QATAR UNIVERSITY

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FACTORS INFLUENCING THE INTENTION TO USE MOBILE BANKING IN QATAR

BY

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ABSTRACT

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Title: “Factors Influencing the Intention to use Mobile Banking in Qatar”

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This paper aims to investigate the main factors that influence the intention to use mobile banking in Qatar. The Technology Acceptance Model (TAM) and Information System Success Model (ISSM) were combined with one additional variable which is Trust to investigate intention to use mobile banking. Data were collected from 288 participants in Qatar via an online survey questionnaire using quantitative research methods. Also, to test the research model and evaluate the reliability and validity of the questionnaire data were used SPSS software.

Based on the findings, service quality, perceived usefulness, and perceived ease of use were shown to have a substantial influence on intention to use mobile banking apps. Nevertheless, the influence of trust, system quality and information quality on intention to use mobile banking were found to be statistically insignificant. R - square result shows that the intention to use mobile banking factors explain (70.7%) of intention to use mobile banking. Also, the F-value in ANOVA is (109.4) which is good and Sig value it is <.001. Therefore, the result is significant. The findings of this research provide an opportunity for numerous banking organizations and top bank executives to better understand the elements influencing the intention to use mobile banking apps in Qatar. Furthermore, this study presented a conceptual model to shed light on the shortcoming and provide a better explanation and understanding of the factors influencing mobile banking in Qatar and their relationships.

Keywords: Intention to Use, Mobile Banking Applications, Technology Acceptance Model (TAM), Information System Success Model (ISSM), Banks, Trust, System Quality, Service Quality, Information Quality, Perceived Usefulness, Perceived ease of use and Qatar.

DEDICATION

I dedicated to my family, my mom, my dad, my brothers, my sisters, and friends.

I wish I could find words to truly express my heartfelt gratitude to my family for their unwavering support in various aspects of my life.

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CHAPTER 1: INTRODUCATION

In chapter one, it will discuss the background of the research, describes general information about the growth of mobile services in Qatar. In addition, describe the mobile banking and especially in Qatar. Also, the significance of the study. Following that, the aim of the work, research questions and the employed research method are presented.

1.1. The Growth of Mobile Services

Today, all people in the world are using or having a smartphone, and it will increase more since technology is growing faster and rapidly. According to the report, between 2000 and 2020, this statistic illustrates the number of mobile cellular subscriptions per 100 residents in Qatar. In 2020, there were 131.84 mobile subscriptions per 100 individuals (S. O'Dea,2021).

Because of the quick advancement of information technology, the smartphone provides new chances for mobile development businesses, and internet service providers to gain competitive advantages by enabling businesses to quickly develop m-service/m-commerce mobile applications with competitive benefits. e-commerce or e-service is the act of delivering services via the Internet (Alotaibi, 2020), whereas m-service/m-commerce refers to any transactions and information accessed through mobile devices (Mort & Drennan, 2005).

Technology has such a large impact on our lives that it is difficult to imagine a life without it. Innovations taking place all around the world in various industries have made our lives much easier and more peaceful (Kumar et al., 2020). Technology is pervasive and rapid in all aspects of our lives; for example, the telecom sector has grown dramatically in every area of the world, including both developed and developing

countries such as Qatar (Kumar et al., 2020).

Because of the rapid and indiscriminate rise of technology, service providers have been on the lookout for new ways to reach out to their clients. Under the influence of technology, conventional modes of purchasing and selling have also transformed (Kumar et al., 2020). Mobile technology is increasingly being used in many forms of commercial activities, and banking and financial services are no exception. The rapid growth and popularity of online shopping have prompted banks and financial institutions to encourage their customers to use online and mobile banking to make payments and other banking operations. As well as the rise of mobile banking can be attributed to the plethora of issues users have in obtaining financial services via traditional delivery methods (Kumar et al., 2020).

1.2. Description of Mobile Banking

Mobile banking highlights an important limitation of e-banking by reducing the user's need to simply a smartphone instead of counting on a computer with internet access (Baabdullah et al., 2019). As a result, users are increasingly using mobile devices to do banking tasks, for instance, making transactions and payments, reviewing balances, accessing account details, seeing, and canceling direct debits, and quickly identifying user activities (Baabdullah et al., 2019). Mobile banking is defined as "a channel through which a customer communicates with a bank via a mobile device, such as a phone or a personal digital assistant." It enables its users to gain access to account information and conduct remote transactions in their accounts at a cheap cost or free (Kumar et al., 2020). In the relatively short time since its inception, mobile banking has become a popular way of banking among its users. It has effectively resulted in smooth and unconstrained banking, as well as becoming a new banking norm (Kumar et al., 2020).

In the banking business, transactional ease has become a key motivator. Banks that use better technology have a competitive advantage over their competitors. In this setting, banks are embracing mobile banking to reap the benefits of improved customer service (Chavali & Kumar, 2018). To provide better services to their customers, telecom organizations are increasingly tying up with financial services in the form of mobile banking. Banks, telecom companies, and other financial organizations are collaborating and complementing each other to provide these services (Chavali & Kumar, 2018). Customers can use a smartphone to do both basic and complicated financial tasks, such as checking account balances, transferring funds between accounts, transferring money to other accounts around the world, paying bills, and finding an ATM (Chavali & Kumar, 2018). Finally, researchers utilized a variety of models to investigate the characteristics that influence M-Banking utilization Sripalawat et al. (2011), for example, employed the Technology Acceptance Model (TAM). Also, Delone and Mclean (D&M) are Success Model was utilized by Tam and Oliveira (2017). However, this study is different from the previous studies, it will expand the factors that will impact the intended use of mobile banking within Qatar. It is done by combining the two models Technology Acceptance Model (TAM) and IS Success Model (ISSM) models for examining M-Banking.

1.3 Purpose of the study

The COVID-19 crisis has raised concerns and challenges regarding how to improve and maximize the benefits of mobile banking. As companies, organizations and businesses have transferred to the online and that has become an important thing as what all the countries around the world are affected from the COVID -19 and the economy. Moreover, it will benefit the environment, as everything will be online and on a small device that will help the customers to do anything they want anytime, and it

is easy. Also, get more insights related to the intention to use mobile banking. Although several types of research literature have emphasized the significance of intention to use mobile banking and some research about influencing the intention to use mobile banking using the TAM model. However, there are a small number of findings have addressed aspects influencing the intention to use mobile banking in Qatar especially with the ISSM model.

This paper aims to identify the factors that influence the intention to use mobile banking applications. More clearly, the outside factors that determine the intention to use mobile banking apps in Qatar from the customer's perspective. Thus, this research study aims to bridge the gap by utilizing new expected elements and a combination of two models, which are ISSM and TAM that may have a beneficial effect on the intention to use mobile banking in Qatar.

As a result, it's critical to assess the current crisis's effects on customer's behavior, primarily by examining the most important factors related to mobile banking and figuring out how these factors influence intentions to use mobile banking during or after the COVID-19 pandemic. To have a better understanding of intention to use mobile banking. So, the study problem may be defined as follows: To determine the factors that influence the intention to use mobile banking in Qatar. The findings presented in this study will provide banks in Qatar with accurate insight into the factors that influence the intention to use mobile banking in Qatar.

1.4 Significant of the Study

There is a scarcity of research on the number of factors influencing intention to use mobile banking in the region, from theoretical and practical perspectives. This study will support bridging the literature gap by providing scholars and practitioners with substantive insights into the influencing factor's intention to use mobile banking. Which

will help banks in the end to the formation of a successful strategy to show the important role of using mobile banking in Qatar. Thus, this study will be significant to all the banks that have mobile banking applications in Qatar. It will improve their knowledge of the most essential factors influencing intention to use mobile banking, particularly in this unusual crisis such as COVID-19. It's difficult to predict how long the crisis will last and how much it will affect the banking sector (Shakila, 2021).

This study builds on that work by evaluating mobile banking applications in Qatar using TAM and ISSM models, while also adding more factors which are trust and demographic variables which are gender and age. It is expected that, over time, researchers will improve their understanding of the specific characteristics and dimensions that influence the models, thus providing a framework for a deeper understanding of mobile banking applications in Qatar.

There are a few research has looked at TAM and ISSM variables and trust variables to see if people in Arabic nations want to utilize mobile banking. (Pang et al., 2020; Mostafa & Eneizan, 2018; Baabdullah et al., 2019). This earlier research, on the other hand, did not investigate thoroughly enough and therefore overlooked the impact of several important variables that may promote to intention to use mobile banking, especially with the ISSM model. As a result, the purpose of this study is to close this gap by focusing on the underlying factors that may have influenced the intention to use mobile banking in Qatar.

This paper aims at understanding the contribution of m-commerce/ m-services to the banking sector and its impact intention of using mobile banking.

1.5. Research Questions

To provide acceptable services for clients, many organizations are currently focusing on m-commerce / m-services. There are several aspects to consider while evaluating these applications, all of which have an impact on user intention. As a result, the following questions are addressed in this research.

RQ1: What factors affect the intention to use mobile banking?

RQ2: Are there any differences in perceptions based on the demographic factors: age and gender?

CHAPTER 2: LITERATURE REVIEW

This chapter describes how banks can figure out the factors that influence the decision of customers to accept mobile banking or not. Also, it illustrates some general information and statistics on mobile banking and the bank system in Qatar. Moreover, it discusses the two models which are Technology Acceptance Model (TAM) and Information System Success Model (ISSM). Also, the discusses of the research framework and research hypotheses. Moreover, the research hypotheses that are going to be evaluated in this study. Finally, it presents a short summary on the theoretical model elements and the factors affecting the intention to use of mobile banking.

2.1. Banks and Mobile Banking

When banks can figure out the elements influencing the customer's decision to accept the given mobile banking, they will be able to acquire a competitive advantage with mobile banking (Kholid, 2019). Considering this, the purpose of this study is to look at the elements that influence customers' intention to use mobile banking. Also, there has been a shift in consumer behavior in Qatar. Because of the increased adoption of mobile devices, it now significantly relies on them to carry out numerous functions. This expansion is aided by advances in technology and increased network capacity at more affordable prices. As a result of the quick adoption, the public's use of numerous digital services has increased (Kholid, 2019). In addition, mobile banking, which gives clients a personal platform to execute banking operations on. It has become increasingly popular among the public. Customers and banks alike can benefit from the-banking platform's features. Customers benefit from the use of mobile banking since it allows them to save time. Moreover, it is useful in a variety of consumer situations. Independent banking services enable banks to provide consumers with more cost-effective services, hence improving service efficacy (Kholid, 2019).

