Customer Perception towards the Internet Banking Services Performed by the Turkish Banking System

Dilara Aydın

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Prof. Dr. Elvan Yılmaz Director

I certify that this thesis satisfies the requirements as a thesis for the degree of Master of Science in Banking and Finance.

Prof. Dr. Salih Katırcıoğlu Chair, Department of Banking and Finance

We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Science in Banking and Finance.

Assoc. Prof. Dr. Nesrin Özataç Supervisor

Examining Committee

1. Prof. Dr. Salih Katırcıoğlu

2. Assoc. Prof. Dr. Bilge Öney

3.Assoc. Prof.Dr. Nesrin Özataç

ABSTRACT

The aim of this study is to investigate the customer perception towards the internet banking services and to identify the main factors affecting the usage of internet banking in Turkey. For that purpose, six hypotheses have been employed for the research methodology. Questionnaire has been prepared and conducted a survey in Izmir for the fieldwork. Out of all the surveys collected, 245 were usable and were compiled with SPSS 18.0. The finding of the study indicated that factors of cost, ease of use, security, accesibility were statistically significant and have positive effects on customer satisfaction. However, awareness factor has no effect on customer satisfaction of internet banking. As a result of the analysis, it is found that education levels affect the usage of the internet banking services in Turkey.

Keywords:Internet banking, customer satisfaction, customer perception.

Bu araştırmanın amacı, Türkiye'deki banka kullanıcılarının internet bankacılığına karşı tutumlarını ve müşteri memnuniyetine etki eden faktörleri araştırmaktır. Bu çalışma, banka müşterilerine yönelik anket çalışması yapılarak değerlendirmeye alınmış ve elde edilen sonuçlar SPSS 18.0 programı ile analiz edilmiştir. Araştırma modeli çerçevesinde 6 hipotez oluşturulmuştur. Veri toplamak amacıyla anket formları Türkçe olarak hazırlanmış ve İzmir ilinde uygulanmıştır. Uygulanan anketlerin 245'i araştırma çerçevesinde analiz için kullanılmıştır. Araştırma sonuçlarına göre algılanan kullanım kolaylığı, güven, maliyet ve erişilebilirlik faktörlerinin müşteri memnuniyeti üzerinde önemli ve pozitif etkisi olduğu görülürken farkındalık faktörünün müşteri memnuniyeti üzerinde bir etkisi olmadığı bireylerin seviyelerinin saptanmıştır. Ayrıca eğitim internet bankacılığı kullanımlarını etkilediği sonucuna varılmıştır.

Anahtar Kelimeler: Müşteri memnuniyeti, internet bankacılığı, müşteri tutumları.

To My Grandmother

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Chapter 1

INTRODUCTION

1.1 Description of Internet Banking

The banking industry has seen many technological changes in the last years which has shaped it from manually intensive industry into one that is technologically dependent. Alternatives to traditional branch banking have attracted increasing attention as internet usage started to spread over the markets. Banks started to use the internet for providing new services to their customers.

Internet banking system allows individuals to perform banking activities at home via internet. Most of the internet banks are traditional banks which also offer online banking while others are online only and have no physical offices.

Internet banking transaction states that customers use the internet to get access to their personal or business bank accounts online anytime and to undertake banking transactions through the use of bank's website without inconvenience. Internet banking allows customers to do their banking transactions anytime and providing continous control over their accounts.

Mu Yibin (2003) defined three functional types of internet banking. These are informational, transactional and communicative internet banking. Transactional internet banking is the most popular type and it offers all of the benefits of a traditional brick and morter institution. It includes full control over customer accounts such as deposits, withdrawals, transfers, online payments and updates. Communicative internet banking allows interaction between the bank system and customers. The communication is restricted to e-mail account, inquiry loan application and static file updates name and adress. However, fund transfer is not included in this type of internet banking. Informational internet banking simply means that the banks provides main information about bank's products and services such as a brochure on the purpose of marketing. In addition, there is no connection the bank's system at informational internet banking.

Information technologies had affected the banking and finance sector substantially. This development increased the number of financial products and services offered by the banks. Nowadays, internet banking plays an important strategic role in the marketing at industrial banking.

According to a research conducted in 2012, Turkey ranked the fifth among all European countries about the internet usage (<u>www.internetworldstats.com</u>). Therefore internet banking is very important for the development of banking sector and the success of marketing departments of banks in Turkey.

1.2 Purpose of the Research

Internet banking is changing and developing with technology everyday. Bank customers began to deal with internet banking together with the increasing usage of the internet and social media. The principle aim of this study is to investigate the customer perception towards the internet banking services and to identify the main factors affecting the usage of internet banking in Turkey.

1.3 Importance of the Research

This study will help the retail banking executives for the basic problems of customers about the internet banking services which are also studied in this research. Internet banking is a modern banking channel and it is much in demand by customers in the recent years. Similar researches have been carried in the past years for Turkey. However in each case, they stated that the study results vary over time. It has been emphasized that research needs to be updated in the coming years. Therefore, this research was conducted in the last quarter of 2013 so it provides an up to date information about the customer perception towards internet banking in Turkey.

1.4 Structure of the Study

This study consists of seven parts. Chapter one includes the definition of internet banking and introduction to the research topic. Chapter two represents the literature review. Chapter three deals with the history and growth of internet banking through the world and Turkey. Chapter four explains the features of internet banking such as advantages and disadvantages from bank and customer perpectives, factors affecting the internet banking adoption and the comparison with other banking channels. Chapter five defines the conceptual model, questionnaire design, hypothesis, data collection and research methodology. Chapter six explains the results of the analysis. Finally, chapter seven concludes the study and also explains the managerial implications and the limitations of this study.

Chapter 2

LITERATURE REVIEW

2.1 Similar Studies

There are several studies about the customer perception or customer satisfaction towards internet banking services and adoption of internet banking in the world including Turkey as well. Most studies are based on questionnaires that analyze relevant country or city.

Sanchez and Gallie (2010) investigated the factors determining the usage of online banking in France. The authors compared the internet banking users of Mexican and French banks. They used the data of available Mexican study and survey analysis from 398 French bank users. The results of the survey revealed that there are six common factors affecting the usage of internet banking that are difficulty, compatibility, trust, third-party concerns and group influence.

Ying Wu et al. (2010) made a survey on 194 online banking customers in Taiwan and they concluded that consumers use internet banking rather than other banking channels for the benefits it has been providing. In contrast, Octovian and Daniela (2006) mentioned that Romanian customers do not adopt internet banking services because they have lack of information about internet banking. In a parallelthe study by Octovian and Daniela (2006) and Omar et al. (2011) found that most of the bank customers are still unaware of internet banking services and also customers have concerns about security, safety and lack of trust about internet banking services in Pakistan.

Murillo et al. (2010) analyzed the determinants of the adoption of online banking operations among United States banks. In contrast with the existing literature, they used panel of commercial banks in United States for the period of 2003-2006. They proved that bank-specific characteristics are important determinants of banks' adoption decisions; play important role in competition.

Annie (2008) analyzed the design of the bank websites, contents and security indicators. According to the study results, she determined the customer's needs and wants about internet banking websites in Nigeria.

Kassean (2012) made the survey with 240 participants in Mauritius. At the end of the study, he has revealed that convenience, security, confidentiality, ease of usage, accessibility and speed of connection, cost of connections and computer equipment, willingness to accept change and innovation, ease of navigation on bank's website and time savings are the main factors behing the adoption of internet banking services.

Ahmed (2011) observed that there is a relation between customer satisfaction in online banking service and tangibles as reliability, responsiveness and empathy. He made a survey with 21 bank customers. The results showed that the customers are satisfied with Islamic Banking online banking services in Malaysia. Sanmugam (2007) seperated the customers into three groups as demographic, social-economic standing and technological access to internet banking services. He defended that banks need to identify the market segments and the marketing of the online services should be based on this segmentation in order to improve the online banking in Malaysia.

Tsoukatos (2008) examined the customers' perceptions of their banks' performance regarding the key e-banking quality elements. This research was used for data collection from a convenience sample of 302 internet banking users in Greece.

Mobarek (2007) found that internet banking are mostly preferred by young people in Botswana. In parallel with the study of Mobarek (2007), Polasik and Wisniewski (2008) concluded that people over the age of 65 are reluctant to have an internet account in Poland. In addition, they made survey with 3519 people and they found that people complained about the internet banking security issues. Identically, Dixit and Datta (2010) analyzed the acceptance of online banking among those customers who are the more than 35 years old and they found that security and privacy factors are main indicators on the acceptance concern among adult customers in India. Their research shows that adult customers are more reluctant to join new technologies that might contain little risk.

