

FACTORS AFFECTING
CUSTOMER SATISFACTION AND LOYALTY
IN MOBILE BANKING IN TURKEY

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Thesis Abstract

Abdullah Sait Çetin, “Factors Affecting Customer Satisfaction and Loyalty in Mobile Banking in Turkey”

In the last three decades mobile phones rapidly spread all around the world. As mobile internet became available and mobile networks improved with 3G technology, mobile phones evolved into smart phones. In early 2000s, before the age of smart phones, banks faced challenges because of small cell phone screens. With the age of smart phones, in mid 2000s, capabilities of mobile phones improved and so did the mobile banking offerings of the banks. By the help of those advancements, banks were able to fulfill their customers' convenience requirements by offering mobile banking services. Turkey is a rapidly growing country with the recent improvements in banking sector. This study aims to analyze the factors which are affecting customer satisfaction in mobile banking, and the relations between customer satisfaction, mobile banking and intended loyalty in Turkey. Data collected from 336 respondents and analyzed by using descriptive, factor, correlation, ANOVA and regression analyses. Results of the analyses show that there are positive relations between convenience & usefulness, relative benefits, content reliability & variety, trust, design & infrastructure and customer satisfaction from mobile banking. In this study, effect of customer satisfaction on customer loyalty is also approved. This study discovers that the main factor affects customer loyalty is the customer satisfaction and also reveals the factors which are affecting customer satisfaction in mobile banking context.

Tez Özeti

Abdullah Sait Çetin, “Türkiye’de Mobil Bankacılıkta Müşteri Memnuniyeti ve Müşteri Sadakatine Etki Eden Faktörler”

Dünya genelinde son otuz yıl içerisinde cep telefonları hızlı bir yayılım göstermiştir. Mobil internetin ortaya çıkışı ve 3G teknolojisinin yaygınlaşması ile cep telefonları akıllı telefonlar haline gelmiştir. Akıllı telefonlar öncesinde 2000’li yılların başlarında mobil hizmetler sağlama noktasında bankalar küçük cep telefonu ekranları sebebiyle zorluklar yaşadılar. 2000’li yılların ortalarına gelindiğinde cep telefonlarının kapasitesiyle birlikte bankaların mobil bankacılık uygulamaları da gelişti. Bu gelişmeler sayesinde bankalar müşterilerinin kullanım kolaylığı ihtiyaçlarını karşılayabilme imkanı buldular. Türkiye bankacılık sektöründeki gelişmelerle hızla gelişen bir ülkedir. Bu çalışmanın amacı Türkiye’de mobil bankacılıkta müşteri memnuniyetine etki eden faktörleri ve müşteri memnuniyetiyle müşteri sadakati ve kullanım devamlılığı arasındaki ilişkileri araştırmaktır. Bu amaçla, 336 kişiden toplanan veriler tanımlayıcı, faktör, korelasyon, ANOVA ve regresyon analizleriyle incelenmiştir. Bu analizler sonucunda; kullanım kolaylığı ve kullanılabilirlik, göreceli avantajlar, içerik güvenilirliği ve çeşitliliği, güvenilirlik, tasarım ve altyapı ile müşteri memnuniyeti arasında pozitif ilişki olduğu ortaya çıkmıştır. Bunun yanında müşteri memnuniyetinin aktif müşteri sadakatine ve aktif müşteri sadakatinin kullanım devamlılığına olan etkisi kanıtlanmıştır. Bu çalışma mobil bankacılıkta müşteri sadakatine etki eden en önemli faktörün müşteri memnuniyeti olduğunu ortaya koymuş ve müşteri memnuniyetine etki eden faktörleri tespit etmiştir.

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CHAPTER 1

INTRODUCTION

Mobile banking is defined as “the provision of banking services to customers on their mobile devices” (Sharma, 2011). With mobile banking, only by making use of a smart phone banks are able to offer banking operations and information services such as checking account balances, making transfers between accounts, querying ATMs, applying credits or credit cards, purchasing or transferring funds, or paying bills. Mobile banking is newly developing and rapidly growing banking channel which increases its number of active users dramatically (KPMG International, 2011). According to The Banks Association of Turkey (TBB) number of active customers using mobile banking raised from 230,353 to 1,582,503 between March 2011 and March 2013 (TBB, 2013).

Over the last three decades, adoption factors of mobile banking and models of innovation adoption constitute the major portion of the existing researches on mobile banking; also reasons for the non-adoption or resistance against adopting new technologies have investigated by several researchers. Apart from those studies, relation between adoption factors of mobile banking with customer satisfaction and loyalty in mobile banking is neglected by academia. As it is stated by many researches continual usage for information technology (IT) is the critical success factor for information systems (IS) (Karahanna et al., 1999; Bhattacharjee, 2001a, b; Kim and Steinfield, 2004; Flavian et al., 2006; Thong et al., 2006). Therefore, this study aims to fill this important absence, which will highlight the reasons behind loyalty in mobile banking by examining and

empirically validating the relations between factors affecting customer satisfaction and loyalty in mobile banking context.

Since 1980s, banking is revolutionized from a traditional brick and mortar model where customers wait for services in the banks, into modern banks where banks can be reached from any place and at any time. First, automated teller machine (ATM) is implemented by the banks, which was to increase convenience for the customers while decreasing costs for the banks. Then telephone banking channel is introduced as an alternative to brick and mortar branches, which includes call center and interactive voice response (IVR). With telephone banking customers were able to do banking operations via telephone. During 1990s, banks realized the opportunity offered by internet technologies and implemented internet banking as a new channel to reach their customers. Internet banking services allow customers to use remote access to manage their bank accounts and transactions (Weir et al., 2006). In the last decade, after wide spread of mobile communication technologies, especially third generation mobile technology, banks have the chance to reach their customers through mobile phones, which means reaching customers at any place and any time.

Introducing new channels to retain existing customers as well as to attract new ones is very important to financial institutions (Kimball and Gregor, 1995; Thornton and White, 2001). Banks seek to populate their customer pool by reaching more customers via mobile banking. They also see mobile banking as a way to improve their brand image and support for customer retention (Seidel, 2009) and in return as a vehicle for new revenue sources. Apart from those, mobile banking is the most efficient channel in terms of operational costs for the banks. According to a research conducted by Tower Group

(2009), processing a transaction through mobile banking costs 50 times lower than through branch.

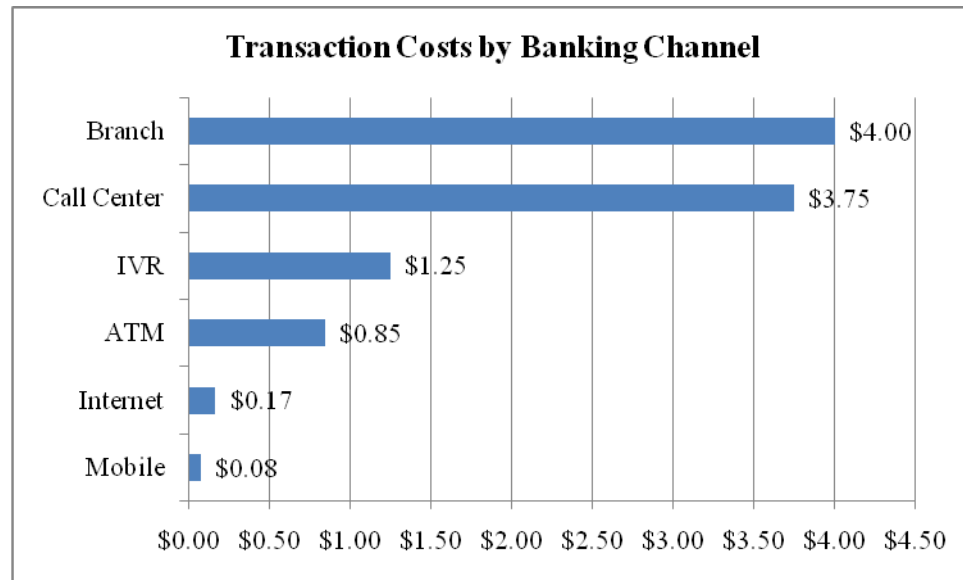


Figure 1 - Per-Transaction Costs by Banking Channels (Tower Group, 2009)

Recent researches and forecasts in business, and academia show that mobile phones should have already formed an alternative form of payment. Despite banks' and mobile network operators' continuous efforts to promote mobile payment, acceptance of that new technology seems to fall behind those expectations (Kleijnen et al., 2007; Walden et al., 2007; Laukkanen and Cruz, 2010). Studies have shown that customer adoption is the main issue for mobile payments (Sharma, 2011; Taga and Karlsson, 2004; Karnouskos, 2004). First, theory of reasoned action (TRA) is applied in order to explain factors affecting the decision to adopt new technology (Ajzen and Fishbein, 1980). Then, technology acceptance model (TAM) and innovation diffusion model are applied by researchers that claim TRA cannot fully explain the reasons of mobile banking non-adoption. Perceived

usefulness and perceived ease-of-use are found as the key factors affecting individual's adoption by most of those studies (Adams et al., 1992; Agarwal and Karahanna, 2000; Davis, 1989; Davis et al., 1989; Doll et al., 1998; Hendrickson et al., 1993; Mathieson, 1991; Segars and Grover, 1993). Moreover, other researchers added new variables to TAM to increase the representativeness of their models which are called TAM 2 and TAM 3 (Venkatesh and Davis, 2000; Venkatesh and Bala, 2008). As it is stated before, factors affecting customer satisfaction and loyalty for mobile banking is barely addressed by academia.

Prior to this study, Deng et al. (2010) conducted a research examining the relations between user experience, satisfaction and repurchase intention of IT. Nevertheless, mobile banking wasn't at the center of interest of that study but mobile internet is used only to test the research model of the study. As the first contribution of this thesis, mobile banking is placed at focus and it is used during both building and testing the research model. Apart from that, this thesis conducted in Turkey, which is an emerging market while the existing study was conducted in USA, which is a developed country. According to Claessens et al. (2002), emerging markets have higher potential than industrial countries in terms of online payments technology acquisition. So, the second contribution of the thesis is examining the relations between adoption factors, customer satisfaction and loyalty in mobile banking in an emerging market, Turkey.

Choi et al. (2008) studied on customer satisfaction factors of mobile commerce in Korea. Main concern of that study is to identify differences of mobile commerce and e-commerce in terms of factors affects customer satisfaction and loyalty. Although that study is also conducted in a developing country, Korea, it mainly focuses on mobile

commerce, which is “any transaction with monetary value that is conducted via a mobile network” (Clarke III, 2001). As the definition implies mobile commerce is a broader term than mobile banking since the latter includes only banking operations and bank customers (Cheney, 2008). This thesis contributes to the existing study of Choi et al. by using mobile banking instead of mobile commerce. Apart from that, second contribution of the thesis is using loyalty factors in research model which was not used previously in the existing studies.

As a result, main contributions of this study are:

- testing the dimensions of customer satisfaction of mobile banking,
- examining the mobile banking customer satisfaction factors in a developing country like Turkey,
- including loyalty factors to the model,
- discovering the factors affecting satisfaction and loyalty in mobile banking in Turkey

Rest of the study will start with literature review about mobile banking, customer satisfaction and loyalty in mobile banking. Literature review part includes many different studies from different disciplines like marketing, technology, psychology, etc. Moreover, studies about internet banking and mobile internet are also reviewed. As a result, mobile banking definition, dimensions of customer satisfaction and loyalty are collected from literature. After presenting the literature review, study continues with theoretical model and hypotheses of the study. Then the methodology of the study to test those hypotheses is explained by giving the details of preparation and design of the questionnaire. Through

analyzing the gathered data, the factors effecting customer satisfaction from mobile banking in Turkey and their relation with customer loyalty is investigated. So, study continues with the results of different descriptive, factor, correlation, regression and ANOVA analyses. Finally, study finishes with the conclusion and implications part.

Therefore, main objectives of this study can be stated as follows:

- To examine the factors affecting customer satisfaction for mobile banking in Turkey
- To investigate the relations of customer satisfaction and mobile banking loyalty for mobile banking in Turkey
- To find out the relations between customer satisfaction and loyalty in mobile banking in Turkey
- To determine the relations between demographics and customer satisfaction and loyalty
- To develop and validate a research model which describes the factors that affect customer satisfaction for mobile banking in Turkey, and the relations between all of the factors

CHAPTER 2

LITERATURE REVIEW

In this chapter development of mobile banking is introduced in a chronological manner. After that, current situation of mobile banking in world and in Turkey is explained. Following the literature on mobile banking, important constructs affecting customer satisfaction from mobile banking and loyalty factors are introduced.

Banking Sector and Mobile Banking

Banking sector is one of the leading sectors in terms of integrating internet and mobile technologies to their operations and services (Laukkanen, 2005). Before the age of internet, banks had already invested in information systems for some time to make most of their operations available electronically. By implementing ATM and phone banking, banks gained experience on adopting new technologies to their systems (Luo et al., 2010). During the internet revolution in the world, mid 1990s, banks started internet banking to make their services and operations available beyond time. Internet banking affected banking sector significantly by decreasing costs for banks and increasing convenience for customers (Laukkanen and Lauronen, 2005). By using internet banking customers were able to check their balances, perform fund transfers across accounts or banks, make several types of payments, carry out investment operations and applications for bank's

products. However being dependent on computer, internet banking was only offering anytime banking rather than anywhere banking.

Mobile phones rapidly spread through developing world in the past decades. Mobile internet became available with the help of improvements of network technologies in mobile networks. Moreover, with the improvement of mobile phone designs and spread of smart phones mobile internet usage increased dramatically. According to Cisco (2013), mobile data traffic grew 70% in 2012 and it is expected to surge over next five years at a 66% rate. Since the mobile internet offers internet services beyond time and place, it has created new opportunities for services and contents, one of which is mobile commerce. Mobile commerce is defined as "any transaction with monetary value that is conducted via a mobile network" (Clarke III, 2001). According to Kim et al. (2007) rapid growth of mobile commerce is closely related with rapid growth of mobile internet. Since the technology becomes a vital element for the banks in such a competitive environment (Khraim et al. 2011), banks strive to exploit the opportunities offered by mobile internet. Therefore, banks started offering banking operations and services at anytime and anywhere by using banks' online applications through mobile phones, which is called mobile banking. Mobile banking provides convenience for customers as it makes possible to perform banking operations at anytime and anywhere (Chung, Kwon, 2008). With mobile banking, customers can access to their bank accounts while traveling, waiting for the bus to work, or waiting in the restaurant for their orders. Hence, mobile banking is more attractive for customers compared to other banking channels in terms of ubiquity, flexibility and mobility (Lin, 2013).

Services offered by mobile banking can be listed as follows:

Operations and services related with account management

- Checking statements or account history
- Account activity alerts with predefined rules
- Checking term deposits
- Checking loan statements
- Checking card statements or equity statements
- Equity statements
- Pension plan management

Operations and services related with money transfers and payments

- Money transfers between own accounts
- Money transfers to other banks
- Bill, tax, and other payments

Operations and services related with investments

- Stock prices query
- Portfolio management

Operations and services related with applications

- Apply bank products like credit card or credits
- Apply or query current campaigns for bank's products and services
- Check for credit card or credit application status

Operations and services related with banking services

- Query nearest branch or ATM location info
- Query for help through online texts

- Submit problems or questions to online help desks

Mobile Banking in World and in Turkey

KPMG International conducted yearly researches about the interaction of customers with communication technologies through 2006 to 2011. Those researches are based on a survey which is distributed to different countries in the world. Most of the surveys are conducted online or by telephone and all of the respondents own either a computer, or mobile phone. In 2011, KPMG International reached 9,600 consumers from 31 different countries for the research. In mobile banking chapter of the research it is stated that mobile banking taking a leap after 2008. According to the research in 2008, 19% of the respondents stated that they have used mobile banking in the last 6 months. In 2010, percentage of the consumers that have used mobile banking in the last 6 months increased to 41%, which rises up to 52% in 2011. Moreover, in 2006 majority of the respondents state that they are not aware of their banks' mobile banking services, whereas 62% of respondents in 2011 states that they are aware of their banks' offerings through mobile banking (KPMG International, 2011).

After the 2001 recession in Turkey, with new regulations, consolidations, and purchases and new foreign bank entries increased the density of the sector, which results in increasing competition (TBA, 2012). As it is in the world, banks in Turkey try to remain competitive by increasing customer satisfaction and loyalty (Anyasi and Otubu, 2009), while attracting new customers and retaining existing ones by offering new

channels like mobile banking. Hence, mobile banking in Turkey started with those basis in 2003 by the first mobile banking site implementation of İşbank. This is followed by Garanti Bank's a first in the world SMS banking application in 2004. After that Akbank started collecting consumer loan applications by SMS in 2005. In 2007, Garanti has launched mobile banking site using WAP technology. One year later, in 2008, Akbank started its mobile banking application. To illustrate the competition between banks in terms of acquiring new technologies TEB developed its first i-Phone application in September 2008, one month after Garanti implemented i-Phone application in October 2008, which is followed by İşbank in March 2009.

According to statistics published by Information and Communication Technologies Authority of Turkey (ICTA) (2011), there are 65.3 million mobile subscribers in Turkey, which results in 89% mobile penetration rate in 2011. Number of mobile and 3G subscribers, and annual growth rates through 2004 to 2011 can be seen on Figure 2.

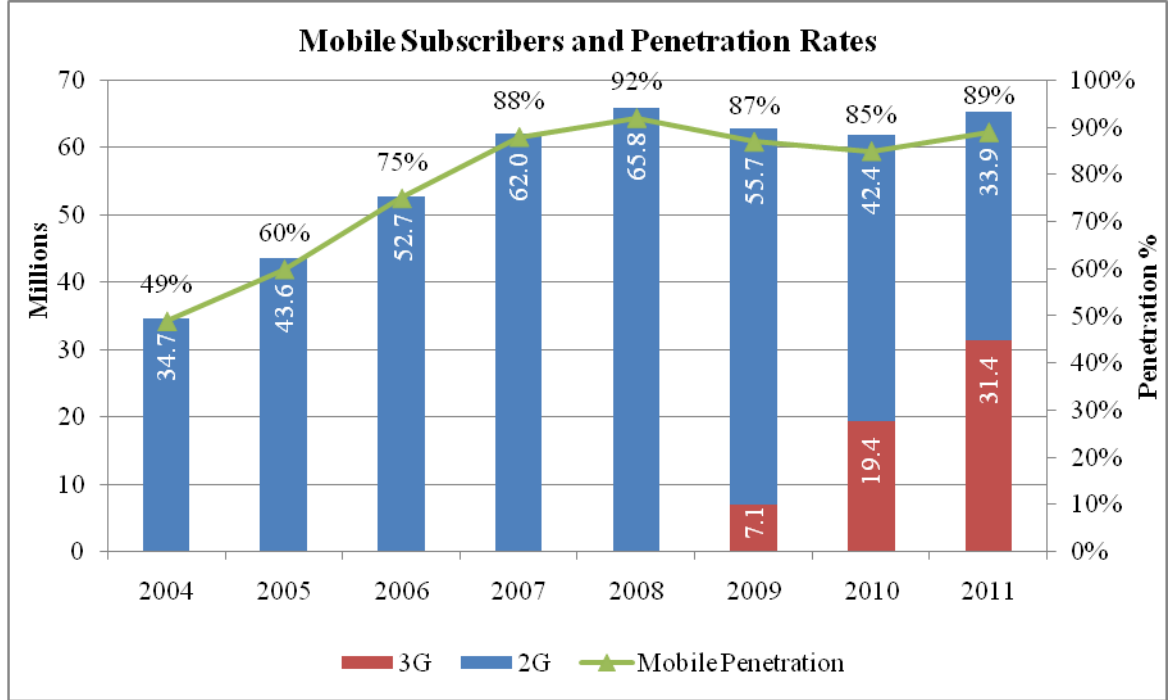


Figure 2 - Number of Mobile Subscribers and Penetration Rates

Source: ICTA 2011 Annual Report,

http://www.tk.gov.tr/kutuphane_ve_veribankasi/raporlar/faaliyet_raporlari/ar2011.pdf

As it can be seen on the Figure 2, after the authorization of 3G services in 2009, number of 3G subscribers increased dramatically to 31 million subscribers until 2011. At the same time, mobile internet subscribers increased significantly with the increase of 3G subscribers after 2009. According to ICTA's research in 2011, there are 6.45 million mobile internet subscribers in Turkey (ICTA, 2011).

Table 1 - Mobile Internet Subscribers in Turkey (ICTA, 2011)

	2009	2010	2011
Mobile Internet Subscribers	396,363	1,448,020	6,454,801

In accordance with Carlsson and Walden's findings (2006), as the mobile connection speed increased number of mobile banking users started to increase after 2009 in Turkey. According to Türkiye Banking Association (TBA) number of users that logged in to the

mobile banking system at least one time increased from 992,017 to 3,594,972 between June 2011 and June 2013. As it can be seen on the following figure, number of mobile banking users that ever logged once increased nearly 3 times in less than last 2 years.

