Adoption of Mobile Banking in Northern Cyprus

Shohreh Alaei Ghareh Vakili

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Approval of the Institute of Graduate Studies and Research

Prof. Dr Serhan Ciftcioğlu
Acting Director

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

Assoc. Prof. Dr Nesrin Özataç
Chair, Department of Banking and Finance

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

Prof. Dr. Salih Katırcıoğlu
Supervisor

Examining Committee

1. Prof. Dr. Salih Katırcıoğlu _____

2. Assoc. Prof. Eralp Bektaş _____

3. Assoc. Prof. Bilge Oney _____

ABSTRACT

The subject of this thesis is to search on mobile banking adoption in the case of North Cyprus. This research was conducted in order to understand what kind of individuals' background has a significant effect on the adoption of mobile banking.

Mobile banking is defined as the financial transactions that can be done through wireless devices such as smart phones, Personal Digital Assistants (PDAs) and other wireless devices. In order to understand the influential factors of users acceptance a survey was implemented among various nationalities with different age groups in North Cyprus. It hopes that this research not only helps the managers of banking industry in North Cyprus to make better decision in their further marketing plan, it will help other managers in similar industries and other countries which have similar conditions to North Cyprus. The findings of this thesis demonstrate that among 60% of respondents have been using mobile banking for 1 to 5 years. Among these people of different nationalities mobile banking was perceived as a useful tool for conducting banking transactions. In contrast, the result showed that different age groups have different perceptions of mobile banking usefulness. Finally, males and females perceived that suggesting this service to their environment may differ. In accordance to the result of mean scores analysis, it proved that the most important influential factors are perceived usefulness, perceived ease of use, and social norms.

Keywords: Mobile Banking (MB), Adoption, Northern Cyprus

ÖZ

Bu tezin konusu, Kuzey Kıbrıs'ta mobil bankacılığı incelemektir. Bu araştırma, bireylerin hangi tür çevresel ve zihinsel özelliklerinin mobil bankacılığı benimseme üzerinde güçlü etkisi olduğunu anlamak amacıyla yapılmıştır.

Mobil bankacılık, cep telefonu, kişisel dijital asistan (PDA) ve diğer kablosuz cihazlar üzerinden yapılan finansal işlemler olarak tanımlanır. Kullanıcıların mobil bankacılığı kabullenmelerine etki eden faktörleri anlamak için çeşitli uyruktan ve yaş grubundan insanlara bir anket uygulanmıştır. Bu araştırma sadece Kuzey Kıbrıs'taki banka yöneticilerinin değil, Kuzey Kıbrıs'la aynı toplumsal özelliklere sahip, aynı sektördeki farklı firmaların ve yöneticilerin pazarlama planları hakkında daha iyi karar almalarını amaçlamıştır.Bu araştırmanın bulguları, anket katılımcılarının %60 ının 1 yıldan 5 yıla kadar hali hazırda mobil bankacılığı kullandığını göstermiştir. Bu grubun arasındaki yabancı uyruklu bireyler banka işlemlerini mobil bankacılık aracılığıyla gerçekleştirmenin kullanışlı olduğunu hissetmişlerdir. Araştırmada, değişik yüzdedeki farklı yaş gruplarının, mobil bankacılığın kullanılışlığı hakkında kendi aralarında tezatlık olduğu tespiti yapılmıştır. Son olarak, erkeklerin ve kadınların mobil bankacılık hakkında çevrelerine aktardığı önerilerin birbirinden farklı olduğu tespit edilmiştir.Sonuç olarak araştırmadaki skorların ortalaması, mobil bankacılığı benimsemede kullanım kolaylılığının, fonksiyonelliğin ve diğerlerine nazaran az da olsa sosyal normların etkili olduğunu göstermiştir.

Anahtar Kelimeler: Mobil Bankacılığı, Uygulama, Kuzey Kıbrıs

DEDICATION

This study is dedicated to my

beloved parents.

ACKNOWLEDGMENT

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LIST OF ABBREVIATIONS

DIT	Diffusion Innovation Theory
E-Banking	Electronic Banking
E-Commerce	Internet Commerce
MB	Mobile Banking
M-Commerce	Mobile Commerce
PC	Personal Computer
PDA	Personal Digital Assistant
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
RA	Relative Advantage
SN	Social Norm
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
TRNC	Turkish Republic of Northern Cyprus
UTAUT	Unified Theory of Acceptance and Use of Technology
WOM	Word Of Mouth

Chapter 1

INTRODUCTION

1.1 Overview

Since the internet technology emerged in the banking industry, banks and other related institutions have been affected by this giant technology (Akturan & Tezcan, 2012). Internet technology not only increased productivity of banking services, it also brought cost efficiency for financial organizations (Riquelme & Rios, 2010). In other words Internet was a revolution in banking system (Akturan & Tezcan, 2012), which since 1980 changed the entire tasks of traditional bank services into the new concept of Internet-based service. Therefore banks forced themselves to replace offline transactions with online-based transactions (Hernandez & Mazzon, 2007). The following sections will give us a brief explanation of Internet Commerce (E-Commerce) and Mobile Commerce (M-Commerce), and also the difference between Internet banking and Mobile Banking (MB) will be discussed.

1.1.1 E-Commerce vs. M-Commerce

Fast growing Internet has been engaged in both personal and professional financial transactions (Cruz et al., 2010; Lee, 2009). Accordingly, the concept of Internet commerce or e-commerce created by professionals, which includes all electronic payment systems, online shopping, Internet stock trading and so on (Lee, 2009). These transactions can be applied through personal computers (PCs), laptops, personal digital assistants (PDAs), two-way pagers and other electronic devices

(Coursaris et al., 2003). As time passed, the availability and mobility of these devices came into consideration. Simultaneously, mobile devices became so popular among users, banks and other organizations tried to provide similar services through cell phones and taking advantage of mobility and time saving opportunity. This new trend is known as mobile commerce or m-commerce (Leiner et al., 2002). The significant difference between e-commerce and m-commerce is the connection mode. In e-commerce, communication is conducted through wired devices to Internet whereas in m-commerce, communication is conducted through wireless (Coursaris et al., 2003; Lee, 2009).

1.1.2 Internet Banking vs. Mobile Banking

It has been for more than 15 years that mobile phones in the shape of cell phones, smart phones, PDAs or other forms with wireless connection make life easier for consumers. Hence they provide better and faster services such as watching multimedia, browsing, payment systems, social network, access to personal information, business information and implementing financial transactions (Cruz et al., 2010). With the rapid growth of 3G (Third Generation) smart phones, wireless devices became popular especially as a delivery channel for financial transaction (Yu, 2012; Howarth, 2008). Cellphones are known as an alternative for PCs (Scornavacca & Hoehle, 2007) though it may be true that gaining trust of mobile phone users who are still PC users for aiming similar services is challenging (Cruz et al., 2010). Consumers prefer to acquire services from different channels rather than a single one (Howcroft et al., 2002).

In order to understand mobile banking, which has improved delivery of financial services (Cruz et al., 2010) it is important to distinguish between mobile banking and

Internet banking while there is a difference between these two significant technologies in their main customer segmentation (Dasgupta et al., 2011)**.** The Internet banking or online banking refers to the services available through computers which are connected to the Internet (Riquelme & Rios, 2010) and was introduced as the cheapest delivery channel (Koening-Lewis et al., 2010), while mobile banking refers to the actions that take place by using wireless devices for making financial transaction (Riquelme & Rios, 2010). As long as the number of wireless devices are increasing compared to other devices, employing them as tools for applying instant financial transactions are also growing (Yu, 2012). Furthermore, strong characteristics of mobile banking are mobility and time saving (Suoranta & Mattila, 2004). These two services are known as Electronic Banking (E-Banking) (Yu, 2012).