Chang (2005) estimated the relationship between adoption of internet banking and demographic characteristics of the customers such as sex, age and marital status in Korea and she found that individual characteristics affect internet banking adoption process. This is similar to the study of Agarwal et al. (2009) in which the customer's demographic characteristics and the basic elements that impact their use, perceptions and satisfaction with internet banking in India have been investigated.

Howcroft (2002) found that education level did not have any influence on the usage and adoption of home based internet banking in the United Kingdom. However, Pikkarainen and Karjaluoto and Pahnila (2004) concluded that people with higher education and higher income are more active at internet banking services in Finland.

2.2 Studies from the Turkish Banking Sector

Pala and Kartal (2010) in their empirical study, investigated the attitudes of Turkish bank customers by employing survey analysis on 196 active e-bank users. The results of the survey revealed that money transfer, account opening and credit transactions are among the most widely used online banking transactions. Additionly, they found that time saved by using internet banking and the continous availability of doing transactions are the most important two factors of online banking. Correspondingly, Gülmez and Kitapçı (2006) concluded that time saving and 24 hours availability features are important for the adoption of internet banking. Their study based on analysis of data relating to 176 respondents who still work in Cumhuriyet University as academic and managerial staff. The results showed that due to security problems, internet banking is not common among educated people and not expected to show that much progress. Likewise, Çakmak et al. (2011) concluded that the most significant difference between users and non-users of internet banking is education level. They found that the most important factors are, time saving, being user friendly and less costly for customer preferences.

Okumuş et al. (2010) stated that banks have three different groups of customers based on their attitudes towards internet banking which are named as the users of internet banking, close to the internet banking and far to the internet banking customers. The customers in each group have different demographic characteristics in Turkey. Additionly, they mentioned that customers' attitudes may vary in time at internet banking areas.

Bayrakdaroğlu (2012) analyzed the relationship of the demographic characteristics of customers and identified factors affecting the usage the internet banking services. The data is obtained from 5 different provinces in the Aegean region in Turkey. Findings of this study revealed that privacy and security issues affect the adoption of internet banking. Identically, Barışık and Temel (2007) measured e-user's knowledge of securiy. They found that internet banking provide cost savings and time saving but e-user have lack of knowledge about internet banking and security issues. Likewise Usta (2005) revealed that the most influential factors of internet banking are security anxiety, difficulties in using and lack of knowledge about the benefits of internet banking.

Durer et al. (2009) made a questionnaire on 535 people and they detected that customers are mainly having problems with speed of the bank websites. They also stated that bank's call desk and supporting services are not sufficient.

As distinct from other studies, Eroğlu and Yücel (2012) investigated corporate customer perception towards internet banking usage in Turkey. They made a survey with 100 specific firms. The results represented that internet banking provides time and cost saving to corporations. Specially regulation and law supports the internet banking in Turkey and it provides a rising in the usage of internet banking services by the firms. The other different study, Aykac and Kervenoael (2008) analyzed internet banking customers of two leading banks, Garanti and Akbank.

Chapter 3

HISTORY AND GROWTH OF INTERNET BANKING

3.1 History of Internet Banking

The evolution of internet banking has emerged with telephone banking during 1980's. There were studies and programs on the concept of home banking. At the early stages of the process, fax and phones were used for electronic banking rather than the computers and internet. The first internet banking application is NetBank in the United States follwed by CitiBank and WellsFargo who has started offering internet banking service to their customers in 2001.

Private banking developed in the 1990's in Turkey after the liberalization of the financial markets and as a consequence competition increased in the Turkish banking sector. After this period, the commercial banks have recognized the importance of technology for factor of competitive advantage.

Is Bank is the first Turkish bank who has offered online banking services by Automated Teller Machines in 1987. Again Is Bank put internet banking service into action during 1987 and followed by Garanti Bank. Nowadays, almost all banks offers the internet banking service at a wide range in Turkey.

The improving technology changes the traditional bank operations as well as the customer behaviours while doing their banking transactions. Finally with the

changing world, banks had to follow new technologies and create new service channels for keeping the existing customers, attracting new customers and customer satisfaction.

3.2 Growth of Internet Banking

3.2.1 World Wide Growth in Internet Banking

The evolution of new technology has created new ways of doing business. Specially internet is one of the biggest service for the banking sector. Those innovations provide chance to do transactions easily, saving time and cost to customers while doing their banking transactions.

Internet banking has been emerged as an efficient tool in order to improve the efficiency of the banking transactions and an additional channel to distribute the bank's services to the customers who benefit from the convenience offered by the amalgamation of technology and effective service provision. (Jose, 2010)

The growth of online banking consumers is 63% across South Korea, Hong Kong, Singapore, China and Taiwan in the second half of 2001. The total internet banking population for this region has increased by 4 million in one year (Sarlak and Hastiani, 2011).

Global Industry Analysts announced the global reports on internet banking market. Customer base for internet banking service is projected to reach 657.2 million by the year 2015 in the world. The adoption of internet banking services consumers is affected by factors such as quality and convenience of service, income and awareness levels of consumers. Internet Banking customers in the United States and the United Kingdom constitute the largest users of internet banking services across the world. The internet banking customers based in India is expected to witness a rapid growth to reach 31.5 million by 2012. (Global Strategic Business Report, 2010)

Recently, as the usage of computers and internet are increasing, the number of internet banking users are increasing as well. Specially, as the banks provide lower costs for online transactions, the number of online banking transactions are growing rapidly. Moreover, this trends continue with the usage of mobile banking applications, new web interfaces, use of internet banking in social media websites and safeguards at online banking transactions.

3.2.2 Growth of Internet Banking in Turkey

Most business sectors are affected by the spread of the internet all over the world, like the banking sector. Especially in the banking services, the absence of a product to be delivered to the customer physically has increased the availability of the internet in the world and Turkey.

Banks developed the bank websites and gives information about services and products to their customers at basic level of internet banking. At enhanced level of internet banking, customers can access to their accounts and transfer funds to the other accounts. To sum up, internet banking customers can do all banking transactions except cash withdrawals and deposits via internet.

Nowadays, there are two different ways of internet banking. First, banks provide a service via physical branches also internet branches. For instance, in Turkey Is Bank give a service by physical branches and also internet branches with website. Second,

banks provide all services through internet banking without any physical branches. To illustrate, Enpara.com provide banking services at only digital channels via website. According to Enpara.com, the bank website should be easy, plain and simple emphasis on their products and services for attracting customers to digital banking in Turkey. Moreover, Deniz Bank opened first facebook bank branch through world in 2012. Deniz Bank customers who has a Facebook account can transfer money everytime and manage their daily agenda by monitoring their credit card, deposit and credit accounts. More than 150,000 people used this application in Turkey.

| | Retail Internet Banking | | | |
|----------------|-------------------------|---------------------------------------------|----------------------------|--|
| Period | Registered once | Registered at least one at last one year | Number of active customers | |
| September 2012 | 21,653,109 | 13,034,921 | 8,975,124 | |
| December 2012 | 22,610,971 | 13,883,544 | 9,629,597 | |
| March 2013 | 24,012,286 | 14,654,179 | 10,246,147 | |
| June 2013 | 25,313,204 | 15,706,945 | 10,468,199 | |
| September 2013 | 26,588,267 | 15,546,148 | 10,860,801 | |

Table 1. Number of internet banking customers in Turkey

Source: Bank Association of Turkey Website Statistics (2013) http://www.tbb.org.tr

Banks Association of Turkey published information of internet banking statistics consisting of 16 banks in Turkey at September 2013. According to statistics, active customers using internet banking increased by 1 million 985 thousand people in the last one year.

As shown in Table 1, the number of customers who are registered once to internet banking system and login to their accounts once is 26,588,267 at September 2013.

The number of customers who are logined to their accounts during the last one year is about 15,546,148 till September 2013. The number of active users are almost 10,860,801 and the number of the internet banking users is expected to exceed 25 million in the next 5 years in Turkey.

Chapter 4

FEATURES OF INTERNET BANKING

4.1 The Services Offered by Internet Banking

Technological advances provides convenience, diversification, increased competition and the acquisition of customer satisfaction efforts to speed up internet banking services. Nowadays, bank users can do almost all branch transactions via internet banking. Çakmak, Güneşer and Terzi (2011) listed the internet banking transactions in detail as :

- Account balance and statement processing,
- Money transfers and payments,
- Transfers between the client's own accounts,
- Transfer to other bank accounts,
- Transfer of foreign currency abroad,
- Transfer to the investment deposit account,
- Transfer to the investment account deposits,
- Bond payments,
- Social security premium payments and tax payments,
- Motor vehicle tax and traffic ticket payments,
- Credit card debt payments,
- Credit card cash advance withdrawal,
- Credit card statements sent via e-mail,

- Virtual card transactions,
- Foreign exchange transactions,
- Investment transactions,
- Government bond transactions,
- Treasury bills transactions,
- Mutual fund purchase and sale transactions,
- Foreign investment fund operations,
- Fund buying and selling orders tracking,
- Equity transactions,
- Stock purchase and sale,
- Purchase and sale orders tracking,
- Account opening procedures,
- Export processing instruction,
- Invoice payment order.