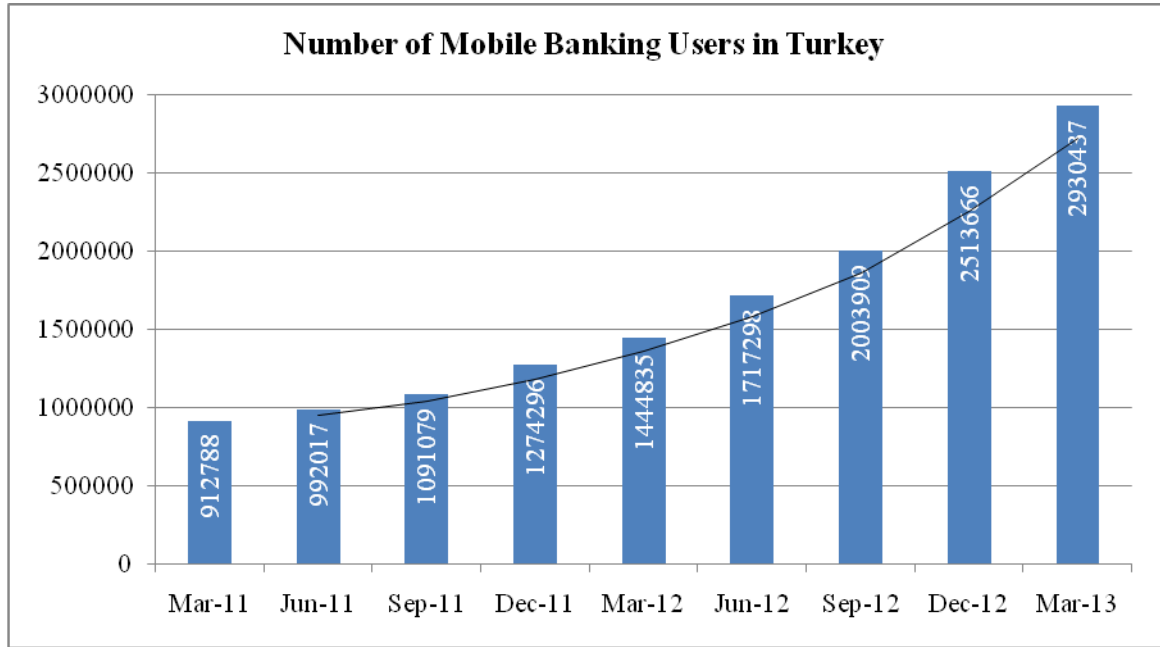


Figure 3 - Number of Mobile Banking Users Logged in at Least One Time

Source: Internet and Mobile Banking Statistics,
<http://www.tbb.org.tr/tr/banka-ve-sektor-bilgileri/istatistiki-raporlar/mart--2013---internet-ve-mobil-bankacilik-istatistikleri/1233>

Moreover, number of monetary (including money transfers, payments, and investment operations) and non-monetary (including credit or credit card applications, payment order entries and info service queries) transactions increases around 40% per 3 months of periods.

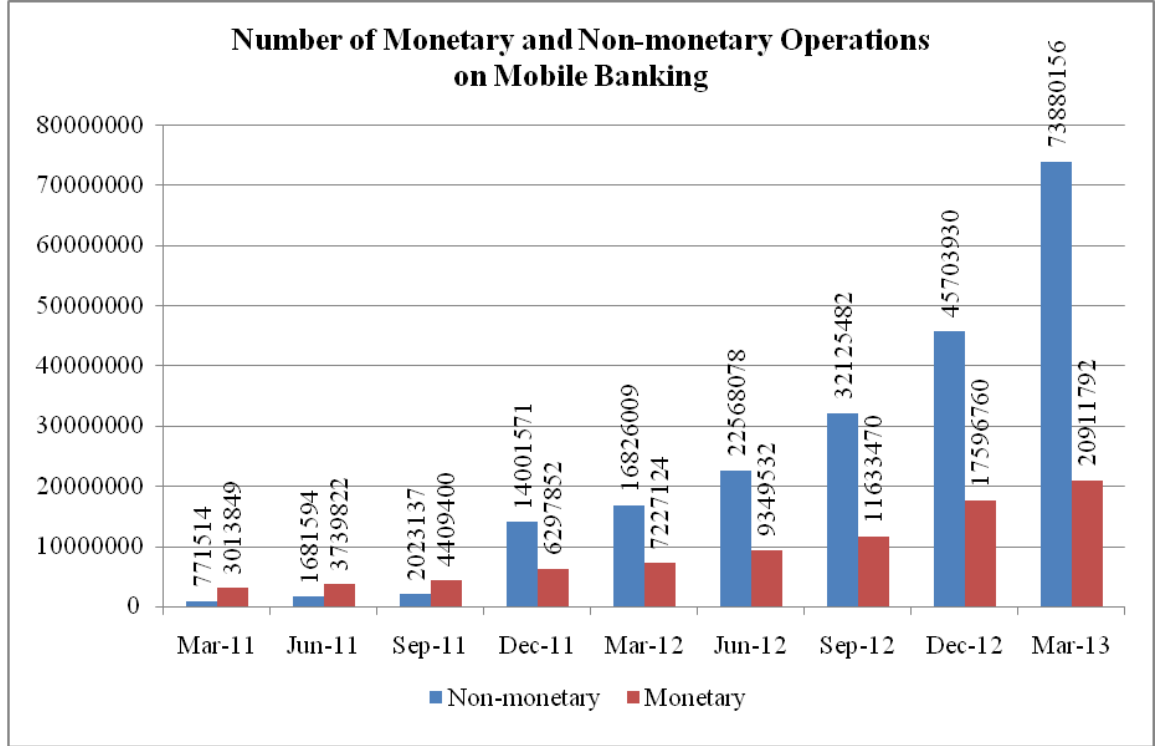


Figure 4 - Change in Volume of Mobile Banking Operations through Time

Source: Internet and Mobile Banking Statistics,
<http://www.tbb.org.tr/tr/banka-ve-sektor-bilgileri/istatistiki-raporlar/mart--2013---internet-ve-mobil-bankacilik-istatistikleri/1233>

Mobile banking in Turkey has a promising future when the number of mobile subscribers and mobile internet users is compared with number of mobile banking users (Tuncalp, 2011).

Mobile Banking Literature

This study focuses on factors affecting customer satisfaction and loyalty in mobile banking in Turkey. In order to determine a set of factors that have a potential to affect customer satisfaction and loyalty via empirical study, a condensed literature research is

conducted. In the mobile banking literature, customer satisfaction and loyalty were not addressed commonly. Whereas, there is an extensive amount of research about adoption intentions, non-adoption reasons of mobile banking. In addition to those, there are some studies considering customer satisfaction or loyalty in internet banking. To gain insight on factors affecting customer satisfaction and loyalty, prior literature on mobile commerce and mobile banking was reviewed.

In this study, related literature about factors affecting customer satisfaction and loyalty are grouped as follows:

- Mobile Services or Mobile banking adoption researches
- Customer satisfaction or loyalty in internet banking researches
- Researches comparing internet banking and mobile banking
- Customer satisfaction, loyalty or repurchase intention in mobile banking researches

Mobile Services and Mobile Banking Adoption Studies

Mobile services and mobile banking adoption studies reveal a number of theories which are commonly used and extended by adding new variables. Since mobile banking adoption can be considered close to the reuse or repurchase intention, mobile banking adoption studies are also reviewed during the literature review phase of this study.

Davis et al. (1989) proposed the technology acceptance model (TAM), which was developed to predict individual adoption and use of IT (Venkatesh and Bala, 2008). Davis

et al. suggests that individual's technology adoption intention is determined by two factors: perceived usefulness, which is the person's belief on the extent of job performance enhancement by using IT and perceived ease of use, which is the degree that a person believes using IT will be free of effort (Shen et al., 2010). There are many studies which find empirical support to TAM within last two decades (Adams et al., 1992; Agarwal and Karahanna, 2000; Hendrickson et al., 1993; Segars and Grover, 1993; Karahanna et al., 1999; Karahanna et al., 2006; Venkatesh et al., 2003). In addition to those studies, researchers extended TAM further by adding new variables to the model (Karahanna and Straub, 1999; Venkatesh, 2000; Venkatesh and Davis, 2000; Koufaris, 2002; Venkatesh and Bala, 2008).

Second theory about the adoption of mobile banking is innovation diffusion theory (IDT) which is proposed by Rogers (1995). This theory described as "the innovation is communicated through certain channels over time among the members of a social system". IDT has proven itself as a powerful tool in explaining technology adoption in cases like electronic payments (Szmigin and Bourne, 1999), mobile commerce (Mallat, 2006; Teo and Pok, 2003), mobile banking (Lee et al., 2003; Suoranta, 2003). According to Rogers' innovation diffusion model, technology acceptance is determined by relative advantage, compatibility, complexity, trialability, observability (Rogers, 1995). It is also approved by some studies relative advantage, compatibility and complexity constructs are the most affective ones on explaining the technology adoption decision (Mallat, 2006; Tornatzky and Klein, 1982).

Third theory on mobile banking adoption is the theory of reasoned action (TRA) which assumes that individuals are rationale and they use all the information available

while making decisions (Igbaria et al., 1995). In TRA Ajzen and Fishbein (1980) states that behavior is determined by the individual's beliefs on outcomes and perceived value for each outcome, so the model includes subjective norms and attitudes on the action. On the other hand, TRA is extended by adding perceived control by Ajzen (1991), which is called theory of planned behavior (TPB). Some researchers tried to explain electronic banking adoption, including internet and mobile banking, by using subjective norms, attitude and perceived control variables (Pikkarrainen et al., 2004; Venkatesh and Davis, 2000; Venkatesh et al., 2003). To use TPB model for mobile banking adoption Beiginia et al. (2011) extended TPB by adding bank's reputation, quality of information, speed of transactions, ease of use, security. By using the data gathered from 315 questionnaires, Beiginia et al. proved that bank's reputation, information quality, transaction speed, ease of use, security significantly affects adoption intention of mobile banking.

During literature survey of this study 254 studies grouped into mobile banking adoption studies. Factors that are found significantly affecting mobile banking or commerce adoption in those studies are marked on the matrix given in Appendix A, summary of those factors can be seen below.

Table 2 - List of Adoption Factors Found Significant in Studies

Factor	Number of Studies
Perceived ease of use / Complexity	33
Perceived usefulness	28
Perceived cost / Price	18
Relative benefits / Advantage	17
Compatibility	15
Perceived risk	14
Security	10

Table 2 – Continued

Factor	Number of Studies
Subjective norm / Social influence	10
Perceived self-efficacy	10
Convenience	9
Trust	9
Facilitating conditions	7
Technology anxiety	6
Innovativeness	6
Attitude	5
Perceived credibility	5
Trialability	5
Privacy	4
Mobility	3
Speed of transaction	3
Perceived quality/System quality	3
Mobile experience	3
Initial trust	3
Interpersonal relationship	3
Awareness	3
Observability	3
Demographics (Age)	3
Familiarity with bank	2
Mobile Payment Knowledge	2
Need interaction	2
Demographics (Gender)	2
Perceived Behavioral Control	2
Structural assurance	1
Network externalities	1
Banking needs	1
Situational normality	1
Expressiveness	1
Accessibility	1

Although adoption studies, which have presented here, are helpful on understanding adoption of mobile banking, they mean little about satisfaction and

repurchase intention (Lee, 2011). Since this study investigates the factors affecting customer satisfaction and loyalty, factors that are found to have significant effects on adoption intentions would just give an idea for the research model.

Customer Satisfaction Studies in Mobile Banking Context

Customer satisfaction is the post-purchase evaluation and the overall response of the customer to the experience of service or product (Oliver, 1992). Customer satisfaction is perceived as a strong determinant for cross purchasing, recommendations and loyalty (Anderson and Sullivan, 1993; Bolton and Drew, 1991; Eggert and Ulaga, 2002; Lam et al., 2004; Mittal and Kamakura, 2001). Moreover, many researchers consider customer satisfaction as an indicator for information systems (IS) success (Bailey and Pearson, 1983; Doll and Torkzadeh, 1988). In customer satisfaction literature service quality, which includes reliability, speed, accuracy, security, functionality, responsiveness, is one of the major determinants of the customer satisfaction (Arbore and Busacca, 2009; Jamal and Naser, 2003; Kumbhar, 2011; Levesque and McDougall, 1996; Winstanley, 1997). Perceived value, which includes perceived benefits and costs and charges, is also affecting customer satisfaction (Kumbhar, 2011; Levesque and McDougall, 1996; Varki and Colgate, 2001; Nagar and Rajan, 2005; Manrai and Manrai, 2007; Matzler et al., 2006).

Lee and Chung (2009) investigated the factors affecting customer satisfaction in mobile banking applications by the empirical study done in Korea. In that study they propose a research model based on Delone and McLean's information systems success

model. Lee and Chung observed that system quality, information quality and interface quality significantly affect customer satisfaction in mobile banking. Delone and McLean (1992) propose that system quality and information quality determines user satisfaction in information systems. Suki (2011) tried to explain factors affecting customer satisfaction in mobile commerce and interestingly find out that ease of use and usefulness of the mobile commerce site is not significantly affecting the customer satisfaction. Moreover, brand image and responsiveness of the vendor affects customer satisfaction whereas website qualities like interactivity and customization does not affect customer satisfaction significantly (Suki, 2011).

Choi et al. (2008) investigated the factors affecting customer satisfaction and loyalty in mobile banking by comparing them with the factors affecting customer satisfaction in internet banking. Choi et al. used ten factors in the research model for customer satisfaction in mobile banking which are convenience, transaction process, mobile portal reliability, information, representation, price, security/privacy, usefulness, experience, and use behavior. As a result of the survey conducted in Korea, Choi et al. found that only transaction process and content reliability affect customer satisfaction of mobile banking, whereas customization, customer service availability, perceived level of price does not affect customer satisfaction (Choi et al., 2008). Deng et al. (2010) studied on user satisfaction and continual usage intention of IT in Korea by using mobile internet services to test their model. Research model of the study inquires for the relationships between cognitive absorption (CA), which is the optimal IT user experience, and customer satisfaction and reuse intention. CA is considered as a major antecedent of perceived usefulness and perceived ease of use. Apart from CA construct, hedonic and utilitarian

performance and expectation disconfirmation constructs are used in the study to predict satisfaction and reuse intention. According to the survey questions utilitarian performance construct mainly included usefulness, ease of use, need for use, functionality, helpfulness, efficiency, effectiveness and perceived benefits items. Results of the empirical tests show that for mobile internet service users' customer satisfaction level changes with perceived utilitarian performance, expectation disconfirmation. Also, those three constructs, including satisfaction, are determined by cognitive absorption level of the customer (Deng et al., 2010). Wang and Liao (2010) studied on a comprehensive model which measures user satisfaction in m-commerce systems. In that study they have developed a construct of m-commerce user satisfaction (MCUS), by examining the related survey questions that construct can be divided into: perceived usefulness, information quality, perceived ease of use, reliability, content validity, availability, design quality, speed, convenience, customer service, and customization. According to Wang and Liao those measures can be grouped into four constructs: content quality, appearance, service quality and ease of use. In their study, Wang and Liao found that content quality, appearance, service quality and ease of use determine the customer satisfaction in m-commerce (Wang and Liao, 2007).

Table 3 - List of Customer Satisfaction Factors Found Significant in Studies

Factor	Number of Studies
Perceived ease of use	21
Perceived usefulness	18
Perceived financial cost	14
Relative benefits/advantage	10
Security	9
Compatibility	8
Perceived risk	7

Table 3 - Continued

Factor	Number of Studies
Convenience	7
Trust	7
Perceived self-efficacy	6
Subjective norm / Social influence	5
Facilitating conditions	4
Privacy	4
Mobility	3
Speed of transaction	3
Attitude towards MFS	3
System quality	3
Technology anxiety	2
Familiarity with bank	2
Mobile experience	2
Initial trust	2
Innovativeness	2
Perceived credibility	2
Structural assurance	1
Network externalities	1
Trialability	1
Banking needs	1
Situational normality	1
Expressiveness	1
Mobile Payment Knowledge	1
Accessibility	1
Need interaction	1
Interpersonal relationship	1
Awareness	1

Loyalty Studies in Mobile Banking Context

Customer loyalty is defined as “a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand

or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior” (Oliver, 1999). According to mobile banking literature, customer loyalty can be defined as favorable attitude of the customer towards mobile banking which results in continued usage (Anderson and Srinivasan, 2003; Keller, 1993; Lin and Wang, 2006). As Aaker (1991) stated, loyalty reduces costs by reducing risks of cash flows and increase cash flows by recommendations and word-of-mouth suggestions. Karahanna et al. (1999) explained repurchase intention as the continual usage of a system, which is considered as the main indicator of success of the system.

Research on customer loyalty in service contexts is relatively new and most of the studies in that context focus on online shopping (Lee, 2011). In mobile banking literature, number of studies focuses on loyalty or repurchase intention is fewer compared to adoption or customer satisfaction studies. Lin and Wang (2006) aimed to develop and validate a customer loyalty model for mobile commerce. Their research model includes perceived value, which is the difference between perceived benefits and costs, trust, habit and customer satisfaction as determinants of customer loyalty. They have tested their model by using the data collected from 255 mobile commerce users and results indicate that perceived value, trust, habit, customer satisfaction determines customer loyalty in mobile commerce. Lin and Wang found that perceived value and customer satisfaction are the most significant determinants of customer loyalty (Lin and Wang, 2006). As it was stated before Deng et al. (2010) conducted a study in Korea which investigates the relations of user experience with customer satisfaction and continuance intention for mobile internet users. In that study Deng et al. (2010) depicted customer satisfaction as the only determinant of continuance intention in research model and tested that model

with 289 usable online survey samples. As a result Deng et al. (2010) found that customer satisfaction significantly influences customers' continuance intention of mobile internet services.

Wang and Liao (2007) developed a comprehensive model to measure customer satisfaction with mobile commerce in Korea. In that study, they have also examined the relations of customer satisfaction with reuse and good word-of-mouth intentions by using sample of 116 respondents. As a result they have found a significant positive relation between customer satisfaction and both reuse intention and good word-of-mouth intentions (Wang and Liao, 2007).