Internet banking has been used widely by Internet users in different countries such as Korea that in 2007 people paid over 44.7 million for Internet banking. However, only 3.5% of these transactions were carried-out on mobile devices (Chunga & Kwonb, 2009).

A research done by a consulting company (IResearch) in China about the adoption rate of using mobile banking by Chinese people, showed only 14.3% rather than other mobile services adoption such as mobile Instant Message (IM) (72%), mobile search (34.3%) and mobile games (43.8%) (Zhou et al., 2010). Similarly, A.T.Kearney market analysis (a global management consulting firm) observed that a small number of mobile Internet users in United State (5%) and Europe (6%) showed their willingness to utilize their wireless devices for financial transactions (Kleijnen et al., 2007). This proves that Internet banking still plays the main role in this area

(Akturan & Tezcan, 2012). Consequently, understanding major factors that have impacts on users' acceptance in using mobile banking services and the main reasons that why same customers are not using banking services is crucial for financial service providers. By knowing this, it will be easier for banks' managers to improve their service quality (Zhou et al., 2010).

1.2 Research Gap

There are abundant papers and studies, which practice the influential factors of bank customers' adoption on online or Internet banking in various large and small countries in the world (e.g. Hernandez & Mazzon, 2007; Laukkanen, 2007 & Lee, 2009). For more than a decade it has been observed that beside international banks, small and local banks in different countries with small market opportunity have adopted online banking and even added mobile banking to their services (Jenkins, 2007). On the other hand, we have limited studies which have been done regarding the effects on mobile banking adoption and there is no research study which has paid sufficient attention on testing various dimensions of accepting a new information technology by users in a small island with limited customers. Therefore North Cyprus as a sample of a small island and low potential market can fill this research gap by examining a justified research model. The result of this research is not only useful for bank managers in this island for applying new marketing strategies, but also is useful for those countries that have relatively similar cultures and conditions to North Cyprus.

1.3 Aim of the Study

The main objective of this inquiry is determining which factors of mobile banking adoption have more influence on bank customers. Accordingly, this research study

examined which demographic variables can also have impact on users' acceptance. For this reason gender, age, income-level and nationality of candidates are considered as control variables. Furthermore findings of this research can answer the following questions of the researcher:

- Is there a significant difference between males and females on mobile banking adoption?
- Is there a significant difference between different nationalities on mobile banking adoption?
- Is there a significant difference between different age groups on mobile banking adoption?
- Do users with high intension to use mobile banking service suggest it to their families, relatives and friends?

1.4 North Cyprus and Its Banks

Cyprus is one of the biggest islands in the Mediterranean. Since 1974 Cyprus has been divided into two parts: the Turkish Republic of Northern Cyprus (TRNC) that mostly included Turks, and South Cyprus that mostly included Greeks. North Cyprus is a small Mediterranean island that is used as a case study with 22 domestic and foreign banks (which are listed in below table) and 8,500 potential Internet users. Internet banking services increased exceptionally in TRNC banks in 2006. Whereas it was 8.7 percent in 2004 then it reached to 30 percent in 2006 unexpectedly. According to an interview that was conducted in 2004 from domestic bank managers of TRNC none of them employed Internet banking. However, in 2006 two of them already offered the service and the rest was in process to introduce the Internet bank service (Jenkins, 2007). Table 1 presents the list of public, private and foreign banks

in North Cyprus.

Table 1: North Cyprus Banks

Ownership Structure	Name of the Banks
Public Banks	Cyprus Vakiflar Bank
Private Banks	1-Cyprus Turkish Central Bank
	2-Kibris Iktisat Bankasi
	3-Turkish Bank
	4-Limassol Turkish Cooperative Bank
	5-Asbank
	6-Artam Bank
	7-Creditwest Bank
	8-Deniz Bank Ltd.
	9-Near East Bank
	10-Sekerbank (Kibris)
	11-Akfinance Bank
	12-Yesilada Bank
	13-Universal Bank (TRNC)
	14-Kibris Continental Bank
	15-Viabank
Foreign Banks	16-Ziraat Bankasi
	17-Halk Bankasi
	18-HSBC Bank
	19-Turkiye Is Bankasi
	20-Oyak Bank

Table 1: North Cyprus Banks(continued)

21- Garanti Bankasi
22- Turk Ekonomi Bankasi

Source: The results presented in this table have been gathered from (Wikipedia the free encyclopedia Web site).

1.5 Structure of the Study

The thesis consists of six chapters. Chapter one presents introductory context about the subject, main objective of this research study plus the research questions.

Chapter two presents some literature review highlights related to the subject of the study, interpretation of their findings and comparison of the results. Chapter three discusses the justification of the research model and develops hypothesis.

Chapter four (data and methodology chapter) provides information about how this research is conducted, including data collection and sampling methods. Chapter five discusses and interprets findings and results.

Finally, chapter six presents a summary of the results. It also presents the limitation of the study and recommendation for future research.

Chapter 2

LITERATURE REVIEW

2.1 Overview

Reviewing the literature revealed that most of the studies in electronic banking are focused on Internet banking or online banking and only few research have been done in mobile banking (Laukkanen & Pasanen, 2008; Yu, 2012). Therefore, it is necessary, in order to find the most appropriate articles about this subject; to find the related theories of new information technology adoption, next reviewing findings from previous studies.

2.2 Background Theories and Review of Previous Studies

There are many studies about literature of technology adoption and theoretical approach of innovation in information technology acceptance by individuals and organizations since the mid-1980s (Venkatesh et al., 2003; Yang, 2005). Among these studies, Technology Acceptance Model (TAM), which is introduced by Davis (1989) is one of the most famous studies in this area (Yang, 2005). The main concept of TAM was perceived from a research, which employed Theory of Reasoned Action (TRA) by Fishbein and Ajzen when it was introduced in 1974 (Hernandez & Mazzon, 2007). The main objective of TAM was regarding attitudes and behaviors affecting on acceptance of new information technologies (Yang, 2005). According to Davis (1989) TAM study that includes two approved dimensions of namely: perceived usefulness and perceived ease of use. He proposed that better perceived

usefulness and ease of use from a technology would lead to a greater acceptance by users. In other word, users intention for adopting new technology is higher when they perceived greater usefulness and ease of use. Later on Venkatesh and Davis (2000) extended TAM theory by adding subjective norm dimension in their study and they called it TAM2 (Hernandez & Mazzon, 2007). Furthermore they proposed that both social influence process and cognitive instrumental process significantly affect user accaptance (Venkatesh & Davis, 2000).