4.2 Advantages of the Internet Banking

4.2.1 Advantages of Internet Banking for Banks

Internet banking provides many benefits to banks. The main advantages to banks are cost savings and increasing in the efficiency of the transaction. Online banking allowed banks to reduce costs of their operations. Cost saving can be realized through less reliance on manual operations and calling centers. Internet banking allows banks to reduce costs and provide the following scenarios:

- Internet banking will allow banks to reduce customer service staff.
- Electronic payment will replace checks and costs of processing these checks will decrease.

- E-mails will replace mails, and electronic applications will replace paper ones.
- Consumers can open new account online, in addition they can apply for financial services from their homes and the result will be less data entry by the bank's personnel.

The other advantages of internet banking for the banks:

- Acquisition of new customers and increase of sales,
- The use of the website to advertise and sell financial products and services,
- Development of new products and services through internet banking,
- Retention of customers,
- Reach more customers via internet banking,
- Reduce density in branches,
- Reduce banking operation costs,
- Faster response to the market assessment,
- Ease of the marketing of product and customer relationship opportunities,
- The provision of more effective customer service,
- Removed out of the traditional banking areas of banking services,
- Increasing the customer loyalty,
- Strengthening the bank brand image,
- Growth market penetration the internet banking service opportunity the access around the world.

Bank should monitor the developments of internet banking around the world for maintaining their presence in the banking sector and complying the competitive advantage. In addition, banks should regulate their services continuously and improve strategy based on the technology and innovations with new requirements.

4.2.2 Advantages of Internet Banking for Customers

Internet banking has several advantages for bank customers perspectives. The most important advantage is that the customer avoids traveling to and from a bank branch. Internet banking provides saving time and money.

The advantages of internet banking from customer point of view can be listed as follows:

- Speed of banking transaction,
- Minimize the use of traditional branch banking,
- Reduce cost of physical branch banking,
- Raised attainability and time saving banking processing can be made all hours a day.

Banks offers internet banking services for 24 hours a day, no weekends and no vacations. For that reason, clients can access, modify and conduct their banking activities at any time they want with no delays. The presence of large number of computers connected to the internet has allowed customers to conduct their banking activities from their home, office or even public places. On average it was found that internet banking transaction costs are much lower than conducting the same transaction traditionally. Internet banking allows users to conduct their banking activities almost from any place where a computer is available; therefore users are allowed to save their travelling costs. In addition, they can save money by decreasing the postage costs and government charges. In traditional banking activities, the

procedure is to ask the bank to conduct transactions and then the bank will act on behalf of the customer. Customers are able to customize their banking site in the format they want. If available, they can customize their site to provide the information they want and they control how those information are shown, display particular product of their interest. As they learn how to use online banking, consumers can conduct their banking activities in a relatively shorter time compared to that time needed to visit their physical branch (Zakaria Jado Zakario,2004).

4.3 Disadvantages of the Internet Banking

4.3.1 Disadvantages of Internet Banking from Bank Point of View

The results of Gartner analyst showed that 10 % of total information budget by the financial firms have been spent in risk management products and services. The analysts consider that in 2006, the risk management will continue to situate itself in the top of the priority lists of the companies from the financial sector. And as this subject becomes more important, the responsibility to build some risk management strategies is attributed to a higher level of the organization's management. Thestrategic responsibility is shifted from the individual department's level to the corporation's level. Although for the financial companies the risk is becoming an element that needs to be kept under control under any circumstances, in the case of implementation of some information technology projects, risk management becomes a key to success. The risk may come from the direction of businesses, people or information technology elements. While certain risk elements are obvious, others are more difficult to identify (Octavian and Daniela, 2006).

Some disadvantages of internet banking can be listed as below as stated by Zakaria Jado Zakario (2004).

- **Transaction Risk:** Transaction risk is the current and prospective risk to earnings and capital arising from fraud, error, and the inability to deliver products or services, maintain a competitive position, and manage information. A high level of transaction risk may exist with Internet banking products, particularly if those lines of business are not adequately planned, implemented and monitored.
- **Reputation Risk:** Reputation risk is the current and prospective impact on earnings and capital arising from negative public opinion. A bank's reputation can be damaged by internet banking services that are poorly executed or otherwise alienate customers and the public. Well designed marketing, including disclosures, is one way to educate potential customers and help limit reputation risk.
- Strategic Risk: Strategic risk is the current and prospective impact on earnings or capital arising from adverse business decisions, improper implementation of decisions, or lack of responsiveness to industry changes. Management must understand the risks associated with Internet banking before they make a decision to develop a particular class of business.
- Credit Risk: Credit risk is the risk to earnings or capital arising from an obligor's failure to meet the terms of any contract with the bank. Internet Banking provides the opportunity for banks to expand their geographic range. In dealing with customers over the internet, it is difficult to understand the willingness of the customer to pay the debt when there is an absent of any personal contact.
- Liquidity Risk: Liquidity risk is the risk to earnings or capital arising from a bank 's inability to meet its obligations when they come due without incurring

unacceptable losses. Liquidity risk includes the inability to manage unplanned changes in funding sources. Internet banking can increase deposit volatility from customers. Increased monitoring of liquidity and changes in deposits and loans may be warranted depending on the volume of Internet account activities.

- Foreign Exchange Risk: Foreign exchange risk is present when a loan or portfolio of loans is denominated in a foreign currency or is funded by borrowings in another currency. Banks may be exposed to foreign exchange risk if they accept deposits from non-U.S. residents or create accounts denominated in currencies other than U.S. dollars. Appropriate systems should be developed if banks engage in these activities.
- **Price Risk:** Price risk is the risk to earnings or capital arising from changes in the value of traded portfolios of financial instruments. Banks may be exposed to price risk if they create or expand deposit brokering, loan sales or securitization programs as a result of Internet banking activities. Appropriate management systems should be maintained to monitor, measure and manage price risk if assets are actively traded.
- Interest Rate Risk: It is the risk to earnings and capital arised from the fluctuating interest rates. Internet banking can attract deposits, loans and other relationships from a larger pool of customers. Greater access to customers forces managers to maintain appropriate asset liability management systems, including the ability to react quickly to changing market conditions.

4.3.2 Disadvantages of Internet Banking from Customer Point of View

As there are many advantages of internet banking for customers, there are disadvantages as well. Customer must have some extra requirements for the purpose of using the internet banking services. There are personel computer with a browser, login name and password, electronic personal account, credit slip special software and network connection. Moreover, users should know how to use computer and internet banking services also know how to protect their accounts. In addition, there is no opportunity for direct communication between users and bank staffs.

Another disadvantage is customers should have reliable computer network system because if there is any mistake at connection, users can not access their accounts and their process may not be valid at bank system. Furthermore, banks upgrade their websites periodically, adding new features at websites or changing external appearance of the website and the menu properties. Thus, some clients are having difficulties in adapting to the new version of bank website.

Perceived risk was one of the major factors affecting consumer adoption in online banking services (Polatoglu and Ekin, 2001). Howcroft et al.(2002) found that the principal characteristic is inhibit online banking adoption are security and privacy.

Probably the greatest challenge faced by customers from internet services is the issue of customer safety and security. The internet environment is open to fraud and identify theft in which sensitive private information about businesses and individuals is stolen by unauthorized persons and used to run up large credit card bills or to ravage the reputation of victims. Tighter risk control procedures are likely to be more costly to internet service providers than what it is in common use today and may provide a significant advantage for the largest financial firms, which can afford to install and maintain more complex customer ID procedures. Clearly, customer privacy and account security are major issues that will shape the future expansion of internet provided financial services (Rose and Hudgins, 2010).

4.4 Influencing Factors of Internet Banking Adoption

According to similar studies, the factors affecting the adoption in internet banking varies towards different markets. The main factors of adopting internet banking are convenience, security, confidentiality, ease of usage, accessibility and speed of connection, cost of connections and computer equipment, willingness to accept change and innovation, ease of navigation on bank's website and the time savings realized.