CHAPTER 3

THEORETICAL MODEL AND HYPOTHESES DEVELOPMENT

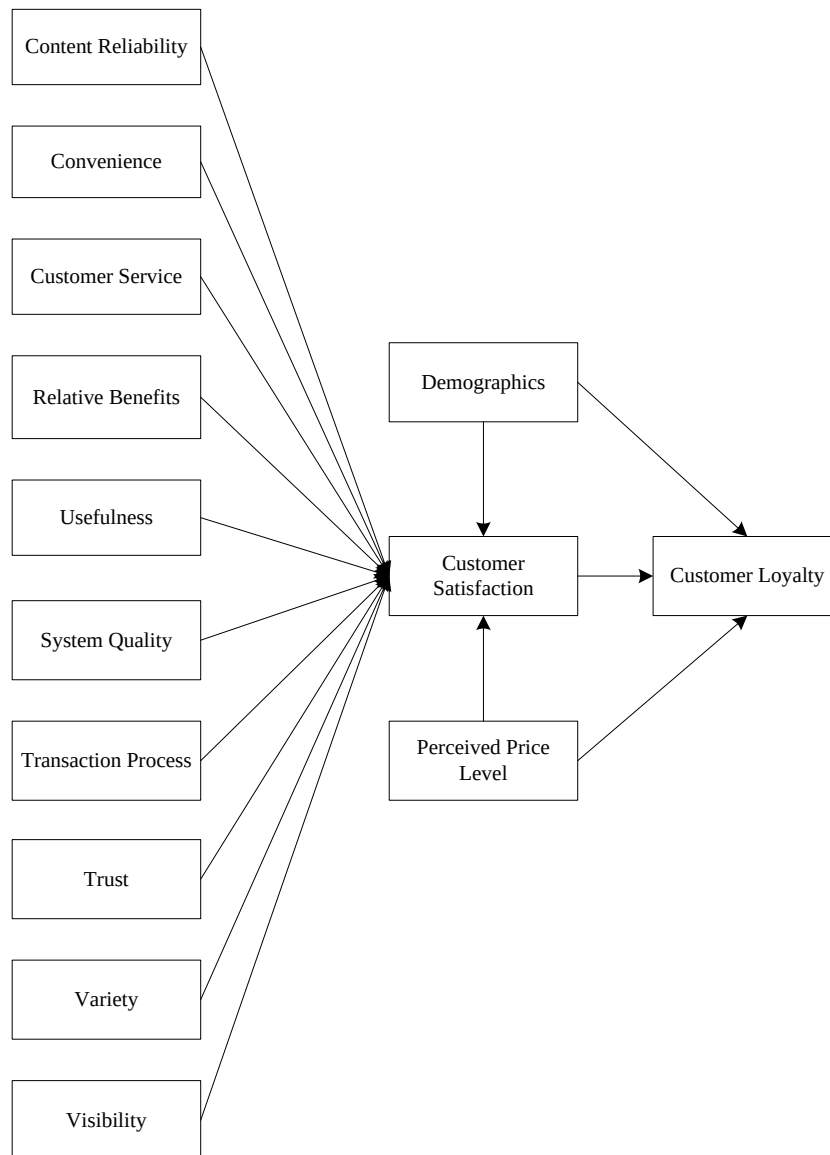


Figure 5 - Theoretical Model before Factor Analysis

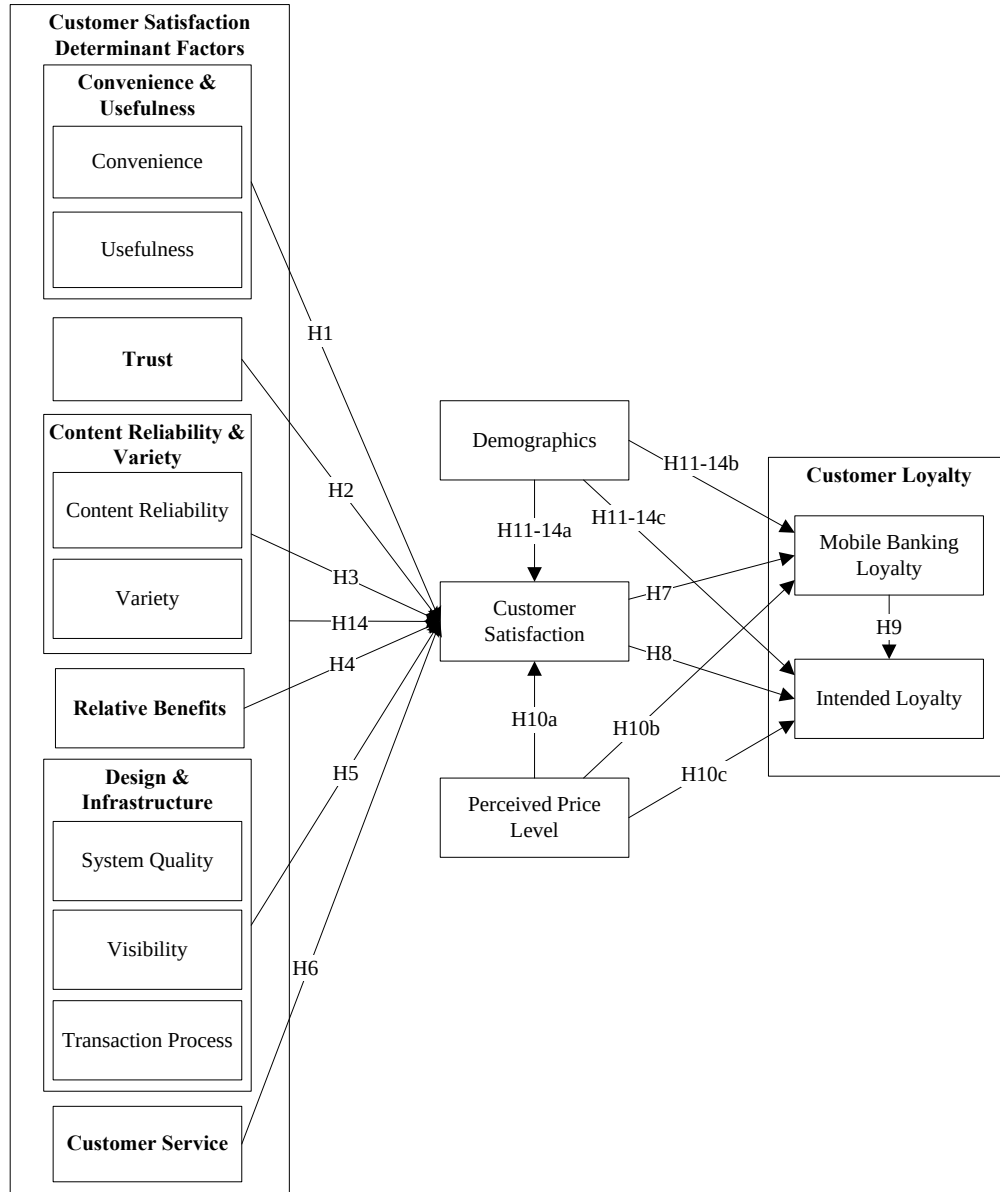


Figure 6 - Theoretical Model after Factor Analysis

In this chapter theoretical model for factors affecting customer satisfaction, loyalty and repurchase intention in mobile banking users in Turkey is presented. Research model is developed by refining the variables that are found to be relevant to customer satisfaction,

loyalty and repurchase intention during the literature review of the study. Those variables potential relations between those variables will be explained in detail.

Module 1: Customer Satisfaction Determinants

Content Reliability

Content reliability is defined as “degree to which a person believes that the web site or mobile portal will give him/her products or service of good quality and would be trustable to order them” (Choi et al., 2008, p. 321). Content reliability includes reliability of information and service, and availability of services and content. Choi et al. found that content reliability significantly affects customer satisfaction of mobile commerce users positively in Korea. Moreover, in that study it is stated that content reliability is more important for mobile commerce than e-commerce because in mobile devices it is more difficult to display enough information due to screen size limitations. While trying to determine quality factors of mobile banking, Lin (2013) defined content quality by using accuracy, currency, relevance and completeness constructs. And Lin (2013) also found that content quality significantly affects mobile banking users’ quality perception, which increases customer satisfaction.

Convenience

Convenience is defined as the comfort and ease of navigating through screens of mobile banking application (Chu et al., 2012). Convenience can be interpreted as the perception of easiness throughout accessing internet until the end of the transaction in mobile

banking. According to Shen et al. (2010) convenience is the main benefit of mobile banking. Shen et al. suggests that in order to enjoy the benefits of convenience customers should have enough experience with the technology, which means that expertise is the moderating variable for the relation between convenience and customer satisfaction. Choi et al. (2008) found that convenience is a significant factor that influences customer satisfaction for e-commerce, but it does not have a significant effect on m-commerce customer satisfaction. However, Wang and Liao (2007) found that service quality construct, in which they have included convenience variable, determines m-commerce user satisfaction.

Customer Service

In e-commerce literature customer service is described as the degree of customization, personalization and the degree of interaction (Zeithaml et al., 2000; Francis and White; 2002; Srinivasan et al., 2002, Loiacono et al., 2002; Bansal et al., 2004; Schaupp and Belanger, 2005). Choi et al. (2008) defined customer service as “assistance provided by the web site or mobile portal regarding questions, issues or problems with using it or transacting content”. In addition to that description Choi et al. combined customization and personalization measures into customer service construct. In this study, in parallel to Choi et al.’s research model customization and personalization measures will be considered within customer service construct. Venkatesh et al. (2003) proposed that customization affect usability of mobile banking as well. Liang and Wei (2004) stated that customer satisfaction of mobile technology is affected by interactivity and customization of mobile applications. Sanayei et al. (2011) defined responsiveness similar to the

customer service construct of this study, which is the degree of commitment of a retailer to provide rapid feedback and service to customers. Moreover, in that study Sanayei et al. investigated the direct relations between responsiveness and customer satisfaction and loyalty. By analyzing 265 samples of a survey collected from mobile payment users in Iran, Sanayei et al. have concluded that responsiveness affects customer satisfaction but it does not have significant effect on customer loyalty. Moreover, they have also approved that customization has significant affect on customer satisfaction (Sanayei et al., 2011). Regarding to previous studies it is convenient to anticipate a relation between customer service and customer satisfaction in mobile banking context.

Perceived Price Level

Perceived price level is different than other factors since it determines both the adoption decision and repurchase intention (Hong et al., 2008). Perceived price level is such an important factor which may also cause slow down or speed up the adoption rate of mobile banking (Wei et al., 2009). Perceived price may include the initial fee paid for handset, service usage fees like mobile internet fees and mobile banking transaction fees (Sadi and Noordin, 2011). In this study, perceived price will be considered including only mobile internet service fees and mobile banking transaction fees. In mobile commerce and mobile banking adoption studies, most of the research models included perceived price or cost as a factor which affects adoption decision (Barati and Mohammadi, 2009; Chen, 2008; Cheong, Park, and Hwang, 2004; Heijden, 2002; Kim, Mirusmonov, and Lee, 2010; Kleijnen, et al., 2004; Laukkanen, Cruz, 2010; Luarn and Lin, 2005; Mallat, 2006; Masinge, 2010; Pousttchi, 2003; Rose and Fogarty, 2006; Sadi, Noordin, 2011; Schierz et

al., 2010; Viehland and Leong, 2007; Wua, Wanga, 2005). In one of the customer satisfaction studies, Lin and Wang (2006) considered perceived cost factor within perceived value construct, and they have proved that perceived value has significant positive effect on both customer satisfaction and loyalty. Choi et al. (2008) also use perceived price level construct as a combination of mobile internet costs and content price, which is mobile banking operations prices. According to Choi et al. perceived price level factor affects customer satisfaction of mobile banking in Korea. Findings of that study reveal that customers find mobile internet prices burdensome, which indicate that customer satisfaction would increase if the prices decrease.

Usefulness

Usefulness is used in main adoption theories like TAM and IDT, and it is defined as the degree of belief that a particular system would enhance individual's performance (Davis et.al, 1989; Moore and Benbasat, 1991; Rose and Straub, 1998). In other words, usefulness is the total value that an individual perceives from using a system (Rogers, 1995). For e-commerce technologies usefulness is found to be one of the strongest predictor of adoption intention (Venkatesh et al., 2003). In adoption studies usefulness is vastly used in research models (Barati and Mohammadi, 2009; Cheah et al., 2011; Chen, 2006; Chen, 2008; Cheong, Park, and Hwang, 2004; Chung and Kwon, 2009; Crabbe et al., 2009; Dahlberg and Oorni, 2006; Daud et al., 2011; Dewan and Chen, 2005; Gu et al., 2009; Kim, Mirusmonov, and Lee, 2010; Kleijnen, et al., 2004; Laukkanen, Cruz, 2010; Lin, 2011; Luarn and Lin, 2005; Luo et al., 2010; Masinge, 2010; Rose and Fogarty, 2006; Sadi and Noordin, 2011; Safeena et al., 2011; Schierz et al., 2010; Viehland and

Leong, 2007; Wua and Wanga, 2005; Yang, 2005; Yu, 2009). Wang and Liao (2007) used usefulness as one of the factors that affect customer satisfaction in mobile context. Usefulness found to be one of the most important determinants of utilitarian performance perceptions of users (Agarwal and Karahanna, 2000; Saade and Bahli, 2005; Shang et al., 2005). Deng et al. (2011) found that utilitarian performance of IT, which includes usefulness, is the main predictor of customer satisfaction in mobile internet services in Korea. Rejikumar and Ravindran (2012) found that usefulness significantly affects satisfaction of mobile banking users in India. According to those findings, it is convenient to hypothesize that there is a relationship between usefulness and customer satisfaction in mobile banking.

Relative Benefits

Relative benefits are the improvement in performance with new technology or service over an existing one (Kim, Shin and Lee, 2009). Relative benefits are realized when a new service offers greater value to customers than existing ones (Rogers, 1995; Taylor and Todd, 1995). Kim et al. proposed that the term relative benefits concept is closely related with perceived usefulness, both of which affect the perceived value of a particular service for users. In their study Kim et al. found that relative benefits significantly affects usage intention of mobile banking.

Major benefits of mobile banking compared to other banking channels are convenience and mobility (Anckar and D’Incau, 2002; Lee and Benbasat, 2003; Looney et al., 2004). In this study relative benefits concept will include convenience, mobility, effectiveness, efficiency, usefulness and ease of use aspects of mobile banking in

comparison with other banking channels. Since relative benefits found to affect mobile banking usage intention in their study, it is convenient to hypothesize that there is a relation between relative benefits and customer satisfaction from mobile banking.

System Quality

System quality for mobile commerce is defined as the degree of availability and accessibility of mobile portal (Choi et al., 2008). Kim et al. (2009a) combined accessibility, stability, adaptability, availability and ease of use in order to define system quality. It is also described as the performance recognized by users (DeLone and McLean, 2004; Bradley et al., 2006). In addition to usage intention, system quality is found to be affecting customer satisfaction (DeLone and McLean, 1992; DeLone and McLean, 2003). Usage intention relation of system quality can be interpreted as repurchase or reuse intention. Gu et al. (2009) defined system quality of mobile banking as perceived speed and system stability. As a result of their study Gu et al. found a significant relation between system quality and customer satisfaction. In this study, relation between system quality and customer satisfaction in mobile banking will be investigated.

Transaction Process

Transaction process is defined as the degree of the user's perception about system's efficiency (Choi et al., 2008). Most adoption studies states that slower transaction speeds is one of the main reasons of low adoption rates in mobile banking (Lee and Chung, 2009). Kim et al. (2007) found that response time is one of the factors that customers have highest expectations for the systems they use. In their study Choi et al. (2008) asked 247

e-commerce and m-commerce users about their opinions on the speed of systems they are using and their overall satisfaction about the system. As a result Choi et al. found that speed of transactions influences customer satisfaction for both e-commerce and m-commerce. According to those previous studies, there is ample evidence about the relation between transaction process and customer satisfaction.

Trust

Zeithaml and Bitner (2000) defined trust as the degree of certainty that the customer has in mind which is gathered from previous exchanges. In accordance with that definition trust in mobile banking can be defined as the degree of confidence in mobile banking vendor which is acquired from past experiences. Kim and Benbasat (2003) defined trust in mobile commerce as users' perception on different attributes of service providers.

It is stated that with the increase in perceived level of risk, effect of trust in creating customer satisfaction also increases (Anderson and Srinivasan, 2003). Since mobile banking transactions perceived as having high risks and perceived risk is closely related with adoption intention (Chen, 2006; Mallat, 2006; Heijden, 2002; Brown, et al., 2003; Chen, 2008; Rose and Fogarty, 2006; Luo et al., 2010) trust is especially important in improving customer satisfaction of mobile banking. Lin and Wang (2006) also investigated the relations of trust and customer satisfaction and loyalty in mobile commerce context. As a result of their study, which includes 225 users of mobile commerce in Taiwan, they have found that trust influences customer satisfaction positively. This relation will be investigated by constructing hypotheses.

Variety

In some mobile banking studies lack of variety of services offered in mobile banking is accounted for one of the main reasons of mobile banking non-adoption (Chong, Ooi and Lin, 2010; Chong et al., 2012; Wei et al., 2009). Wei et al. (2009) states that value added services offered by mobile banking applications remain limited. Moreover, increase in the 3G services adoption rates also increased the variety of offerings in mobile banking which is resulted in rapid increase in willingness to adopt mobile banking in Malaysia (Chong, Ooi and Lin, 2010). Chong et al. (2012) found that variety of services offered affects the mobile banking adoption intention of consumers in Malaysia.

Although customer satisfaction and adoption intention is two different concepts, in some studies they are used together to measure the success of e-commerce (Lee et al., 2007). Hence, it is meaningful to investigate the relations between adoption factors like variety and customer satisfaction.

Visibility

Visibility means the degree of properly shown information on mobile screen which meets the users' needs (Choi et al., 2008). Straub (1989) stated that visibility is one of the most important determinants of a positive customer experience. Staples et al. (2002) proposes that information visibility affects consumers' post purchase behavior for web sites. Ilsever et al. (2007) found content visibility has significant effect on user satisfaction from website. In another study related with online customer satisfaction conducted by Szymanski and Hise (2000), site design is found to be one of the factors affecting customer satisfaction. Tabaei et al. (2011) proposed that web site quality, which is a

combined construct of aesthetics, website quality and visibility, is an effective factor on electronic customer satisfaction. According to those previous researches, it can be suggested that visibility affects customers' satisfaction from mobile banking.

Variables in the customer satisfaction determinants module are listed below:

- Content Reliability
- Convenience
- Customer Service
- Perceived Price Level
- Usefulness
- Relative Benefits
- System Quality
- Transaction Process
- Trust
- Variety
- Visibility

As it will be explained later in the Analyses and Findings chapter, those variables are factor analyzed and grouped into the following six constructs:

- Convenience & Usefulness
- Relative Benefits
- Content Reliability & Variety
- Trust
- Design & Infrastructure

- Customer Service

In Analyses and Findings chapter statistical details for the factor analyses will be given. Here, it was necessary to present those groupings in order to clarify the Figure 6 which depicts the model after the factor analysis is conducted.

Module 2: Customer Satisfaction Factor

Customer Satisfaction

Customer satisfaction concept has attracted much attention for a long time as a result of its importance in determining competitive positioning (Fornell, 1992). According to Patterson et al. (1997) customer satisfaction is critical due to its contribution to long term relationships which increases profitability in return. Fornell (1992) stated that customer satisfaction not only increases customer loyalty but also lowers customers' sensitivity to price, reduces marketing costs for creating new customers, decreases operation costs and more importantly improves company's reputation. Morgan and Rego used more than 50000 customers' data from American Consumer Satisfaction Index (ACSI) database and compared more than 200 companies to test the relations between customer satisfaction and company profitability. Result of their study indicates that average customer satisfaction significantly determines company's profitability. Hence, understanding the factors affecting customer satisfaction has a great importance to companies (McKinney et al., 2002).

Concept of customer satisfaction is defined satisfaction as post choice evaluation of purchase decision in early studies (Oliver, 1980; Churchill and Suprenant, 1992;

Bearden and Teel, 1983; Oliver and DeSarbo, 1988). Oliver constructed the most widely accepted model in 1997, which depicts customer satisfaction as a function of both expectation and performance called expectation disconfirmation model. Oliver defined that model as “satisfaction is the consumer’s fulfillment response” which is “a judgment that a product or service provided a pleasurable level of consumption related fulfillment, including levels of under- or over-fulfillment” (Oliver, 1997, p. 13). In other words, satisfaction is the fulfillment response which comes after the consumption of a product or service, as an evaluation with respect to how well it meets a need, desire, or goal. In general, it can be stated that customer will be satisfied if the performance of service or product is favorable and dissatisfied if it is unfavorable (Deng et al., 2010).

Customer satisfaction researches indicate that satisfied customers are more likely to remain loyal (Oliver, 1997; Reichheld and Teal, 1996; Abdinnour-Helm et al., 2005). Many studies report a strong connection between customer satisfaction and customer loyalty (Anderson and Sullivan, 1993; Heskett et al., 1997; Mittal, Ross, & Baldasare, 1998; Oliver, 1980; Rust and Zahorik, 1993). In parallel to that, satisfied IT users are also likely to remain loyal and continue to use same IT service or product (Kim and Steinfield, 2004; Thong et al., 2006). Shankar et al. (2003) states that the relation between customer satisfaction and loyalty becomes more significant in online environments. Anderson and Srinivasan (2003) tested if e-loyalty is affected by customer satisfaction with an online survey reaches to 1211 e-retailing customers. Anderson and Srinivasan found that customer satisfaction significantly affects loyalty of customers to e-retailers. In addition to that, there are other e-commerce studies stating that customer satisfaction affects customer loyalty (Bhattacharjee, 2001a, b; Flavian et al., 2006). Apart from e-commerce studies,

Deng et al. (2010) found that customer satisfaction from mobile service providers affects customer loyalty by the survey they conducted with 541 participants in China. Moreover, customer satisfaction has been found to have a direct and positive effect on customer purchase intentions and repeat behavior in e-service context (Chiou and Pan, 2009; Mittal and Kamakura, 2001; Shankar et al. 2003; Tsotsou, 2006; Yang and Peterson, 2004).

There is ample evidence in e-commerce and mobile internet studies for the existing of positive relation between customer satisfaction and customer loyalty. That relation between customer satisfaction and loyalty will be hypothesized in mobile banking context in this study.

Module 3: Customer Loyalty Variables

Customer Loyalty

Customer loyalty is defined as “... the customer’s favorable attitude toward an electronic business resulting in repeat buying behavior” in the e-commerce context (Anderson and Srinivasan, 2003, p. 125). Oliver (1999) defined loyalty as the degree that customers feel committed to the suppliers and not actively seeking for alternative suppliers. Jacoby (1971) explained loyalty as customers’ biased purchase behavior that stems from a psychological process. According to Kim et al. (2004) customer loyalty can be conceptualized by favorable attitude and repurchase intention.

The process leading to customer loyalty is explained with customers’ repeated satisfying experiences with a particular service provider (Oliver, 1997). Keller (1993)

suggested customer loyalty emerges when favorable attributes of the service is present in repeat buying behavior. Devaraj et al. (2002) also found the same relation and stated that repeated satisfying experiences creates loyal customers in time.

