این را ستا سعی در جمع آوری دیدگاه های میشریان در باره بانکداری از طریق اینترنت داریم. پاسخ های شما کاملا محرما نه نگه دا شته می شود و فقط در پایان نا مه کارشناسی ارشد اینجانب مورد استفاده قرار می گیرد. با تشکر از شما به خاطر وقت و مشارکت تان.

بخش الف:

i j	ز	مرد□	1. <u>جنسیت:</u> 2. <u>سن:</u>
	35 - 26	We by	25 - 18
	55 -46	. W.S	45 - 36
			65 - 56
			3. شغل :
BO	تاجر		د انـشجو
ر 🗆	خانه دا		بخش خصوصی
	شهروند		بازنشسته

	بیکار
800 - 601 دلار 	4. <u>درآمد ماهیانه:</u> کمتر از 200 دلار
د انشگا هی ا کارشناسی ارشد ا	5. <u>میزان تحصیلات:</u> ابتدایی □ راهنمایی □ دکترا □ <mark>بخش ب:</mark>
	 6. از چه نوع بانکی اس عمومی □ هر دو □ 7. آیا بانک شما خدمات می دهد؟ بله □ نظری ندارم □

8. آیا شما از خدمات بانکداری الکترونیکی استفاده
مـى كـنـيـد؟
<u>بله، استفاده می کنم</u>
خیر، استفاده نمی کنم
(اگر پاسخ به این سوال منفی است لطفا به سوال
ر بمصر پے سے بے۔ بیان سوبان مصحفی بسک تنفیک ہے۔ سوبان
. (بروید)
(اگر پاسخ به این سوال مثبت است لطفا به سوال
9 پـاسخ دهيد).
9. از کدام سرویس بانکداری الکترونیکی استفاده می
<u>کنید؟(به هر تعداد می توانید تیک بزنید)</u> ت
پـرد اخت قـبوض 🗆
انتقال سرمایه 🗆
انـتقـال پـول □
.6
چک کردن آخرین تراکنش
ل_ پـرداخت اقـساط
اعتبار قابل انتقال
پرو کے کے کا کے کا کا کا کا کا کا کا کا کا کا کا کا کا
10. چند بار از خدمات بانکداری الکترونیکی
<u>استفاده می کنید؟</u> <u>هر روز</u> □
10. <u>چند بار از خدمات بانکداری الکترونیکی</u> <u>استفاده می کنید؟</u> <u>هر روز</u> \square
<u>هفته ای یک با ر</u>
لــا <u>هر دو هفـته</u>

	ماهانه
	سایر موارد
سرویس های بانکداری الکترونیکی که ، می دهد رضایت دارید؟	۱۱. <u>چمدر از ۱</u> بانک شما ارائه
	بسیار زیاد
	زيا د 🗀
سرویس های بانکداری الکترونیکی که می دهد رضایت دارید؟ اد دارید که تراکنش های آنلاین شما های می پذیرد؟	مـتـوسط
	كم □ بسيار كم □ 12 ب <u>ا امنيت انجاد</u>
	بسیار کم
اد دارید که تراکنش های آنلاین شما و می پنیرد؟	
	(C), YO,
<u>اد دارید که تراکنش های انلاین شما</u> ·	.12
<u>می پدیترد؛</u>	با امین ابام
	خير 🗆
	مطمئن نيستم
	12. <u>ایا اعده</u> ب <u>ا امنیت انجاه</u> بله □ خیر □ مطمئن نیستم

اگر شما به پرسش شماره 8 پاسخ منفی داده اید لطفا به سوالات زیر پاسخ دهید:

13. وليل اصلى شما براى استفاده نكردن از خدمات بانكدارى الكترونيكى چيست؟

به بانک ها اعتماد ندارم
در خمانه اتصال اینترنت ندارم
در استفاده از کامپیوتر مشکل دارم
درباره امنیت اجرای تراکنش ها تردید دارم
لـا احساس لـزومـی در ایـن زمینه نمـی کنم 🔃
از وجود این سرویس بی اطلاع بودم
ترجیح میدهم شخصا از شعبه های بانک استفاده
کنم
ساير دلايل (لطفا توضيح دهيد)
14. در آینده آیا از این سرویس استفاده می
<u>کنید؟</u> بـلـه
- میر از از از از از از از از از از از از از
شاید
با تشکر

<u>قـسمـت دوم</u>

پرسشنامه مورد استفاده مدیران بانک ها: پرسشنامه ای که در این تحقیق برای مدیران بانک مورد استفاده قرار گرفت از مقاله (2010)Jenkins برگرفته شده است که به تطبیق بانکداری الکترونیک در یک جزیره کوچک می باشد.

<u>بخش الف:</u>

اطلاعات كلى:

- 1. اسم بانك:
- 2. تاریخ تاسیس:
- 3.تعداد شعبه های فعال در داخل و خارج از ایران
 - 4. دارایی تقریبی شما چقدر است؟
 - 5. آیا بانک شما وب سایت دارد؟ بله □ خیر □
 - 6. اگر بله آدرس وب سایت بانک شما چیست؟
 - 7. چه زمانی وب سایت آغاز به کار کرد؟
- 8. آیا خدمات بانکداری الکترونیکی را در وب سایت خود ارائه می دهید؟ ___ بله خیر خیر
 - 9. چه زمانی به معرفی دستگاه های خودپرداز به مشتریان پرداختید؟

:	ں	بخش
	_	· ·

- 1. شما از چه زمانی خدمات بانکداری اینترنتی ارائه می دهید؟
- 2. نصب این سیستم ها چقدر برای بانک شما هزینه دربر داشته است؟
- 3. بانک شما چه هزینه ای را برای فعال نگه داشتن این سیستم متحمل می شود؟
 - 4.چه تعداد کاربر آنلاین دارید؟
- 5. چرا تصمیم به استفاده از بانکداری الکترونیکیگرفتید؟
 - 6.لطفا فعالیت های قابل انجام در وب سایت خود را تیک بزنید:

*. V	
	مشاهده حساب جاری
قبوض 🗌	پرداخت الکترونیکی
	مديريت وجوه نقدى
10 HUL	درخواست وام
رده گذاری □	باز کردن حساب سپر
	تقاضای کارت اعتبا
مشخص کنید:	سایر موارد، لطفا

نر شما درباره . بیران چیست؟ 8. هر گونه نظر دیگری؟

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