Barriers for adoption of internet banking factors are a lack of awareness of internet banking and its benefits, lack of trust on security and privacy, inadequate knowledge of service and no online support in case of break-down, difficulty during first time usage, difficult initial set up procedure, restrictive work place access during day time and loss in personal relationship in banker-customer relations (Kassean, Gungaphul and Murughesan, 2012). Likewise Dixit and Datta (2010) specified that privacy and security are the most influencing factor at internet banking area. The importance of security and privacyfor the acceptance of internet banking has been noted in many banks study and foundthat people have weak understanding of internet banking, although they are aware about risk (Dixit and Datta, 2010). The diversity of services offered by internet banking causes increasing the number of internet banking customers. A better designed and more user friendly website increases the time spent on the web page. As expected, time is the most important positive affecting factor.

On the other hand, Durer et al. (2009) defined the factors affecting internet banking negatively as difficulties in usage, cost of internet connectivity, security and privacy concerns, foreignness against technological products and some traditional habits.

According to Durer et al. (2009), risk of fraud, the lack of knowledge about internet banking, the lack of face to face contact, insufficient support for internet banking by bank staffs adversely influence the customer adoption process to internet banking services.

4.5 Comparison the Internet Banking and the Other Banking Channels

Mobarek (2007) stated that the most favored distribution channel is ATM, second one is internet banking, the third preference is mobile banking and the final preference is traditional branch banking.

Internet banking works like traditional banking but the main difference is that customers can access their accounts and information, making payments and transactions using their computer. The large banks had many branches and small banks had few branches, customers used traditional branch banking until 1980. Nowadays, internet banking segment growing up and the branch banking segment is shrinking also shifting to electronic banking. Mobile and phone banking, ATM and internet banking are expected to be more popular than traditional branch banking. The reason for this, they have more advantages as compared to branches.

| 1401 0 2 .00m | barison of the bank | | | |
|----------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| | Branch | Mobile Banking | ATM | Internet Banking |
| Customer Access | Restricted as geograqphically | Unlimited as geographical but transactions are limited | Process are limited | Unlimited as geographical,All operations can be done except withdrawals and deposit |
| Cost of Operation | 1,07 USD | 0,54 USD | 0,27 USD | 0,02 USD |
| Propose appropriate products to customers | Limited | Limited | Limited | Recommed appropriate products to customers via website |
| The convenience of the customer access | Low (Customer have to go to bank) | High (Customer can connect via phone) | Medium (Customer can use the nearest ATM) | High (Customer can access via PC) |
| Transaction Security | High | High (Transaction with Password) | Medium (Possibility of the card being stolen) | Medium (Possibility of the password being stolen by hackers) |

Table 2.Comparison of the bank's distribution channels

Source: Shanthi GOPALAKRISHNAN, Daniel WISCHNEVSY and Fariborz DAMANPOUR,"A Multilevel Analysis of Factors Influencing The Adoption of Internet Banking", IEEE Transactions on Engineering Management, Vol.50, No.4, 2003

Obviously, internet banking has the advantage in terms of cost in Turkey as in the world. Therefore, banks give more importance the development of internet banking than the other channels. Specially, Turkish people often use the internet and social media platforms in these days. To illustrate, Akbank announced that it has invested \$120 million for internet banking services in 2012.

Chapter 5

RESEARCH METHODOLOGY

This chapter represents the methodology used in this study. In this context, informations is given about the model of conceptual, hypothesis, questionnaire design, the development of data collection tool, data collection and research methodology.

5.1 Conceptual Model

Conceptual model is a descriptive model based on qualitative assumptions about its elements, their inter-relationships and system boundaries. Conceptual models use diagrams, narratives and tables to represent a set of causal relationship in a simplified manner. In this study, the model was used in terms of the perception of cost, awareness, security, ease of use, accesibility towards the customer satisfaction of the internet banking clients in the Turkish Internet Banking System. The conceptual model was used in the following Figure 1:

INTERNET BANKING FACTORS



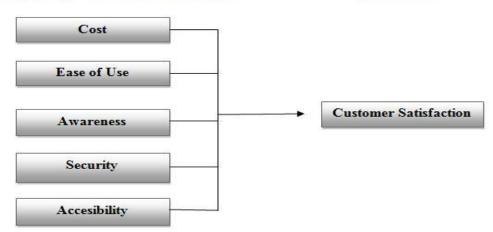


Figure 1. Conceptual Model

5.2 Hypothesis Testing

Purpose of this study is to investigate the customer perception towards the internet banking services and to identify the factors affecting the usage of internet banking based on customer satisfaction in Turkey. The hypothesis are given below:

H1: There is a relationship between educational level and the usage of internet banking.

H2 : Cost factor positively influences the customer satisfaction.

H3 : Ease of use factor positively influences the customer satisfaction.

H4 : Awareness factor positively influences the customer satisfaction.

H5 : Security factor positively influences the customer satisfaction.

H6 : Accesibility factor positively influences the customer satisfaction.

5.3 Questionnaire Design and Data Collection

Main objective of this study is to observe the customers perceptions towards internet banking. Thus, data for paper survey is collected from individual bank customers in the city of Izmir in Turkey. A sample of 245 clients of banks completed questionnaires concerning the customers perception towards internet banking services.

The questionnaire is consisted of three parts including part A, part B and part C. Part A is related with customer's demographic characteristics such as gender, age, marital status, occupation, income, and educational level and area of living. Part B is related with customer's thoughts and habits about internet banking. In addition, two questions are used for detecting the reasons of customer about using or not using the internet banking in Part B. Part C is concerned with the main effective factors of internet banking such as ease of use, cost, awareness, accesibility, safety and privacy.

In addition, part C has been prepared according to five point Likert scale model from strongly disagree to strongly agree. (1-Strongly Disagree 2-Disagree 3-Not Certain 4-Agree 5-Strongly Agree).

Thirty questions are asked in the survey in order to collect data about the bank customers. When preparing the questionnaire in this study, attention has been to be understandable of the questions and not be greater than the number of questions for survey respondents not tightened and to give reliable answers. English and Turkish version of survey of this study is added in the Appendix A and B of thesis.

5.4 Methodology

After data was obtained from 245 respondents, SPSS 18 has been used for the evaluation. The SPSS (Statistical Package for the Social Sciences) is a computer software that provides statistical analysis of data and tables of statistics.

Firstly, conceptual model was created. Then, reliability analysis, regression analysis, frequency and descriptive analysis were conducted in SPSS 18 computer software. According to the obtained results, questionnaire have been evaluated. Finally, these evaluation are discussed in terms of customer perceptions towards the internet banking and interaction with bank managers in Turkey.

Chapter 6

SURVEY RESULTS AND FINDINGS

This part explains the analysis of results and interpretations on statistic results from the research that include a Cronbach's Alpha analysis, frequency analysis of respondents, descriptive statistics and multiple regression analysis. First of all, frequency analysis of demographic characteristics will be explained.

6.1 Frequencies Analysis

6.1.1 Distribution of Clients by Demographic Characteristics

The distribution of the demographic characteristics of the summary is given below:

- 54,3 % Male, 45,7 % Female.
- 42,0 % Married, 58,0 % Single.
- 10,6 % Primary Education, 22,4 % High School, 62,4 % University, 4,5 % Master/PhD.
- 29,4 % aged 18-24 years, 30,2 % aged 25-35 years, 16,3 % aged 36-44 years, 18,0 % aged 45-54 years, 5,3 % aged 55-64 years, 0,8% aged 65 and over years.
- Distribution of the clients by monthly income: 29,8 % 1000 TL and under, 25,3 % 1000 TL-1500 TL, 13,9 % 1500 TL-2000 TL, 17,1 % 2000 TL-3000 TL, 7,8 % 3000 TL-5000 TL, 6,1 % 5000 TL and over.
- 228 respondents live in a city, 7 respondents live in a town and 10 respondents live in a village.