Compared to less loyal customers, loyal customers are more immune to negative information about the service or product they use (Deng et al., 2010) and as it is stated in many studies loyal customers are inclined to purchase from the same supplier again (Anderson and Srinivasan, 2003; Assael, 1992; Deng et al., 2010; Devaraj et al., 2002; Keller, 1993; Kim et al., 2004; Koo, 2006; Kuehn, 1962; Lipstein, 1959; Oliver, 1997; Zeithaml et al., 1996). Ganesh et al. (2000) divided customer loyalty items into two groups, which are active loyalty and passive loyalty. Ganesh et al. explained active loyalty as “customers’ willingness to spread positive word of mouth and their intentions to use more of bank’s services.” Kimiloğlu et al. (2010) used custom loyalty construct which explains customers’ intention to purchase more from same supplier and spread positive word of mouth. According to those definitions, relation between customer satisfaction and loyalty is convenient to examine.

Hypotheses

This study’s objective is to find out the relations between:

- Convenience & usefulness and customer satisfaction
- Relative benefits and customer satisfaction
- Content reliability & variety and customer satisfaction
- Trust and customer satisfaction

- Design & infrastructure and customer satisfaction
- Customer service and customer satisfaction
- Demographics and customer satisfaction determinant factors
- Demographics and customer satisfaction and loyalty
- Customer satisfaction and loyalty
- Within loyalty factors
- Perceived price level and customer satisfaction determinant factors
- Perceived price level and customer satisfaction and loyalty

Hypothesis 1: There is a positive relationship between convenience and usefulness and customer satisfaction.

Hypothesis 2: Relative benefits and customer satisfaction are positively correlated.

Hypothesis 3: There is a positive relationship between content reliability and variety and customer satisfaction.

Hypothesis 4: There is a positive relationship between trust and customer satisfaction.

Hypothesis 5: There is positive correlation between design & infrastructure and customer satisfaction.

Hypothesis 6: Customer service and customer satisfaction are positively correlated.

Hypothesis 7: There is positive relationship between customer satisfaction and mobile banking loyalty.

Hypothesis 8: Customer satisfaction and intended loyalty are positively correlated.

Hypothesis 9: Mobile banking loyalty and intended loyalty are positively correlated.

Hypothesis 10: There is positive relationship between perceived price level and customer satisfaction and loyalty.

Hypothesis 11: There is a difference between male and females with respect to customer satisfaction and loyalty.

Hypothesis 12: There is significant difference in customer satisfaction and loyalty between different age groups.

Hypothesis 13: There is a difference between different income levels with respect to customer satisfaction and loyalty.

Hypothesis 14: There is a difference between different education levels with respect to customer satisfaction and loyalty.

Hypothesis 15: Customer satisfaction from mobile banking is influenced/ determined by convenience & usefulness, relative benefits, design & infrastructure content reliability & variety, trust, customer service.

CHAPTER 4

RESEARCH METHODOLOGY

This chapter of the study gives the process and details of the research which includes preparation of the questionnaire, data collection methodology, questionnaire variables and their constructs, data sampling and analysis.

Data Collection Method

Questionnaires are useful way to gather required sample data for hypothesis testing studies (Sekaran, 2010, p.197). Hypothesis testing studies tries to find the relationships between independent and dependent variables. Since the aim of this study is to determine the correlation between factors affecting customer satisfaction and loyalty in mobile banking in Turkey, it is decided to use questionnaire to gather sample data. As the study's time span cannot be longer than one year it was more convenient to collect the sample data only once rather than a longitudinal study, which would require much longer time span.

Preparation of Questionnaire

Literature review of that study lasted for 1.5 year long, which has started in October 2011 and lasted until February 2013. In the literature review phase, studies from different

disciplines reviewed, including marketing, economy, psychology, information systems and management. Articles on different topics like adoption of technology, satisfaction, loyalty in both online and mobile contexts have been reviewed. From those studies, variables which have a potential affect on customer satisfaction or loyalty for mobile banking are collected. Moreover, questions to measure customers' attitude towards those variables are gathered from literature. After deriving the questions from previous studies, those questions are reworded in order to be used for mobile banking context. Lastly, those questions are translated into Turkish and the first pilot version is developed. During the pilot phase, 12 responses and feedbacks on the wording of questions, flow of the questionnaire are gathered are collected within that period. After making the required corrections final version of the survey is distributed over internet.

Components of the Questionnaire

Questionnaire consists of 66 questions. All of the questions are close ended questions and most of them are in 5 point scale. Questions in the questionnaire distributed in 3 pages which are used to control the flow of the questions. First page includes a brief explanation of the study and one question to determine if the respondent uses mobile banking or not. If the user does not use mobile banking, then the user is directed to the third and the last page. If the user uses mobile banking, then the questionnaire continues with the second page which includes the main survey questions with different parts.

First part in the second page has the questions to define the usage behavior of the customer like which bank is being used, for how long the customer uses mobile banking, frequency for each type of operation that the customer does over mobile banking and lastly customers' mobile internet usage behaviors and customers' cell phone suitability for mobile banking. First two questions in that part are multiple choice questions, third and fourth questions asks the respondent to indicate the answer in terms of 5 point scale (1: Never, 2: Rarely, 3: Occasionally, 4: Often, 5: Always).

Table 4 - Page 1 Questions

Construct	Original Question	Adapted Version	Adapted Study
M-Banking Experience	We have used ubiquitous computing for a long time.	How long have you been using mobile banking: a- Last 1 month, b- Last 6 month, c- Last 1 year, d- Last 2-3 year, e- More than 3 years.	Kim et al., 2009a
Bank		Choose the bank of which you are using mobile banking application:	
Usage Frequency		Please indicate the frequency use mobile banking application for the banking operations below: 1:Never, 2: Rarely, 3: Sometimes, 4: Usually, 5: Always a- Money Transfer b- Payment (Card Debt, Bill,...) c- Check Account Info d- Investment Operation e- Application f-Nearest ATM info	

Table 4 - Continued

Construct	Original Question	Adapted Version	Adapted Study
Mobility	I frequently use m-Internet to use various services besides contents download	I use m-Internet to use various other services besides mobile banking (email, web browsing, etc.)	Choi et al., 2008
Cell Phone Suitability	Functionality of the mobile device I currently use is appropriate for m-Internet	Functionality of the mobile device I currently use is appropriate for mobile banking application use	Choi et al., 2008

Second page includes 47 questions to determine customers' opinions and attitudes towards mobile banking in terms of usefulness, convenience, design, quality, service, benefits, price and trust. For all the questions in that part respondents asked to give their answers in 5-point scale (1: Strongly disagree, 2: Disagree, 3: Neither disagree nor agree, 4: Agree, 5: Strongly agree). Questions on the second page, their original and adapted versions and studies from which the original questions have been taken are indicated on the following table. There are 4 frames within the second page. First frame includes independent variable questions, which are hypothesized to determine customer satisfaction from mobile banking.

Table 5 - Page 2 Questions – Frame 1

Construct	Original Question	Adapted Version	Adapted Study
Convenience	This mobile Internet site enables me to order products or services anywhere and anytime.	Mobile banking enables me to reach banking services anywhere and anytime.	Suki, 2011
Usefulness	I access m-Internet while traveling	I access mobile banking only when I cannot go to branch.	Choi et al., 2008

Table 5 - Continued

Construct	Original Question	Adapted Version	Adapted Study
Convenience	Overall process from access of m-Internet to content download is easy	Overall process from access of mobile banking to make transaction is easy	Choi et al., 2008
Usefulness	I believe that using e-commerce technologies will save capital by reducing costs	I believe that using mobile banking save capital by reducing costs	Datta, 2011
Usefulness	Using M-Internet enables me to accomplish tasks more quickly	Using mobile banking enables me to accomplish tasks more quickly	Kim, et al., 2007
Relative Benefits	M-banking is much more convenient than e-banking	Mobile banking is much more convenient than other means of banking.	Chong et al., 2012
Usefulness	Using a wallet phone would give me greater control over my credit and debit cards.	Using a mobile banking application would give me greater control over my credit and debit cards.	Swilley, 2010
Variety	There are many m-commerce services/applications that meet my needs.	There is a great variety of mobile banking services that meet my needs.	Chong et al., 2012
Variety	Current m-commerce services/applications are up to my expectations.	Current mobile banking services are up to my expectations.	Chong et al., 2012
Content Reliability	Services and content I want are always available	Services and content I want are always available	Choi et al., 2008
Content Reliability	Information about content I want can be offered always	Information about services and operations are always available	Choi et al., 2008
Content Reliability	The interactions with the website are clear and understandable.	The interactions with the mobile banking are clear and understandable.	Li and Yeh, 2010; Swilley, 2010
System Quality	Rate of success of access to m-Internet is high	Rate of success to log in the mobile banking application is high.	Choi et al., 2008
System Quality	There is no case that next page is not loaded after access to m-Internet due to a technological problem of system	No error message encountered during a transaction in mobile banking.	Choi et al., 2008

Table 5 - Continued

Construct	Original Question	Adapted Version	Adapted Study
Trust	The system of M-Internet is reliable.	The system of mobile banking is reliable.	Kim, Chan and Gupta, 2007
Trust	The information provided from ubiquitous computing is reliable.	The information provided from mobile banking is reliable.	Kim et al., 2009a
System Quality	The quality of the output I get from the system is high.	The quality of the service I get from the mobile banking is high.	Venkatesh and Bala, 2008
Transaction Process	M-Internet takes a short time to respond.	Mobile banking takes a short time to respond.	Kim, et al., 2007
Visibility	Overall design of screens offered through m-Internet is constructed to help user's convenience	Overall design of screens offered through mobile banking is constructed to help user's convenience	Choi et al., 2008
Visibility	The screen design (i.e., colors, boxes, navigation bars, etc.) is attractive.	The screen design (i.e., colors, boxes, navigation bars, etc.) is attractive.	Li and Yeh, 2010
Usefulness	In my opinion, the use of mobile banking services increases my ability to control my financial matters by myself.	In my opinion, the use of mobile banking services increases my ability to control my financial matters by myself.	Laukkanen and Kiviniemi, 2010
Trust	Payments made through m-commerce will be processed securely.	Payments made through mobile banking will be processed securely.	Chong et al., 2012
Trust	Privacy on m-commerce is well protected.	Privacy on mobile banking is well protected.	Chong et al., 2012
Customer Service	Mobile banking firms publish a policy on customer protection from accidents	Mobile banking firms have a policy on customer protection from transaction mistakes.	Kim et al., 2009b
Customer Service	Mobile banking always provides accurate financial services.	Mobile banking always provides accurate financial services.	Kim et al., 2009b
Customer Service	There is content specification recommended for me when I access	There is content specification recommended for me when I access to mobile banking	Choi et al., 2008

Table 5 - Continued

Construct	Original Question	Adapted Version	Adapted Study
Customer service	I feel that when needed, I will get enough guidance from the bank related to mobile banking services.	I feel that when needed, I will get enough guidance from the bank related to mobile banking services.	Laukkanen and Kiviniemi, 2010

Second frame of the second page includes 4 questions, which measure relative benefits perception of customers for mobile banking.

Table 6 - Page 2 Questions – Frame 2

Construct	Original Question	Adapted Version	Adapted Study
Relative Benefits	Mobile banking has more advantages than Internet or off-line banking because services are not limited by location.	Mobile banking has more advantages than Internet or off-line banking because services are not limited by location.	Kim et al., 2009b
Relative Benefits	Mobile banking is more convenient than Internet or off-line banking.	Mobile banking is more convenient than Internet or off-line banking.	Kim et al., 2009b
Relative Benefits	Mobile banking is more effective than Internet or off-line banking in managing a bank account.	Mobile banking is more effective than Internet or off-line banking in making transactions.	Kim et al., 2009b
Relative Benefits	In my opinion, mobile banking does not offer any advantage compared to handling my financial matters in other way.	In my opinion, mobile banking does not offer any advantage compared to handling my financial matters in other way.	Laukkane n and Kiviniemi, 2010

Third frame in second page includes dependent variable questions, which are customer satisfaction and loyalty questions.

Table 7 - Page 2 Questions – Frame 1

Construct	Original Question	Adapted Version	Adapted Study
Customer Satisfaction	Overall process from access and search to download via m-Internet is satisfying	Overall process from access and making transaction via mobile banking application is satisfying	Choi et al., 2008
Customer Satisfaction	I think that I made the correct decision to use mobile Internet service.	I think that I made the correct decision to use mobile Internet service.	Deng et al., 2010
Customer Loyalty	I will continuously use m-commerce	I will continuously use mobile banking	Choi et al., 2008
Customer Loyalty	I am willing to recommend people to use m-commerce provided by the mobile telecommunication company that I currently subscribe.	I am willing to recommend people to use mobile banking application provided by the bank that I currently subscribe	Choi et al., 2008; Ganesh et al., 2000
Customer Loyalty	As long as I live in this neighborhood, I do not foresee myself switching to a different bank.	I won't change the bank whose mobile banking application I use.	Ganesh et al., 2000
Customer Loyalty	I will continuously use m-commerce provided by the mobile telecommunication company that I currently subscribe, even though other companies offer me similar service or benefits	I will continuously use mobile banking application provided by the bank that I currently subscribe, even though it offers me similar service or benefits through other channels.	Choi et al., 2008
Customer Loyalty	In the near future, I intend to use more of the services offered by my bank.	I will do more business with the bank whose mobile banking services I use.	Ganesh et al., 2000
Customer Loyalty	In the near future, I intend to use more of the services offered by my bank.	I will use products of the bank that I currently subscribe, other than mobile banking operations.	Ganesh et al., 2000
Customer Loyalty	In the near future, if I have to buy a new mobile phone, I would choose the same brand.	I can use other products of the bank of which I'm using mobile banking.	Kimiloglu et al., 2010

Last frame of the second page includes perceived price level and willingness to pay questions, which are all price related items. First two questions on this frame are yes/no questions and they are presented separately from others. Remaining four questions are again 5 point scale questions, and only the respondents that are paying for mobile banking are asked to answer those questions.

Table 8 - Page 2 Questions – Frame 4

Construct	Original Question	Adapted Version	Adapted Study
Payment Info		Are you paying for connection or operations for mobile banking?	
Willingness to Pay		If you are not paying for mobile banking, would you continue to use if you would have to pay?	
Perceived Price Level	A level of content price is appropriate	A level of transactions' price is appropriate.	Choi et al., 2008
Perceived Price Level	A level of price for using m-Internet is appropriate	A level of price for using m-Internet to access mobile banking is appropriate.	Choi et al., 2008
Willingness to Pay	If my current bank were to raise the price of my checking account, I would still continue to be a customer of the bank.	I will use even if transactions price is increased	Ganesh et al., 2000
Willingness to Pay		Even if 10% is taken as transaction fee, I would continue to use mobile banking.	

Third page is comprised by 8 questions. First 5 questions ask customer's demographic information: city of residence, gender, age, education, and monthly income. Last 3

questions in that page try to determine customers' usage behavior of general banking services through branch, internet banking usage and satisfaction.

Table 9 - Page 3 Questions

Construct	Original Question	Adapted Version	Adapted Study
City		Please indicate the city you reside.	
Gender		Gender: a- Male, b-Female	
Age		Age: a-18-25 years, b-26-35 years c-36-45 years, d-46-55 years e- > 56 years	
Education		Education: a-Less than high school b-High school graduate c-University graduate d-Master graduate e-Doctorate graduate	
Income		Personal Income: (monthly) a-<2,000 TL b-2,000-3,500 TL d-3,501-5,000 TL e-5,001-10,000 TL f->10,000 TL	
Usage Frequency		Please indicate the frequency you use physical branches for the operations below: 1:Never, 2: Rarely, 3: Sometimes, 4: Usually, 5: Always a- Money Transfer b- Payment (Debt, Bill,..) c- Check for Card or Account Info (balance, debt, info, etc.) d- Investment Operation e- Application	

Table 9 - Continued

Construct	Original Question	Adapted Version	Adapted Study
Internet Banking Usage		Are you using internet banking?	
Internet Banking Satisfaction		If you are using internet banking, are you satisfied with internet banking services offered by your bank?	

Data Collection Process

Online questionnaire is used to collect the required sample data for the study. Reasons of using online questionnaire are: large sample data is required which is not possible for paper based questionnaires and to reach different geographical areas in Turkey. Since the users of mobile banking are already internet users' it is convenient to collect required survey data by using online questionnaire.

In this study convenience sampling is used to select people to participate the study. Convenience sampling is one of non-probability sampling methods, is used to collect survey data. Because of the restrictions of time span of the study decrease in generalizability and representativeness by using convenience sampling is accepted for the sake of quickness. Moreover, as mobile banking applications require smart phones, it makes sense to use convenience sampling by setting target audience having smart phones beforehand.

Online questionnaire is prepared by using Google Documents. Survey link is distributed by using social networks, forums, mailing lists. It is sent to several companies' mailing lists: Garanti, Akbank, İşbankası, Yapıkredi, Turkcell, BSH, IBM and Arçelik, etc. Also it is posted on technology related forums: forum.donanimhaber.com, forum.shiftdelete.net, and also some general forums: forumturkiye.com, forum.memurlar.net. Moreover, survey link is shared on Facebook, Linkedin and Twitter accounts of many people. Through those channels online questionnaire link has been reached to more than 3000 people. As it is stated previously, with the first question of survey only customers that have used mobile banking can continue to the survey. Those who don't use mobile banking only asked to provide their demographic information as they are directed to third page of the survey. In other words, only mobile banking users are included in the second page questions, which are to test the hypotheses of the study.

Data Analysis Approach

Collected responses are entered to SPSS for statistical analyses. Analyses applied in SPSS are summarized below:

- Descriptive analyses, to depict statistical information like mean or standard deviation, are applied for demographic profile of the respondents, and usage behavior of mobile and physical banking.

- Factor analyses are done to decrease the dimensions by grouping the items which loads together. Factor analyses applied to customer satisfaction determinants' items and customer loyalty items.
- Correlation analyses are performed to determine the relations between factors like convenience & usefulness, relative benefits and customer satisfaction. Also the relation between customer satisfaction and customer loyalty factors are investigated by using correlation analyses.
- Regression analyses are applied in order to express the relations between independent and dependent variables in terms of mathematical formulas.
- Difference analyses (t-test and ANOVA) are applied to observe the differences between groups of different demographic profiles with respect to customer satisfaction and customer loyalty.

CHAPTER 5

ANALYSES AND FINDINGS

In this chapter findings from the descriptive, reliability, ANOVA, factor and regression analysis are explained in detail.

Descriptive Analyses

Demographic Profile of the Respondents

In this section general demographic characteristics of the respondents in terms of frequencies and descriptions are presented. Table 10 shows demographic profile of the respondents in terms of four demographic variables with original segments used in the survey.

Table 10 - Demographic Profile of the Respondents

	Male	Female			
Gender	195	141			
	58%	42%			
	18-25	26-35	36-45	46-55	> 56
Age	84	211	23	10	8
	25%	63%	7%	3%	2%
	Less than high school	High school graduate	University graduate	Master graduate	Doctorate graduate
Education	4	31	193	100	8
	1%	9%	57%	30%	2%
	<2,000 TL	2,000-3,500 TL	3,501-5,000 TL	5,001-10,000 TL	>10,000 TL
Income	87	113	68	57	11
	26%	34%	20%	17%	3%

According to the findings shown on the table above, last two segments of age variable are merged as there are few sample data for both of those segments. Also, for education level variable; master graduate and doctorate graduate segments are merged together and less than high school and high school education levels are merged together. As a result education level variable is decreased to 3 segments which are: high school or less graduate, university graduate, post-university graduate. Moreover, income level variable decreased from 5 to 4 segments by merging two income levels above 5001 TL. Table 11 shows the summary for reorganized descriptive variables.

Table 11 - Reorganized Demographic Profile of the Respondents

	Male	Female		
Gender	195	141		
	58%	42%		
	18-25	26-35	36-45	> 46
Age	84	211	23	18
	25%	63%	7%	5%
	Less than Univesity	University graduate	Higher than University	
Education	35	193	108	
	10%	57%	32%	
	<2,000 TL	2,000-3,500 TL	3,501-5,000 TL	> 5001 TL
Income	87	113	68	68
	26%	34%	20%	20%

Total number of males is slightly higher than total number of females, which seems parallel with the gender distribution of internet banking users in Turkey (Okumus et al., 2010).

In order to have a personal banking account in Turkey, customer should be above 18, so the sample involves people who are older than 18 years old. There are 211 respondents between 26 and 35 ages, which is the dominant age group of the sample constituting 63% of the sample. That age group can be considered as technology adaptive teenagers and adults. Having a young sample, 88% of which aged below 35 years old, can be explained by the age distribution of Turkey. According to Turkish Statistical Institute (TUIK) (2013a), 58% of the general population of Turkey is aged below 35 years old. TUIK (2013b) reports also indicate that internet usage rate is 64% for people younger than 35 years old in Turkey, whereas it falls to 21% for people older than 35 years old. Those figures can explain the reason behind having 88% of mobile banking users younger than 35 years old in the sample data. Moreover, according to the research conducted by Google (2013), smart phone usage rate is 50% for the respondents aged below 35 years old; whereas usage rate falls to 20% for the respondents aged above 35 years old. This also indicates that having a young sample is probable for mobile banking study such as this thesis.