Customers' intentions to use them-banking apps and use them frequently are influenced by several factors. One of the reasons is perceived usefulness. Customers use mobile banking with the expectation of improving their job productivity. Another element to consider is perceived ease of use. Customers will be more interested in utilizing m-banking if they find it to be simple through using technology (Kholid, 2019). Also, ISSM factors are information quality, service quality, and system quality, when customers use mobile banking, they can see the quality of the financial mobile banking app quality and trust to see how customers trust the apps in the mobile and if they will share their personal information through mobile since it will impact their privacy. Also, when persons who have a lot of power over a consumer use m-banking, they will encourage him or her to utilize it. The technology acceptance model (TAM) and the information system success model (ISSM) also was adding one variable which is trust were combined in this study, to create a new model that focused on factors that impact users' intention of mobile banking in Qatar.

2.1.1. Mobile banking in Qatar

Mobile Apps have become an integral part of our everyday lives, facilitating regular human activities, and satisfying a variety of requirements in various fields. Mobile Apps have become the main trend among mobile users in all industries throughout the world (Hammouri et al., 2021).

Because Qatar has one of the quickest population growth rates and the greatest migrant population, the subject of public service satisfaction is unique. The issue has become even more severe since the blockade in Qatar in May 2017 (Benmansour, 2019; p.326). Moreover, according to Roy, 2017 stated that the growing popularity of smartphones has resulted in the development and widespread use of mobile applications to satisfy the diverse needs of users for various purposes.

Al-Shafi and Weerakkody, 2010 stated that In July 2000, the Qatari government launched its e-Government program to develop a new dynamic relationship between the government and citizens. The Emir Sheikh Hamad bin Khalifa Al-Thani formed the Supreme Council for Information and Communications Technology to speed up Qatar's transformation towards an information-based society (ictQATAR). The Ministry of Information and Communications Technology In 2004 and 2013, (ictQatar) was established (ictQatar, 2013-2014).

In 2014, the Qatar e-Government 2020 Strategy became released with a key goal to provide give up-to-give up e-services (ict Qatar, 2014). According to the MOTC, 2017 identified that along with improvement of cell programs for 60% of e-services. In 2014, Qatar ranked forty-four up from forty-eight in 2012 withinside the UN e-Government Development Index (United Nations E-Government Survey, 2016; p.115). In addition, according to Ahmed, 2018 stated the Ministry of Transport and Communications 2016, changed into a setup from merging ictQatar with the Ministry of Transport. According to Wansink, 2020 stated that in 2018 with 2,400 e-government services were made to be had in Qatar via each internet site and cellular application.

Qatar is one of the advanced states that growing quickly in the use of smartphones and having access to E-banking facilities and powerful e-commerce ecosystems, according to Al-Khalaf and Choe (2020). Qatar's Telecom Regulatory Commission reported in 2021, among the almost three million citizens of Qatar, four million citizens are mobile users. According to Research- And Markets.com, the global digital banking platform market by 2026 is expected to reach $9 billion and at a compound annual growth rate of 16% until then (Digital, 2021).

As the banking system in Qatar has regained stability, mobile banking has benefited from a fresh push. Banks, for example, have changed their products and

services in recent years to cater to an increasingly mobile client base. This is related to Qatar's population of 75 percent used smartphones, placing it first in the Gulf area in terms of access to (Metodieva, 2012), with a rising trend toward online services (Al-Khalaf & Choe, 2020). Therefore, Qataris now have access to mobile banking apps for a range of services, including bill payment, depositing cash, and transferring money abroad (A complete guide to mobile banking in Qatar,2021). In Qatar, all the main commercial and Islamic retail banks provide mobile banking services for both current and corporate accounts for example Doha Bank, Qatar Islamic Bank, HSBC Qatar, and Qatar National Bank (A complete guide to mobile banking in Qatar,2021).

2.2. Technology Acceptance Model (TAM)

The first model is in this paper is the technology acceptance model (TAM). Davis (1989) first proposed the Technology Acceptance Model (TAM), which is an information system theory. It focuses on computer users as models and demonstrates how people may embrace and utilize new technologies. It was created to predict user technology adoption decisions. The major goal of this theory is to showcase the consumers' potential. Further, it emphasizes, for instance, when a technology developer feels that his or her system is user-friendly Lule et al. (2012).

The TPB and TRA were refined by Davis, Bagozzi, and Warshaw in 1989, where the components Perceived Usefulness (PU) and Perceived Ease of Utilize (PEU) were discovered to be the two most important aspects that predict the intention to use technology. PU is defined as “the subjective probability of a potential user that the use of a particular application system will raise the performance of its functionality” and PEOU is defined as “the degree to which the potential user expects the target system to be effort-free” (Davis et al., 1989: 985). Moreover, one of their main conclusions is that technology use can be properly predicted from users' intentions, which is consistent

with TRA and TBP, which state that users' behavioral intention to execute a specific action is the primary determinant of actual behavior.

The model is centered on defining the features of information processes that lead to decisions to accept or reject technological innovations. Based on Davies (1989), perceived usefulness refers to how much a person believes that using new technology will benefit and improve his or her job performance, whereas perceived ease of use refers to how much a person believes that using new technology will be less complicated for him or her.

The initial form of the TAM model, developed in1989 by Davis, is depicted in Figure 1. In 2000, Venkatesh and Davis expanded the original TAM model, which represents in figure 2, to account for the social impact such as image, subjective norms, and voluntariness as well as cognitive instrumental processes in explaining perceived usefulness and usage intentions like perceived ease of use, output quality, job relevance, and result demonstrability.

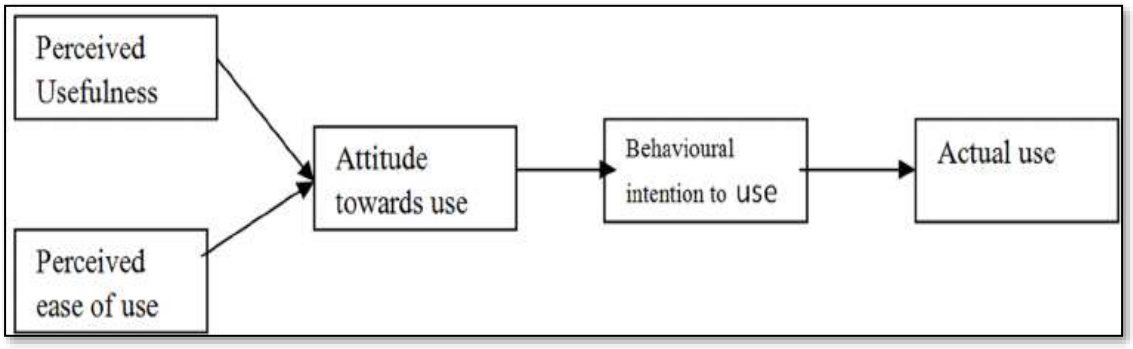

Figure 1: The Original TAM Model (Davis, 1989)

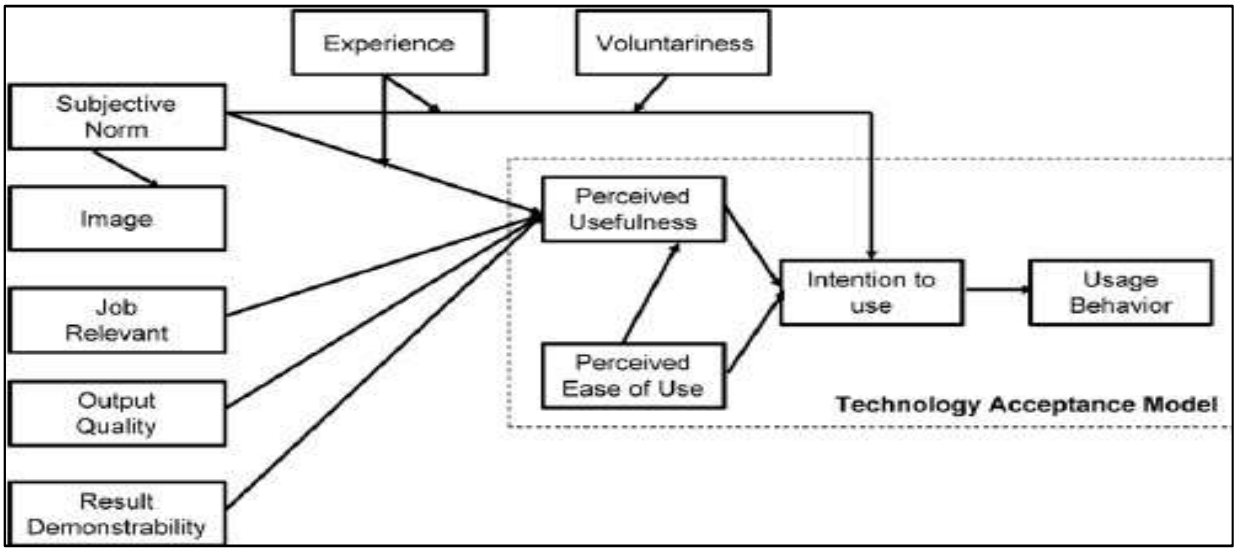

Figure 2: TAM2 Model (Venkatesh & Davis 2000)

2.3 Information System Success *Model (ISSM)*

The second model is the information system success model (ISSM) which will study in this paper. Delone and Mclean created the Information System Success Model (ISSM) in 1992 to investigate the elements that influence the success of a new system's deployment. It considers the level of quality in terms of features, services, information, and tools that only included two factors which are information quality and system quality. Then, Delone and Mclean (2003) modified the Information System Success Model (ISSM) by adding a new quality parameter which is service quality (SERVQ) and combining the individual and organizational effect into a single variable, the net benefit (Delone & McLean, 2003).

The model uses quality characteristics as predictors of user intention of using mobile banking, and the positive relationship between information quality (IQ), service quality (SERVQ), and system quality (SYSQ) with the intention to use mobile banking. Also, to assess the information system's success (Delone & McLean, 2003).

Determining the elements that influence the amount of actual usage of technology has been seen as a critical goal for modifying the features of a technological service to make its acceptance more appealing. Much research has been conducted on

mobile banking like Baptista and Oliveira, 2015; and Choudrie et al., 2018. The characteristics that could influence M-Banking use were investigated in several contexts (e.g., Saudi Arabia, South Korea, Taiwan, and Mozambique) investigated the factors that may influence the utilization of mobile banking (Baabdullah et al., 2019).

Although information quality is one of the key constructs in the updated ISS model, Tam and Oliveira (2017) study revealed that users prefer graphic interface expression over traditional information display from the system (Tun, 2020).

As a result, in numerous research (Lee, Sung, & Jeon, 2019; and Tam & Oliveira, 2017), IQ was found to be a non-critical factor in determining users' intentions to use an innovative IS. The system quality (SYSQ) factor is concerned with ease of use, and it is like the perceived ease of use (PEOU) of the TAM model (Seddon, 1997). Similarly, Talukder, Quazi, & Sathye (2014) It was also suggested that the SYSQ concept be excluded from future research because it did not influence behavioral intention in their study. Many other research studies like (Tam & Oliveira, 2017; Tun, 2020) also indicated a similar result (Tun, 2020).