- 39,2 % Private Sector, 11,8 % Public Sector, 9,8 % Retired, 33,1 % Student,
 6,1 % Does not work.
- 39,6 % work with one bank, 29,4 % work with two banks, 16,3 % work with three banks, 14,7 % work with more than four banks.
- 53,5 % were Internet banking users and 46,5 % were nonusers.

| Gender | Frequency | Percent | Marital Status | Frequency | Percent |
|----------------------|-----------|---------|------------------------|-----------|---------|
| Male | 133 | 54,3 | Married | 103 | 42,0 |
| Female | 112 | 45,7 | Single | 142 | 58,0 |
| Total | 245 | 100,0 | Total | 245 | 100,0 |
| | | | | | |
| Age | Frequency | Percent | Monthly Income (TL) | Frequency | Percent |
| 18-24 | 72 | 29,4 | 1000 and under | 73 | 29,8 |
| 25-35 | 74 | 30,2 | 1000-1500 | 62 | 25,3 |
| 36-44 | 40 | 16,3 | 1500-2000 | 34 | 13,9 |
| 45-54 | 44 | 18,0 | 2000-3000 | 42 | 17,1 |
| 55-64 | 13 | 5,3 | 3000-5000 | 19 | 7,8 |
| 65 and above | 2 | 0,8 | 5000 and over | 15 | 6,1 |
| Total | 245 | 100,0 | Total | 245 | 100,0 |
| | T | T | | 1 | 1 |
| Educational Level | Frequency | Percent | Occupation | Frequency | Percent |
| Primary Education | 26 | 10,6 | Private Sector | 96 | 39,2 |
| High School | 55 | 22,4 | Public Sector | 29 | 11,8 |
| University | 153 | 62,4 | Retired | 24 | 9,8 |
| Master/PhD | 11 | 4,5 | Student | 81 | 33,1 |
| Total | 245 | 100,0 | Does not work | 15 | 6,1 |
| | | | Total | 245 | 100,0 |

Table 3. Demographic characteristics of Sample

6.1.2 Customer's Informations Related to the Use of the Internet Banking

As can be seen at Table 4, 148 respondents mostly use the ATM channel and only 7 respondents mostly use the mobile banking channel. The most common uses internet

banking and branch banking channels are equal. According to answers, the most common uses internet banking and branch banking channels are same level.

| | Frequency | Percent | Valid | Cumulative |
|----------|-----------|---------|---------|------------|
| | | | Percent | Percent |
| Internet | 45 | 18,4 | 18,4 | 18,4 |
| ATM | 148 | 60,4 | 60,4 | 78,8 |
| Mobile | 7 | 2,9 | 2,9 | 81,6 |
| Branch | 45 | 18,4 | 18,4 | 100,0 |
| Total | 245 | 100,0 | 100,0 | |

Table 4. Most commonly used banking channel

Table 5. Education level and the usage of bank's distribution channels

| Educational | | | | Valid | Cumulative |
|-------------|----------|-----------|-------|---------|------------|
| Status | Channel | Frequency | % | Percent | Percent |
| | ATM | 9 | 34,6 | 34,6 | 34,6 |
| Primary | Mobile | 1 | 3,8 | 3,8 | 38,5 |
| Education | Branch | 16 | 61,5 | 61,5 | 100,0 |
| | Total | 26 | 100,0 | 100,0 | |
| | Internet | 8 | 14,5 | 14,5 | 14,5 |
| High | ATM | 27 | 49,1 | 49,1 | 63,6 |
| School | Mobile | 1 | 1,8 | 1,8 | 65,5 |
| | Branch | 19 | 34,5 | 34,5 | 100,0 |
| | Total | 55 | 100 | 100,0 | |
| | Internet | 32 | 20,9 | 20,9 | 20,9 |
| | ATM | 107 | 69,9 | 69,9 | 90,8 |
| University | Mobile | 4 | 2,6 | 2,6 | 93,5 |
| | Branch | 10 | 6,5 | 6,5 | 100,0 |
| | Total | 153 | 100 | 100,0 | |
| | Internet | 5 | 45,5 | 45,5 | 45,5 |
| Master/PhD | ATM | 5 | 45,5 | 45,5 | 90,9 |
| | Mobile | 1 | 9,1 | 9,1 | 100,0 |
| | Total | 11 | 100 | 100,0 | |

Table 5 compares the most used banking channel and educational levels. As shown in the table, 61,5 % of primary school graduates mostly use the branch banking channel also they do not use the internet banking. 20,09 % of university graduates

prefer internet banking except ATM. Additionly, the Chi-Square Test was applied in terms of measure the relationship between education level and usage the internet banking. As we can see Table 6 the relationship statistically significant because significant values are 0.000. This means that there is a meaningful relationship between the education level and usage the internet banking in Turkey.

| | | | Asymp. Sig. |
|--------------------|--------|----|-------------|
| | Value | df | (2-sided) |
| Pearson Chi-Square | 66.608 | 9 | .000 |
| Likelihood Ratio | 64.235 | 9 | .000 |
| Linear-by-Linear | 54.221 | 1 | .000 |
| Association | | | |
| N of Valid Cases | 245 | | |

Table 6: Chi-Square Test for Education Level and Usage of Internet Banking

Consequently when educational level increases, the use of electronic banking channels are increasing. Therefore, hypothesis H1 is accepted in this research.

| | Frequency | Percent | Valid | Cumulative |
|-------|-----------|---------|---------|------------|
| | 1100,0000 | | Percent | Percent |
| Yes | 131 | 53,5 | 53,5 | 53,5 |
| No | 114 | 46,5 | 46,5 | 100,0 |
| Total | 245 | 100,0 | 100,0 | |

Table 7. Usage of internet banking

As can be seen at Table 7, while 113 respondents are using the internet banking services, 114 respondents do not prefer the internet banking. In addition as can be seen below the Table 8, 30,6 % of respondents use internet banking since less than one year. 20,8 % of respondents use the internet banking since one or two years. Respondents who never use the internet banking did not answer question about duration of usage the internet banking.

| | Frequency | Percent | Valid | Cumulative |
|-----------|-----------|---------|---------|------------|
| | | | Percent | Percent |
| Less than | 75 | 30,6 | 45,5 | 45,5 |
| 1 year | | | | |
| 1-2 | 51 | 20,8 | 30,9 | 76,4 |
| 2-3 | 21 | 8,6 | 12,7 | 89,1 |
| 4-5 | 12 | 4,9 | 7,3 | 96,4 |
| More than | 6 | 2,4 | 3,6 | 100,0 |
| 5 years | | | | |
| Total | 165 | 67,3 | 100,0 | |
| Missing | 80 | 32,7 | | |
| Total | 245 | 100,0 | | |

Table 8. Duration of the usage the internet banking

According to Table 9, 22 % of respondents use the internet banking weekly, 18,8 % of respondents monthly, 13,5 % of respondents daily and 6,1 % of respondents yearly. However, 39,6 % of respondents never use the internet banking.

| | Frequency | Percent | Valid | Cumulative |
|---------|-----------|---------|---------|------------|
| | | | Percent | Percent |
| Daily | 33 | 13,5 | 13,5 | 13,5 |
| Weekly | 54 | 22,0 | 22,0 | 35,5 |
| Monthly | 46 | 18,8 | 18,8 | 54,3 |
| Yearly | 15 | 6,1 | 6,1 | 60,4 |
| Never | 97 | 39,6 | 39,6 | 100,0 |
| Total | 245 | 100,0 | 100,0 | |

Table 9. Frequency of the usage of internet banking

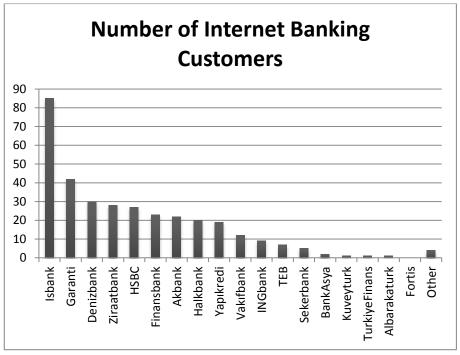


Figure 2: Which Banks are you using for the Internet Banking Service?