Majority of the respondents have undergraduate degree with 57 percent. In addition to that 32% of the respondents have graduate degrees. So, respondents for the study have high level of education which signalizes that most of those respondents can be assumed to have enough experience with mobile technologies.

In terms of income level, 74% of the respondents have more than 2000 TL monthly income and 40% of the respondents have more than 3500 TL monthly income, which is more than 1800 \$. According to those income levels, it can be considered that most of the respondents can pay the price of mobile services required for mobile banking.

In order to compare mobile banking user profiles with non-mobile banking users, tables for each demographic group are generated separately.

Table 12 - Demographics for Mobile Banking Users

Demographics	Mobile Banking Users	
	Freq.	%
<i>Gender</i>		
Female	70	33.98
Male	136	66.02
<i>Age</i>		
18-25	39	18.93
26-35	143	68.93
36-45	15	7.28
> 46	10	4.85
<i>Education</i>		
Less than University Degree	9	4.37
University Graduate Degree	124	60.19
Higher than University Degree	73	35.44
<i>Monthly Income (TL)</i>		
<2,000 TL	34	16.50
2,000-3,500 TL	70	33.98
3,501-5,000 TL	50	24.27
> 5001 TL	52	25.24

Percentage of mobile banking users within females is lower than mobile banking users' percentage in males. This means that mobile banking usage rate is higher among males.

Mobile banking usage rate is high among 26-35 and 36-45 age groups, which are 67.30% and 65.22%. Lowest usage rate observed in 18-25 age group, which includes young teenagers and mostly university students. So, mobile banking non-use can be

explained with not having personal account or personal salary among those university students.

Mobile banking usage rate increases with education level. “Higher than university” education group has the highest mobile banking usage rate with 67.59%. And the “less than university” education group has the least mobile banking usage rate with 25.71%.

As it is seen on the table above, mobile banking usage rate increases with income level of the respondents. Highest rate of mobile banking usage is observed in respondents who are having monthly income more than 5001 TL, which is 76.47%. Lowest rate of mobile banking usage is 39.08%, which is observed in respondents having less than 2000 TL monthly income.

Mobile Banking Usage

As it is seen on the table below, 61% of the respondents are using mobile banking. Rate of mobile banking usage is high compared to general population in Turkey. This high rate of mobile banking adoption can be explained with highly educated and young sample.

Table 13 - Mobile Banking Usage

		Frequency	%
Are you using mobile banking?	Yes	206	61
	No	130	39

Internet Banking and Mobile Banking Usage

It is seen in the below table that in sample data nearly all of the non-internet banking users are also not using mobile banking. And most of the respondents (89%) in the study are

using internet banking. Lastly, most of the internet banking users are also using mobile banking (68%).

Table 14 - Internet Banking and Mobile Banking Usage

		Are you using mobile banking?		Total
		Yes	No	
Are you using internet banking?	Yes	205 (68%)	95 (32%)	300 (89%)
	No	1 (3%)	35 (97%)	36 (11%)
	Total	206 (61%)	130 (39%)	336

Mobile Banking Usage: Banks

In Table 15, banks of which the respondents use mobile banking applications are shown. Currently, there are 16 banks offering mobile banking services to their customers in Turkey. As it is seen on the table below, 57% of the respondents are using mobile banking application of Türkiye İş Bankası and Garanti Bankası.

Table 15 - Mobile Banking Usage: Banks

Bank	Frequency	%
Türkiye Garanti Bankası	67	32.5
Türkiye İş Bankası	51	24.8
Akbank	37	18
Yapı ve Kredi Bankası	23	11.2
Türk Ekonomi Bankası	8	3.9
Vakıf Bank	6	2.9
Türkiye Cumhuriyeti Ziraat Bankası	5	2.4
Denizbank	4	1.9
Finans Bank	2	1
ING Bank	2	1
Bank Asya	1	0.5

Mobile Banking Experience

In the original survey questions mobile banking experience variable was segmented into 5 experience level categories. Since last 3 month experience level category has few observations, it is copied into last 6 month experience level category. In the survey data 57% of the respondents have more than 2 years of mobile banking experience.

Mobile Banking Usage Profiles

Mobile banking usage profiles for the 206 respondents that are using mobile banking are summarized in the Table 16. It can be stated that most of the respondents are using mobile banking for checking card or account info, doing payments or money transfers. Application for credit cards or credits and closest ATM query services are the least used services in mobile banking.

Table 16 - Mobile Banking Services Usage Profile of Respondents

Mobile Banking Experience	Last 6 month	Last 1 year	Last 2-3 year	More than 3 years	
	39	52	60	55	
	19%	25%	29%	27%	
Mobile Banking Activities	Never	Rarely	Sometimes	Usually	Always
Money Transfer	10	30	48	61	57
	5%	15%	23%	30%	28%
Payment	21	21	39	49	76
	10%	10%	19%	24%	37%
Check for Card or Account Info	2	11	34	67	92
	1%	5%	17%	33%	45%

Table 16 - Continued

Mobile Banking Activities	Never	Rarely	Sometimes	Usually	Always
Investment	97	34	32	22	21
	47%	17%	16%	11%	10%
Mobile Banking Activities	Never	Rarely	Sometimes	Usually	Always
Application (Credit Card or Loan)	143	30	17	6	10
	69%	15%	8%	3%	5%
Closest ATM Query	112	42	28	14	10
	54%	20%	14%	7%	5%

Usage frequency of the services offered by physical branches is also gathered in the sample. When the frequencies of mobile banking service usage of mobile banking users are compared to branch services usage frequencies it is seen that money transfers, payments, checking account info and investment services are used less frequently from branches than mobile banking. On the contrary, more of the mobile banking users are using branches to apply for credit cards or credits instead of using mobile banking. Second part of the table below contains physical branch services usage frequencies for the non-mobile banking users. When the branch usage frequencies of non-mobile banking users are compared with mobile banking users, it is seen that mobile banking usage decrease mostly the frequency of checking credit card or account info through branches. However, interestingly mobile banking usage didn't affected money transfer and payment operations' frequency through branches. On the other hand, mobile banking usage increased application for card or account through branches. This may be interpreted as the affect of mobile banking usage to customer loyalty, which increases customers' willingness to use more products and services from the bank.

Table 17 - Banking Operation Frequencies of Mobile Banking Users and Non-Mobile Banking Users

Banking Operations Through Branch (Mobile Banking Users)	Never	Rarely	Sometimes	Usually	Always
Money Transfer	80	34	23	33	37
	39%	16%	11%	16%	18%
Payment	73	39	14	32	49
	35%	19%	7%	15%	24%
Check for Card or Account Info	85	28	14	22	58
	41%	14%	7%	11%	28%
Investment	105	41	27	21	13
	51%	20%	13%	10%	6%
Application	75	57	41	12	22
	36%	28%	20%	6%	11%
Banking Operations Through Branch (Non-Mobile Banking Users)	Never	Rarely	Sometimes	Usually	Always
Money Transfer	47	38	23	11	8
	37%	30%	18%	9%	6%
Payment	46	23	16	19	23
	36%	18%	13%	15%	18%
Check for Card or Account Info	41	24	16	27	19
	32%	19%	13%	21%	15%
Investment	67	32	15	8	5
	53%	25%	12%	6%	4%
Application	59	49	11	1	7
	46%	39%	9%	1%	6%

Customer Satisfaction Determinants' Items

Table 18 - Means of Customer Satisfaction Determinant Items

Construct	Items	N	Mean (Over 5)	Std. Dev.
Usefulness	Using mobile banking enables me to accomplish tasks more quickly.	206	4.47	0.76
Convenience	Mobile banking enables me to reach banking services anywhere and anytime.	206	4.46	0.72

Table 18 - Continued

Construct	Items	N	Mean (Over 5)	Std. Dev.
Convenience	Overall process from access of mobile banking to make transaction is easy.	206	4.3	0.76
Usefulness	In my opinion, the use of mobile banking services increases my ability to control my financial matters by myself.	206	4.23	0.78
Relative Benefits	Mobile banking has more advantages than Internet or off-line banking because services are not limited by location.	206	4.15	0.9
Trust	Payments made through mobile banking will be processes securely.	206	4.1	0.81
System quality	Rate of success to log in the mobile banking application is high.	206	4.07	0.83
Visibility	Overall design of screens offered through mobile banking is constructed to help user's convenience.	206	4	0.82
Usefulness	I believe that using mobile banking save capital by reducing costs.	206	3.99	1.04
Transaction Process	Mobile banking takes a short time to respond.	206	3.97	0.87
System quality	The quality of the service I get from the mobile banking is high.	206	3.94	0.8
Relative Benefits	Mobile banking is much more convenient than other means of banking.	206	3.93	1.02
Trust	The information provided from mobile banking is reliable.	206	3.92	0.81
Visibility	The screen design (i.e., colors, boxes, navigation bars, etc.) is attractive.	206	3.83	0.93
Variety	Current mobile banking services are up to my expectations.	206	3.82	0.91
Content reliability	Services and content I want are always available.	206	3.8	0.89
Content reliability	The interactions with the mobile banking are clear and understandable.	206	3.76	0.88
Trust	The system of mobile banking is reliable.	206	3.75	0.88
Trust	Privacy on mobile banking is well protected.	206	3.74	0.92
Customer service	Mobile banking always provides accurate financial services.	206	3.74	0.89
Customer service	I feel that when needed, I will get enough guidance from the bank related to mobile banking services.	206	3.64	0.93

Table 18 - Continued

Construct	Items	N	Mean (Over 5)	Std. Dev.
Variety	There is a great variety of mobile banking services that meet my needs.	206	3.63	1.03
Usefulness	Using a mobile banking application would give me greater control over my credit and debit cards.	206	3.6	1.14
Relative Benefits	Mobile banking is more advantageous since it is easier to use than other alternative banking channels.	206	3.58	1.08
Customer service	There is content specification recommended for me when I access to mobile banking.	206	3.57	0.92
Relative Benefits	Mobile banking is more effective than Internet or off-line banking in making transactions.	206	3.55	1.08
Content reliability	Information about services and operations are always available.	206	3.53	1.01
Relative Benefits	Mobile banking is more convenient than Internet or off-line banking.	206	3.49	1.08
Perceived price level	A level of price for using m-Internet to access mobile banking is appropriate.	80	3.29	1.31
Usefulness	I access mobile banking only when I cannot go to branch.	206	3.24*	1.01
System quality	No error message encountered during a transaction in mobile banking.	206	3.2	1.05
Perceived price level	A level of transactions' price is appropriate.	80	2.97	1.32
Customer service	Mobile banking firms have a policy on customer protection from transaction mistakes.	206	2.68	1.19

* Reverse coded question

Items that the most of the respondents are strongly agreed are related with usefulness and ubiquitousness of mobile banking. This indicates that usefulness and ubiquitousness of mobile banking are highly appreciated by users. System quality items, such as successful login rates, and system security item asking the security perception of the user are also rated high in the sample. According to those results, it can be stated that most of the

customers in the sample are happy with system quality and feeling secure while doing banking operations through mobile banking. Item that has the least mean is related with the customer protection policies offered by banks for mobile banking applications. This indicates that most of the respondents in the sample are thinking that their banks won't protect them in case of any mistake they do during the banking operations through mobile banking. Next lowest graded item is related with perceived price level variable, which means that most of the respondents who are paying for mobile banking think that the price they are paying is not appropriate.

Customer Satisfaction from Mobile Banking

As it is seen on the following table, there are 2 items for customer satisfaction. Means of satisfaction items in the study are 3.69 and 4.16 over 5, which signalizes that respondents of the study are mostly satisfied with the mobile banking service they use. For the first item 64% of the mobile banking users state that they are satisfied from the overall process of mobile banking. And 90% of the mobile banking users indicate that they are pleased to use mobile banking.

Table 19 - "Overall process from access and making transaction via mobile banking application is satisfying"

Responses	Frequency	Percent
Strongly disagree	2	0.97
Disagree	16	7.77
Neither disagree nor agree	55	26.70
Agree	103	50.00
Strongly agree	30	14.56

Table 20 - “I'm pleased that I'm using mobile banking services for my banking operations.”

Responses	Frequency	Percent
Strongly disagree	1	0.49
Disagree	5	2.43
Neither disagree nor agree	15	7.28
Agree	125	60.68
Strongly agree	60	29.13

Mobile Banking Customer Loyalty

More than 71% of the respondents are saying that they will use mobile banking continuously in the future.

Table 21 - “I will continuously use mobile banking”

Reponses	Frequency	Percent
Strongly disagree	3	1.46
Disagree	15	7.28
Neither disagree nor agree	39	18.93
Agree	77	37.38
Strongly agree	72	34.95

Moreover, vast majority of the sample (75%) states that they won't change the bank of which they are using mobile banking. That item has its mean as 3.98, which signalizes that mobile banking users in the sample are loyal to their banks.

Table 22 - “I won't change the bank whose mobile banking application I use.”

Reponses	Frequency	Percent
Strongly disagree	3	1.46
Disagree	15	7.28
Neither disagree nor agree	31	15.05
Agree	92	44.66
Strongly agree	65	31.55

Interestingly, 50% of the respondents declare that they won't switch to other channels even if the same bank offers more advantageous terms than mobile banking channel.

Table 23 - "I will continuously use mobile banking application provided by the bank, even though it offers me similar service or benefits through other channels."

Reponses	Frequency	Percent
Strongly disagree	12	5.83
Disagree	36	17.48
Neither disagree nor agree	54	26.21
Agree	63	30.58
Strongly agree	41	19.90

Willingness to Recommend the Mobile Banking Application

Willingness of the respondents to recommend the mobile banking application they use is asked in the survey. Results show that more than 85% of the mobile banking users are willing to recommend the application they use to other people. Mean value for that item is 4.21 over 5. It is surprising that only 3.5% of the customers saying that they won't recommend the mobile banking application to other people.

Table 24 - "I am willing to recommend people to use mobile banking application provided by the bank that I currently subscribe"

Reponses	Frequency	Percent
Strongly disagree	1	0.49
Disagree	6	2.91
Neither disagree nor agree	21	10.19
Agree	99	48.06
Strongly agree	79	38.35

Willingness to Pay

Respondents asked for their willingness to pay more for mobile banking services.

According to the results, most of the respondents (55.1%) state that they won't continue to use mobile banking if the transactions price increase. Most of the respondents who are already paying for mobile banking (80.3%) state that they won't continue to use mobile banking if 10% is taken as transaction fee.

Table 25 - "I will use mobile banking even if the transactions price increase."

Reponses	Frequency	Percent
Strongly disagree	35	29.7
Disagree	30	25.4
Neither disagree nor agree	27	22.9
Agree	19	16.1
Strongly agree	7	5.9

Table 26 - "Even if 10% is taken as transaction fee, I would continue to use mobile banking."

Reponses	Frequency	Percent
Strongly disagree	82	70.1
Disagree	12	10.3
Neither disagree nor agree	16	13.7
Agree	5	4.3
Strongly agree	7	1.7

Factor Analyses

To determine dimensions of customer satisfaction from mobile banking determinants factor analysis is used. There are 31 items which are gathered in literature review in correspondence with the customer satisfaction from mobile banking determinant

variables. Moreover, there are 8 items to measure customer loyalty. In order to decrease those numbers of items into fewer constructs and group related items together factor analysis is applied. Two factor analyses applied separately; first one is to group customer satisfaction determinant variables' items and second one is to group customer loyalty items. Factors found from those analyses will be used in further analyses.

Mobile Banking Customer Satisfaction Determinant Factors

Reliability Analysis

There are Customer Satisfaction determinant 31 items in total. Cronbach's Alpha for those items is found as .940. Results of the reliability analysis applied to those 31 items show that customer satisfaction determinants are consistent and reliable (Nunnally, 1978, p. 245).

Sampling Adequacy

Factor analysis is applied with principle components method to decrease the dimensions for explaining customer satisfaction from mobile banking. Before running factor analysis adequacy of sample is checked by using Kaiser-Meyer Olkin measure of sampling adequacy. As Kaiser-Meyer Olkin measure is found to be 0.916, which is greater than 0.500, the sample is adequate to run the factor analysis. Moreover, Bartlett's Test of Sphericity is also applied to the sample, which is another measure of sampling adequacy. Significance level for Bartlett's Test of Sphericity is found to be 0.000, which means sample is reliable to apply the factor analysis.

Table 27 - KMO and Bartlett's Test for Customer Satisfaction Determinant Factors

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.916
Bartlett's Test of Sphericity	Approx. Chi-Square	4089.676
	Df	465
	Sig.	0.000

Total Variance Explained

The results of the factor analysis show that 69.04% of the total variance is explained by 7 constructs. It is a satisfying result since explained variance is greater than 60%. In that factor analysis, principle component method and varimax rotation used to group the variables that load together.

Factor Solution of Customer Satisfaction Determinants

According to factor analysis 31 items related to customer satisfaction from mobile banking were classified into 7 components which are demonstrated on the table below. Those 7 components are named as: 1- Trust, 2- Convenience & Usefulness, 3- Relative Benefits, 4- Content Reliability & Variety, 5- Design & Infrastructure, 6- Customer Service, 7-Ungrouped Item.

Last item, which is a negatively asked question ("I access mobile banking only when I cannot go to branch.") didn't load together with other usefulness questions. Since that item couldn't group into usefulness factor, it is decided to remove that item and rerun factor analysis with 30 items.

Table 28 - Factor Solution for Customer Satisfaction Determinants with Items Loaded

Factor Name	Variance Explained (%)	Variable	Item	Item Loadings
F1. Trust	12.82	Trust	The information provided from mobile banking is reliable.	0.802
		Trust	Privacy on mobile banking is well protected.	0.783
		Trust	The system of mobile banking is reliable.	0.778
		Trust	Payments made through mobile banking will be processes securely.	0.560
F2. Convenience & Usefulness	12.34	Usefulness	Using mobile banking enables me to accomplish tasks more quickly	0.712
		Convenience	Mobile banking enables me to reach banking services anywhere and anytime.	0.686
		Usefulness	I believe that using mobile banking save capital by reducing costs	0.685
		Convenience	Overall process from access of mobile banking to make transaction is easy	0.660
		Usefulness	In my opinion, the use of mobile banking services increases my ability to control my financial matters by myself.	0.546
		Usefulness	Using a mobile banking application would give me greater control over my credit and debit cards.	0.532
		Usefulness	Using a mobile banking application would give me greater control over my credit and debit cards.	0.532
F3. Relative Benefits	11.89	Relative Benefits	Mobile banking is more convenient than Internet or off-line banking.	0.855
		Relative Benefits	Mobile banking is more effective than Internet or off-line banking in making transactions.	0.851
		Relative Benefits	Mobile banking is more advantageous since it is easier to use than other alternative banking channels.	0.849

Table 28 - Continued

Factor Name	Variance Explained (%)	Variable	Item	Item Loadings
F3. Relative Benefits	11.89	Relative Benefits	Mobile banking has more advantages than Internet or off-line banking because services are not limited by location.	0.616
		Relative Benefits	Mobile banking is much more convenient than other means of banking.	0.614
F4. Content Reliability & Variety	11.55	Content reliability	Information about services and operations are always available.	0.761
		Variety	Current mobile banking services are up to my expectations.	0.728
		Variety	There is a great variety of mobile banking services that meet my needs.	0.700
		Content reliability	Services and content I want are always available.	0.671
		Content reliability	The interactions with the mobile banking are clear and understandable.	0.609
F5. Design & Infrastructure	9.97	System quality	No error message encountered during a transaction in mobile banking.	0.726
		System quality	Rate of success to log in the mobile banking application is high.	0.629
		Visibility	Overall design of screens offered through mobile banking is constructed to help user's convenience.	0.600
		System quality	The quality of the service I get from the mobile banking is high.	0.553
		System quality	Mobile banking takes a short time to respond.	0.539
		Visibility	The screen design (i.e., colors, boxes, navigation bars, etc.) is attractive.	0.480

Table 28 - Continued

Factor Name	Variance Explained (%)	Variable	Item	Item Loadings
F6. Customer Service	6.74	Customer service	Mobile banking firms have a policy on customer protection from transaction mistakes.	0.710
		Customer service	There is content specification recommended for me when I access to mobile banking	0.594
		Customer service	I feel that when needed, I will get enough guidance from the bank related to mobile banking services.	0.584
		Customer service	Mobile banking always provides accurate financial services.	0.470
F7. Ungrouped Item	3.74	Usefulness	I access mobile banking only when I cannot go to branch.	0.852

Factor Analysis – Second Iteration

In this section factor analysis reapplied only with 30 remaining customer satisfaction determinant items.

Sampling Adequacy

Kaiser-Meyer Olkin measure for the remaining items is found to be 0.918, which is greater than 0.500, the sample is adequate to run the factor analysis. Kaiser-Meyer Olkin measure improved since variance in the sample data is decreased. Moreover, Bartlett's Test of Sphericity is also applied to the sample, which is another measure of sampling adequacy. Significance level for Bartlett's Test of Sphericity is found to be 0.000, which means sample is reliable to apply the factor analysis.