SERVQ is becoming more widely recognized as a key component of the e-commerce environment (Santos, 2003). Because service quality is an activity that improves the value of a product, firms must focus more than ever on improving their services (Tun, 2020). SERVQ is the quality of the online or offline supports that mobile banking users receive. But there is a lack of research papers examining the impact of SERVQ on users' behavioral intent, most notably in the context of mobile financial services (Tun, 2020). As shown in the study of Pang et al., 2020 stated that it can reveal the success of the IS model for the link between the quality system and quality of service and quality information with user satisfaction and intention to use.

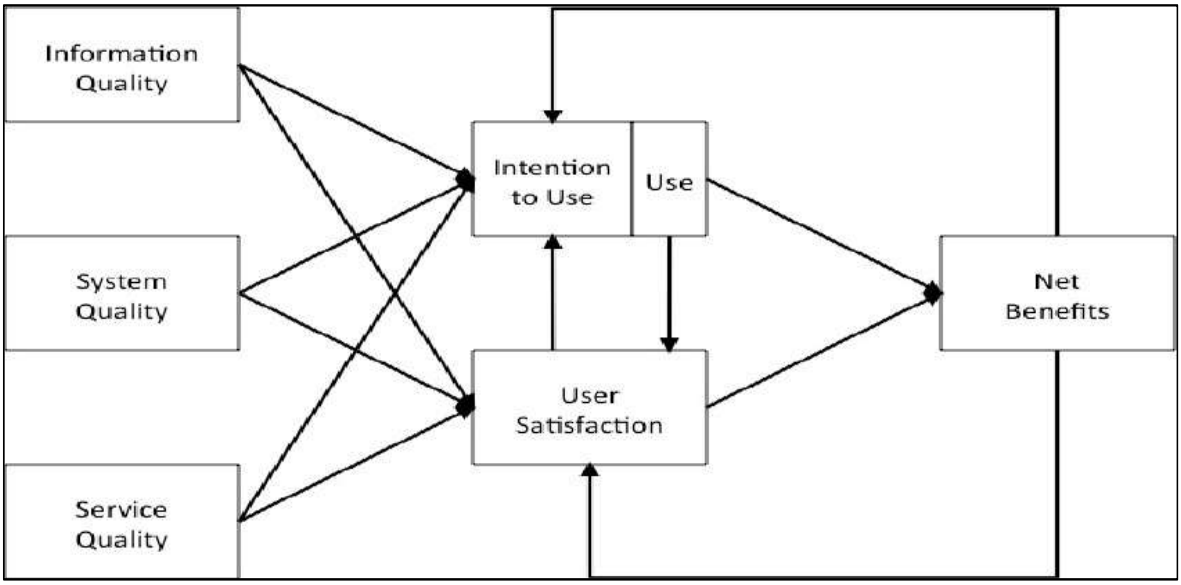

Figure 3: The ISSM updated (DeLone and McLean, 2003)

Figure 3 above, displays the difference between the original and the updated ISSM model, which are the service quality to reflect the importance of service and support in successful e-commerce systems, the intention to use to measure user attitude as an alternative measure of use, and the collapsing of individual impact and organizational impact into a more parsimonious net benefits construct (Urbach & Müller, 2012). Also, Urbach & Müller, (2012) stated that IS success updated model contains six interconnected elements which are service, system and information quality, intention to use, satisfaction, and net benefits. The arrows show possible connections between the success dimensions.

This study, however, is unique as it combines two models (i.e., the Technology Acceptance Model (TAM) of Davis (1989) and the information system success model (ISSM) model of DeLone and McLean (1992). To use mobile banking of mobile financial services providers in Qatar. TAM model adopts two variables (perceived usefulness (PU) and perceived ease of use (PEOU). Regarding the ISSM model adopts three variables which are service quality (SEVQ), information quality (IQ), and system quality (SYSQ). Also, this paper includes moderate variables which are gender and age. The goal of combining the two theories, as well as the age and gender variables, is to

improve the predictive power of consumers' continuous intention to use m-banking.

2.4 Research Framework and Research Hypotheses

The major research question of this paper is: What factors affect the intention to use mobile banking?

Figure 4 below shows the combination of TAM and ISSM model with additional factor Trust proposed for use in this study. This model suggests five main factors as being closely related to continuing usage of mobile banking, namely: service quality, information quality, system quality, perceived usefulness, and perceived ease of use. Moreover, the model has one direct determinant of the intention of use (continued use of mobile banking), and one additional new factor which is trust has positively affected the intention of use of mobile banking.

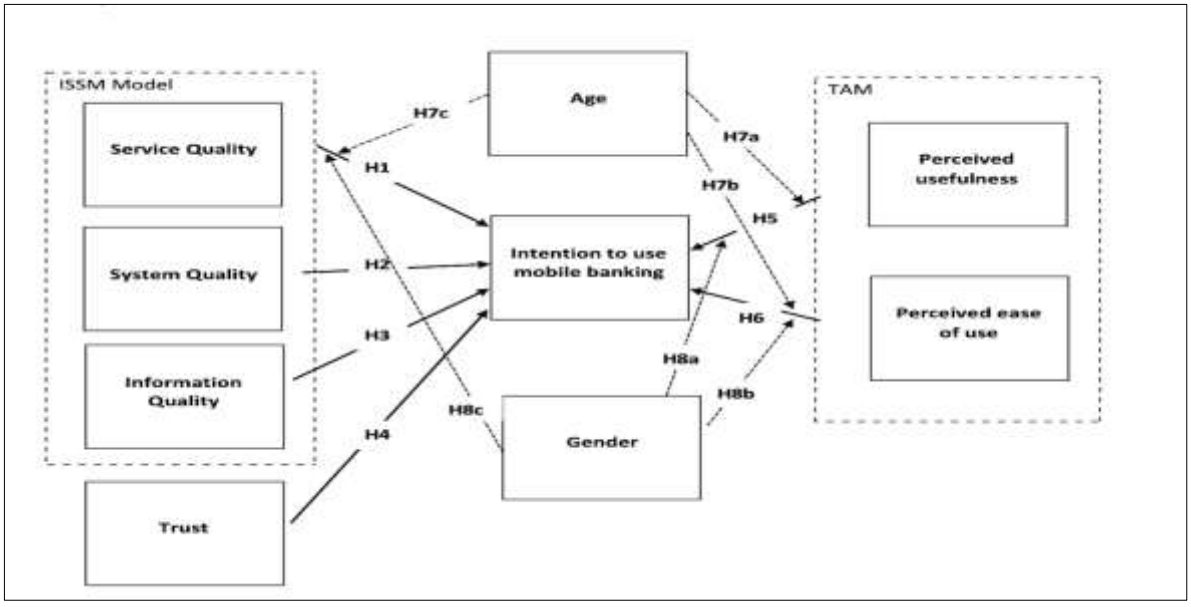

Figure 4: The proposed research model

2.4.1 Perceived Usefulness (PU)

Perceived usefulness has been applied to a wide range of ITs to gauge innovation performance for employment, life, and study since the original TAM (Munoz-Leiva et al., 2016). Based on Davies (1989), Perceived Usefulness PU refers to how much a person believes that using new technology will benefit and improve his or her job performance. Perceived usefulness has been viewed as a considered relative advantage on multiple occasions; as a result, Rogers (2003) discusses a comparable concept known as "relative advantage," defined as "the way it is perceived as being "better" than its predecessor." Also, this variable is important in our search since bank mobile applications are regarded as creative within online banking, and the utility offered to customers is strongly connected to the benefits it provides (Munoz-Leiva et al., 2016).

Many studies have shown that perceived usefulness and intention to use mobile banking are inextricably linked and have a direct relationship with each other (Munoz-Leiva et al., 2016). Studies of the effects of perceived usefulness in the field of new technologies provide different results. Several research papers support the significant and positive impact of this construction on intent to use. First, Munoz-Leiva et al., (2016) found that perceived usefulness has a positive influence on the intention of use of mobile banking. Second, Mostafa & Eneizan, (2018) stated that the perceived usefulness of mobile banking has a significant influence on people's intentions to use mobile banking. Third, Kumar et al., (2020) show that it has a huge impact on people's willingness to adopt new technologies and most of this research has found that perceived usefulness has a positive effect on consumers' attitudes and acceptance toward new information or technology uptake in many counties like Jordan, Taiwan,

India, and Saudi Arabia.

Moreover, Al-Jabri, (2015) and Huang et al., (2019) identified that perceived usefulness has a positive influence on the behavioral intention to use the mobile banking app. Likewise, (Najdawi et al., 2021) and (Tella & Olasina, 2014) found that there is a major relationship between perceived usefulness and customer attitudes toward e-payments.

Also, (Saji & Paul, 2018), (Pang et al., 2020), and (Li et al., 2019) result that perceived usefulness is positively related to the user's intent. Finally, Individual behavioral desire to utilize m-banking services is positively influenced by perceived usefulness (Nguyen & Nguyen, 2020). As a result, it is one of the most important elements that influence the inclination to utilize information technology is perceived usefulness (De Leon, 2019).

PU is one of the biggest impacts in the TAM model utilized in this study when considering the desire to continue using an information technology system. Many investigations have demonstrated that this variable remains significant at all levels (Muñoz-Leiva et al., 2017; Mostafa & Eneizan, 2018; Kumar et al., 2020; and Li et al., 2019; Saji & Paul, 2018).

The results of a study conducted by there is a correlation between perceived usefulness and m-banking adoption intention. As a result, it is reasonable to assume that if customers consider m-banking to be a more productive, effective, and helpful technology, they will use it. Also, perceived usefulness has a positive effect on individual behavioral intent to use mobile banking (Nguyen & Nguyen, 2020).

These results are consistent with previous research papers on mobile banking services that tested the relationship between the perceived usefulness with client's intention to use mobile banking services (Luarn & Lin, 2005; Akturan & Tezcan, 2012;

Hanafizadeh, Behboudi, Abedini, and Jalilvand, 2014). This means PU is the most influential element on the behavior of the customers to accept to use or not mobile banking and benefit from it.

Based on the preceding argument, it is hypothesized:

H1:Perceived usefulness will have a significant positive impact on users' intention to use mobile banking

2.4.2 Perceived Ease of Use (PEOU)

Perceived ease of use means how much a person believes that using new technology will be less complicated for him or her while using. According to the definition of perceived ease of use by Davis et al., (1989)."The degree to which a person feels that utilizing a specific system would be free of effort within an organizational environment." Also, the approach to this construct is based on measurements of how technologies enable you to complete jobs faster, enhance productivity, performance, and work efficiency Munoz-Leiva et al., (2016). Diverse research using various context have proven the influence of perceived ease of use on attitude (Chau & Lai, 2003). This concept was also found to have a favorable influence on attitudes about mobile social network games (Park, Baek, Ohm, & Chang, 2014) and attitudes toward mobile games (Ha, Yoon, and Choi, 2007).