We asked to respondents about the banking institution they are working with. Respondents could choose more than one bank for this question. According to results, Isbank appeared to be the mostly used internet bank in the Turkish banking sector. This result was expected because Isbank is the first institute to start using the internet banking service. Secondly, an innovative bank Garanti was commonly used bank. Denizbank opened first facebook bank branch of the world and Denizbank was the third for use of internet banking at this research.

| | Number of |
|---------------|-----------|
| Name of Bank | Customers |
| Isbank | 85 |
| Garanti | 42 |
| Denizbank | 30 |
| Ziraatbank | 28 |
| HSBC | 27 |
| Finansbank | 23 |
| Akbank | 22 |
| Halkbank | 20 |
| Yapıkredi | 19 |
| Vakıfbank | 12 |
| INGbank | 9 |
| TEB | 7 |
| Sekerbank | 5 |
| BankAsya | 2 |
| Kuveyturk | 1 |
| TurkiyeFinans | 1 |
| Albarakaturk | 1 |
| Fortis | 0 |
| Other | 4 |

Table 10. The preferred banks for internet banking by customers

Table 11. Which features of internet banking do you use?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------------------------------------------------|-----------|---------|------------------|-----------------------|
| Pay the bills | 54 | 22,0 | 33,5 | 33,5 |
| Pay rent and so on | 21 | 8,6 | 13,0 | 46,6 |
| Check the account | 49 | 20,0 | 30,4 | 77,0 |
| Transfer funds between accounts | 21 | 8,6 | 13,0 | 90,1 |
| Requesting credit card and credit card transactions | 13 | 5,3 | 8,1 | 98,1 |
| Purchase and sale of foreign exchange | 2 | ,8 | 1,2 | 99,4 |
| Stock Transactions | 1 | ,4 | ,6 | 100,0 |
| Total | 161 | 65,7 | 100,0 | |
| Missing System | 84 | 34,3 | | |
| Total | 245 | 100,0 | | |

Table 11 shows that the most frequently used transactactions at internet banking by the customers. Firstly, 22% of respondents preferred the internet banking for pay the bills and 20% of respondents are using the internet banking in order to check their accounts. Finally, the least preferred service was stock transactions by the respondents. Additionly, 84 non-internet banking users did not answer because they never make a transactions regularly via internet banking channel.

| | | | | <u> </u> |
|-------------|-----------|---------|---------|------------|
| | Frequency | Percent | Valid | Cumulative |
| | | | Percent | Percent |
| Yes I am | 141 | 57,6 | 73,4 | 73,4 |
| satisfied | | | | |
| No I am not | 51 | 20,8 | 26,6 | 100,0 |
| satisfied | | | | |
| Total | 192 | 78,4 | 100,0 | |
| Missing | 53 | 21,6 | | |
| System | | | | |
| Total | 245 | 100,0 | | |

Table 12. Are you satisfied with your bank's internet banking services?

Of the 245 respondents, 141 respondents are satisfied while 51 respondents are not satisfied with their bank's internet banking services. As can be seen at Table 12, 53 respondents did not answer for this question because of they never try to use any features of internet banking.

6.1.3 Reasons using and not using to Internet Banking

| Reasons | Frequency | Percent |
|-----------------------------|-----------|---------|
| Save time | 98 | 40,0 |
| 24 hours availability | 77 | 31,4 |
| Banking transaction is easy | 22 | 9,0 |
| Transaction cost is cheap | 17 | 6,9 |
| Be technologically | 16 | 6,5 |
| Security | 13 | 5,3 |
| Curiosity | 8 | 3,3 |

Table 13. The reasons for using the internet banking.

Table 13 shows that 131 respondents are using the internet banking services and they answered reasons to use. Respondents were allowed to choose more than one option fort his question. Their reasons for using the internet banking services respectively; 40% save time, 31,4% make transactions 24 hours, 9% operations be easy, 6,9% to be cheaper, 6,5% be technologically, 5,3% be safe and finally 3,3% curiosity.

Table 14. The reasons for not using internet banking.

| Reasons | Frequency | Percent |
|----------------------------------------------------------|-----------|---------|
| Bank officer should be in front of me during the process | 21 | 8,6 |
| The idea of making an incorrect operation | 53 | 21,6 |
| Not have sufficient knowledge about internet banking | 29 | 11,8 |
| The absence of the habit of using the internet | 28 | 11,4 |
| Be difficult to use internet banking | 9 | 3,7 |
| Not safe | 40 | 16,3 |

Table 14 shows that 114 respondents are not using the internet banking services and the answered reasons to not use. Respondents were allowed to choose more than one option for this question. According to 53 nonusers, "the idea of making an incorrect operation" was the for most reason to not use the Internet Banking. The second important reason was "Internet Banking is not safe". The most unimportant reason was "be difficult to use internet banking".

6.2 Cronbach's Alpha Analysis

Coefficient alpha is one name for the Cronbach alpha reliability estimate. Cronbach alpha is the most commonly analysis, reported reliability test for multiple likert survey questions and measure internal consistency. According to the analysis results alpha is evaluated as in the following Table 15 :

| Tuble 15. Cronouch 5 uiphu theory | | | | |
|-----------------------------------|---------------------------------|--|--|--|
| Cronbach's alpha | Internal consistency | | | |
| $\alpha \ge 0.9$ | Excellent (High-Stakes testing) | | | |
| $0.7 \le \alpha < 0.9$ | Good (Low-Stakes testing) | | | |
| $0.6 \le \alpha < 0.7$ | Acceptable | | | |
| $0.5 \le \alpha < 0.6$ | Bad | | | |
| α < 0.5 | Unacceptable | | | |

Table 15. Cronbach's alpha theory

Source: George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.). Boston: Allyn & Bacon

This survey has 13 questions of five-point Likert scale at part C and Croanbach's alpha analysis applied on this questions. Croanbach's alpha value was found to be 0.66 for Likert questions and this value is acceptable in SPSS reliability statistics.

In addition, for each likert question the reliability test was separately performed. Consequently, only question 23 was below 0.5 so it was removed and it was not evaluated in terms of the quality of the survey. In this study, reliability analysis of the detailed table are given in Appendix C.

6.3 Descriptive Analysis

The respondents were asked to express their degree of agreement against each question. In each section of the questionnaire, Five-Point Likert scale is used for each statement ranging from "1-Strongly disagree" to"5-Strongly agree". The results are shown following the Table 16.

Table 16. Descriptive statistics

| Table 10. Descriptive statistics | | | | | Std. |
|----------------------------------|-----|------|------|--------|-----------|
| | Ν | Min. | Max. | Mean | Deviation |
| 18-Internet banking service is | 245 | 1,00 | 5,00 | 3,9714 | 1,04959 |
| less costly than other banking | | , | , | , | , |
| services. | | | | | |
| 19-Internet banking | 245 | 1,00 | 5,00 | 3,3755 | 1,20697 |
| transaction procedures are | | - | | - | |
| simple and straightforward. | | | | | |
| 20-Internet banking | 245 | 1,00 | 5,00 | 2,7347 | 1,24755 |
| transactions are complex. | | | | | |
| 21-Use the internet banking is | 245 | 1,00 | 5,00 | 3,3837 | 1,21455 |
| an easy service. | | | | | |
| 22-I am satisfied with internet | 245 | 1,00 | 5,00 | 3,8122 | 1,05458 |
| banking because I do not have | | | | | |
| to go to bank. | | | | | |
| 24-I have information about | 245 | 1,00 | 5,00 | 2,9224 | 1,19686 |
| the internet banking | | | | | |
| transactions. | | | | | |
| 25-Bank officer should be in | 245 | 1,00 | 5,00 | 3,0367 | 1,35905 |
| front of me during the | | | | | |
| process. | | | | | |
| 26-I think, I entered my | 245 | 1,00 | 5,00 | 3,3510 | 1,07087 |
| personal data is protected | | | | | |
| during the process. | | | | | |
| 27-Internet banking is more | 245 | 1,00 | 5,00 | 3,7796 | 1,01646 |
| effective than branch banking | | | | | |
| about time saving. | | | | | |
| 28-It is convenient because it | 245 | 1,00 | 5,00 | 3,9143 | ,89443 |
| eliminates the risk of carrying | | | | | |
| cash. | | | | | |
| 29-Websites are safe that | 245 | 1,00 | 5,00 | 3,1469 | ,92486 |
| offer internet banking services. | | | | | |
| 30-If I have any problem | 245 | 1,00 | 5,00 | 2,9755 | ,99147 |
| about internet banking | | | | | |
| service, Banks provide the | | | | | |
| support. | | ļ | | | |
| Valid N (listwise) | 245 | | | | |

Table 16 shows the degree of agreement with the statements on five point Likert questions. Mean values indicate the average of agreements the expression by

respondents. As can be seen, participants demonstrated a high degree of expression is internet banking is less costly than other banking channels, averaging 3,9714 on the five-point Likert scale. When considering this average, we can say that the cost of internet banking is appropriate for the budget of the customers.

The other high level of expression is internet banking is convenient because it eliminates the risk of carrying cash with averaging 3,9143. Although the risk of carrying cash, mostly customers prefer to use ATM machines for banking transactions. The reason for this, physically can not be used cash money in the internet banking.

Respondents think internet banking is more effective than branch banking with a mean score of 3,7796. However, according to table of distribution channels, branch banking and internet banking are equal about make a banking transaction. 'I have information about the internet banking transactions' has been used in order to measure the importance of customer knowledge about the internet banking. According to results of respondents have enough information about internet banking with degree is 2,9224. Thus, we can say that customers have knowledge about the internet banking transactions and aware this modern banking channel.

The lowest a mean score is 2,7347 with expression of internet banking is complex. In a paralel, the most unimportant reason was difficult to use internet banking with 3,7 % for not using the internet banking. Finally, considering the expression number of 26 with average of 3,3510 could be said that customers rely on their banks about privacy issue at internet banking.