Table 29 - KMO and Bartlett's Test for Customer Satisfaction Determinant Factors

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.918
Bartlett's Test of Sphericity	Approx. Chi-Square	4055.184
	Df	435
	Sig.	0.000

Total Variance Explained

The results of the factor analysis show that 67.55% of the total variance is explained by 6 constructs. It is a satisfying result since explained variance is greater than 60%. In that factor analysis, principle component method and varimax rotation used to group the variables that load together.

Factor Solution of Customer Satisfaction Determinants

According to factor analysis 30 items related to customer satisfaction from mobile banking were classified into 6 components which are demonstrated on the table below. Those 6 components are named as: 1- Convenience & Usefulness, 2- Relative Benefits, 3- Content Reliability & Variety, 4- Trust, 5- Design & Infrastructure, and 6- Customer Service.

Table 30 - Factor Solution for Customer Satisfaction Determinants with Items Loaded

Factor Name	Variance Explained (%)	Variable	Item	Item Loadings
F1. Convenience & Usefulness	13.07	Usefulness	Using mobile banking enables me to accomplish tasks more quickly	0.734
		Convenience	Mobile banking enables me to reach banking services anywhere and anytime.	0.725

Table 30 - Continued

Factor Name	Variance Explained (%)	Variable	Item	Item Loadings
F1. Convenience & Usefulness	13.07	Convenience	Overall process from access of mobile banking to make transaction is easy	0.670
		Usefulness	I believe that using mobile banking save capital by reducing costs	0.627
		Usefulness	In my opinion, the use of mobile banking services increases my ability to control my financial matters by myself.	0.585
		Usefulness	Using a mobile banking application would give me greater control over my credit and debit cards.	0.493
F2. Trust	12.98	Trust	The information provided from mobile banking is reliable.	0.800
		Trust	Privacy on mobile banking is well protected.	0.776
		Trust	The system of mobile banking is reliable.	0.772
		Trust	Payments made through mobile banking will be processes securely.	0.550
F3. Content Reliability & Variety	12.45	Content reliability	Information about services and operations are always available.	0.782
		Variety	Current mobile banking services are up to my expectations.	0.708
		Variety	There is a great variety of mobile banking services that meet my needs.	0.680
		Content reliability	Services and content I want are always available.	0.665
		Content reliability	The interactions with the mobile banking are clear and understandable.	0.654
F4. Relative Benefits	12.15	Relative Benefits	Mobile banking is more convenient than Internet or off-line banking.	0.857
		Relative Benefits	Mobile banking is more effective than Internet or off-line banking in making transactions.	0.852

Table 30 - Continued

Factor Name	Variance Explained (%)	Variable	Item	Item Loadings
		Relative Benefits	Mobile banking is more advantageous since it is easier to use than other alternative banking channels.	0.847
		Relative Benefits	Mobile banking has more advantages than Internet or off-line banking because services are not limited by location.	0.616
		Relative Benefits	Mobile banking is much more convenient than other means of banking.	0.603
F5. Design & Infrastructure	9.87	System quality	No error message encountered during a transaction in mobile banking.	0.742
		System quality	Rate of success to log in the mobile banking application is high.	0.611
		Visibility	Overall design of screens offered through mobile banking is constructed to help user's convenience.	0.578
		System quality	The quality of the service I get from the mobile banking is high.	0.544
		System quality	Mobile banking takes a short time to respond.	0.517
		Visibility	The screen design (i.e., colors, boxes, navigation bars, etc.) is attractive.	0.452
F6. Customer Service	7.04	Customer service	Mobile banking firms have a policy on customer protection from transaction mistakes.	0.718
		Customer service	There is content specification recommended for me when I access to mobile banking	0.607
		Customer service	I feel that when needed, I will get enough guidance from the bank related to mobile banking services.	0.591
		Customer service	Mobile banking always provides accurate financial services.	0.470

Mean of Each Factor

Table 31 - Means of Factor Components of Customer Satisfaction

Component Number	Component Name	N of Items	Mean (over 5)	Std. Deviation
1	Convenience & Usefulness	6	4.17	0.64
2	Trust	4	3.88	0.75
3	Content Reliability & Variety	5	3.71	0.77
4	Relative Benefits	5	3.74	0.87
5	Design & Infrastructure	6	3.83	0.67
6	Customer Service	4	3.41	0.71

Factor 1: Convenience & Usefulness factor consists of 4 usefulness and 2 convenience items, which are depicted on the table above. Mean of the factor is 4.17 over 5, and its explanatory power for the variance is 13.07%. According to table above, there is no item that has factor loading below 0.5, so there is no need to drop any item from the construct.

Factor 2: Trust factor consists of 4 trust items depicted on table above. Mean of the factor is 3.88 over 5. This factor can explain 12.98% of the total variance. As it is shown on table above, there is no item that has factor loading below 0.5, so there is no need to drop any item from the construct.

Factor 3: Content Reliability & Variety factor consists of 3 content reliability and 2 variety items depicted on the table above. Mean of the factor is 3.71 over 5. This factor can explain 12.45% of the total variance. As it is seen on table above, there is no item that has factor loading below 0.5, so there is no need to drop any item from the construct.

Factor 4: Relative Benefits factor consists of 4 relative benefits items depicted on the table above. Mean of the factor is 3.74 over 5. This factor can explain 12.15% of the

total variance. As it is seen on table above there is no item that has factor loading below 0.5, so there is no need to drop any item from the construct.

Factor 5: Design & Infrastructure factor consists of 4 system quality and 2 visibility items depicted on table above. Mean of the factor is 3.83 over 5. This factor can explain 9.87% of the total variance. As it is seen on table above, there is one item that has factor loading below 0.5, still since that item is measuring a certain aspect of visibility it is decided not to drop it.

Factor 6: Customer Service factor consists of 4 customer service items depicted on Table 28. Mean of the factor is 3.41 over 5. This factor can explain 7.04% of the total variance. According to the results on table above, there is no item that has factor loading below 0.5, so there is no need to drop any item from the construct.

Mobile Banking Customer Loyalty Factors

Reliability Analysis

There are Customer Loyalty 8 items in total. Cronbach's Alpha for Customer Loyalty scale is found as .822. Results of the reliability analysis applied to those 8 items show that Customer Loyalty construct is consistent and reliable (Nunnally, 1978, p. 245).

Sampling Adequacy

Loyalty items have been adopted and reworded from different studies. There are 8 customer loyalty items in the survey. Factor analysis is applied to find out which of those 8 factors are loading together. Prior to factor analysis Bartlett's Test of Sphericity is

applied to the sample. Kaiser-Meyer-Olkin measure of sampling adequacy found as 0.832, which is greater than 0.5. Therefore, sample size is enough to apply factor analysis. Moreover, significance level for Bartlett's Test of Sphericity is 0.000, which signalizes that sample is reliable to apply the factor analysis.

Table 32 - KMO and Bartlett's Test for Customer Loyalty Items

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.832
Bartlett's Test of Sphericity	Approx. Chi-Square	564.947
	Df	28
	Sig.	0.000

Total Variance Explained

Total variance explained by 2 components is 60.40%. This result can be accepted as a satisfying result as it is greater than 60%. For the factor analysis principle component method and varimax rotation are used.

Factor Solution of Customer Loyalty Items

Table 33 - Factor Solution for Customer Loyalty Items with Items Loaded

Factor Name	Variance Explained (%)	Variable	Item	Item Loadings
F1. Mobile Banking Loyalty	33.16	Customer Loyalty	I am willing to recommend people to use mobile banking application provided by the bank that I currently subscribe	0.781
		Customer Loyalty	I will continuously use mobile banking	0.757

Table 33 – Continued

Factor Name	Variance Explained (%)	Variable	Item	Item Loadings
F1. Mobile Banking Loyalty	33.16	Customer Loyalty	I won't change the bank whose mobile banking application I use.	0.719
		Customer Loyalty	I will continuously use mobile banking application provided by the bank that I currently subscribe, even though it offers me similar service or benefits through other channels.	0.606
		Customer Loyalty	Since I'm satisfied with other services from the bank, I'm using mobile banking of the same bank.	0.561
F2. Intended Loyalty	27.23	Customer Loyalty	I will use products of the bank that I currently subscribe, other than mobile banking operations.	0.873
		Customer Loyalty	I can use other products of the bank of which I'm using mobile banking.	0.800
		Customer Loyalty	I will do more business with the bank whose mobile banking services I use.	0.643

Mean of Each Factor

Table 34 - Means of Factor Components of Customer Satisfaction

Component Number	Component Name	Mean (over 5)	Std. Deviation
1	Mobile Banking Loyalty	3.87	0.70
2	Intended Loyalty	3.91	0.73

Factor 1: First factor includes 3 channel loyalty items, one bank loyalty item and a willingness to recommend item. This factor signalizes the customers' intention to continue using the same bank's mobile banking application. As a result, first factor is named as "Mobile Banking Loyalty".

Mobile Banking Loyalty factor items can be seen on Table 33. Mean of the factor is 3.87 over 5. Factor can explain 33.16% variance of total variance. As it is seen on Table 33, there is no item that has factor loading below 0.5, so there is no need to drop any item from the construct.

Factor 2: Second factor includes 3 items which try to measure customers' intention to use or purchase new services or products from the same bank. Therefore, second factor is named as "Intended Loyalty".

Items constitute the Intended Loyalty factor can be seen on Table 33. Mean of the factor is 3.91 over 5. This factor can explain 27.23% of the total variance. As it is seen on Table 33, there is no item that has factor loading below 0.5, so there is no need to drop any item from the construct.

Factor Reliabilities

Reliability of Convenience & Usefulness Factor

Reliability analysis has been applied to determine internal consistency 6 items of Convenience & Usefulness factor. In order to check the internal consistency Cronbach's Alpha is calculated, which is .824. Since that value is greater than .70, content reliability items are considered as consistent and reliable (Nunnally, 1978, p. 245).

Table 35 - Reliability: Convenience & Usefulness Factor

ITEMS	Num. of Items	Reliability
Using mobile banking enables me to accomplish tasks more quickly Mobile banking enables me to reach banking services anywhere and anytime.	6	.824

Table 35 - Continued

ITEMS	Num. of Items	Reliability
Overall process from access of mobile banking to make transaction is easy I believe that using mobile banking save capital by reducing costs The use of mobile banking services increases my ability to control my financial matters by myself. Using a mobile banking application would give me greater control over my credit and debit cards.		

Reliability of Trust Factor

Trust factor has 4 items. Cronbach's Alpha for Trust factor is found as .895. This scale is considered as consistent and reliable since that value is greater than .70 (Nunnally, 1978, p. 245).

Table 36 - Reliability: Trust Factor

ITEMS	Num. of Items	Reliability
The information provided from mobile banking is reliable. Privacy on mobile banking is well protected. The system of mobile banking is reliable. Payments made through mobile banking will be processes securely.	4	.895

Reliability of Content Reliability & Variety Factor

Content Reliability & Variety factor has 5 items, which are shown in Table 37.

Cronbach's Alpha for Content Reliability & Variety scale is found as .870. Since that value is greater than .70, content reliability items are considered as consistent and reliable (Nunnally, 1978, p. 245).

Table 37 - Reliability: Content Reliability & Variety Factor

ITEMS	Num. of Items	Reliability
Information about services and operations are always available. Current mobile banking services are up to my expectations. There is a great variety of mobile banking services that meet my needs. Services and content I want are always available. The interactions with the mobile banking are clear and understandable. Information about services and operations are always available. Current mobile banking services are up to my expectations. There is a great variety of mobile banking services that meet my needs.	5	.870

Reliability of Relative Benefits Factor

A 5-item scale is used to measure Relative Benefits factor. Relative Benefits factor's Cronbach's Alpha is found as .896. Since that value is greater than .70, content reliability items are considered as consistent and reliable (Nunnally, 1978, p. 245).

Table 38 - Reliability: Relative Benefits Factor

ITEMS	Num. of Items	Reliability
Mobile banking is more convenient than Internet or off-line banking. Mobile banking is more effective than Internet or off-line banking in making transactions. Mobile banking is more advantageous since it is easier to use than other alternative banking channels. Mobile banking has more advantages than Internet or off-line banking because services are not limited by location. Mobile banking is much more convenient than other means of banking.	5	.896

Reliability of Design & Infrastructure Factor

Design & Infrastructure factor is measured with 6 items. Design & Infrastructure factor's Cronbach's Alpha is found as .848. Since that value is greater than .70, content reliability items are considered as consistent and reliable (Nunnally, 1978, p. 245).

Table 39 - Reliability: Design & Infrastructure Factor

ITEMS	Num. of Items	Reliability
No error message encountered during a transaction in mobile banking. Rate of success to log in the mobile banking application is high. Overall design of screens offered through mobile banking is constructed to help user's convenience. The quality of the service I get from the mobile banking is high. Mobile banking takes a short time to respond.	6	.848

Reliability of Customer Service Factor

A 4-item scale is used to measure Customer Service factor. Customer service factor's Cronbach's Alpha is found as .690. This value is not greater than .70 which is considered as a threshold value for reliable scales. Since .690 is close to .70 and the study is an exploratory study, it can be stated that .690 is an acceptable value (Nunnally, 1967, p. 226).

Table 40 - Reliability: Customer Service Factor

ITEMS	Num. of Items	Reliability
Mobile banking firms have a policy on customer protection from transaction mistakes. There is content specification recommended for me when I access to mobile banking	4	.690

Table 40 - Continued

ITEMS	Num. of Items	Reliability
I feel that when needed, I will get enough guidance from the bank related to mobile banking services. Mobile banking always provides accurate financial services.		

Reliability of Mobile Banking Loyalty Factor

5 customer loyalty items were grouped into Customer Loyalty factor. Customer loyalty factor's Cronbach's Alpha is found as .763, which is greater than .70 and considered as a reliable factor (Nunnally, 1967, p. 226).

Table 41 - Reliability: Mobile Banking Loyalty Factor

ITEMS	Num. of Items	Reliability
I am willing to recommend people to use mobile banking application provided by the bank that I currently subscribe I will continuously use mobile banking I won't change the bank whose mobile banking application I use. I will continuously use mobile banking application provided by the bank that I currently subscribe, even though it offers me similar service or benefits through other channels. Since I'm satisfied with other services from the bank, I'm using mobile banking of the same bank.	5	.763

Reliability of Intended Loyalty Factor

Intended Loyalty factor is a 3 item scale factor. Cronbach's Alpha of the factor is found as .763, which is greater than .70 and considered as a reliable factor (Nunnally, 1967, p. 226).

Table 42 - Reliability: Intended Loyalty Factor

ITEMS	Num. of Items	Reliability
I will use products of the bank that I currently subscribe, other than mobile banking operations. I can use other products of the bank of which I'm using mobile banking. I will do more business with the bank whose mobile banking services I use.	3	.762

Correlation Analyses

In this part, relations between customer satisfaction determinants and customer satisfaction will be examined by correlation analysis. Also, relations between customer satisfaction and mobile banking loyalty and intended loyalty will be examined by applying correlation analyses.

Customer Satisfaction Determinant Factors and Customer Satisfaction

Correlation analysis using Pearson correlation coefficients is used to find the relations between customer satisfaction determinant factors and customer satisfaction. Those relations correspond to hypotheses from 1 to 6, which propose that there are positive correlations between customer satisfaction determinant factors and customer satisfaction.

Table 43 - Correlation between Customer Satisfaction and Customer Satisfaction Factors

		Customer Satisfaction	Hypothesis	Result
Convenience & Usefulness	Pearson Correlation	.658**	H1: Positive Relation	Supported
	Sig. (2-tailed)	.000		
Relative Benefits	Pearson Correlation	.607**	H2: Positive Relation	Supported
	Sig. (2-tailed)	.000		

Table 43 - Continued

		Customer Satisfaction	Hypothesis	Result
Content Reliability & Variety	Pearson Correlation	.633**	H3: Positive Relation	Supported
	Sig. (2-tailed)	.000		
Trust	Pearson Correlation	.616**	H4: Positive Relation	Supported
	Sig. (2-tailed)	.000		
Design & Infrastructure	Pearson Correlation	.655**	H5: Positive Relation	Supported
	Sig. (2-tailed)	.000		
Customer Service	Pearson Correlation	.508**	H6: Positive Relation	Supported
	Sig. (2-tailed)	.000		

By looking the correlation table above, there are significant positive correlations between all customer satisfaction determinant factors and customer satisfaction, which means that all of the hypotheses from 1 to 6 are confirmed.

Most strong correlation exists between Convenience & Usefulness factor and Customer Satisfaction factor. This is logical because as it mentioned in many studies, convenience, ubiquity and flexibility are the most distinctive properties of mobile technologies (Lee and Benbasat, 2003; Venkatesh et al., 2003; Looney et al., 2004). Second most strong correlation is between design & infrastructure and customer satisfaction. This is also logical because in mobile banking customers has a small screen to conduct banking operations, so screen design and visibility is an important aspect of mobile banking (Kim et al., 2009). Weakest correlation is found between Customer Service and Customer Satisfaction factor. This relatively weak correlation signalizes that mobile banking users value customer services less than other factors like usefulness or design and infrastructure.

Hypothesis 1 is confirmed with the correlation analysis. The positive relation between convenience & usefulness and customer satisfaction is significant since Sig. value is less than .005. Customers who think that mobile banking is convenient and useful are satisfied with mobile banking services.

Hypothesis 2 is approved by the results of the correlation analysis. Since the Sig. value is less than .005, positive relation between relative benefits and customer satisfaction is significant. Customers who think that mobile banking has relative benefits compared to other banking channels tend to be more satisfied with mobile banking services.

Hypothesis 3 is verified with correlation analysis' results. As the correlation coefficient is positive and significance value is less than .005, there is positive relation between content reliability & variety and customer satisfaction. This means that, customers tend to be satisfied if they see mobile banking content is reliable and having enough variety.

Hypothesis 4 is confirmed with the correlation analysis. The positive relation between trust and customer satisfaction is significant since Sig. value is less than .005. Customers who think that mobile banking is trustable are inclined to be more satisfied with mobile banking services.

Hypothesis 5 is approved by the results of the correlation analysis. Since the Sig. value is less than .005, positive relation between design & infrastructure and customer satisfaction is significant. This means that, customers tend to be satisfied if they are satisfied with the design & infrastructure of mobile banking.

Hypothesis 6 is verified with correlation analysis' results. There is positive relation between customer service and customer satisfaction since the correlation coefficient is positive and significance value is less than .005. Customers who think that customer service in mobile banking satisfying are inclined to be more satisfied with mobile banking services.

Customer Satisfaction and Mobile Banking Loyalty

Table 44 - Correlation between Customer Satisfaction and Mobile Banking Loyalty

		Mobile Banking Loyalty	Hypothesis	Result
Customer Satisfaction	Pearson Correlation	.700**	H7: Positive Relation	Supported
	Sig. (2-tailed)	.000		

** Correlation is significant at the 0.01 level (2-tailed).

A positive correlation between customer satisfaction and mobile banking loyalty is confirmed by the correlation analysis above.

Hypothesis 7 is proved by the results of correlation analysis. Customers who are satisfied with mobile banking services tend to be more loyal to their banks. Therefore, satisfaction from mobile banking is an important determinant of mobile banking loyalty.

Customer Satisfaction and Intended Loyalty

Table 45 - Correlation between Customer Satisfaction and Intended Loyalty

		Intended Loyalty	Hypothesis	Result
Customer Satisfaction	Pearson Correlation	.541**	H8: Positive Relation	Supported
	Sig. (2-tailed)	.000		

** Correlation is significant at the 0.01 level (2-tailed).

According to the correlation analysis, more satisfied mobile banking customers plan to purchase more services and products from the bank. This indicates that mobile banking influences the offering banks' revenues significantly. Hypothesis 8 is supported with the results of the correlation analysis.

Mobile Banking Loyalty and Intended Loyalty

Table 46 - Correlation between Mobile Banking Loyalty and Intended Loyalty

		Intended Loyalty	Hypothesis	Result
Mobile Banking Loyalty	Pearson Correlation	.546**	H9: Positive Relation	Supported
	Sig. (2-tailed)	.000		

** Correlation is significant at the 0.01 level (2-tailed).

According to the correlation analysis, if a customer is more loyal to mobile banking channel, then s/he will be most probably purchase more services and products from the same bank. This relation shows that mobile banking can affect the bank's revenue and profits significantly. Hypothesis 9 is supported with the results of the correlation analysis.