There are several studies that has shown that perceived ease of use and intention to use mobile banking have positive and significant impact on each other Mostafa & Eneizan, (2018). Examples of the studies that indicate that perceived ease of use has a positive influence on the intention to use mobile banking are Mostafa & Eneizan, (2018), Kumar et al., (2020), Al-Jabri, (2015), Huang et al., (2019) stated that perceived

ease of use has a positive effect on the behavioral intention to use the mobile banking app.

Similarly, (Najdawi et al., 2021) and (Tella & Olasina, 2014) found that there is a strong relationship between perceived ease of use and customer attitudes toward e-payments. Furthermore, (Pang et al., 2020), (Li et al., 2019), and (Saji & Paul, 2018), discovered that perceived ease of use is positively related to customer intention to use mobile banking. Finally, (Nguyen & Nguyen, 2020) discovered that perceived ease of use has a favorable effect on behavioral intention to use mobile banking services.

However, some studies found that there is a negative relationship between perceived ease of use and intention to use mobile banking. For instance, the researchers discovered that perceived ease of use had a substantial impact on intention. In research of 232 bank customers in Zimbabwe performed by (Makayeza, 2017), perceived ease of use did not affect behavioral intention to use mobile banking services.

H2: Perceived ease of use will have a significant positive impact on user's intention to use mobile banking.

2.4.3. System Quality (SYSQ)

System quality is represented in the technological system's ease of use, usability, navigability, availability, dependability, flexibility, and reaction time DeLone & McLean, (2003). It illustrated the broad scope of this factor in a variety of ways that have been activated and measured. Ease of use was the most used metric for SYSQ in the context of e-commerce and IB (Brown & Jayakody, 2008; Brown & Buys, 2005; Liao & Cheung, 2008; Karjaluoto, 2009; Wang & Liao, 2007). Wang & Liao (2007) Customer satisfaction with mobile commerce is measured in terms of ease of use and appearance (both components of SYSQ). Lee & Chung (2009) mentioned in their paper,

SYSQ identified the quality of interface design as the main influence on customer satisfaction with mobile banking.

There is a few of research studies regarding the positive impact of system quality and the intention of use of mobile banking (Brown et al., 2010) Baabdullah et al., (2019).

H3: System quality will have a significant positive impact on users' intention to use mobile banking

2.4.4. Service Quality (SERVQ)

Service quality, as defined by DeLone & McLean (2003), is the entire support provided by the service provider, often known as customer support (Wang et al., 2001). While Landram et al., (2009) stated that the SEVQ factor has several dimensions, which include tangibility, dependability, assurance, empathy, and responsiveness (Brown, et al., 2010).

Also, Massad et al., 2006 and Brown & Jayakody, 2008; found that SEVQ is a key driver of e-commerce satisfaction, as well as IB satisfaction (Brown & Buys, 2005). Responsiveness is a major feature of SEVQ – Landram et al., 2009 which is identified by Liao & Cheung (2008) as a significant element impacting IB customer satisfaction (Brown, et al., 2010).

Whereas Riquelme (2009) shows how SEVQ characteristics like punctuality and politeness affect satisfaction. Moreover, Another SEVQ component, which is dependability, is shown by Karjaluoto et al. (2009) to be a crucial element in online banking satisfaction. Wang & Liao, 2007 indicated that SEVQ has been demonstrated

to be a key component of customer satisfaction in the mobile commerce environment (Brown, et al., 2010). Additionally, Santos, 2003 indicated that SEVQ is becoming more widely recognized as a key component of the e-commerce environment (Tun, 2020).

Nevertheless, there is a few of research findings that investigate the effect of SEVQ on the behavioral intention of users, most notably in the mobile financial service context (Tun, 2020) and Baabdullah et al., (2019).

H4: Service quality will have a significant positive impact on users' intention to use mobile banking

2.4.5. Information Quality (IQ)

DeLone & McLean, 2003 defined information quality (IQ) as the timeliness, precision, adequacy, correctness, completeness, currency, clarity, and relevance of the information given by a system. Wang et al., 2001; and Molla & Licker, 2001 stated that it is also known as content quality, particularly in the e-commerce perspective (Brown, et al., 2010).

In many different sectors, which include Internet Banking (IB) (Brown & Buys, 2005), m-commerce (Wang & Liao, 2007), e-commerce, (Brown & Jayakody, 2008), and Cell Phone Banking (CPB) (Lee & Chung, 2009), the substantial effect of information quality on consumer satisfaction has been proven.

However, there is a few of studies that investigate the intention to use mobile banking and if there is a relationship or positive impact between the quality factors with the intention of use (Brown, et al., 2010) and Baabdullah et al., (2019).

H5:Information quality will have a significant positive impact on user intention to use mobile banking.

2.4.6. Trust (T)

According to Brown & Jayakody (2008), e-commerce vendor credibility leads to increased customer satisfaction. The significance of trust in IB satisfaction has also been proven (Hwang et al., 2007). Because of the newness of mobile banking, Wati et al. (2009) emphasize trust as being especially important for customer happiness. Also, this is supported by Lee & Chung (2009), who show that trust has a significant influence on customer satisfaction with mobile banking (Brown, et al., 2010).

The findings strongly suggested that trust is an important component in predicting BI. In other words, customers who trust banks appear to be more encouraged to use mobile banking. This might be because there are rising worries about risk in online banking services. After all, they are conducted in an open environment, exposing their applications and outcomes to security and dangers such as theft, fraud, breaches of personal privacy, and hacker assaults (Nguyen & Nguyen, 2020).
(Hanafizadeh, Behboudi, Abedini, & Jalilvand, 2014); (Lee & Chung, 2009) stated that in theory, these findings parallel previous studies of mobile banking that tested and agreed on trust as a critical factor in determining customers' intent to adopt mobile banking (Nguyen & Nguyen, 2020) and (Saparudin et al., 2020) and (Ramos et al., 2018).

H6: Trust will have a significant positive impact on users' intention to use mobile banking

The six variables listed above may be combined to form a framework that depicts the major aspects impacting consumer intent to use mobile banking. Because there is no evidence of a connection between the ISSM variables and the intention to use mobile banking in the examined literature, but there is evidence that the TAM elements and trust have a strong influence on the intention of use of mobile banking. The goal of our study is to learn more about the identified elements in the context of mobile banking in Qatar, as well as how these factors influence consumer intention of use or not with mobile banking.

2.4.7. Intention Use

Individual intentions, according to Ajzen and Fishbein (1980), are a predictor of user behavior. Islam, and low) sated that the purpose to do specific activities is described as behavior. If the person can act willingly, use behavior that predicts acceptable actions Ajzen and Fishbein, (1980). According to Luarn and Lin, (2005), the intention to use will affect user behavior in Technology Acceptance Model. In the UTAUT model Berry, (2017) stated that user behavior is an endogenous variable. In India, Gupta, and Arora (2019) discovered that behavior intention impacts m-payment use behavior Loisa et al, (2020).

According to Bagozzi (2007), there is a weak theoretical link between intention and actual use. He claimed that purpose is not indicative of actual use since individual decisions to accept new technologies vary over time. Finally, Bagozzi viewed TAM as a philosophical theoretical model that relies on the individual's will to utilize the real system. As a result, he claims that the TAM model is unsuitable for predicting and explaining real system usage and that the individual's purpose should be investigated further (Ahmad, 2018). Several major factors influence the intention to use e-banking

services, including perceived usefulness, perceived ease of use, service quality, information quality, system quality, and trust.

2.4.8. Age

Some research on mobile banking adoption found that typical electronic banking users were young (Joshua & Koshy, 2011) or that the elderly had more resistance to change and a negative attitude toward using mobile banking services (Laukkanen et al. 2007). According to some studies, respondents aged 50 and up were most eager to use mobile banking services (Suoranta & Mattila 2004), typical mobile banking users were aged 30 to 49 (Laukkanen & Pasanen 2008), and middle-aged or older customers were the primary users of electronic banking (Laforet & Li 2005; Dasgupta et al. 2011).

Furthermore, Laforet and Li ,2005 conducted a random survey of 300 people on the streets of six major Chinese cities and found that mobile banking's primary users were not always young and well-educated. Laukkanen et al. ,2007 divided Finnish respondents into two groups based on their age (over 55 or not) and found that the two groups differed in terms of risk, tradition, and image obstacles. Also, Cruz et al. ,2010 surveyed 3585 Brazilians and found that older persons found mobile banking to be more difficult to use than younger people. Similarly, Puschel et al. ,2010 found that typical users of mobile banking were under 30 years old after interviewing 666 people in Brazil Yu, (2012).

Based on the foregoing contradictory findings, it is necessary to determine whether age has a moderating influence. As a result, this research proposes:

H7a. The influence of perceived usefulness on Intention to use mobile banking will be moderated by age.

H7b. The influence of perceived ease of use on Intention to use mobile banking will be moderated by age.

H7c. The influence of service quality on Intention to use mobile banking will be moderated by age.

2.4.9. Gender

Regrading to gender, preceding research has observed a more potent share of perceived usefulness of cellular offerings amongst guys than amongst women (Nysveen et al. ,2005). Also, the cause is men seem extra task-orientated than ladies and digital banking offerings are commonly prompted via way of means of purpose achievement (Cruz et al. 2010). Moreover, much empirical research has found out the statistical distinction among women and male respondents withinside the cell service/banking setting. For instance, girls understand greater chance in a web buy than guys do Garbarino & Strahilevitz 2004, peer reviews have a better impact on women in cell services Nysveen et al. 2005, guys are much more likely to apply cell banking than girls are Laukkanen & Pasanen 2008; Koenig-Lewis 2010, guys are greater involved at the price of Internet get entry to and provider charges than girls are whilst the use of cell banking services (Cruz et al. ,2010).

By the use of gender as a moderating variable in a prolonged TAM, (Riquelme and Rios 2010). sampled 681 respondents in Singapore and determined that the effect of the social norm on aim to undertake and perceived ease-of-use at the notion of perceived usefulness have been more potent amongst ladies than amongst guys. In

contrast, (Puschel et al. 2010) accrued 666 respondents in Brazil and determined that cell banking customers have been predominantly males. Likewise, via amassing 553 respondents in India, (Joshua and Koshy, 2011) found that guys would possibly use digital banking offerings greater than ladies would (Yu, 2012). Given that the findings above are inconsistent, it's far vital to envision the moderating impact of gender. As a result, the below hypothesizes:

H8a. The influence of perceived usefulness on Intention to use mobile banking will be moderated by gender.

H8b. The influence of perceived ease of use on Intention to use mobile banking will be moderated by gender.

H8c. The influence of service quality on Intention to use mobile banking will be moderated by gender.