6.4 Regression Analysis

Question 18 was used to represent the cost factor. For the perception of security, number of questions 26 and 27 were averaged and used in regression analysis. Respectively, the number of questions 21, 24 and 27 were used to represent the factors of ease of use, awareness and accesibility in SPSS. The question number of 22 was used for dependent variable or customer satisfaction.

This model has been estimated to examine the significance test for the five factors of internet banking.

Multiple Regression Model:

Multiple regression model whose parameters are identified as follows:

 $Y = A + \beta 1(X1) + \beta 2(X2) + \beta 3(X3) + \beta 4(X4) + \beta 5(X5) + E$

Y=Dependent Variable, "Customer Satisfaction"

A=Intercept or constant value

 β 1=First Coefficient of the independent variable

X1=First independent variable,"Security factor"

 β 2=Second Coefficient of the independent variable

X2=Second independent variable, "Ease of use factor"

 β 3=Third Coefficient of the independent variable

X3=Third independent variable, "Cost factor"

β4=Fourth Coefficient of the independent variable

X4=Fourth independent variable, "Awareness factor"

 β 5=Fifth Coefficient of the independent variable

X5=Fifth independent variable, "Accesibility factor"

E=Standard Error

Multiple Regression Model Results:

In the initial stage of multiple regression model t-ratios and probabilities are given to see if parameters are statistically significant.

Y = 0.390 + 0.189(Security) + 0.415(Ease of use) + 0.171(Cost) + 0.043(Awareness)

+ 0.148(Accesibility) + 0.729

Table 17. Regression analysis results

| Multiple R = 0.729 | R-squared = 0.531 | Adjusted $R = 0.521$ |
|--------------------------|-------------------|----------------------|
| Standard Error = 0.72961 | F = 54.152 | P < 0.001 |

The difference between R square (0.531) and adjusted R square (0.521) is 0.01. This difference (0.01) presentive a positive sign. We can say that when another factor of internet banking add to the this model, there is not significant alteration in a R square value.

Sig.

.127 .045 .000

.001

.398

.013

| Tuble 10. Multiple regression analysis results | | | | | | |
|------------------------------------------------|------|-----------|------|-------|--|--|
| Model | В | Std.Error | Beta | t | | |
| (Constant) | .390 | .255 | | 1.529 | | |
| Security | .189 | .094 | .128 | 2.014 | | |
| Ease of use | .415 | .058 | .445 | 7.210 | | |
| | | | | | | |

.051

.051

.060

.170

.049

.143

3.347

.846

2.491

Table 18. Multiple regression analysis results

.171

.043

.148

Cost Awareness

Accesibility

As it is given in the results, t-value of awaraness factor and probability is not statistically significant for customer satisfaction. There is no relationship between awareness factor and customer satisfaction. This means that customers having knowledge about internet banking transactions does not affect the customer satisfaction. Therefore, Hypothesis H4 is invalid.

As can seen at Table 18, security, ease of use, cost and accesibility variables of the tvalues are bigger than 2. This means that we are 95 % ensure that a important relationships exists four factors.

Security, ease of use, cost and accesibility factor explain 53 % of the variance in the dependent variable or customer satisfaction. The residual percentage of the variance can be clarified by four factors other than awareness factor. Additionly, F ratio (54.152) is statistically significant at 0.01 level.

Moreover Table 18 shows that forecasts the regression coefficients and addition with their t-ratios and probability values. According to regression analysis results we can say that perceptions on securiy, ease of use, cost and accesibility factors are statistically significant also positively influence on customer satisfaction. Therefore, Hypothesis H2, H3, H5 and H6 are accepted while H4 is rejected.

Chapter 7

CONCLUSION AND DISCUSSION

7.1 Conclusion

This study has examined the five factors of internet banking on customer satisfaction and customer perception towards the internet banking in Turkey. The finding of the study indicated factors of cost, ease of use, security and accesibility were statistically significant and positive effects on customer satisfaction while awareness factor was observed that have no effect on customer satisfaction of internet banking.

The other result is about relationship between educational level and usage the internet banking. Customer's education level impact on the use of internet banking. In parallel, Pikkarainen and Karjaluoto and Pahnila (2004) concluded that people with higher education and higher income are more active at internet banking services in Finland. However, Howcroft (2002) found that education level did not have any influence on the usage of internet banking in United the Kingdom. In this study, university graduates have been adopted to internet banking but primary school graduates do not prefer the internet banking. Therefore , banks should take this into consideration and make advertising strategies to cater to people with low levels of education in Turkey.

Most of customers have started to priority to prefer electronic banking instead of traditional or branch banking in Turkey. Specially, customers prefer to use ATM machines. Most of users began to use internet banking over a year ago. According to customer, internet banking is more effective than branch banking about time saving but still internet banking and branch banking are same level about primary uses because some customers have an opinion that 'bank officer should be in front of me during the process'. In addition most important reason for not using the internet banking, 'the idea of making an incorrect operation' ranks first. Therefore, banks should regard the customer support services. The most unimportant reason is 'be difficult to use internet banking'. According to users, the most important reasons for using the internet banking are respectively save time, 24 hours availability, ease of use and be cheap.

In parallel with the statistics of Bank Association of Turkey, the most frequently used transactions are paying bills and checking account at internet banking. The most used banks respectively are Isbank, Garanti and Denizbank for internet banking. Isbank and Garanti are the first Turkish banks who has offered the internet banking services in Turkey. The difference from other banks is the use of social media by Denizbank. Denizbank opened the first facebook branch of the world.

Finally considering that Turkey ranked the fifth among European countries about the internet usage, banks should use the digital media platform for attract the customer and promote their products and services in Turkey.

7.2 Limitations

The sample for this study was based on the respondents of a specific geographical area. The essential limitation of this study is that research has been conducted only in Izmir. Izmir is the third largest city and according to Bank Association of Turkey,

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it is the third city of most used internet banking in Turkey. Research of facilities has allowed to be made a survey at one city because of there are cost and time constraints. In the future, similar studies can be performed in more than one city or different provinces of Turkey and results may differ over time. Especially, studies can be obtained very different results in rural areas or outside the city center.

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APPENDICES

Appendix A) The English Version of Questionnaire 1: Gender?

- : Gender?
 - o Male
 - o Female

2: Marital Status?

- \circ Married
- o Single

3: Educational Status?

- o Primary Education
- o High School
- \circ University
- Master/PhD

4-Age?

- o **18-24**
- o **25-35**
- o **36-44**
- o **45-54**
- o **55-64**
- 65 üstü

5-What is your monthly income range? (Turkish Lira)

- \circ 1000 and under
- o **1000-1500**
- o **1500-2000**
- o **2000-3000**
- o **3000-5000**
- \circ 5000 and over

6-Where you live?

- o City
- o Town
- Village

7-Profession?

- Private Sector
- o Public Sector
- o Retired
- o Student
- Does not work

8-Number of the Banks You Work with?

- o 1
- o 2
- o 3
- 4 and more than 4

9-Which Banking Channel you are using?

- o Internet
- o ATM
- Mobile (Telephone)
- o Branch

10-Do you use internet banking service?

- o Yes
- o No

11-What are the reasons you <u>do not use</u> internet banking service? (You can choose more than one option)

- Bank officer should be in front of me during the process
- The idea of making an incorrect operation
- Not have sufficient knowledge about internet banking
- The absence of the habit of using the internet
- Be difficult to use internet banking
- o Not safe

12-What are the reasons to use internet banking?

(You can choose more than one option)

- o Save time
- 24 hours availability
- Banking transactions are easy
- Transaction cost is cheap
- Be technologically
- o Security
- Curiosity

13-How often do you use internet banking?

- o Daily
- o Weekly
- Monthly
- o Yearly
- o Never

14-How many years of internet banking services do you use?

- Less than 1 year
- o **1-2**
- o **2-3**
- o **4-5**
- More than 5 years

15-Are you satisfied with your bank's internet banking service?

- Yes I am satisfied
- No I am not satisfied

16-Which features of internet banking do you use?

- o Pay the bills
- o Pay rent and so on
- \circ $\,$ Check the account
- o Transfer money between accounts
- Requesting credit card and credit card transactions
- Purchase and Sale of Foreign Exchange
- Stock Transactions

17-Which banks internet banking service do you use?