Perceived Price Level and Satisfaction, Mobile Banking and Intended Loyalty

Table 47 - Correlation between Perceived Price Level and Satisfaction, Mobile Banking and Intended Loyalty

		Perceived Price Level	Hypothesis	Result
Customer Satisfaction	Pearson Correlation	.138	H10: Positive Relation	Partially Supported
	Sig. (2-tailed)	.223		
Mobile Banking Loyalty	Pearson Correlation	.268*		
	Sig. (2-tailed)	.016		

Table 47 - Continued

		Perceived Price Level	Hypothesis	Result
Intended Loyalty	Pearson Correlation	.315**		
	Sig. (2-tailed)	.004		

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Results of correlation analysis indicate that perceived price level and customer satisfaction are not significantly correlated. On the other hand, perceived price level and mobile banking loyalty are positively correlated. This means that more loyal customers think that the prices they pay are appropriate. Lastly, there is a significant positive correlation between intended loyalty and perceived price level. This is logical because customers think that they are paying appropriate prices for mobile banking and mobile internet are planning to use and purchase more services and products of the same bank.

Hypothesis 10 is partially supported by the results of the correlation analyses, since there is no significant correlation between customer satisfaction and perceived price level.

ANOVA Analyses

Gender and Satisfaction, Mobile Banking and Intended Loyalty

Table 48 - ANOVA Analysis between Gender and Satisfaction, Mobile Banking and Intended Loyalty

	Gender	N	Mean	F	Sig.
Customer Satisfaction	Male	136	3.97	1.445	0.231
	Female	70	3.84		
	Total	206	3.92		

Table 48 - Continued

	Gender	N	Mean	F	Sig.
Mobile Banking Loyalty	Male	136	3.9	0.869	0.352
	Female	70	3.81		
	Total	206	3.87		
Intended Loyalty	Male	136	3.92	0.18	0.672
	Female	70	3.88		
	Total	206	3.91		

First ANOVA analysis is used to determine whether there is any significant difference between male and females in terms of customer satisfaction from mobile banking. This analysis proves that there is no significant difference between male and females considering the customer satisfaction from mobile banking. As the sample includes mostly educated people which are already familiar with mobile technologies, it makes sense not to have significant difference between men and women.

According to the ANOVA analysis between gender and mobile banking loyalty, it is seen that there is no significant difference between male and females in terms of mobile banking loyalty. This means that mobile banking loyalty doesn't change significantly with the gender of customer.

ANOVA analysis shows that there is no significant difference between male and females in terms of intended loyalty. So, intention to purchase more from the same bank doesn't change between men and women.

Since results of the ANOVA analyses shows that there is no significant difference between males and females in terms of customer satisfaction, mobile banking and intended loyalty, Hypothesis 11 doesn't supported.

Age and Satisfaction, Mobile Banking and Intended Loyalty

Table 49 - ANOVA Analysis between Age and Satisfaction, Mobile Banking and Intended Loyalty

	Age Group	N	Mean	F	Sig.
Customer Satisfaction	18-25	39	3.91	3.401	0.019
	26-35	142	3.95		
	36-45	15	4.17		
	46 - ...	10	3.30		
	Total	206	3.92		
Mobile Banking Loyalty	18-25	39	3.87	1.819	0.145
	26-35	142	3.89		
	36-45	15	3.97		
	46 - ...	10	3.38		
	Total	206	3.87		
Intended Loyalty	18-25	39	3.79	3.2	0.024
	26-35	142	3.92		
	36-45	15	4.33		
	46 - ...	10	3.50		
	Total	206	3.91		

ANOVA analysis between age groups and customer satisfaction proves that there is significant difference between age groups in terms of customer satisfaction. As it is seen on the table mean of customer satisfaction is highest for 36-45 age group, whereas it gradually falls for people younger than 36 and older than 45.

Second ANOVA analysis proves that there is no significant difference between different groups with different ages with respect to mobile banking loyalty. In fact there is means of mobile banking loyalty items changes between different age groups. But, those changes are not large enough to be statistically significant.

It is interesting to find that the intended loyalty differences are significant between age groups, whereas mobile banking loyalty wasn't. Results of the analysis show that intended loyalty is highest for the 36-45 age group.

There is significant difference between age groups in terms of customer satisfaction and intended loyalty. Since there is no significant difference in mobile banking loyalty, Hypothesis 12 is partially supported.

Income and Satisfaction, Mobile Banking and Intended Loyalty

Table 50 - ANOVA Analysis between Income and Satisfaction, Mobile Banking and Intended Loyalty

	Income Level	N	Mean	F	Sig.
Customer Satisfaction	<2,000 TL	34	3.54	4.509	0.004
	2,000-3,500 TL	70	3.97		
	3,501-5,000 TL	50	3.96		
	> 5,001 TL	52	4.08		
	Total	206	3.92		
Mobile Banking Loyalty	<2,000 TL	34	3.59	2.453	0.064
	2,000-3,500 TL	70	3.87		
	3,501-5,000 TL	50	3.93		
	> 5,001 TL	52	3.99		
	Total	206	3.87		
Intended Loyalty	<2,000 TL	34	3.60	2.788	0.042
	2,000-3,500 TL	70	3.98		
	3,501-5,000 TL	50	3.89		
	> 5,001 TL	52	4.02		
	Total	206	3.91		

Since the sample has a fairly even distribution among income groups, ANOVA analysis found a significant difference between income groups in terms of customer satisfaction.

This means that customers having different income levels have different levels of

customer satisfaction. From the table above, it is seen satisfaction levels are increasing with the increasing income levels.

Again, means of mobile banking loyalties for different income levels are seen similar. Therefore, difference between different income levels is not significant in terms of mobile banking loyalty.

Difference between different income levels in terms of intended loyalty is significant with 0.05 significance level. Which means that intended loyalty is changing between people having different income levels.

According to the results of the ANOVA analyses, Hypothesis 13 is partially supported.

Education and Satisfaction, Mobile Banking and Intended Loyalty

Table 51 - ANOVA Analysis between Education Level, Customer Satisfaction, Mobile Banking and Intended Loyalty

	Education Level	N	Mean	F	Sig.
Customer Satisfaction	Less than University	9	3.94	0.193	0.825
	University Graduate	124	3.95		
	Higher than University	73	3.88		
	Total	206	3.92		
Mobile Banking Loyalty	Less than University	9	3.71	1.594	0.206
	University Graduate	124	3.94		
	Higher than University	73	3.77		
	Total	206	3.87		
Intended Loyalty	Less than University	9	3.93	2.273	0.106
	University Graduate	124	3.99		
	Higher than University	73	3.76		
	Total	206	3.91		

It is interesting to find out that there is no difference between customers having different education levels in terms of customer satisfaction. ANOVA analysis shows that there is no significant change in customer satisfaction between different education level groups.

Mobile banking loyalty for different education levels are not changing significantly. This means that mobile banking loyalty doesn't change significantly between different education level groups.

Last ANOVA analysis signalizes that intended loyalty doesn't change between different education levels. Results of this analysis prove that there is no significant difference between education levels with respect to intended loyalty.

ANOVA analyses couldn't detect any significant difference between education level groups in terms of customer satisfaction, mobile banking and intended loyalty. So, Hypothesis 14 is not supported by ANOVA analyses.

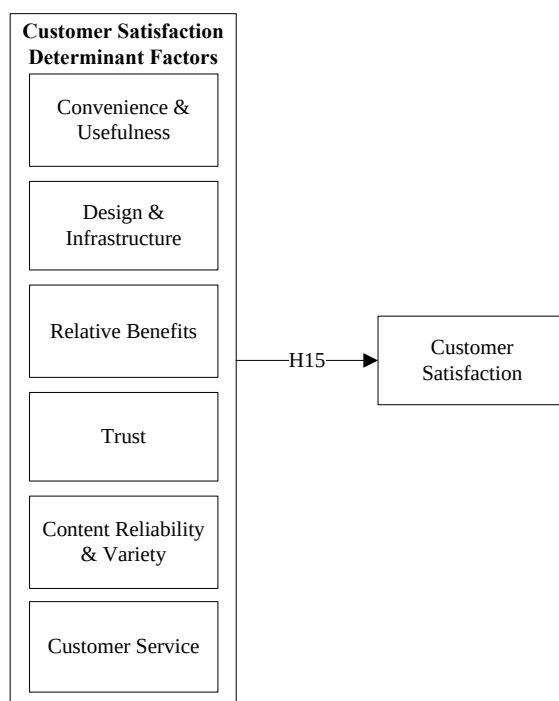
Regression Analyses

Regression analyses are conducted in order to determine the cause and affect relationships between dependent and independent variables. Stepwise linear regression analysis is used since it combines forward and backward selection and variables enter to the model according to their t-values.

Customer Satisfaction Determinants and Customer Satisfaction

Hypothesis 15: Customer satisfaction from mobile banking is influenced/ determined by convenience & usefulness, relative benefits, design & infrastructure content reliability & variety, trust, customer service.

Figure 7 - Theoretical Model for the Regression Analysis



- Factor1: Convenience & Usefulness
- Factor2: Design & Infrastructure
- Factor3: Relative Benefits
- Factor4: Trust
- Factor5: Content Reliability & Variety
- Factor6: Customer Service

By using stepwise linear regression, SPSS reached a resulting regression model after trying five different models. Regression analysis results for the resulting regression models are as follows.

Table 52 - ANOVA table of Customer Satisfaction Regression Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62.121	5	12.424	63.774	.000 ^a
	Residual	38.963	200	.195		
	Total	101.084	205			

a. Predictors: (Constant), Convenience & Usefulness, Design & Infrastructure, Relative Benefits, Trust, Content Reliability & Variety

b. Dependent Variable: Customer Satisfaction Factor

According to ANOVA table, predictive level of the model is high since the F value is 63.774. Moreover, as F value is 63.774, it can be stated that it is strongly significant. Also significance value for the model is .000, thus, customer satisfaction can be predicted by the regression equation by the independent variables.

Table 53 - Model Summary of Customer Satisfaction Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.784 ^a	.615	.605	.44138	1.975

a. Predictors: (Constant), Convenience & Usefulness, Design & Infrastructure, Relative Benefits, Trust, Content Reliability & Variety

R can take values between -1 and +1, in this regression model it takes .784. Also, R^2 takes values between 0 and 1, and it is calculated as .615. Model gets stronger as the R^2 value gets closer to 1. Since the R^2 is .615 for the model, it can be stated that the model is highly

predictive. In other words, R and R^2 values are signalizes that the result of the regression equation is highly satisfying.

Since the model is significant, variables within the model, which will indicate the factors determining customer satisfaction from mobile banking, can be examined. To determine the variables that affect customer satisfaction, t-values and significance levels are important. T-values and significance levels for the variables in the model are listed below. Only the variables having less than .05 significance level are included in the model.

Table 54 - Regression Coefficients of Dependent Variable Customer Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.317	.216		1.465	.145
Factor1	Convenience & Usefulness	.209	.072	.192	2.915	.004
Factor2	Design & Infrastructure	.217	.070	.207	3.116	.002
Factor3	Relative Benefits	.185	.046	.229	4.010	.000
Factor4	Trust	.173	.058	.184	2.961	.003
Factor5	Content Reliability & Variety	.146	.058	.159	2.504	.013

a. Dependent variable: Customer Satisfaction

It is expected that the customer satisfaction estimate should be greater than zero even if all the independent variables are zero; therefore, even if the constant found insignificant it is not omitted from the model. As a result, regression equation of customer satisfaction from mobile banking is as follows:

$$\begin{aligned} \text{Customer satisfaction from mobile banking} \approx \\ 0.317 + 0.209 * (\text{Factor1}) + 0.217 * (\text{Factor2}) + 0.185 * (\text{Factor3}) + 0.173 * (\text{Factor4}) + \\ 0.146 * (\text{Factor5}) \end{aligned}$$

Main objective of applying multiple regression is to determine the independent variables which can predict the customer satisfaction from mobile banking best.

According to the results with 0.05 significance level, there are 5 factors used to explain customer satisfaction. Those equations mean that customer satisfaction is determined by design & infrastructure, convenience & usefulness, relative benefits, trust and content reliability & variety of mobile banking. Content reliability & variety has the least effect on customer satisfaction. Moreover, customer service was not included into the equation, which means that customer service does not significantly affecting customer satisfaction. This can be explained by mobile banking usage behavior of the customers. Since most of the users doesn't use information intensive operations in mobile banking, like investment operations, customers may not need to get support from customer services frequently. Accordingly, customer service has positive correlation with customer satisfaction in mobile banking but it doesn't affect customer satisfaction significantly.

From the results of the multiple regression analyses, it can be concluded that Hypothesis 15 is partially supported, since customer service doesn't included in the model.

CHAPTER 6

CONCLUSION AND IMPLICATIONS

The aim of this study is to find out the determinants of customer satisfaction from mobile banking and the relation of customer satisfaction, mobile banking and intended loyalty in mobile banking context in Turkey.

A comprehensive literature review has been conducted including different disciplines such as marketing, economy, psychology, information systems and management and different topics like adoption of technology, satisfaction, loyalty in both online and mobile contexts. Following that extensive literature review, an online questionnaire was prepared. In order to gather sample data, questionnaire was distributed via mail, social media, forums and web sites. The data gathered from 336 respondents at the end of the gathering phase is analyzed with descriptive, factor, correlation, regression and ANOVA analyses by using SPSS 20.0.

Descriptive analyses indicate that most of the items have means greater than 3.5, which signalizes that majority of the respondents agree with the statements in the questions. In other words, majority of the respondents regard mobile banking positively. Usefulness, convenience, relative benefits and system quality items are among the highest rated items in the study. This means that convenience and usefulness properties of mobile banking are highlighted most by the respondents. System quality and relative benefits of the mobile banking are also appreciated by the respondents. The least highlighted items are the ones which are related with customer service and perceived price level. This

implies the respondents of the study are not happy with the customer services provided by the banks. Moreover, they don't find the price they are paying is appropriate for the mobile banking service they get. Two perceived price level questions have the highest standard deviation values, which indicate that respondents of those questions have different perceptions on the prices they pay.

Results of the factor analysis show that the factors affecting customer satisfaction from mobile banking can be grouped into 6 constructs. Those factors are:

Factor 1: Convenience & Usefulness,

Factor 2: Relative Benefits,

Factor 3: Content Reliability & Variety,

Factor 4: Trust,

Factor 5: Design & Infrastructure,

Factor 6: Customer Service

Factors that are having the highest mean are Convenience & Usefulness and Trust. And the factor that has the lowest mean is Customer Service.

Results of the correlation analyses demonstrate that:

- There is a positive relationship between convenience and usefulness and customer satisfaction. Meaning that, users thinking that mobile banking is convenient and useful are more satisfied with their experience of mobile banking.
- There is a positive relationship between relative benefits and customer satisfaction. Customers who find mobile banking relatively more advantageous compared to other banking channels are more satisfied with mobile banking.

- There is a positive relationship between content reliability and variety and customer satisfaction. If customers think that content presented in mobile banking is reliable and content variety is enough, they tend to be satisfied from their mobile banking experience.
- There is a positive relationship between trust and customer satisfaction from mobile banking. Customers who trust mobile banking applications found to be more satisfied with their mobile banking experiences.
- There is positive correlation between design & infrastructure and customer satisfaction. Design and infrastructure of mobile banking applications are found to be important for customer satisfaction from mobile banking.
- Customer service and customer satisfaction are positively correlated. If a customer is happy with the customer service of mobile banking, they tend to be satisfied with mobile banking in general.
- There is positive relationship between customer satisfaction and mobile banking loyalty. Satisfied customers seem to be more loyal to mobile banking application of the bank they use. Also, satisfied customers found to be loyal to the mobile banking channel, they rarely consider using other banking channels.
- There is positive relationship between customer satisfaction and intended loyalty. Customers who satisfied with mobile banking experience inclined to use more of bank's services. Moreover, satisfied customers tend to purchase other products from the same bank.

- Perceived price level have positive correlations with mobile banking loyalty and intended loyalty. These results signalize that mobile banking and intended loyalty increases with price level perception improves.

ANOVA analyses showed that:

- There is no significant difference between males and females according to customer satisfaction, mobile banking and intended loyalty.
- There are significant differences in customer satisfaction from mobile banking between different age groups. This means that customer satisfaction level is changing with different age groups. And the analysis reflects that customers within 36-45 age group are having the highest satisfaction from mobile banking.
- There are significant differences between different income levels with respect to customer satisfaction and intended loyalty. Whereas there is no significant difference in terms of mobile banking loyalty between different income levels.
- There is no significant difference between different education levels in terms of customer satisfaction, mobile banking and intended loyalty. Still, it is seen that compared to other education level groups university graduates are the most satisfied and loyal group.

Regression analyses showed that:

- Customer satisfaction from mobile banking is determined by convenience & usefulness, relative benefits, design & infrastructure and trust. As the correlation analyses suggest, convenience & usefulness, trust, design & infrastructure, relative benefits and content reliability & variety affect customer satisfaction positively. On the contrary, customer service factors are not affecting customer satisfaction significantly.

There are a number of implications of this study. For the mobile banking users, this study reveals many factors that affect customer satisfaction from mobile banking. As convenience & usefulness, relative benefits, design & infrastructure and trust increase, customer satisfaction from mobile banking also increases. So, this study provides customers a list of factors that are affecting their satisfaction level from mobile banking.

For mobile banking providers, this study reveals a list of factors that affects their customers' satisfaction from the mobile banking services they provide. Convenience & usefulness, relative benefits, design & infrastructure and trust are affecting mobile banking customer satisfaction positively. Design & infrastructure and convenience & usefulness are affecting customer satisfaction most. By considering those results, banks may improve their customer satisfaction levels from mobile banking by increasing their system quality and design. Also, they may use advertisement emphasizing on convenience and usefulness of mobile banking. It is also seen that banks should also improve their customers' trust towards their mobile banking services in order to increase customer satisfaction.

In addition to the factor list that affects customer satisfaction from mobile banking, factors affecting mobile banking loyalty and intended loyalty also provided in the study. Customer satisfaction is related with loyalty of customers to both their banks and mobile banking channel. According to the results, banks can increase mobile banking loyalty by increasing customer satisfaction. Also, by increasing design and infrastructure of their mobile banking services banks can increase their customers' mobile banking loyalty.

Last factor list is provided for intended loyalty factors, which includes mobile banking loyalty, customer satisfaction and perceived price level. This factor list reveals a

way for banks to increase their customers' intention to use more of their services and products. Also ANOVA analyses between demographics and intended loyalty reveals that banks should focus on specific age and income groups rather than considering different education level groups.

Customer service doesn't have significant affect on customer satisfaction. As a result of those findings, banks should focus on design & infrastructure, convenience & usefulness and relative benefits, content reliability & variety rather than customer service.

There are also limitations of this study. First limitation of this study is the sample distribution in terms of demographic profiles. The sample of the study is constituted by mostly educated banking customers, who are at least university graduates. Moreover, respondents in the sample are mostly young and early adult customers who are experienced computer and mobile internet users. Therefore, researchers may study with more evenly distributed samples according to education level and ages. Second limitation of this study is the time limitation. Because of the time limitation of the study, sample data is gathered only one time. In order to determine the relation between customer satisfaction, mobile banking and intended loyalty new studies would use a longitudinal approach with a broader time span. Finally, this study is conducted to gather information from mobile banking customers. New studies can be conducted from the banks' point of view, like investigating the relations between customer satisfaction from mobile banking and banks' profitability.

APPENDIX A

ADOPTION STUDIES AND ADOPTION FACTORS LIST

	Perceived ease of use/Complexity	Perceived usefulness	Perceived cost/Price	Relative benefits/advantage	Security	Compatibility	Perceived risk	Convenience	Trust	Subjective norm / Social influence	Perceived self-efficacy	Facilitating conditions	Privacy	Mobility	Speed of transaction	Attitude	Perceived quality/System quality	Technology anxiety	Familiarity with bank	Mobile experience	Initial trust	Structural assurance	Network externalities	Innovativeness	Perceived credibility	Trialability	Banking needs	Situational normality	Expressiveness	Mobile Payment Knowledge	Accessibility	Need interaction	Interpersonal relationship	Awareness	Observability	Demographics (Age)	Gender	Perceived Behavioral Control	
Anckar and D'Incau, 2002				X																																			
Heijden, 2002	X		X				X																	X															
Brown et al., 2003	X			X		X	X				X	X									X							X	X										
Pousttchi, 2003			X		X			X																															
Suoranta, 2003	X			X		X	X											X								X							X		X	X			
Lee and Benbasat, 2003				X																																			
Lee, Warkentin, and Choi, 2004						X											X	X																					
Cheong, Park, and Hwang, 2004	X	X	X	X								X				X																	X						
Kleijnen, et al., 2004	X	X	X							X							X																						
Looney, Jessup, and Valacich, 2004				X																																			
Mattila, 2004	X			X		X	X																			X										X			
Zmijewska, Lawrence, and Steele, 2004a	X	X	X		X				X																														
Zmijewska, Lawrence, and Steele, 2004b	X	X	X						X					X																									
Dewan and Chen, 2005	X	X			X			X					X		X																								
Laforet and Li, 2005																																		X					
Luarn and Lin, 2005	X	X	X								X															X													
Yang, 2005		X															X							X													X	X	

[illegible]

APPENDIX B

QUESTIONNAIRE (ENGLISH)

Q1. Do you use mobile banking?