A modified TAM and ISSM models were created for this purpose, with one additional key component, trust, specifically geared to evaluate the acceptability and desire to utilize mobile banking. The modified TAM and ISSM models with trust factor utilized in this study that influence customer intention to use mobile banking shows in table 1

Table 1: Research Variable Definitions and Measurements

Variable	Conceptual Definition	Source
Perceived Usefulness (PU)	The amount to which customers believe mobile banking is beneficially effective in meeting the intended demands and wishes of mobile banking users	(Akhter et al., 2020; Venkatesh, Morris, Davis & Davis, 2003)
Perceived Ease of Use (PEOU)	the magnitude of customer expectations for an easy-to-use mobile banking app.	
System Quality (SYSQ)	This is represented in the technological system's ease of use, usability, navigability, availability, dependability, flexibility, and reaction time (DeLone & McLean, 2003).	(Brown et al, 2010).
Service Quality (SEVQ)	Customer support is a term used to describe the entire support provided by a service provider (Wang et al., 2001)	(Brown et al, 2010).
Information Quality (IQ)	Refers to the correctness, completeness, currency, clarity, and relevance of information supplied by a system in terms of precision, timeliness, sufficiency, accuracy, and completeness (DeLone & McLean, 2003).	(Brown et al, 2010).
Trust (T)	the capacity of a service to do essential duties on time; the ability to achieve its claims without deceit; and the sincerity to consider customers' needs in a timely way.	(Azad, 2016)
Intention to use (IU)	Anticipated usage of a system before its actual use, as well as future projections.	(Mostafa, 2018)
Mobile Banking (MB)	Is defined as "a channel through which a client communicates with a bank via a mobile device such as a phone or a personal digital assistant." Also, it enables its users to have access to account information and conduct remote transactions in their accounts at a minimal cost.	(Kumar et al, 2020)

CHAPTER 3: RESEARCH METHODOLOGY

This section discusses the methodology employed to evaluate the influence of the factors of TAM and ISSM models with trust variable in terms of intention to use mobile banking in Qatar. including the questionnaire design, data collection, and statistical methods

The purpose of this chapter is to demonstrate the research processes and methodologies that were utilized to measure customers' intention to use mobile banking in Qatar and to investigate the elements that influence customers' intention to use mobile banking in Qatar.

The main goal of this research is to assess the impact and significance of these factors concerning intention use of mobile banking and to define the relationship between (trust, perceived usefulness, perceived ease of use, information quality, service quality, system quality) and intention to use with mobile banking. As a result, the suggested model, study hypotheses, research design, data collection, statistical assessment, sampling method, and instrumentation are all discussed in chapter 3.

3.1. Proposed model and research hypotheses

Many factors can impact the intention to use mobile banking, as evidenced by the literature review and theories addressed in Chapter 2. As a result, a new model was created by combining the two models TAM and ISSM with one additional factor which is trust. The proposed model evaluates the impact of these six external variables on the intention to use mobile banking with the established combine TAM and ISSM models. Even though these factors evaluated by earlier academics encompass nearly every model of intention to use mobile banking on their own, they have never been merged

and combined into one model to examine their affecting and relationships with demographic factors. This study develops such a model, as seen in Figure 5.

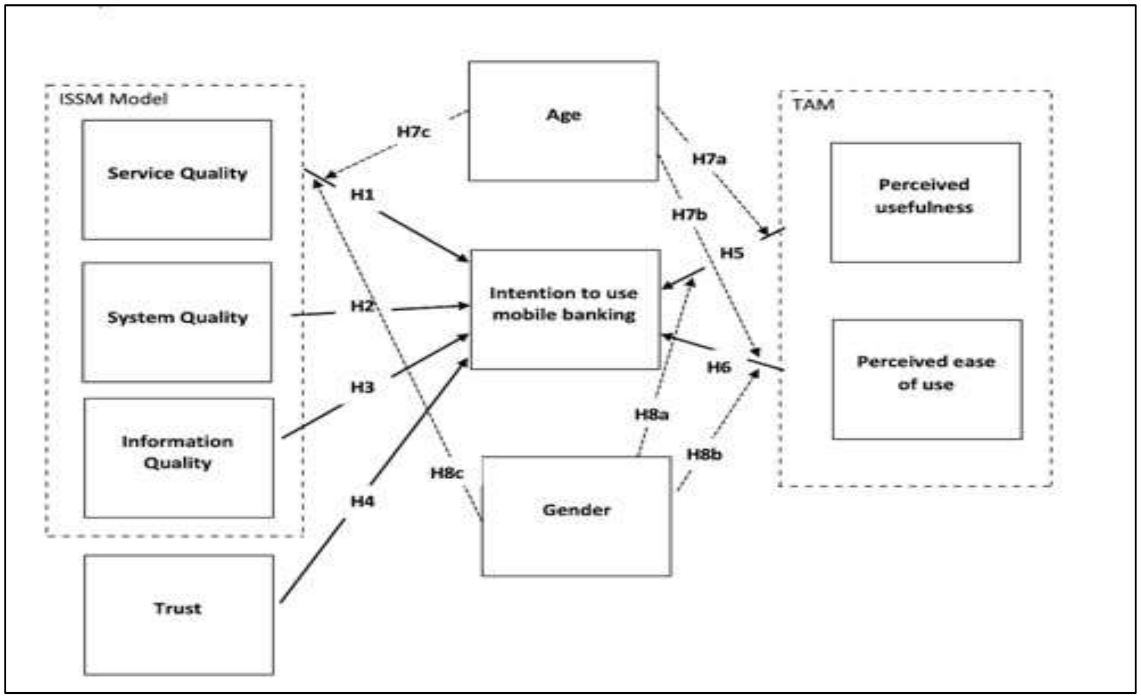

Figure 5: Modified TAM and ISSM models in this paper

3.1.2 Research Hypothesis

The goal of this research is to examine the below hypotheses:

H1: Perceived usefulness will have a significant positive impact on users'intention to use mobile banking

H2: Perceived ease of use will have a significant positive impact on user intention to use mobile banking.

H3: System quality will have a significant positive impact on users' intention to use mobile banking

H4: Service quality will have a significant positive impact on users' intention to use mobile banking

H5: Information quality will have a significant positive impact on users' intention to use

mobile banking

H6: Trust will have a significant positive impact on users' intention to use mobile banking

H7a: The influence of perceived usefulness on Intention to use mobile banking will be moderated by age.

H7b: The influence of perceived ease of use on Intention to use mobile banking will be moderated by age.

H7c: The influence of service quality on Intention to use mobile banking will be moderated by age.

H8a: The influence of perceived usefulness on Intention to use mobile banking will be moderated by gender.

H8b: The influence of perceived ease of use on Intention to use mobile banking will be moderated by gender.

H8c: The influence of service quality on Intention to use mobile banking will be moderated by gender.

3.2. Research design and measurement development

This study report employed a quantitative correlational research survey methodology to verify the elements that influence intention to use of mobile banking in Qatar. (Aliaga & Gunderson, 2000). The main goal of this study was to explore at the impact and importance of these factors concerning intention use of mobile banking and to define the relationship between (trust, perceived usefulness, perceived ease of use,

information quality, service quality, system quality) and intention to use with mobile banking. This chapter discusses the suggested model, study hypotheses, research design, data collection, statistical assessment, sampling method, and instrumentation.

3.3. Approval procedure

The Institutional Review Board (IRB) of Qatar University confirmed this research of the human subject protections guidelines. Approval was obtained from Qatar university by an official letter through email, The approval is under the number QU-IRB 1581-E/21, dated 7th of September 2021 (see Appendix A). The approval method is necessary to ensure the questionnaire's validity and integrity, as well as that the research is conducted ethically.

The questionnaire was designed to incorporate endogenous (dependent) factors first, followed by their predictors (exogenous) variables, to control for typical method bias (Murray, Kotabe, & Zhou, 2005).

3.4. Sample selection

This paper focuses on the intention to use mobile banking in Qatar. The target population was those undergraduate, high diplomas and postgraduate, retired, aged 18 years and above, who have used or not the mobile banking apps in Qatar, whether during the coronavirus epidemic or at any other time, were the target group. Also, participants could come from any gender, be male or female, and come from any nationality (Qatari and non-Qatari). As a result, people from outside Qatar, as well as people in Qatar who are under the age of 18, were excluded (the consent form stipulated that people below 18 years old cannot participate). The sample could constitute the

population and comprise sufficient participants. In this study, 288 responses have been acquired from all citizens in Qatar aged 18 and above.

3.5. Research instrument

The paper tool contained six major factors for the proposed modified TAM and ISSM models. They are as follows: system quality, information quality, service quality, perceived Usefulness, perceived ease of use, trust, and intention to use of mobile banking are measured.

Effective measures necessitate solid, straightforward questions that are organized consistently throughout the questionnaire. Creating the questionnaire is a multi-step process that necessitates meticulous attention to detail. The first step was to conduct a wide evaluation of the literature on intention to use of mobile banking. Previous research assisted in identifying the constructs in the proposed model, which was then modified to fit the context of intention to use of mobile banking.

The questionnaire was reviewed by the supervisor and pre-tested with three graduate students to ensure that it was properly planned, clear, valid, and had decent writing and adequate measurement scales. Candidates were asked to complete the survey online and provide constructive criticism or comments on the format and content of the questions to assist refine the clarity and appropriateness of the items. As a result, several items were altered or replaced to better reflect the factors.

There were three primary sections to the final survey questionnaire. The first segment was dedicated to gathering demographic and general information from respondents, such as gender, age, educational level, and nationality. The second segment of the questionnaire asked respondents to rate how strongly they agreed or disagreed with the statements on a five-point Likert scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree). Using a five-point Likert scale.

The final section included an open question in which respondents could add their own comments on the topic.

3.6. Data Collection

The data was collected for eight weeks from middle of October 2021 until the end of November 2021, through online survey using snowball technique method (Google Docs), and social media channels, such as WhatsApp and Twitter. The web survey was chosen because of its ease of use and some limitations in approaching many population candidates. (Evans & Mathur, 2005; Shih & Fan, 2008) especially in the perspective of the Covid-19 pandemic during the period of the survey.

The purpose of the paper was explained in the beginning of the survey. Then, Qatar University mailed the online survey link to all male and female students and staffs in QU. In addition, it had distributed through WhatsApp and Twitter. Ultimately, a total 288 participated in the study. Participants were informed during the introduction process that participation was voluntary and anonymous, and that they might exit the survey at any time.

3.7. Data Analysis

This paper used (SPSS v.27.0) for the statistical analysis. Step-by-step regression analysis was used to analyze the data. It was used nine constructs. The data analysis was carried out in the following five steps:

1. Demographic data was analyzed to confirm the participants' characteristics.
2. Analysis regression analysis was used to see if there was any significant variation in perceptions based on demographic factors and overall level of intention to use mobile banking.
3. To establish the item’s efficiency for the seven determinants, the convergent and discriminant validity, reliability (Cronbach's alpha values), and internal

consistency were tested. The nine determinants containing: 1- Service quality. 2- Information quality. 3- System quality. 4- perceived usefulness. 5- Perceived ease of use. 6- Trust. 7- Intention to use.