- o IS BANK
- o AKBANK
- ZİRAAT BANK
- O VAKIFBANK
- o ŞEKERBANK
- GARANTİ BANK
- YAPI KREDİ
- KUVEYT TÜRK
- HALKBANK

- o HSBC
- FİNANSBANK
- o BANK ASYA
- o TEB
- ING BANK
- DENİZBANK
- FORTIS
- TÜRKİYE FİNANS
- ALBARAK TÜRK
- Others (Please write)_____

Please you tick as appropriate for yourself. The meanings of numbers as follows:

| 1-Strongly Disagree | 2-Disagree | 3-Not certain |
|---------------------|-------------------|---------------|
| 4- Agree | 5- Strongly Agree | |

| | 1 | 2 | 3 | 4 | 5 |
|-------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|
| 18-Internet banking service is less costly than other banking services.(Branch,ATM,Mobile Banking) | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 19-Internet Banking Transaction procedures are simple and straightforward. | \bigcirc | \bigcirc | \bigcirc | 0 | \bigcirc |
| 20-Internet Banking Transactions are complex. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 21-Internet banking is easy service. | \bigcirc | Ō | Ō | Ō | Ō |
| 22-I am satisfied with internet banking because I do not have to go to bank. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 23-Banks give enough information about the internet banking service. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 24-I have information about the internet banking transactions. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 25-Bank officer should be in front of me during the process. | \bigcirc | 0 | 0 | 0 | 0 |
| 26-I think,I entered my personal data is protected during the process. | \bigcirc | 0 | 0 | 0 | \bigcirc |
| 27-Internet Banking is more effective than branch banking about time saving. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 28-It is convenient because it eliminates the risk of carrying cash. | \bigcirc | 0 | 0 | \bigcirc | \bigcirc |
| 29-Websites are safe that offer internet banking services. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 30-If I have any problem about internet banking service, banks provide support. | \bigcirc | 0 | 0 | 0 | 0 |

Appendix B) The Turkish Version of Questionnaire

- 1: Cinsiyetiniz?
 - o Bay
 - o Bayan

2: Medeni haliniz?

- o Evli
- o Bekar

3: Öğrenim Durumunuz?

- o İlköğretim
- o Lise
- o Üniversite

o Yüksek Lisans/Doktora

4-Yaşınız?

- 0 18-24
- o 25-35
- o 36-44
- o 45-54
- o 55-64
- o 65 üstü

5-Aylık gelir aralığınız? (Türk Lirası)

- o 1000 altı
- o 1000-1500
- o 1500-2000
- o 2000-3000
- o 3000-5000
- 5000 ve üstü

6-İkamet ettiğiniz yer?

- o Şehir
- o Kasaba
- o Köy

7-Mesleğiniz?

- Özel sektör
- Kamu sektörü
- o Emekli
- o Öğrenci
- o Çalışmıyor

8-Çalıştığınız banka sayısı?

- o 1
- o 2
- o 3
- 4 ve fazlası

9-En çok hangi bankacılık kanalını kullanıyorsunuz?

- o İnternet
- o ATM
- Mobil (Telefon)
- o Şube

10-Bankanızın İnternet bankacılığı hizmetini kullanıyormusunuz?

- o Evet
- o Hayır

11-İnternet bankacılığı hizmetini <u>kullanmıyorsanız</u> nedenleri nelerdir? (Birden fazla şıkkı işaretleyebilirsiniz)

- o İşlem yaparken karşımda mutlaka birini görmek istiyorum
- Hatalı bir işlem yapma düşüncesi
- İnternet bankacılığı hakkında yeterli bilgiye sahip olmama
- İnternet kullanma alışkanlığının olmaması
- İnternet bankacılığı kullanımının zor olması
- o Güvenli olmaması

12-İnternet bankacılığını kullanma nedenleriniz nedir? (Birden fazla şıkkı işaretleyebilirsiniz)

- o Zamandan Tasarruf
- 24 saat ulaşılabilirlik
- Bankacılık işlemlerinin kolay olması
- İşlem maliyetinin azlığı
- Teknolojik olması
- o Güvenlik
- o Merak

13-İnternet bankacılığını ne kadar sıklıkla kullanıyorsunuz?

- o Hergün
- Haftada bir
- Ayda bir
- Yılda bir
- Hiçbir zaman

14-İnternet Bankacılığı hizmetini kaç yıldır kullanıyorsunuz?

- o 1 yıldan az
- o 1-2
- o 2-3
- o 4-5
- \circ 5 yıldan fazla

15-Bankanızın internet bankacılığı hizmetinden memnunmusunuz?

- o Evet memnunum
- Hayır memnun değilim

16-İnternet bankacılığının hangi özelliklerini kullanıyorsunuz?

- o Faturaları ödemek
- o Kira vb. ödemek
- Hesap sorgulaması yapmak
- Hesaplar arasında para transferi yapmak
- o Kredi kartı talep etmek ve kredi kartı işlemleri
- Döviz alım ve satımı
- Hisse senedi işlemleri

17-İnternet Bankacılığı kullanımında müşterisi olduğunuz banka yada bankalar hangileridir?

- İŞ BANKASI
- o AKBANK
- ZİRAAT BANKASI
- VAKIFBANK
- ŞEKERBANK
- GARANTİ BANKASI
- YAPI KREDİ
- KUVEYT TÜRK
- HALKBANK

- HSBC
- FİNANSBANK
- BANK ASYA
- o TEB
- ING BANK
- DENİZBANK
- FORTIS
- TÜRKİYE FİNANS
- ALBARAK TÜRK
- Diğer (Lütfen belirtiniz)_____

Lütfen aşağıda bulunan ifadeler için size uygun olan durumu işaretleyiniz. Numaraların ifade ettiği değerlendirmeler aşağıda belirtilmiştir:

| -Kesinlikle Katılmıyorum 2-Katılmıyorum | | 3 -Fikrim Yok |
|-----------------------------------------|---------|----------------------|
| 4 - Katılıyorum | 5- Kesi | nlikle Katılıyorum |

| | 1 | 2 | 3 | 4 | 5 |
|--------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|
| 18-İnternet bankacılığı diğer bankacılık hizmetlerine (şube,atm,telefon bankacılığı) göre daha az maliyetlidir. | 0 | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 19-İnternet bankacılığında işlemler için gerekli sürecin basit ve anlaşılır olduğunu düşünüyorum. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 20-İnternet bankacılığı işlemleri karmaşıktır. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 21-İnternet bankacılığı kullanımı kolay bir hizmettir | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 22-İnternet bankacılığını kullanarak bankaya gitmek zorunda kalmadığım için memnunum. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 23-Bankalar sunmuş oldukları internet bankacılığı hizmetiyle ilgili yeterince bilgi vermektedirler. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 24-İnternet bankacılığı işlemleri hakkında yeterince bilgi sahibiyim. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 25-Bankacılık işlemlerini yaparken karşımda birisi olmalıdır. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 26-İşlem sırasında girdiğim kişisel bilgilerimin korunduğunu düşünüyorum. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 27-Zaman tasarufu sağladığı için şube bankacılığından daha etkin buluyorum. | 0 | 0 | 0 | 0 | \bigcirc |
| 28-Nakit para taşıma riskini ortadan kaldırdığı için uygun buluyorum. | 0 | 0 | 0 | \bigcirc | \bigcirc |
| 29-İnternet Bankacılığı hizmeti sunan web siteleri güvenlidir. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| 30-Bankalar internet bankacılığı hizmeti konusunda herhangi bir problemle karşılaştığımda yeterli destek vermektedir. | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |

Appendix C) Reliability Analysis of All Likert Questions

| | | r |
|---------------------------------------------------------------------------------------------|---------|------------|
| | Initial | Extraction |
| 18-Internet banking service is less costly than other banking services. | 1.000 | .563 |
| 19-Internet banking transaction procedures are simple and straightforward. | 1.000 | .760 |
| 20-Internet banking transactions are complex. | 1.000 | .710 |
| 21- Use the internet banking is an easy service. | 1.000 | .723 |
| 22-I am glad that I did not have to go to the bank using internet banking. | 1.000 | .673 |
| 23- Banks give enough information about their internet banking service. | 1.000 | .488 |
| 24-I have information about the internet banking transactions. | 1.000 | .648 |
| 25- Bank officer should be in front of me during the process. | 1.000 | .659 |
| 26-I think, I entered my personal data is protected during the process. | 1.000 | .635 |
| 27-Internet banking is more effective than branch banking about time saving. | 1.000 | .684 |
| 28- It is convenient because it eliminates the risk of carrying cash. | 1.000 | .632 |
| 29- Websites are safe that offer internet banking services. | 1.000 | .689 |
| 30- If I have any problem about internet banking service, banks provide the support. | 1.000 | .694 |

Table 19. Reliability analysis of all Likert questions