In order to determine factors of human behavioral intension to mobile banking Luarn & Lin (2005) surveyed 180 bank customers in Taiwan. By adding one trust-based (Perceived credibility) and two resource-based instruments (perceived financial cost and perceived self-efficacy) into the model, they used extended Technology Acceptance Model (TAM). Accordingly, they observed that five main dimensions of self-efficacy, financial costs, credibility, ease of use and usefulness have positive influence on human behavioral intention. In addition, Cruz et al. (2010) found that perceived risk and financial cost of initial set up of mobile banking service has two influential factors from an online research in Brazil. Subsequent to the study of Luarn & Lin (2005) collecting 158 questionnaires in Malaysia, Amin et al. (2008) used the same 5 dimensions that Luarn & Lin (2005) used in their research. However in their model they replaced financial cost and self-efficacy by the amount of information and normative pressure. In the final analysis they found these 2 new dimensions in addition to perceived credibility, perceived ease of use and perceived usefulness again have significant influence on users' adoption. According to Lee et al. (2003) study, user experience and self-efficacy influence the consumer's ideas of using mobile banking.

By investigating 325 MBA students in India Dasgupta et al. (2011) applied extended TAM to realize influential factors in adoption of mobile banking. First, they used exploratory analysis in order to recognize important influential factors. Afterwards, they practiced regression analysis. As a result they perceived six out of seven dimensions have significant effects on mobile banking adoption. These dimensions are perceived usefulness, perceived value, perceived ease of use, perceived image, perceived credibility and self-efficacy except risk. Furthermore, Riquelme & Rios (2010) uncovered by sampling 681 users in Singapore that perceived usefulness; social norms and risk significantly affect the adoption of mobile banking respectively.

Laukkanen & Kiviniemi (2010) examined the effectiveness of information and the guidance banks offer for its services to customers on the adoption of MB. As a result, they concluded consumers' perceived positive image from an innovation through good information and guidance, which are offered by banks due to their direct effect on perceived functional usability (perceived usefulness).

Kim et al. (2009) conducted a research to investigate which dimensions of trust have an influence on using mobile banking services. They examined four types of trust barriers in their research. Among these factors, personal propensity, perceived benefit and structural assurance having an impact on consumers' intension to use mobile banking. Contrary to the factor of firm reputation has been shown to have no impact on consumers initial perceived trust.

Diffusion Innovation Theory (DIT), proposed by Rogers (1995) is another famous

theory in this field. He introduced five barriers, and the barriers were relative advantage, compatibility, complexity, trialability and observability to process the acceptance of innovation in technology. Relative advantage refers to how superior new innovation is in comparison with previous technologies. Compatibility refers to how much the innovation is compatible with values and needs of users. Complexity refers to how hard an innovation is for users to use or understand it. Observability refers to what extent prospective users observe the benefits of the innovation. And finally trialability refers to which extent adopters try the innovation before adoption. The result of this study showed that the relation of each characteristic is positive with the users' intension for adoption except complexity, which had negative relation (Hernandez & Mazzon, 2007). Brown et al. (2003), by conducting a research of 162 participants and applying the innovation diffusion theory found out perceived relative advantages, perceived risk, chance of testing mobile banking and the number of bank services required by respondents are significantly determining the factors for users' adoption of mobile banking. Based on the study which is done by Lewis et al. (2010), via questioning 155 participants aged between 18-35 and implementing TAM and IDT models they figured out that perceived usefulness, compatibility and risk have significant influence on the adoption of mobile banking. Moreover Lee et al. (2003) interviewed 8 people, and observed that the risk factor has negative effect and relative advantage has positive effects on people's perception of MB.

Ajzen (1991), Theory of Planned Behavior (TPB) an extended version of TRA (Fishbein & Ajzen, 1975) introduces the factor of perceived behavioral intension that has been used to understand how individuals react to different technologies. It includes two aspects of behavioral intension and behavioral control. Based on an

empirical research via collecting 195 usable samples, which has been done by Sripalawat et al. (2011) through utilizing TAM and TPB, it has discovered that the three key factors, which have most influence on intension to use mobile banking, are subjective norms, perceived usefulness and self-efficacy respectively.

Puschel et al. (2010) conducted their study in Brazil by collecting 666 consumers. By combining TAM, TPB and IDT, they recognized that relative advantages, visibility and compatibility are the most three important factors, significantly influencing attitude and self–efficacy. Technology facilitating condition significantly affected perceived behavioral control. Perceived behavioral control and attitude in addition of subjective norm influenced adoption for mobile banking users.

Recently by integrating proposed theories of technology adoption Venkatesh et al. (2003) developed the Unified Theory of Acceptance and Use of Technology (UTAUT). According to their investigation they discovered three factors: performance expectancy, effort expectancy and social influence have influence on people's willingness to use information technology (Park et al., 2007).

Ram & Sheth (1989) introduced the Innovation Resistant Theory. This theory has 18 dimensions of barriers, which explain why people resist new technologies even if these technologies are useful and necessary. Laukkanen et al. (2007) conducted a survey on 1,525 customers of a large Scandinavian bank by employing a narrow version of innovation resistant theory in 5 factors: usage, value, risk, tradition and image barriers. Through this research they detected that usage and value barriers have more influence on the adoption of new innovations rather than other barriers.

Moreover, according to Yang's (2009) survey conducted in one of the universities in south Taiwan with 178 students by utilizing the Raschl measurement model and item response theory, he realized that good transaction speed and fees of mobile banking service provide easier acceptance for mobile banking users.

Among the research about the effects of gender in mobile banking adoption, Pijpersa et al. (2001) found that males are more likely to accept mobile commerce rather than females. In addition, study of Wan et al. (2005) supported that the male is more positive to adopt mobile banking. Yang (2005) found that despite of expectation, gender has negative impacts on perceived usefulness and perceived ease of use. Furthermore, Laforet & Li (2005) discovered that compared to western countries, the majority of Chinese mobile bank users are males. Moreover Amin et al. (2006) detected that effectiveness of a mobile service is more important for males rather than females. Contrary degree of risk and safety of mobile banking service is more significant for female users. In addition age, social influence, mobile technology readiness and computer skills are other important individual factors, which have influence on mobile banking adoption (Kleijnen et al., 2004).

Laforet & Li (2005) questioned 128 individuals in China, and they discovered that most important barriers to mobile banking adoption are lack of awarness and perception of benefits provided by mobile banking. Refering to Laforet & Li (2005) study, among two ways of increasing awarness of users which are advertising and word of mouth, it was determined that mass media increases awareness of adopters in comparison with interpersonal communication (word of mouth). In contrast Suoranta & Mattila (2004) employed Bass model of diffusion and divided 1,253

respondents into 3 categories: nonusers, regular users and occasional users. Accordingly, they discovered that between two types of communication channels, interpersonal communication, which has more influence on people who are users of a new technology and mass media, is next.

Chapter 3

RESEARCH MODEL AND HYPOTHESIS DEVELOPMENT

3.1 Research Model

This chapter presents the model of the study; in addition, the hypothesis is generated from the model. First the conceptual model of this research will be defined and then the method of data collection and methodology will be discussed.

3.2 Model Justification

Present study is developed and examined by the model, which tried to predict factors of adoption on mobile banking services among users. Additionally it also shows effects of each variable on other variables. The original model is taken from a research done by Riquelme & Rios (2010) via two theoretical frameworks in order to conceptualize the study. Regarding the original model, they used perceived ease of use and perceived usefulness from TAM by Davis (1989) and they added social norm factor from extended version of TAM (Venkatesh & Davis, 2000) and also they integrated relative advantage and perceived risk with utilization of innovation diffusion theory from Rogers(1995). So, there are 5 main constructs in our original model that lead to adoption. They assumed relative advantage and perceived ease of use have an influence on usefulness of mobile banking service. Moreover, risk, social influence plus perceived usefulness have direct impact on adoption. Word of mouth variable is assumed as a dependent variable in our research model in order to understand if consumers are satisfied with mobile banking service, and suggests it to

their environment. There are questions that are designed due to measuring each dimension of conceptual model. These questions can be seen in the questionnaire instrument, which is added to the appendix of the thesis.