4. After the measures were validated, SPSS software approaches were used to examine the validity of the suggested model, in addition to evaluate the link between constructs. The association between the seven variables was investigated using IBM SPSS version 27 and Microsoft Excel were used to analyze the data.

CHAPTER 4: DATA ANALYSIS

We will summarize the study's findings and give an analysis of the quantitative data acquired from the survey questionnaires in this chapter of the research paper. The study's main goal was to explore the relationships between various variables such as service quality, information quality, system quality, perceived usefulness, perceived ease of use, trust, intention to use, gender, age.

The number of people who responded to this study survey was 288, and according to the statistics, four people didn't answer the survey. As a result, these responses were eliminated, leaving only 284 respondents. These individuals dropped out of the survey due to the large number of factors investigated.

4.1 Demographics profiles of the participants

The total sample involved 288 responses, the majority (n=193, 67%) were female and (n=95, 33% were Males. The large number of female replies is since the poll was distributed via email to students and staffs in QU, and most of the candidates are females. In addition, the survey was forwarded to WhatsApp groups and Twitter dedicated solely to females.

Table 2 shows the demographic characteristics of the participants in this paper. Most respondents were in their 20s (39.6 percent were between the ages of 21- 30, 36.8 percent were between the ages of 31-45), 12.8 percent were between the ages of 46 or more, and the least percent with 10.8 were between the ages of 18-20. According to the educational level, bachelor's degree (49.7 percent) is the most common classification category, followed by postgraduate with (35.4 percent), then, high school or less with (10.1 percent) and finally high diploma with (4.9 precent). According to the nationality, Qataris were the most common group with (56.9%), followed by non-Qataris with (43.1%). Because it is so close to the actual population, this is thought to be a suitable

representation for real-world data (World Population Review, 2022).

Table 2: Respondents' Demographic Data (N=288)

Character		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Female	193	67.0	67.0	67.0
	Male	95	33.0	33.0	100.0
	Total	288	100.0	100.0	
Age	18-20	31	10.8	10.8	10.8
	21-30	114	39.6	39.6	50.3
	31-45	106	36.8	36.8	87.2
	46- or more	37	12.8	12.8	100.0
	Total	288	100.0	100.0	
Educational level	Bachelor	143	49.7	49.7	49.7
	High Diploma	14	4.9	4.9	54.5
	High School or less	29	10.1	10.1	64.6
	Postgraduate	102	35.4	35.4	100.0
	Total	288	100.0	100.0	
Nationality	Non-Qatari	124	43.1	43.1	43.1
	Qatari	164	56.9	56.9	100.0
	Total	288	100.0	100.0	

4.2. Descriptive Statistics

Descriptive analysis is described on this part to provide a clearer perception of the elements affecting intention to use with mobile banking in Qatar. In table 3 summarizes descriptive statistics such as Mean and Standard Deviations. The construct's mean ratings on a 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree) are included in the results. As can be seen, the mean value across seven constructs ranged from 3.70 (most negative assessment) to 4.462 (most positive

assessment), with most items classified as high or moderate agreement. Almost all the factor standard deviations are related within the variable construct itself and when it compared to the other factors that demonstrate corresponding dispersion of data around the mean, that indicates that most of the participants responses were either agree or moderately agree. For example, in service quality factor, SERVQ 1 has the highest mean with 4.48, but has lowest standard deviation with .767, which means that the responses agreed on such us this mean. However, the lowest mean goes to SERVQ 4 with 3.81, and the highest value of the standard deviation goes to SERVQ 5 with 1.044. Another example, system quality factor SYSQ 2 has the highest mean with 4.36 and SYSQ4 has the lowest mean with 3.70. While the standard deviation SYSQ 4 has the highest value with 1.019 and lowest value goes to SYSQ 2 with .814, which means that the small deviation in SYSQ 2 the responses agreed on such mean. regarding to the TAM model factor like perceived usefulness factor PU 1 has the highest mean with 4.62 with low standard deviation with .715. PU 5 has the lower mean value with 4.21 and has the higher standard deviation with 0.968.

Moreover, regarding intention to use dependent variable the highest value goes to INTENUSE 2 with 4.70 and the lowest mean has INTENUSE 3 with 4.37, the highest standard deviation value has INTENUSE 3 with .887 and the lowest value .721 goes to INTENUSE 4. As you can see in table 3 below, the overall construct means, are high value between 3.98 and 4.55, which indicate the participants expectations are high also and agree on the intention to use mobile banking. While the overall standard deviation value between 0.794 to 0.991, which means the answers are close to the mean value.

As shown, the people tend to believe that mobile banking apps is an effective and helpful and that will increase the usage of mobile banking apps more in future. Also, it will be a huge opportunity to enhance customer engagement. Moreover, it offers

advantages such as lower transaction costs, accessibility, convenience, dependability, and security in financial transactions. These advantages can alter economic agents' financial behavior by allowing them to manage their resources more rationally and increase their savings levels. Descriptive statistic of participants' views on service quality (SERVQ) reveals that people are likely to esteem that mobile banking apps is fast, reliable, simple, and flexible. The findings also indicate that the information in mobile banking apps is accurate, up to date and sufficient. Furthermore, descriptive statistics confirm the mobile banking apps is easy to use, save time for people, and manage any financial recourses more effectively.

The descriptive statistics also show that the majority of people agree with the statements in the positive responses for Perceived ease of use, Perceived usefulness, Service Quality, and Intention to use mobile banking apps. All the means for all of the factors are greater than 3.6 and the standard deviations are almost equal to 1 which means it demonstrates a narrow and small spread around the mean and demonstrates that the majority of people in Qatar agree on the benefits of mobile banking apps.

Table 3: Descriptive Statistics Results

Code	Item Description	N	Mean	Std. Dev.
SERVQ 1	I believe that operations through mobile banking app are fast.	279	4.48	0.767
SERVQ 2	The systems used for mobile banking app are reliable.	279	4.28	0.828
SERVQ 3	I find the operations performed through mobile banking app are specific to my requests.	279	4.23	0.851
SERVQ 4	I find the operations performed though mobile banking app are complete	279	3.81	1.009
SERVQ 5	I can access mobile banking services from anywhere, any time.	279	4.14	1.044
Total construct		279	4.188	0.8998
SYSQ 1	Mobile banking app quickly loads all the text and graphics.	279	3.73	0.96
SYSQ 2	Mobile banking systems are compatible with my mobile phone.	279	4.36	0.814
SYSQ 3	Mobile banking is easy to navigate.	279	4.14	0.961
SYSQ 4	Mobile banking app is visually attractive.	279	3.7	1.019
Total construct		279	3.9825	0.9385
IQ 1	Mobile banking app provides me with information relevant to my needs.	279	3.95	0.941
IQ 2	Mobile banking app provides me with sufficient information.	279	3.82	0.97
IQ 3	Mobile banking app provides me with accurate information.	279	3.83	1.044
IQ 4	Mobile banking app provides me with up-to-date information.	279	4.04	1.01
Total construct		279	3.91	0.99125
T 1	The mobile banking application that I am using is totally trustworthy.	279	4.18	0.919
T 2	Trusting mobile banking applications is not difficult.	279	3.94	1.03
Code	Item Description	N	Mean	Std. Dev.

T 3	I have trust in the technology that mobile banking uses.	279	3.98	0.993
T 4	I would trust my bank telecommunication operator to provide secure data connections to conduct internet/ mobile banking.	279	4.13	0.948
T 5	I believe that my mobile banking provider will keep the commitments and promises made to me.	279	4.15	0.863
Total construct		279	4.076	0.9506
PU 1	Using mobile banking app saves me time.	279	4.62	0.715
PU 2	Mobile banking app is a practical option for making payments.	279	4.54	0.718
PU 3	Using mobile banking app enables me to carry out my day-to-day tasks.	279	4.44	0.811
PU 4	Mobile banking wallet is a trend of the modern lifestyle.	279	4.5	0.786
PU 5	I believe that internet banking enables me to manage my financial resources more effectively.	279	4.21	0.968
Total construct		279	4.462	0.7996
PEOU 1	I can easily learn how to use mobile banking app.	279	4.34	0.859
PEOU 2	I can quickly become proficient in using the services offered through mobile banking app.	279	4.43	0.823
PEOU 3	The procedures of mobile banking app (steps of making payment, deposit, transfer fund) are simple to me.	279	4.34	0.908
PEOU 4	The interface of mobile banking is user-friendly and easy to understand.	279	4.26	0.916
PEOU 5	My interaction with the bank’s Website and/or mobile banking application is clear and understandable.	279	4.23	0.921

Code	Item Description	N	Mean	Std. Dev.
PEOU 6	I think that the interaction with online banking / mobile banking does not require a lot of mental effort.	279	4.14	0.972
Total construct		279	4.29	0.900
INTENUSE 1	I believe that I will use the services of mobile banking app more in the future.	279	4.56	0.732
INTENUSE 2	I believe that I will use/continue to use mobile banking in the next 6 months.	279	4.7	0.836
INTENUSE 3	I intend to pay for purchases with mobile banking.	279	4.37	0.887
INTENUSE 4	Given that I have access to a web-enabled mobile phone, I predict that I would use Internet/mobile banking.	279	4.57	0.721
Total construct		279	4.55	0.794

4.3. Correlation

The correlation statistical design is used to find the relationship between two or more variables in the model (Creswell, 2008). The power of connection (Field, 2009) between TAM and ISSM independent variables (Service quality, system quality, information quality, perceived usefulness, perceived ease of use, and trust) and dependent variable is measured using metric Pearson (**β**) correlational designs (intention to use). Table 4 summarizes the Pearson correlation analysis used to test the connections between all the constructs in the TAM and ISSM models.

According to Dancey and Reidy (2004), A Pearson's correlation value of 0.7 is deemed very strong, a value of 0.4-0.69 is deemed strong, a value of 0.3-0.39 is deemed moderate, a value of 0.2-0.29 is deemed weak, and a value < 0.19 is considered negligible.

- *Pearson Correlation results suggested there was a very solid, positive association between*

intention to use mobile banking apps and:

- Perceived Ease of Use, β = **0.805**, **p < 0.01**
- Perceived Usefulness, β = **0.754, p < 0.01**

- *Pearson Correlation results suggested there was a strong, positive association between* **intention to use mobile banking apps** and:

- Service Quality, β = **0.634, p < 0.01**
- Trust, β = **0.581, p < 0.01**
- System Quality, β = **0.527, p < 0.01**
- Information Quality**,** β = **0.432, p < 0.01**

As can be seen, all variables are statistically significant at the 0.01 level. Furthermore, because all correlations are less than 0.85 it implies there is no multicollinearity issue (Evans, 2016).