Yes	No
-----	----

Q2. How long have you been using mobile banking?

Last 1 month	Last 6 month	Last 1 year	Last 2-3 year	More than 3 years
--------------	--------------	-------------	---------------	-------------------

Q3. Choose the bank of which you are using mobile banking application:

Akbank	Aktif Yatirim Bankasi	Denizbank	Finans Bank
ING Bank	Sekerbank	Türk Ekonomi Bankasi	Ziraat Bankasi
Türkiye Halk Bankasi	Türkiye Garanti Bankasi	Türkiye Is Bankasi	Yapi ve Kredi Bankasi
Fortis Bank	Vakif Bank	Türkiye Finans Katilim Bankasi	Bank Asya

Q4. Please indicate the frequency use mobile banking application for the banking operations below:

	Never	Rarely	Sometimes	Usually	Always
a- Money Transfer					
b- Payment (Credit Card Debt, Credit, Bill, etc.)					
c- Check for Card or Account Info (balance, debt, info, etc.)					
d- Investment Operation					
e- Application (Card, Credit, etc.)					
f - Closest ATM Query					

Q5. Please indicate the degree that you agree with the statements below:

		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
1	I use m-Internet to use various other services besides mobile banking (email, web browsing, etc.)					
2	Functionality of the mobile device I currently use is appropriate for mobile banking application use					

Q6. Please indicate the degree that you agree with the statements below considering the current mobile banking application you are using:

		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
1	Mobile banking enables me to reach banking services anywhere and anytime.					
2	I access mobile banking only when I cannot go to branch.					
3	I believe that using mobile banking save capital by reducing costs					
4	Using mobile banking enables me to accomplish tasks more quickly					
5	Mobile banking is much more convenient than other means of banking.					
6	Using a mobile banking application would give me greater control over my credit and debit cards.					
7	There is a great variety of mobile banking services that meet my needs.					
8	Current mobile banking services are up to my expectations.					
9	Services and content I want are always available					

		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
10	Information about services and operations are always available					
11	The interactions with the mobile banking are clear and understandable.					
12	Rate of success to log in the mobile banking application is high.					
13	No error message encountered during a transaction in mobile banking.					
14	The system of mobile banking is reliable.					
15	The information provided from mobile banking is reliable.					
16	The quality of the service I get from the mobile banking is high.					
17	Mobile banking takes a short time to respond.					
18	Overall design of screens offered through mobile banking is constructed to help user's convenience					
19	The screen design (i.e., colors, boxes, navigation bars, etc.) is attractive.					
20	In my opinion, the use of mobile banking services increases my ability to control my financial matters by myself.					
21	Payments made through mobile banking will be processes securely.					
22	Privacy on mobile banking is well protected.					
23	Mobile banking firms have a policy on customer protection from transaction mistakes.					

		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
24	Mobile banking always provides accurate financial services.					
25	There is content specification recommended for me when I access to mobile banking					
26	I feel that when needed, I will get enough guidance from the bank related to mobile banking services.					
27	Mobile banking has more advantages than Internet or off-line banking because services are not limited by location.					

Q7. Please indicate the degree that you agree with the statements below considering the current mobile banking application you are using:

		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
1	Mobile banking is more convenient than Internet or off-line banking.					
2	Mobile banking is more effective than Internet or off-line banking in making transactions.					
3	Mobile banking is more advantageous since it is easier to use than other alternative banking channels.					
4	Overall process from access and making transaction via mobile banking application is satisfying					

Q8. Please indicate the degree that you agree with the statements below considering the current mobile banking application you are using:

		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
1	I'm pleased that I'm using mobile banking services for my banking operations.					
2	I will continuously use mobile banking					
3	I am willing to recommend people to use mobile banking application provided by the bank that I currently subscribe					
4	I won't change the bank whose mobile banking application I use.					
5	I will continuously use mobile banking application provided by the bank that I currently subscribe, even though it offers me similar service or benefits through other channels.					

Q9. Are you paying for connection or operations for mobile banking?

Yes	No
-----	----

Q10. If you are not paying for mobile banking, would you continue to use if you would have to pay?

Yes	No
-----	----

Q11. If you are paying for mobile banking please indicate the degree that you are agree with the statements below:

		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
1	A level of transactions' price is appropriate.					
2	A level of price for using m-Internet to access mobile banking is appropriate.					
3	I will use even if transactions price is increased					
4	Even if 10% is taken as transaction fee, I would continue to use mobile banking.					

Q12. Please indicate the city you reside:

Q13. Gender:

Male	Female
------	--------

Q14. Age:

18-25 years	26-35 years	36-45 years	46-55 years	> 56 years
-------------	-------------	-------------	-------------	------------

Q15. Personal Income: (monthly)

<2,000 TL	2,000-3,500 TL	3,501-5,000 TL	5,001-10,000 TL	>10,000 TL
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Q16. Education:

Less than high school	High school graduate	University graduate	Master graduate	Doctorate graduate
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Q17. Please indicate the frequency you use branch for the banking operations below:

	Never	Rarely	Sometimes	Usually	Always
a- Money Transfer					
b- Payment (Credit Card Debt, Credit, Bill, etc.)					
c- Check for Card or Account Info (balance, debt, info, etc.)					
d- Investment Operation					
e- Application (Card, Credit, etc.)					

Q18. Are you using internet banking?

Yes	No
-----	----

Q19. If you are using internet banking, are you satisfied with internet banking services offered by your bank?

Yes	No
-----	----

APPENDIX C

QUESTIONNAIRE (TURKISH)

Türkiye'de Mobil Bankacılığın Kullanımına Etki Eden Faktörler ve Müşteri Memnuniyetine Etkileri Anketi

Değerli Katılımcı,

Bu anket Boğaziçi Üniversitesi Yönetim Bilişim Sistemleri Yüksek Lisans Programı tez çalışması kapsamında Abdullah Sait Çetin tarafından Doç. Dr. Ceylan Onay ve Doç. Dr. Aslıhan Nasır danışmanlığında gerçekleştirilmektedir.

Kişisel bilgileriniz ve yanıtlarınız kesinlikle saklı tutulacaktır ve 3. şahıslarla paylaşılmayacaktır.

Anket sonuçları sadece tez çalışması kapsamında kullanılacaktır.

Katılımınız için teşekkür ederiz.

* Gerekli

1) Mobil bankacılık kullanıyor musunuz? *

☐ Evet

☐ Hayır

Devam et »

Google Dokümanlar tarafından hazırlanmıştır

[Kötüye Kullanımı Bildirme](#) - [Hizmet Şartları](#) - [Diğer Şartlar](#)

Figure 8 - Questionnaire (Turkish) Page 1

Türkiye'de Mobil Bankacılığın Kullanımına Etki Eden Faktörler ve Müşteri Memnuniyetine Etkileri Anketi

* Gerekli

Anket Soruları

2) Mobil bankacılığı ne kadar süredir kullanıyorsunuz. *

- ☐ Son 1 ay
- ☐ Son 6 ay
- ☐ Son 1 yıl
- ☐ Son 2-3 yıl
- ☐ 3 yıldan fazla

3) Lütfen mobil bankacılık uygulamasını kullandığınız bankayı seçiniz: *

- ☐ Akbank
- ☐ Aktif Yatırım Bankası
- ☐ Denizbank
- ☐ Finans Bank
- ☐ ING Bank
- ☐ Şekerbank
- ☐ Türk Ekonomi Bankası
- ☐ Türkiye Cumhuriyeti Ziraat Bankası
- ☐ Türkiye Halk Bankası
- ☐ Türkiye Garanti Bankası
- ☐ Türkiye İş Bankası
- ☐ Yapı ve Kredi Bankası
- ☐ Fortis Bank
- ☐ Vakıf Bank
- ☐ Türkiye Finans Katılım Bankası
- ☐ Bank Asya

Figure 9 - Questionnaire (Turkish) Page 2

4) Lütfen mobil bankacılık üzerinden aşağıdaki bankacılık işlemlerini kullanım sıklığınızı belirtiniz. *

	1: Hiç	2: Nadiren	3: Bazen	4: Sık Sık	5: Her Zaman
Para Transferi	☐	☐	☐	☐	☐
Ödeme (Kredi Kartı Borcu, Kredi Borcu, Fatura, vs.)	☐	☐	☐	☐	☐
Kart ya da Hesap Bilgisi Kontrolü (Bakiye, Borç, Genel Bilgi, vs.)	☐	☐	☐	☐	☐
Yatırım İşlemi	☐	☐	☐	☐	☐
Başvuru (Kredi Kartı, Kredi, vs.)	☐	☐	☐	☐	☐
En Yakın ATM Bilgisi Sorgulama	☐	☐	☐	☐	☐

5) Lütfen aşağıdaki ifadelere ne derece katıldığınızı belirtiniz. *

	1: Kesinlikle Katılmıyorum	2: Katılmıyorum	3: Kararsızım	4: Katılıyorum	5: Kesinlikle Katılıyorum
1- Mobil interneti mobil bankacılık dışında pek çok hizmet için kullanıyorum (email, web browsing, vs.)	☐	☐	☐	☐	☐
2- Şu an kullandığım cep telefonu mobil bankacılık için elverişlidir.	☐	☐	☐	☐	☐

6) Lütfen aşağıdaki ifadelere ne derece katıldığınızı şu an kullanmakta olduğunuz mobil bankacılık uygulamasını göz önünde bulundurarak belirtiniz. *

	1: Kesinlikle Katılmıyorum	2: Katılmıyorum	3: Kararsızım	4: Katılıyorum	5: Kesinlikle Katılıyorum
1- Mobil bankacılık her hangi bir yerde ve zamanda bankacılık hizmetlerine erişmemi sağlar.	☐	☐	☐	☐	☐
2- Mobil bankacılığı sadece şubeye gidemediğimde kullanırım.	☐	☐	☐	☐	☐
3- Mobil bankacılık üzerinden işlem yapmak kolaydır.	☐	☐	☐	☐	☐

Figure 8 – Questionnaire (Turkish) Page 2 Continued

4- Mobil bankacılık kullanarak maliyetleri azalttığıma ve tasarruf sağladığıma inanıyorum.	☐	☐	☐	☐	☐
5- Mobil bankacılık kullanmak bankacılık işlemlerimi daha hızlı ve kolaylıkla yapmamı sağlar.	☐	☐	☐	☐	☐
6- Mobil bankacılık diğer bankacılık kanallarına kıyasla çok daha kullanışlıdır.	☐	☐	☐	☐	☐
7- Mobil bankacılık kredi kartı ve banka kartlarımı daha etkin kullanmamı sağlar.	☐	☐	☐	☐	☐
8- Mobil bankacılıkta ihtiyaçlarımı karşılayan çok çeşitli hizmetler mevcuttur.	☐	☐	☐	☐	☐
9- Mobil bankacılık ile sunulan hizmetler beklentilerimi karşılar.	☐	☐	☐	☐	☐
10- Mobil bankacılıkta ihtiyacım olan içerik ve servisler her zaman erişilebilirdir.	☐	☐	☐	☐	☐
11- İşlem ve servisler hakkında bilgi her zaman mevcuttur.	☐	☐	☐	☐	☐
12- Mobil bankacılıkta işlemler sırasındaki yönlendirmeler açık ve anlaşılabilir.	☐	☐	☐	☐	☐
13- Mobil bankacılıkta sisteme başarılı giriş yapma oranı yüksektir.	☐	☐	☐	☐	☐
14- Mobil bankacılıkta işlemler sırasında hiç hata mesajıyla karşılaşmadım.	☐	☐	☐	☐	☐
15- Mobil bankacılık sistemi güvenilirdir.	☐	☐	☐	☐	☐
16- Mobil bankacılıkta verilen bilgiler güvenilirdir.	☐	☐	☐	☐	☐
17- Mobil bankacılıkta aldığım hizmetin kalitesi yüksektir.	☐	☐	☐	☐	☐
18- Mobil bankacılık işlemleri sırasında yanıt süresi kısadır.	☐	☐	☐	☐	☐

Figure 8 – Questionnaire (Turkish) Page 2 Continued

19- Mobil bankacılıkta sunulan ekranlar kullanım kolaylığı sağlayacak şekilde oluşturulmuştur.	☐	☐	☐	☐	☐
20- Ekran tasarımı (renkleri, kutuları, gezinti çubukları, vs.) çekicidir.	☐	☐	☐	☐	☐
21- Mobil bankacılık ile sunulan servisler sayesinde finansal işlemlerimi kendi başıma yapabiliyorum.	☐	☐	☐	☐	☐
22- Mobil bankacılıkta yapılan ödemeler güvenli şekilde işlenir.	☐	☐	☐	☐	☐
23- Mobil bankacılıkta kişisel bilgiler iyi korunur.	☐	☐	☐	☐	☐
24- Mobil bankacılıkta yapacağım hatalı işlemlerden doğacak zararlarımın banka tarafından karşılanacağına inanıyorum.	☐	☐	☐	☐	☐
25- Mobil bankacılıkta hep doğru finansal bilgiler verilmektedir.	☐	☐	☐	☐	☐
26- Mobil bankacılıkta verilen mesajlar ve bilgiler kişiye özel şekilde görüntülenir.	☐	☐	☐	☐	☐
27- İhtiyaç duyduğumda mobil bankacılık ile ilgili banka tarafından yeterince yönlendirme alabileceğimi düşünüyorum.	☐	☐	☐	☐	☐
7) Lütfen aşağıdaki ifadelere ne derece katıldığınızı şu an kullanmakta olduğunuz mobil bankacılık uygulamasını göz önünde bulundurarak belirtiniz: * 1: Kesinlikle Katılmıyorum 2: Katılmıyorum 3: Kararsızım 4: Katılıyorum 5: Kesinlikle Katılıyorum					
1- Mobil bankacılık her yerden erişilebilir olduğundan internet ya da diğer bankacılık kanallarına kıyasla daha avantajlıdır.	☐	☐	☐	☐	☐

Figure 8 – Questionnaire (Turkish) Page 2 Continued

2- Mobil bankacılık internet ya da diğer bankacılık kanallarına kıyasla daha kullanışlıdır.	☐	☐	☐	☐	☐
3- Mobil bankacılık internet ya da diğer bankacılık kanallarına kıyasla daha etkin ve verimlidir.	☐	☐	☐	☐	☐
4- Mobil bankacılık finansal işlemlerimi daha kolay yapabildiğimden diğer alternatif bankacılık kanallarına göre daha avantajlıdır.	☐	☐	☐	☐	☐
8) Lütfen aşağıdaki ifadelere ne derece katıldığınızı şu an kullanmakta olduğunuz mobil bankacılık uygulamasını göz önünde bulundurarak belirtiniz. *					
	1: Kesinlikle Katılmıyorum	2: Katılmıyorum	3: Kararsızım	4: Katılıyorum	5: Kesinlikle Katılıyorum
1- Başlangıçtan sonuna kadar mobil bankacılık süreçleri tatmin edicidir.	☐	☐	☐	☐	☐
2- Genel olarak mobil bankacılık hizmetlerini kullanmaktan memnunum.	☐	☐	☐	☐	☐
3- Gelecekte bankacılık işlemlerim için çoğunlukla mobil bankacılığı kullanacağım.	☐	☐	☐	☐	☐
4- Şu an kullandığım mobil bankacılık uygulamasını başka insanlara da tavsiye edebilirim.	☐	☐	☐	☐	☐
5- Mobil bankacılık uygulamasını kullandığım bankayı değiştirmeyi düşünmüyorum.	☐	☐	☐	☐	☐
6- Bankam bana internet ya da diğer bankacılık kanalları için daha uygun teklifler sunsa dahi mobil bankacılık kanalını kullanmaya devam edeceğim.	☐	☐	☐	☐	☐

Figure 8 – Questionnaire (Turkish) Page 2 Continued

7- Mobil bankacılık uygulamasını kullandığım bankanın mobil bankacılıktaki hali hazırda kullanmadığım diğer hizmetlerini de (havale, eft, kredi kartı başvurusu, bakiye sorgulama, vs.) kullanmayı düşünürüm.	☐	☐	☐	☐	☐
8- Mobil bankacılık uygulamasını kullandığım bankanın mobil bankacılık dışındaki kanallarını da (şube, internet bankacılığı, telefon bankacılığı, ATM, vs.) kullanmayı düşünürüm.	☐	☐	☐	☐	☐
9- Mobil bankacılık uygulamasını kullandığım bankanın hali hazırda kullanmadığım ürünlerini (kredi kartı, kredi, vadeli/vadesiz hesap, vs.) kullanmayı düşünürüm.	☐	☐	☐	☐	☐
10- Bankamın verdiği diğer hizmetlerden memnun olduğum için mobil bankacılık hizmetini kullanıyorum.	☐	☐	☐	☐	☐

9) Mobil bankacılık kullanabilmek için internet bağlantı ücreti ya da işlem ücreti ödüyor musunuz? *

- ☐ Evet
☐ Hayır

10) Mobil bankacılık kullanabilmek için internet bağlantı ücreti ya da işlem ücreti ödemiyorsanız, bağlantı ücreti ya da işlem ücreti ödemek durumunda kalsaydınız mobil bankacılığı kullanmaya devam eder miydiniz?

- ☐ Evet
☐ Hayır

Figure 8 - Questionnaire (Turkish) Page 2 Continued

11) Lütfen aşağıdaki soruları mobil bankacılık kullanabilmek için internet bağlantı ücreti ya da işlem ücreti ödüyorsanız doldurunuz.

	1: Kesinlikle Katılmıyorum	2: Katılmıyorum	3: Kararsızım	4: Katılıyorum	5: Kesinlikle Katılıyorum
1- İşlemler için alınan ücretler makuldür.	☐	☐	☐	☐	☐
2- Mobil bankacılığa erişmek için ödemem gereken bağlantı ücreti makuldür.	☐	☐	☐	☐	☐
3- İşlemler için alınan ücret artılsa bile mobil bankacılığı kullanmaya devam ederim.	☐	☐	☐	☐	☐
4- İşlem tutarının %10'u işlem ücreti olarak alınsa dahi mobil bankacılığı kullanmaya devam ederim.	☐	☐	☐	☐	☐

« Geri Devam et »

Google Dokümanlar tarafından hazırlanmıştır

[Kötüye Kullanımı Bildirme](#) - [Hizmet Şartları](#) - [Diğer Şartlar](#)

Figure 8 - Questionnaire (Turkish) Page 2 Continued

Türkiye'de Mobil Bankacılığın Kullanımına Etki Eden Faktörler ve Müşteri Memnuniyetine Etkileri Anketi

* Gerekli

Demografik Bilgiler

Anketin son sayfasıdır, lütfen "Gönder"e basmayı unutmayın!

Lütfen yaşadığınız şehri belirtiniz: *

Adana

Cinsiyetiniz: *

- ☐ Erkek
☐ Kadın

Yaşınız: *

- ☐ 18-25
☐ 26-35
☐ 36-45
☐ 46-55
☐ > 56

Eğitim Durumunuz: *

- ☐ Lise Öncesi
☐ Lise Mezunu
☐ Üniversite Mezunu
☐ Yüksek Lisans Mezunu
☐ Doktora Mezunu

Kişisel Geliriniz (aylık net): *

- ☐ <2,000 TL
☐ 2,000-3,500 TL
☐ 3,501-5,000 TL
☐ 5,001-10,000 TL
☐ >10,000 TL

Figure 10 - Questionnaire (Turkish) Page 3

Lütfen bankanızın şube kanalından aşağıdaki bankacılık işlemlerini kullanım sıklığınızı belirtiniz. *

	1: Hiç	2: Nadiren	3: Bazen	4: Sık Sık	5: Her Zaman
Para Transferi	☐	☐	☐	☐	☐
Ödeme (Kredi Kartı Borcu, Kredi Borcu, Fatura, vs.)	☐	☐	☐	☐	☐
Kart ya da Hesap Bilgisi Kontrolü (Bakiye, Borç, Genel Bilgi, vs.)	☐	☐	☐	☐	☐
Yatırım İşlemi	☐	☐	☐	☐	☐
Başvuru (Kredi Kartı, Kredi, vs.)	☐	☐	☐	☐	☐

İnternet bankacılığı kullanıyor musunuz? *

- ☐ Evet
☐ Hayır

İnternet bankacılığı kullanıyorsanız bankanızın sunduğu internet bankacılığı hizmetinden memnun musunuz?

- ☐ Evet
☐ Hayır

Anketi tamamladınız, katılımınız için teşekkür ederiz!

Lütfen "Gönder"e basmayı unutmayın!

[« Geri](#) [Gönder](#)

Google Formlar üzerinden asla şifre göndermeyin.

[Google Dokümanlar](#) tarafından hazırlanmıştır

[Kötüye Kullanımı Bildirme](#) - [Hizmet Şartları](#) - [Diğer Şartlar](#)

Figure 9 - Questionnaire (Turkish) Page 3 Continued

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