3.3 Hypothesis Development

Based on two theoretical frame works which are used in this study, the following section will explain four explanatory factors namely perceived risk, perceived ease of use, relative advantage, social norm in details and also will present research hypothesis that have been developed in this research.

3.3.1 Perception of Risk

Due to the mobility of cellphones, the risk of employing mobile applications especially implementing financial transactions is greatly high. In that case the chance of stealing or loss of mobile devices is high. According to a report 62,000 cellphones have been left in taxis in London in 2001 (Coursaris et al., 2003). Perception of risk refers to the perceived security risk of users' intention to use electronic banking (Lee, 2009). According to Laforet & Li (2005) investigation in china, they figured that perception of risk for individuals is an important factor to accept new technology. As Brown et al. (2003) mentioned that security and trust are crucial factors for individuals' details of private financial information when using cellphone banking. As a result when an individual perceived unsecure transaction or in other word, higher the risk of using cellphone banking lower the chance of a person adoption occurs. In addition, Wu & Wang (2005) discovered that perceived risk factor had significantly effect on mobile banking adoption. On that basis it was hypothesized:

H1: The greater the perception of risk of mobile banking is the lower the intension to adopt it.

3.3.2 Perceived Ease of Use and Perceived Usefulness

The literature Perceived Ease Of Use (PEOU) and Perceived Usefulness (PU) in the present study were taken from TAM (Davis 1989). Accordingly it has been used in many researches to find the main reasons of user perceptions of technology usefulness. In addition, the goal of TAM is to explain the major dimensions of technology acceptance. This theory developed that PEOU and PU are the important factors for users' approval for a new technology. According to Davis (1989), PEOU refers to how much an individual should attempt in order to apply the system. PU is defined as the degree of usefulness of a new system that perceived by a user, which increases job performance in the organization context (Akturan & Tezcan, 2012). There are many researches that show PEOU and PU have influence on adoption to technology (Venkatesh & Davis, 2000 & Venkatesh et al., 2003) on that basis it was hypothesized:

H2: The greater the perceived ease of use of the mobile device for banking transaction is the higher the intention to adopt it.

H3: The higher the intention to adopt if users perceive high usefulness from mobile banking services.

3.3.3 Relative Competitive Advantage

Due to literature, Relative competitive Advantage (RA) as an explanatory factor that is used in this study applied from Rogers (1995) research can be defined as the perceived competitive advantage of a new system or a technology by a consumer (Hernandez & Mazzon, 2007). Furthermore relative competitive advantage can suggest the advantages of using mobile banking services in compare to other methods such as online banking or Internet banking. So, for this reason it has influence on adoption rate of users (Brown et al., 2003). As an illustration for years,

people were unfamiliar with the concept of payment with their cellphones. Once they could understand the relative advantages of mobile payments they have more intention to adopt (Shin, 2009). Thus, the hypothesis is as follow:

H4: The greater the perceived relative advantage of mobile banking over electronic banking is the higher the intention to adopt it.

3.3.4 Social Norms

Social Norm (SN) is a factor that cannot be denied in all models of users' adoption (Pedersen & Ling, 2002). Social norm refers to how individuals' decision is affected by their environment about using a product or a service. Environment can be referred to friends, family and relatives (Riquelme & Rios, 2010). As noted in the literature, social norm factors have a positive effect on users' behavioral intention to adopt cell phone banking (Wang et al., 2009). So, the hypothesis is as follow:

H5: The higher social norms are the higher mobile banking adoption.

3.4 Control Variables

In this study, control variables consist of: respondents' gender, age, income-level, nationality and occupation, which are all measured to test hypotheses to discover how respondents' background affects their response and consequently impact on the result of the research. The relationship between control variables (gender, age, income-level, nationality and occupation) and factors instruments (perception of risk, PEOU, PU, relative advantage, adoption, social norm and word of mouth) is shown in one-way ANOVA analysis table in the chapter 5 of this thesis. So the hypothesis is as follow:

H6: There is a significant difference between males and females on mobile banking adoption.

H7: There is a significant difference between different nationalities on mobile banking adoption.

H8: There is a significant difference between different age groups on mobile banking adoption.

3.5 Word of Mouth Variable

Word of Mouth (WOM) variable in this research is considered as a dependent variable, which realized when consumers are satisfied from using mobile banking services. Whether, they would suggest it to their environment or not. So, it is hypothesized as follow:

H9: consumers with high intention to use mobile banking services are more likely to suggest mobile banking to their environment.

Chapter 4

DATA AND METHODOLOGY

4.1 Introduction

This chapter includes research method, research sample and research design. The following section will give information about the type of research that was applied in this study, the type of data was collected and which samples were used. It will also propose information about questionnaire instruments in the study.

4.2 Research Methodology

The present study aims to examine factors that can have impact on adoption of MB services among banks customers specifically who are current users of online banking services in North Cyprus. The inquiry also aimed to discover whether there would be a relation between demographic variables such as respondents' age, gender, nationality, occupation and income level, which used in this study, and their willingness to adoption of mobile banking services. Accordingly, the researcher used questionnaire and convenience sampling method to collect data.

4.3 Research Design

As it has mentioned before the purpose of this study is to recognize main influential factors of adoption by considering control variables effects. For that reason, in this study, a questionnaire used as a tool for collecting data. The survey divided in three parts. First part includes questions for demographic information of participants namely age, gender, nationality, occupation and monthly income. In addition it

consists two questions: first question asks about how long customers have been using mobile banking services? And second question asks from which banks in North Cyprus they are getting the services, domestic banks or foreign banks?

Second part, the most important part consists of 23 brief statements measuring various dimensions under a study on a five-point scale, which is as follow:

1- Strongly Disagree
2- Disagree
3- Neutral
4- Agree
5- Strongly Agree

In the third and final section of the survey respondents were asked to answer three questions under same construct, which measured the satisfaction of users from utilizing mobile banking service and their recommendation to use same service.

4.4 Research Sample

Data survey is collected from bank customers. The sample was drawn from population in North Cyprus from different nationalities. A total of 200 questionnaires were handed out among people who are users of banking services and respondents returned 140, which means a response rate of 70%. In the present study researcher tried to distribute questionnaire to candidates who are well educated preferably with monthly income. So the majority of these participants have chosen from university were full and part time instructors plus students who work inside the campus as a full time research assistant, part time research assistant and some as student assistant. The rest have chosen from citizens of TRNC. The items of the questionnaire were

prepared in English and then it is translated to Turkish. The English version distributed among academic staff in Eastern Mediterranean University and the Turkish version distributed to TRNC residents. Both version of this survey are presented in the thesis appendix. The questionnaires were voluntarily completed and returned to the researcher without respondents' identification.

4.5 Statistical Analysis

In this study all the analysis were done by using Mac SPSS. Frequency analysis examined in the first step in order to understand demographic distribution of respondents, as well as the mean scores and standard deviation analysis carried out for the current research. Analysis of Variance (ANOVA) tested in order to test significant differences. Furthermore, cross-tabulation analysis carried out for providing the association between a control and a factor variable or more. Finally factor analysis tested for each 23 questions to support dimensionality and validity of instruments.