Table 4: Pearson correlation for all the constructs

	PU2022	SERVQ	SYSQ	IQ	T	PEOU	Intenuse
PU2022	1	.597**	.499**	.472**	.623**	.758**	.754**
SERVQ	.597**	1	.692**	.570**	.661**	.666**	.634**
SYSQ	.499**	.692**	1	.562**	.549**	.640**	.527**
IQ	.472**	.570**	.562**	1	.651**	.499**	.432**
T	.623**	.661**	.549**	.651**	1	.632**	.581**
PEOU	.758**	.666**	.640**	.499**	.632**	1	.805**
Intenuse	.754**	.634**	.527**	.432**	.581**	.805**	1

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

4.4.1. Assessment of Measurements Model (Outer Model)

SPSS Software was used to assess the measurement instrument's construct validity and reliability.

4.4.1.1. Reliability Analysis

The reliability analysis is the first test of the analysis to validate the research instrument (questionnaire). Cronbach's alpha and reliability assess the items' dependability and internal consistency of the same construct. According to Pallant (2016), a Cronbach's alpha value greater than 0.7 indicates an acceptable level of reliability. However, Khairul Azhar et al. (2018) and Hulin et al. (2001) believed that a value less than 0.6 is low, a value between 0.6 and 0.8 is acceptable, and a value greater than 0.8 is excellent. Furthermore, Hair et al. (2016) used composite reliability to assess internal consistency, stating that a value greater than 0.7 is considered acceptable. Table 5 shows the Cronbach's alpha results for all factor items, indicating that the

questionnaire was reliable and valid. Cronbach's Alpha was acceptable for SYSQ while the remaining variables were in the excellent range with values greater than 0.8.

Table 5: Cronbach's Alpha Value of Main Variables

Constructs	N	Number of items	Cronbach's Alpha
Information Quality (IQ)	279	4	0.893
Intention to Use Mobile Banking (INTENUSE)	279	4	0.900
Perceived Ease of Use (PEOU)	279	6	0.922
Perceived Usefulness (PU)	279	5	0.898
Service Quality (SERVQ)	279	5	0.853
System Quality (SYSQ)	279	4	0.799
Trust (T)	279	5	0.919

4.4.1.2. Validity Analysis (Factor analysis)

a. Convergent validity

Convergent validity examines whether items can represent the relevant construct. Discriminant validity assesses whether the items differ or vary from other factors (Anderson & Gerbing, 1988).

The variance in the indicators that is explained by the variance in the common factor is referred to as the Average Variant Extracted (AVE). Simply put, it is the degree of variance measured by the model. The average value of all constructs must be greater than 0.5 (Hair et al., 2010). The convergent validity test was performed, and we discovered that all latent factors in the construct model have values greater than 0.5. While perceived usefulness, service quality, and system quality values are less than 0.5.

The Service quality factor (0.368) has the lowest value, while information quality has the highest (0.587). Examining factor loadings determines convergent validity. Items must have a stronger association with their own related constructs to load highly (> 0.6) when using loadings analysis (Chin, 1998).

As seen in Table 6 below, the most of loading's values are greater than 0.70, and most of them are greater than the acceptable level of 0.60. However, there are five of the loading's values are less than the acceptable level of 0.60, which is still acceptable range according to MacCallum et al., (1999) and one value is less than 0.50. Because most AVE values are greater than 0.5 and only three AVE values are less than 0.5 which are perceived usefulness, service quality and system quality, these low loadings do not appear to have a significant impact on model fit or internal consistency. Due to this corresponds to composite reliability values ranging from 0.706 to 0.860, which are all greater than 0.7. Hair et al., (2014); Fornell and Larcker, (1981). Even though Fornell and Larcker, (1981) stated that if AVE is less than 0.5 and though composite reliability is greater than 0.6, the construct's convergent validity is still sufficient.

Table 6: Convergent Validity

Constructs	Items	Loading	Composite Reliability	Average Variance Extracted (AVE)
INTENUSE	INTENUSE1	0.718		
	INTENUSE2	0.744	0.839	0.567
INTENUSE	INTENUSE3	0.763		
	INTENUSE4	0.785		
	IQ1	0.789		
IQ	IQ2	0.739		
	IQ3	0.813	0.85	0.587
	IQ4	0.721		
	PEOU1	0.656		
	PEOU2	0.67		
PEOU	PEOU3	0.715	0.86	0.506
	PEOU4	0.778		
	PEOU5	0.742		
	PEOU6	0.7		
	PU1	0.655		
	PU2	0.657		
PU	PU3	0.64	0.791	0.431
	PU4	0.714		
	PU5	0.613		
	SERVQ1	0.444		
	SERVQ2	0.595		
SERVQ	SERVQ3	0.647	0.739	0.368
	SERVQ4	0.744		
	SERVQ5	0.562		
	SYSQ1	0.576		
SYSQ	SYSQ2	0.729	0.706	0.378
	SYSQ3	0.548		
	SYSQ4	0.591		
	T1	0.703		
	T2	0.745		
T	T3	0.752	0.85	0.532
	T4	0.73		
	T5	0.716		

b. Discriminant validity

It is used to see if a construct differs statistically from other factors. The average variance must be greater than the variance shared by the model's other constructs (Fornell and Larcker,1981). The degree to which a factor can be distinguished from other elements is reflected in its discriminant validity (Hair et al., 2016). The Fornell–Larcker and cross-loadings criteria are used to test discriminant validity using Spss and Excel (Henseler et al., 2009).

1. Fornell–Larcker criterion

The Fornell-Larcker criterion requires that the specific construct's square root of the AVE be greater than the item's square root of the AVE for other constructs (Hair et al., 2016). According to table 8, each factor has a higher AVE square root with itself.

Table 7: Fornell-Larcker

	PU2022	**SERVQ**	**SYSQ**	**IQ**	**T**	**PEOU**	**Intenuse**
PU2022	**0.657**						
SERVQ	.597**	**0.606**					
SYSQ	.499**	.692**	**0.615**				
IQ	.472**	.570**	.562**	**0.766**			
T	.623**	.661**	.549**	.651**	**0.729**		
PEOU	.758**	.666**	.640**	.499**	.632**	**0.711**	
Intenuse	.754**	.634**	.527**	.432**	.581**	.805**	**0.753**

As can be seen in the above table 7, the average variance's square roots (diagonal values) are greater than any other correlation (off-diagonal values). For example, the square root of the AVE for Information quality (IQ) is 0.766, which is greater than its correlation with any of the other latent variables, both vertically (0.766 > 0.651, 0.499, 0.432) and horizontally (0.766 > 0.562, 0.570, 0.472). As a result, discriminant validity is satisfied for each construct.

4.4.2. Structural Model

According to Hair et al. (2017), a structural model must be examined using the coefficient of determination, the coefficient of the slope of regression, the t-test, and the p value. SPSS software and Excel has been used to analysis the model fit, regression test, and R square.

Coefficient of determination (R2)

Table 8: Coefficient of determination (R^2)

Construct	R Square	R Square Adjusted	Durbin-Watson	Result
Intention to Use Mobile Banking	0.707	0.701	2.085	High

R^2 denotes coefficient of determination

The coefficient of determination (R2) value of the endogenous variable, Intention to Use Mobile Banking, is 0.707, respectively, as shown in table 8 above. Falk and Miller (1992) suggested an R-square value of 0.10 as a minimum acceptable value, as well as Chin (1998) recommended that values greater than 0.67 are considered high, whereas values between 0.33 and 0.67 are considered moderate. Also, Durbin Watson (DW) statistic is used to examine residuals from a statistical model or regression analysis for autocorrelation. Durbin-Watson statistics will always have a value between 0 and 4 as their range. A value of 2.0 indicates that there is no evidence of

autocorrelation in the sample. While values between 0 and less than 2 indicate positive autocorrelation, but values between 2 and 4 show negative autocorrelation (Evans, 2016). As a result, R2 of the Intention to Use Mobile Banking is described as high (Falk & Miller,1992). (Note: Because the remaining variables are exogenous latent factors, no R-square was displayed.) In our situation, IQ, SERVQ, SYSQ, PU, PEOU, and T explain 70.7 percent of the total variation in INTENUSE. Durbin Watson value is 2.085, which means there is zero autocorrelation and no problem with the data.

Hypotheses testing results for the whole model (Path coefficient)

The path coefficient β was used to evaluate the relationship between dependent and independent variables. Table 9 summarizes the testing hypothesis results.

There is one type of effects caused by independent constructs on dependent variable. which is the direct effect. The direct causal relationship between intention to use mobile banking and factors such as service quality, system quality, information quality, trust, perceived usefulness, and perceived ease of use.

Service quality, system quality, information quality, trust, perceived usefulness, and perceived ease of use. all have a direct effect on intention to use mobile banking in this model. A P-value less than 0.05 indicates that the hypothesis is acceptable, and vice versa. As shown in table 9 below, the results indicated that the three independent variables have an influence on the intention to use mobile banking which are perceived ease of use (PEOU), perceived usefulness (PU), and service quality as their P-value less than 0.05. However, information quality (IQ), system quality (SYSQ) and trust (T) indicate that there is no influence on the intention to use mobile banking as their p-value is greater than 0.05.

Among the factors influencing intention to use mobile banking, perceived ease of use (β = 0.504), and perceived usefulness (β = 0.308) had the greatest positive effect on intention to use mobile banking, which supports H2 and H1, respectively. Also, the results display that service quality (β = 0.157, P 0.004) influence intention to use mobile banking, which provide a support for hypothesis H4. Nevertheless, the information quality path (β = -0.041, P > 0.05) and the system quality (β = -0.045, P > 0.05) and trust path (β = 0.018, P > 0.05) did not prove to be a significant predictor of intention to use mobile banking, and therefore H3, H5 and H6 were not supported.

The total effect value indicates the extent to which the independent variable is influenced. The greater the total effect value, the greater the impact on intention to use mobile banking. As a result, in table 10 below, the order of influence of each influencing factor on intention to use mobile banking is as follows: perceived ease of use (0.504) > perceived usefulness (0.308) > service quality (0.157).

In conclusion, perceived ease of use, perceived usefulness and service quality have a significant impact on the intention to use mobile banking. System quality, information quality and trust have no significant impact on the intention to use mobile banking.