Chapter 5

RESULTS AND DISCUSSION

This chapter presents remarkable results and discussions on empirical findings from the research that includes descriptive analysis, cross-tabulation, ANOVA analysis and factor analysis, which shows the acceptance or rejection of hypothesis considering all the factors and variables.

5.1 Descriptive Analysis

In this section finding of demographic distribution of respondents, result of mean scores and standard deviation tests will be discussed.

5.1.1 Frequencies

As it has mentioned before sample of this study is 140. Among the respondents 40.7% are female and 59.3% are male. Furthermore, 45.0% have age between 18-27, 39.3% between 28-37, 11.4% between 38-47 and 4.3% between 48 or older. This is obvious that majority of participants are between 20-35 years old. According to frequency table 51.4% are Turkish Cypriot, 32.1% Iranians, 7.9% Africans, 6.4% Arabs and 2.1% other nationalities. Due to the response of participants their monthly income categorized in 5 groups. To summarize 25.7% have income between 0-499$, 46.4% have income between 500-1499, 15.7% have income between 1500-2499, 5.7% have income between 2500-3499 and 6.4% between 3500$ and more. Additionally, 47.1% of bank customers are students, 15.0% are professors 15.7% are workers, 3.6 are public officers, and 18.6% have other occupations. 29.3% of

candidates do not use mobile banking at all. However, 60.7% have been using mobile banking between 1-5 years. Moreover 10% use this service for 6-10 years. Among the participants who use mobile banking, 36.4% receive this service from domestic banks while 25.7% use foreign banks in North Cyprus and only 9.3% have experienced using both banks.

Table 1: Frequency Table for Control Variables

Factor	Frequency	Percentage
Gender		
Female	57	40.7
Male	83	59.3
Total	140	100.0
Age		
18-27	63	45.0
28-37	55	39.3
38-47	16	11.4
48 or older	6	4.3
Total	140	100.0
Nationality		
Turkish Cypriot	72	51.4
Iranian	45	32.1
African	11	7.9
Arabs	9	6.4
Other	3	2.1
Total	140	100.0
Monthly Income		
0-499$	36	25.7
500-1499	65	46.4
1500-2499	22	15.7
2500$ -3499$	8	5.7
3500$ or more	9	6.4
Total	140	100.0

Table 2: Frequency Table for Control Variables(continued)

Occupation		
Student	66	47.1
Worker	22	15.7
Public Officer	5	3.6
Professor (Academic)	21	15.0
Other	26	18.6
Total	140	100.0
How many years have you been Using mobile banking (years).		
0	41	29.3
1-5	85	60.7
6-10	14	10.0
Total	140	100.0
Does mobile banking you use belor Domestic bank or Foreign bank.		
Domestic	51	36.4
Foreign	36	25.7
Non	40	28.6
Both	13	9.3
Total	140	100.0

5.1.2 Mean Scores and Standard Deviation Analysis

In this section average and standard deviation of each variable were calculated in order to have a better understanding of questionnaire instruments and their relation between participants response.

The following table shows risk variable mean score; it's close to indecision degree (3.04). It means that the respondents in North Cyprus who are current users or non-users of mobile banking service relatively feel indecision whether this service is risky or not. However as Cruz et al. (2010); Koening-Lewis et al. (2010) and Riquelme & Rios (2010) emphasized that risk factor has significantly influenced on

adoption of mobile banking. Additionally, participants are relatively in indecision part regarding the mean score of relative advantage instrument. Referring to the Brown et al. (2003) and Puschel et al. (2010) studies, they found relative advantage significantly effects on users' attitudes to adopt.

Whereas the mean score of PEOU and PU are relatively close to the agree side (3.58 and 3.81). It proposes that users perceived more convenient and easy to work with cell phone devices for implementing their banking transactions rather than other devices. So our result supports the findings from Luarn & Lin (2005) study.

As the result shows respondents are relatively more disagree to social norm factors (2.67). It can be interpreted that people do not care how important is what other people think about using cell phones as a trendy way for applying banking transactions. In contrast, Puschel et al. (2010) and Riquelme & Rios (2010) proposed social norm as a significant factor for adoption.

Mean score of Adoption factor and WOM mean score variable are close to agree section (about 3.60). As expectation, bank customers are willing to adopt and suggest mobile banking to their environment. Therefore, the finding from this test accepted H9.

Regarding to the table below, standard deviation of participant are very low in some factors (lower than one) and only for the last two factors are greater than one, which means that respondents have almost similar ideas for questionnaire instruments.

Table 2: Mean Scores Analysis

Items	Mean	Std.Deviation
Risk	**3.0494**	**.92088**
1- I think that the use of a mobile phone for banking transaction is risky.	2.7714	1.20755
2- I have serious doubts that the banking transactions performed on a mobile phone will work satisfactory.	2.7786	1.18788
3- Conducting banking transactions on mobile phones is risky because one can easily lose or misplace the mobile phone.	3.3500	1.24615
4- It is risky to transmit and store information related to banking transactions on a mobile phone.	3.2929	1.22619
EOU	**3.5833**	**.88429**
1- A mobile phone is more convenient than a PC to conduct bankingtransaction.	3.2929	1.34376
2- A mobile phone would be easy to use to conduct banking transactions.	3.6714	.99959
3- I believe it would be easy to get the mobile phone to do banking transaction.	3.5857	1.13153
4- Conducting banking transactions on a mobile phone would be an easy thing to do.	3.6643	1.13550
5- A mobile phone would make it easier for me to conduct banking transaction.	3.6214	1.23188
RA	**3.2114**	**.61012**
1- A banking transaction via a mobile phone is dependable.	3.2143	1.19222
2- A mobile phone for banking transaction offers more advantages than a PC.	3.1429	1.32258
3-Banking transaction on a mobile phone would eliminate time and space constraints that I otherwise would have when I transact on a PC.	3.5857	1.21137
4- A mobile phone is not a good substitute of a PC to conduct banking transaction.	2.6786	1.23071
5- A mobile phone would give me greater control over my banking transactions.	3.4357	1.17044
Adoption	**3.4333**	**.83076**
1- If banking transactions on a mobile phone were available in my bank I would adopt it straight away.	3.6357	1.27065
2- If banking transactions on a mobile phone were available at my bank I would use it regularly.	3.4929	1.17220
3- If banking transactions on a mobile phone were available at my bank I would adopt it mainly for information search (not for transaction purposes)	3.1714	1.19918

Table 3: Mean Scores Analysis(continued)

Usefulness	**3.8143**	**.97697**
1- A mobile phone would be useful for me to conduct banking transactions.	3.7714	1.12104
2- A mobile phone would be useful for me to eliminate the constraints of time and space when conducting banking transactions.	3.8571	1.07001
Social Norm	**2.6738**	**1.17083**
1- If I adopted a mobile phone for banking transactions, it would give a higher status among colleagues.	2.6286	1.25430
2- If I were to adopt a mobile phone for banking transactions, I would be more prestigious among my peers than those who have not adopted it.	2.6786	1.31547
3- I would be trendy if I adopted a mobile phone for banking transactions.	2.7143	1.31009
WOM	**3.5857**	**1.12729**
1- I can suggest mobile banking to my friends.	3.6714	1.14705
2- I can suggest mobile banking to my family members.	3.6071	1.16728
3- I can suggest mobile banking to everybody.	3.4786	1.24350

5.2 ANOVA Test for Significant Differences

In this section we will examine the effects of demographic variables (gender, age, income level, nationality and occupation of participants) on research factors (Risk, PEOU, RA, Adoption, Usefulness, SN and WOM) by using one-way ANOVA test. In this test, significant control variables show selected bank customer's response who differ in age, income level and occupation with different answer to the same question or not. In addition, control variables such as gender and nationality are measured to analyze if has impacts on their response. Regarding to the table below, there is statically significant difference between mean of risk factor, gender and age of participants because the significant values are smaller than 5%. So, It can be interpreted as: different age of participants and different gender had various

responses to perceived risk factors. In addition, people with various age answered differently to usefulness instrument. In the previous study of assessing risk and gender Amin et al. (2006) discovered that females are significant rather than males in perception of risk. Consequently, based on findings in this study, male and female perceived risk differently.

Extensive studies about effects of individual demographic factors such as age and gender on perception of EOU and usefulness have shown that age positively predicts users' perception of usefulness. However, it predicts perception of EOU negatively (Yang, 2003). Pijpersa et al., (2001) found that age negatively influenced both TAM factors (perception of usefulness and perception of EOU). However, the current study provides only age differences affected by perceiving usefulness of cellphone technology. The findings of the present study proposed that there is no relation between impact of gender on PEOU and PU, which is supporting Pijpersa et al., (2001) findings. However result from ANOVA test represents that participants with different nationalities have different perception of EOU factor. Additionally, their perception differs in suggesting mobile banking service to their environment. Word Of Mouth (WOM) is presented as the significant value in the one-way ANOVA analysis table.

Referring to Laukkanen & Pasanen (2008) study, the control variables such as education, occupation, household income and size of the household are not significant, neither in online banking studies nor in mobile banking adoption studies. Regarding to our findings from ANOVA F-statistic test, income-level and occupation are statistically indifferent because their values are greater than 5%.

To summarize, we have three significant demographic variables in this research regarding the findings from this test, and they are Gender, Age and Nationality.

Table 3: ANOVA Test for Significant Differences

Items	Gender	Age	Income-level	Nationality	Occupation
Risk	.015*	.039*	.680	.150	.477
EOU	.961	.534	.602	.045*	.342
RA	.423	.823	.902	.605	.498
ADOPTION	.675	.132	.515	.634	.974
USEFULNESS	.225	.038*	.163	.014	.385
SN	.458	.255	.367	.737	.180
WOM	.505	.116	.076	.072*	.638

5.3 Cross-Tabulation Analysis

In order to provide the association between two critical variables or more, cross tabulations and chi-square are considered as a tool to measure this relationship in this section. Firstly, gender as a demographic variable is examined with one of the risk instrument (conducting banking transaction on mobile phones is risky because one can easily lose or misplace the mobile phone) to find if there is association between these variables or not. The result is presented in below table:

Table 4: Cross- Tabulation Analysis of Gender*Risk

			Conducting banking transactions on mobile phones is risky because one can easily lose or misplace the mobile phone.						
			Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Total**	**Chi-Square**
Gender	Female	#N	4	7	11	18	17	57	.133
		%	7.0%	12.3%	19.3%	31.6%	29.8%	100.0%	
	Male	#N	9	18	19	26	11	83	
		%	10.8%	21.7%	22.9%	31.3%	13.3%	100.0%	

As it has mentioned before among 57 female participants 35 of them and also among 83 male participants 37 of them answered agree or strongly agree to the risk factor instrument (conducting banking transaction on mobile phones is risky because one can easily lose or misplace the mobile phone.). For the same variables Chi-square test shows 0.133 score, which is greater than 0.1 that means there is no association between male and female and they think similarly to this risk factor.

Next, gender and nationality in one side and WOM instrument (I can suggest mobile banking to everybody) in another side were tested.

Table 5: Cross-Tabulation Analysis of Gender*WOM

			I can suggest mobile banking to everybody.						
			Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Total**	**Chi-Square**
Gender	Female	#N	8	3	20	12	14	57	.095
		%	14.0%	5.3%	35.1%	21.1%	24.6%	100.0%	
	Male	#N	7	9	17	31	19	83	
		%	8.4%	10.8%	20.5%	37.3%	22.9%	100.0%	

Regarding the same male and female respondents for suggesting MB to everybody conversely to risk factor, male and female answered differently. 20 of female were uncertain and 12 persons were agreeing, in contrast 31 of male were agree and 19 strongly agree in suggesting MB to everybody. The chi-square value relatively (0.095) is smaller than 0.1 therefore it shows that male and female have dissimilar answer to WOM instrument so they have different ideas.

Nationality is another demographic factor considered to be tested with WOM factor in cross tabulation analysis. As the result shows, different nationalities tendency particularly is more to agree and strongly agree side to conclude by looking at chi-square result which is 0.318 greater than 0.1 various nationalities do not think differently about suggesting MB to their environment so they moderately agree with recommendation.

Table 6: Cross-Tabulation Analysis of Nationality*WOM

			I can suggest mobile banking to everybody.						
			Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**Total**	**Chi-Square**
Nationality	Turkish Cypriot	#N	11	6	18	20	17	72	.318
		%	15.3%	8.3%	25.0%	27.8%	23.6%	100.0%	
	Iranian	#N	3	3	12	14	13	45	
		%	6.7%	6.7%	26.7%	31.1%	28.9%	100.0%	
	African	#N	1	0	2	6	2	11	
		%	9.1%	0.0%	18.2%	54.5%	18.2%	100.0%	
	Arabs	#N	0	3	4	2	0	9	
		%	0.0%	33.3%	44.4%	22.2%	0.0%	100.0%	
	Other	#N	0	0	1	1	1	3	
		%	0.0%	0.0%	33.3%	33.3%	33.3%	100.0%	

5.4 Factor Analysis

Finally, factor analysis simply shows how fit respondents are with questionnaire dimensions. Therefore, reliability analysis is done in order to find out overall validity of each dimension. The result shows that 84% validity of the instruments. Furthermore, confirmatory analysis was examined in order to discover how fit individual questions are in each dimension. As the result shows in table 9, out of the overall instruments only two questions did not pass the factor analysis. That lead to step need to be eliminated in the future. Finally, result of factor analysis show that

variables with factor loading less than 50% would not be suitable for further analysis like regression modeling.

Table 7: Result of Factor Analysis on 23 Instruments in the Questionnaire

Variables and Items	Factor Loadings
1- I think that the use of a mobile phone for banking transaction is risky.	.612
2- I have serious doubts that the banking transactions performed on a mobile phone will work satisfactory.	.552
3- Conducting banking transactions on mobile phones is risky because one can easily lose or misplace the mobile phone.	.679
4- It is risky to transmit and store information related to banking transactions on a mobile phone.	.655
5- A banking transaction via a mobile phone is dependable.	.551
6- A mobile phone for banking transaction offers more advantages than a PC.	.655
7- A mobile phone is more convenient than a PC to conduct banking transaction.	.594
8- Banking transaction on a mobile phone would eliminate time and space constraints that I otherwise would have when I transact on a PC.	.616
9- A mobile phone is not a good substitute of a PC to conduct banking transaction.	.612
10- A mobile phone would be easy to use to conduct banking transactions.	.473*
11- It would be easy for me to remember how to conduct banking transactions on a mobile phone.	.599
12- I believe it would be easy to get the mobile phone to do banking transaction.	.661
13- Conducting banking transactions on a mobile phone would be an easy thing to do.	.603

Table 8: Result of Factor Analysis on 23 Instruments in the Questionnaire(continued)

14- If banking transactions on a mobile phone were available at my bank I would adopt it straight away.	.696
15- If banking transactions on a mobile phone were available at my bank I would use it regularly.	.624
16- If banking transactions on a mobile phone were available at my bank I would adopt it mainly for information search(not for transaction purposes)	.307*
17- A mobile phone would make it easier for me to conduct banking transaction.	.705
18- A mobile phone would be useful for me to conduct banking transactions.	.600
19- A mobile phone would be useful for me to eliminate the constraints of time and space when conducting banking transactions.	.538
20- A mobile phone would give me greater control over my banking transactions.	.500
21- If I adopted a mobile phone for banking transactions, it would give a higher status among colleagues.	.803
22- If I were to adopt a mobile phone for banking transactions, I would be more prestigious among my peers than those who have not adopted it.	.851
23- I would be trendy if I adopted a mobile phone for banking transactions.	.797

Table 8: Reliability Statistics

Cronbach Alpha	Number of Items
.839	26

Chapter 6

CONCLUSION AND POLICY IMPLICATIONS

6.1 Conclusion

As stated earlier, nowadays one of the major concerns for financial institutions and commercial banks is to provide better and fast services to the customers. Due to close competition between commercial banks they have been trying to offer safe and secure services in order to keep competitive in the market. Furthermore, technology is the basic competitive advantage for financial organizations and is inevitable to stop growing. If there was not innovation in information technology services for banking system they could not achieve what they have achieved today. With this concern, managers seek to have better understanding of what consumers expect and to find out which specification of behavior effect on intention to use bank services. Due to the facing with rapid growing in technology is inevitable, many studies have done in order to find out how to overcome people's resistance for accepting new technology since many years ago.

As mentioned earlier, one of the most famous studies in this topic is TAM theory, which discovered perceived ease of use and perceived usefulness, which they are two important dimensions regarding this concept (Davis, 1989). Other studies followed similar model and integrated it with other models (e.g. Venkatesh et al., 2000; Venkatesh et al., 2003 and Luarn & Lin, 2005). Accordingly, this study applied

TAM theory, extended TAM and finally two extra instruments (risk and social influence) added to the basic model of this study that is tested by Riquelme & Rios (2010).

Although, the recent studies about online banking showed consumers are more adoptive to utilize Internet and online banking than mobile banking, while cellphones consider as an alternative for personal computers. Cellphones are becoming as important as wallet for individuals and also they are easier to carry for applying banking transactions instantly without concerning about time and place. (Shin, 2009).

The main objective of this study is to discover the most important factors, which have influence on acceptance and adoption of mobile banking. The research investigated what kind of demographic factors have significant impact on users' intention to adopt mobile banking in North Cyprus. It also proposed if individual background influence on their decision. The results of this research are evaluated by Mac SPSS via analyzing 140 questionnaires collected in North Cyprus.

According to the previous studies the numbers of people who use mobile banking service were really low comparing to online banking users (Luarn & Lin, 2005; Laukkanen, 2007 and Yang, 2009). However, the obtained result showed that about 60% of respondents have been using mobile banking for 1 to 5 years and this percentage is expected to increase in the future.

Accordingly, the result of mean scores analysis has proved that perceived ease of use and perceived usefulness have statistically significant effect on mobile banking

adoption and also have positive influence on word of mouth variable. It means that when people perceived usability of mobile banking service they will recommend it to their environment. In contrast, social norms have least influence on users' adoption in our findings. The result proposed that the respondents from different nationalities perceived mobile banking as a useful service for conducting banking transactions, which it leads to their positive recommendation to other users as they receive similar services from banks. Furthermore, age and gender of candidates have influence on amount of risk perception, but both male and female perceived risk through using mobile banking. The result also shows that different age groups have different perception of usefulness of mobile banking services. It may be defined as elder people perceived less usefulness rather than younger people. Finally, males and females have different perception of suggesting mobile banking service to their family, relatives and friends.

6.2 Policy Implication

Customers of commercial banks and other financial institutions have different tastes to choose alternative channels for implementing banking transactions. Therefore, those banks, which can meet customers demand with various preferences, will be more productive. Mobile banking is the latest channel in this category, which has offered these transactions regardless of time and space.

The result of this study presented that what factors have more influence on users to choose one of the electronic banking channels. Findings from this research can be helpful for bank managers in order to apply the best strategies for applying better marketing plan and improve service quality specifically in North Cyprus. Likewise, they can use this information to attract more customers to use cell phone devices.

Thus, customers would suggest it to other bank customers, as they perceived usefulness of mobile devices,

6.3 Limitations and Areas for Future Studies

Although, this study provides findings, which are useful for understanding influential factors on individuals to choose cell phones as a device for applying bank services, there are limitations to the study. A major limitation for this inquiry is that the model was used in this research does not include all the dimensions from all related models of the mobile banking adoption studies. So, maybe in the future study it is good to consider the models, which provide more accurate results and best explanation. Another limitation for this study is that some of the questions in the questionnaire overlap and it may be hard for the respondents to differentiate meaning of some concept. For instance, it is difficult to differentiate the difference between usefulness and ease of use concept.

Firstly, the present study did not emphasize on the type of banking transaction and all questions generalized all the banking services. For example perception of risk can be different in some services in comparing to other services. Secondly, it is better to replace qualitative research instead of quantitative research in further studies in order to achieve better results. Finally, another limitation on the generalizability of the finding is the fact that study was conducted relatively on small sample size of (140). A study using a larger sample would present more generalizable findings.

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APPENDICES

Appendix A: English Questionnaire Survey

The effects of gender, age and nationality in the adoption of mobile banking in North Cyprus

Dear Friends,

This research is about perception of bank customers for e-banking adoption through using mobile banking in the case of North Cyprus. Please read all of the questions carefully and try to answer the questions based on your experience and opinions.

PART A. DEMOGRAPHIC PROFILE (Personal Information)

1. Gender:

    a. Female

    b. Male

2. Age: ……..

3. Nationality: ……

4. Monthly Income: …….$

5. Occupation:

    a. Student

    b. Worker

    c. Public officer

d. Professor (Academic)

e. Other: please state:

6. How many years have you been using mobile banking? ……. years.

7. Does mobile banking you use belong to:

a) Domestic Bank

b) Foreign Bank

PART B. INSTRUMENT

Please use the following scale ranging from 1 (Very Strongly Disagree) to 5 (Very Strongly Agree) for your answers:

Very strongly disagree Very strongly agree

1 2 3 4 5

ID		**Very Strongly Disagree**	**Very Strongly Agree**
1	I think that the use of a mobile phone for banking transactions is risky.	1 2 3 4 5	
2	I have serious doubts that the banking transactions performed on a mobile phone will work satisfactorily.	1 2 3 4 5	
3	Conducting banking transactions on mobile phones is risky because one can easily lose or misplace the mobile phone.	1 2 3 4 5	
4	It is risky to transmit and store information related to banking transactions on a mobile phone.	1 2 3 4 5	
5	A banking transaction via a mobile phone is dependable.	1 2 3 4 5	

6	A mobile phone for banking transactions offers more advantages than a PC.	1 2 3 4 5
7	A mobile phone is more convenient than a PC to conduct banking transactions.	1 2 3 4 5
8	Banking transactions on a mobile phone would eliminate time and space constraints that I otherwise would have when I transact on a PC.	1 2 3 4 5
9	A mobile phone is not a good substitute of a PC to conduct banking transactions.	1 2 3 4 5
10	A mobile phone would be easy to use to conduct banking transactions.	1 2 3 4 5
11	It would be easy for me to remember how to conduct banking transactions on a mobile phone.	1 2 3 4 5
12	I believe it would be easy to get the mobile phone to do banking transactions.	1 2 3 4 5
13	Conducting banking transactions on a mobile phone would be an easy thing to do.	1 2 3 4 5
14	If banking transactions on a mobile phone were available at my bank I would adopt it straight away.	1 2 3 4 5
15	If banking transactions on a mobile phone were available at my bank I would use it regularly.	1 2 3 4 5

16	If banking transactions on a mobile phone were available at my bank I would adopt it mainly for information search (not for transaction purposes).	1 2 3 4 5
17	A mobile phone would make it easier for me to conduct banking transactions.	1 2 3 4 5
18	A mobile phone would be useful for me to conduct banking transactions.	1 2 3 4 5
19	A mobile phone would be useful for me to eliminate the constraints of time and space when conducting banking transactions.	1 2 3 4 5
20	A mobile phone would give me greater control over my banking transactions.	1 2 3 4 5
21	If I adopted a mobile phone for banking transactions, it would give a higher status among colleagues.	1 2 3 4 5
22	If I were to adopt a mobile phone for banking transactions, I would be more prestigious among my peers than those who have not adopted it.	1 2 3 4 5
23	I would be trendy if I adopted a mobile phone for banking transactions.	1 2 3 4 5

PART C. WORD OF MOUTH

	Very Strongly Disagree				**Very Strongly Agree**
1) I can suggest mobile banking to my friends.	1	2	3	4	5
2) I can suggest mobile banking to my family members.	1	2	3	4	5
3) I can suggest mobile banking to everybody.	1	2	3	4	5

Appendix B: Turkish Questionnaire Survey

Kuzey Kıbrıs'ta cinsiyet ve uyruğun, mobil bankacılık uygulamalarını benimsemedeki etkisinin moderasyonu.

Sevgili Arkadaşlar,

Bu araştırma Kuzey Kıbrıs'taki mobil bankacılık kullanan banka müşterilerinin e-bankacılık algısını belirlemek üzerinedir. Lütfen bütün soruları dikkatlice okuyup düşüncelerinize ve tecrübelerinize gore cevap veriniz.

BÖLÜM A. DEMOGRAFİK PROFİL (KİŞİSEL BİLGİLER)

1. Cinsiyet:

    a.Bayan

    b. Bay

2. Yaş: ……..

3. Uyruk: ……

4. Aylık Gelir: ……$

5. Meslek:

    a. Öğrenci

    b. İşçi

c. Devlet Memuru

d. Akademisyen

e. Diğer; Lüten Belirti:

6. Kaç yıldır mobil bankacılık kullanıyorsunuz? ……. yıl.

7. Mobil bankacılığını kullandığınız banka:

a) Yerel Banka

b) Yabancı Banka

BÖLÜM B. DEĞERLEDİRME

Lütfen aşağıdaki ölçüm skalasını kullanarak (Şiddetle katılmıyorum- Şiddetle katılıyorum)

Şiddetle Katılmıyorum Şiddetle Katılıyorum

1 2 3 4 5

ID		Şiddetle Katılmıyorum				Şiddetle Katılıyorum
1	Bence mobil bankacılık uygulamalarını kullanmak risklidir.	1	2	3	4	5
2	Cep telefonları üzerinden yapılan bankacılık işlemlerinin tatmin edici olduğu konusunda ciddi şüphelerim var.	1	2	3	4	5
3	Cep telefonları üzerinden bankacılık işlemleri yapmak, telefonun kaybolması ve ya yanlış kişilerin eline geçmesi açısından risklidir.	1	2	3	4	5
4	Cep telefonlarında banka bilgilerini depolamak ve işlem yapmak risklidir.	1	2	3	4	5
5	Cep telefonlarıyla mobil bankacılık işlemleri güvenlidir.	1	2	3	4	5
6	Bir cep telefonu, bankacılık işlemleri için bir bilgisayara göre daha avantajlıdır.	1	2	3	4	5

7	Bir cep telefonu, bankacılık işlemleri için bir bilgisayara göre daha pratiktir.	1 2 3 4 5
8	Cep telefonları üzerinden bankacılık işlemleri yapmak, bilgisayara gore zamandan ve mekandan tasarruf ettirir.	1 2 3 4 5
9	Bir cep telefonu, bankacılık işlemleri yapma konusunda bigisayarların alternatifi olamaz.	1 2 3 4 5
10	Cep telefonları bankacılık işlemleri yapmayı kolaylaştırır.	1 2 3 4 5
11	Cep telefonları üzerinden bankacılık işlemlerinin nasıl yapıldığını hatırlamak benim için daha kolaydır.	1 2 3 4 5
12	Bir cep telefonu edinmenin bankacılık işlemlerimi kolaylaştıracağına inanıyorum.	1 2 3 4 5
13	Cep telefonları üzerinde bankacılık işlemleri gerçekleştirmek yapılan en kolay iş olacaktır.	1 2 3 4 5
14	Eğer bankamın bir mobil uygulaması olsaydı bunu hemen benimserdim.	1 2 3 4 5
15	Eğer bankamın bir mobil uygulaması olsaydı, bu uygulamayı sıklıkla kullanırdım.	1 2 3 4 5
16	Eğer bankamın bir mobil uygulaması olsaydı, o uygulamayı işlem yapmak için değil, çoğunlukla bilgi edinmek için kullanırdım.	1 2 3 4 5

17	Benim için cep telefonları, bankacılık işlerini kolaylaştırır.	1 2 3 4 5
18	Benim için cep telefonları, bankacılık işleri için kullanışlıdır.	1 2 3 4 5
19	Benim için cep telefonları üzerinden bankacılık işlemleri yapmak, bilgisayara gore zamandan ve mekandan tasarruf ettirir	1 2 3 4 5
20	Cep telefonları, bankacılık işlemlerinde bana muhteşem bir kontrol verir.	1 2 3 4 5
21	Bir mobil bankacılık uygulamasını benimsemek beni iş arkadaşlarımın arasında statü sahibi yapar.	1 2 3 4 5
22	Bir mobil bankacılık uygulamasını benimsemek beni akranlarımın arasında benimsemeyenlere nazaran prestij sahibi yapar.	1 2 3 4 5
23	Bir bankacılık uygulamasını benimsemem modaya uygun olacaktır.	1 2 3 4 5

BÖLÜM C. AĞIZDAN AĞIZA

	Şiddetle Katılmıyorum				**Şiddetle Katılıyorum**
1) Arkadaşlarıma mobil bankacılığı önerebilirim.	1	2	3	4	5
2) Aile üyelerime mobil bankacılığı önerebilirim.	1	2	3	4	5
3) Herkese mobil bankacılığı önerebilirim.	1	2	3	4	5