Table 9: Multiple Regression of the research model

Constructs	Unstand. Coeff.		Stand. Coeff.	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
PU2022	0.318	0.055	0.308	5.829	<.001	0.385	2.598
SERVQ	0.153	0.052	0.157	2.929	0.004	0.375	2.665
SYSQ	-0.042	0.047	-0.045	-0.899	0.37	0.434	2.304
IQ	-0.033	0.037	-0.041	-0.896	0.371	0.511	1.956
T	0.015	0.044	0.018	0.342	0.732	0.396	2.524
PEOU	0.462	0.054	0.504	8.631	<.001	0.315	3.172
a. Dependent Variable: Intenuse							
Significant P** < 0.01, P<0.05							

Table 10: Summary of hypotheses testing related to the whole model

Hypotheses	B	Sig	Results
H1: Perceived usefulness will have a significant positive impact on users'intention to use mobile banking	0.308	<.001	Supported, accepted
H2: Perceived ease of use will have a significant positive impact on users' intention to use mobile banking	0.504	<.001	Supported, accepted
H3: System quality will have a significant positive impact on users' intention to use mobile banking	-0.045	0.37	Not supported, rejected
Hypotheses	B	Sig	Results
H4: Service quality will have a significant positive impact on users' intention to use mobile banking	0.157	0.004	Supported, accepted
H5: Information quality will have a significant positive impact on users' intention to use mobile banking	-0.041	0.371	Not supported, rejected
H6: Trust will have a significant positive impact on users' intention to use mobile banking	0.018	0.732	Not supported, rejected

4.4.3. The Moderation Effects

Multiple regression was used to test the influence of moderation on the relationships between related predictors and intention to use mobile banking. For example, Age (A) is multiplied by the independent variables that are moderate (PEOU, PU, and SERVQ). Furthermore, Gender (G) is multiplied by the independent variables that are moderated (PEOU, PU and SERVQ). As shown in Table 12 below, the results show that gender have no effect on the relationship between the predictors and intention to use mobile banking apps, as their p-values are greater than the confidence level of 0.05. However, age have an impact on the relationship between the predictors and intention to use mobile banking apps between perceived ease of use with the intention to use mobile banking as the p-value is less than 0.05, but age has no effect on the relationship between the service quality, perceived usefulness, and intention to use mobile banking apps, as p-value is greater than 0.05.

Table 11: Multiple Regression with the moderation effects

Constructs	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
PU2022	0.318	0.055	0.308	5.829	<.001	0.385	2.598
Constructs	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
PEOU	0.462	Beta	0.504	8.631	<.001	0.315	3.172
SERVQ	0.153	0.052	0.157	2.929	0.004	0.375	2.665
PEOU*G	0.267	0.176	0.784	1.519	0.13	0.011	92.66
SERVQ*G	-0.035	0.145	-0.098	-0.24	0.811	0.017	58.452
PU*G	-0.222	0.179	-0.672	-1.241	0.216	0.01	101.928
PEOU*A	0.159	0.041	0.931	3.884	<.001	0.05	19.993
SERVQ*A	-0.068	0.035	-0.405	-1.944	0.053	0.066	15.105
PU*A	-0.03	0.039	-0.178	-0.768	0.443	0.053	18.766
a Dependent Variable: Intenuse							
Significant P** < 0.01, P<0.05							

Table 12: Summary of hypotheses testing related to moderation

Hypotheses	B	Sig	Results
H7a.The influence of perceived usefulness on Intention to use mobile banking will be moderated by age.	-0.178	0.443	Not supported, rejected
H7b.The influence of perceived ease of use on Intention to use mobile banking will be moderated by age.	0.931	<.001	Supported, accepted
H7c.The influence of service quality on Intention to use mobile banking will be moderated by age.	-0.405	0.053	Not supported, rejected
H8a.The influence of perceived usefulness on Intention to use mobile banking will be moderated by gender.	-0.672	0.216	Not supported, rejected
H8b.The influence of perceived ease of use on Intention to use mobile banking will be moderated by gender.	0.784	0.13	Not supported, rejected
H8c.The influence of service quality on Intention to use mobile banking will be moderated by gender.	-0.098	0.811	Not supported, rejected

CHAPTER 5: DISCUSSION

Banks all over the world face a challenge in terms of keeping their customers as loyal as possible. As a result, banks have considered various novel mechanisms (such as mobile banking) to meet the increasing customer demand for banking services. Customers today expect more in terms of when, how, and where they can obtain financial services (Leong et al., 2017). Mobile banking is one of the most effective tools for meeting these high customer expectations (Oppong et al., 2014). Baabdullah et al (2019). This, in turn, motivates the current study to examine how much intent to use mobile banking apps could contribute to the level of bank customer use.

The study's aim is to validate the TAM and ISSM models' relevance for understanding the intention to use mobile banking apps in Qatar. This paper proposes an extension and combination to TAM and ISSM models and trust variable, which is used to investigate intention to use mobile banking apps in Qatar.

This paper contributes to the intention to use mobile banking apps by validating the approval model in intention to use mobile banking. As main determinants of intention to use mobile banking, the model was expanded to include trust and two models of TAM and ISSM models. According to the findings, perceived ease of use, perceived usefulness and service quality were important factors in the intention to use mobile banking apps.

Furthermore, the findings revealed that intention to use mobile banking apps was significantly influenced by perceived ease of use, perceived usefulness, and service quality. However, system quality, information quality and trust had no effect on the intention to use mobile banking apps. Also, regarding to the moderation effects variables (gender and age), when we have used only the significance variables to test

the moderate variables, which are perceived ease of use, perceived usefulness, and service quality. As a result, gender have no effect on the relationship between the predictors and intention to use mobile banking apps, as their p-values are greater than the confidence level of 0.05. Though, age have an influence on the relationship between the predictors which are perceived ease of use and service quality and intention to use mobile banking apps, as their p-value is less than 0.05, but service quality is not support.

The relationship between the independent and dependent variables is examined in this section. The proposed hypotheses are examined first, and then the coefficient of determination (R2) is calculated.

5.1. Influence of perceived usefulness on the intention to use mobile banking

According to the findings of this research paper, perceived usefulness has a significant impact on intention to use mobile banking apps. The construct has the second highest predictor and places the greatest emphasis on intention to use mobile banking. Our findings, support the hypothesis (H1) that if users understand that using mobile banking apps are useful and productive for completing their life easily, they will continue to use mobile banking and be more satisfied.

This is consistent with the many research which have found that perceived usefulness is a significant factor influencing adoption intention. These investigations lead to the conclusion that people have a positive attitude toward technology that they find useful. It supports the conclusion that people are more enthusiastic about a new technology if it is relatively simple to use Kumar et al., (2020). This is consistent with the study that reported the original development of the TAM model (Ahmad, 2018), and with a variety of studies that have used the basic TAM model to assess the intention

to use mobile banking (Mostafa & Eneizan, 2018; Munoz-Leiva et al., 2016; Al-Jabri, 2015 and Huang et al., 2019; Saji & Paul, 2018; Pang et al., 2020; and Li et al., 2019; and Nguyen & Nguyen, 2020).

5.2. Influence of perceived ease of use on the intention to use mobile banking

The findings of this research paper revealed that the perceived ease of use factor had a significant impact on the intention to use mobile banking. After perceived usefulness, the perceived ease of use construct is the second-best predictor of intention to use mobile banking.

Customers find that greater ease of use of mobile banking applications leads to greater intention to use because of its convenience and usefulness in the context of the COVID-19 pandemic (Ramos-de-Luna et al., 2016; Liébana-Cabanillas et al., 2017; Muñoz-Leiva et al., 2017; Liébana-Cabanillas et al., 2018; Singh et al., 2020). This indicates that customers are enthusiastic about the effectiveness of using the apps and easy to use by intention to use mobile banking. Also, the frequency with which users engage with the system might also reflect ease of use.

The paper findings are consistent with a large number of studies that have found a significant correlation between perceived ease of use with the intention to use mobile banking (Mostafa & Eneizan, 2018; Munoz-Leiva et al., 2016; and Huang et al., 2019; Saji & Paul, 2018; Pang et al., 2020; and Li et al., 2019; and Nguyen & Nguyen, 2020).

In contrast, the findings of other research papers show that there is no significant relationship and that perceived ease of use has no influence on the intention to use mobile banking (Al-Jabri, 2015). However, the findings of our paper shows that users in Qatar will accept the intention to use mobile banking apps if the system is easy to use and easy to learn.

5.3. Influence of system quality on the intention to use mobile banking

System quality had a considerable significant effect on intention to use mobile banking, according to the findings of a prior research papers (Brown et al., 2010, Pang et al., 2020, Baabdullah et al., 2019). Customers in Saudi Arabia are more likely to utilize mobile banking effectively if they believe mobile banking services offer a high level of usability, availability, dependability, adaptability, and response speed. According to (Delone and Mclean ,2003), Laforet and Li (2005), (Lee and Chung ,2009), (Shannon and Weaver ,1998), and (Zhou ,2011) reported that these technological features are substantially reflected in customers' capacity to use new systems successfully and accurately.

However, according to our findings, system quality had no significant impact on intention to use mobile banking. This result was in accordance with, (Talukder, Quazi, and Sathye ,2014) (Tam & Oliveira, 2017); and (Tun, 2020) who proved that system quality had no effect on behavioral intention in their studies.

5.4. Influence of service quality on the intention to use mobile banking

The results of this study revealed that service quality had a significant impact on the intention to use mobile banking. The study results supported previous studies such as (Baabdullah et al, 2019, and Khaled et al, 2019). who established that there was a relationship between service quality and intention to use mobile banking.

In terms of service quality, mobile banking is a very new and unique technology, thus customers want proper support. Customers' attention is focused on the main dimensions of service quality (i.e., security/privacy, practicality, design/aesthetics, enjoyment, and sociality), as proposed by (Arcand et al., 2017), (Delone and McLean, 2003), and (Shih and Fang, 2006), statistically proven by the current study's findings.

This, in turn, emphasizes the need of coordination between many parties, such as bank customer care, mobile service providers, the bank's information technology department, and Internet service providers, in delivering high-quality customer service. Today, technological advancements in Qatar have aided consumers in considering using mobile banking to be simple, convenient, and less complex.

5.5. Influence of information quality on the intention to use mobile banking

In our paper the findings revealed that the information quality factor had no significant impact on intention to use mobile banking. The study results supported previous study (Baabdullah et al, 2019) and (Brown, et al., 2010). The reason behind this, the present degree of technology awareness among internet users. In this paper information quality turn out to be non-significant in determining the intention to use mobile banking it can be because customers are not suitable and not comfortable for use of information offered by a technical service, which support by (Changchit et al., 2017); (Han et al., 2016); (Kim et al., 2009) studies. Also, according to (Chae et al. 2002), the quality of information has a considerable impact on the use of mobile Internet in general as people not always believe or think that will add to them a value in the end.

5.6. Influence of trust on the intention to use mobile banking

The results of previous research papers proved that trust had a significant positive effect on intention to use mobile banking **(**Hanafizadeh, Behboudi, Abedini, & Jalilvand, 2014); (Lee & Chung, 2009) and (Kumar et al., 2020) stated that in theory, these findings parallel previous studies of mobile banking that tested and agreed on trust as a critical factor in determining customers' intent to adopt mobile banking Nguyen & Nguyen, 2020) and (Saparudin et al., 2020) , (Ramos et al., 2018) and(

Setyanti et al., 2010).

But, in this study, the findings revealed that the trust factor had no significant impact on intention to use mobile banking. The negative result in this paper, it can because customers still don't trust the internet, mobile banking services as well as they feel not confidentiality and not secure to provide their personal information, and payment through the system.

5.7. Influence of gender, and age

The impact of demographics variables on new technology adoption has been studied extensively. However, research findings in the context of electronic banking are inconsistent when compared to traditional innovation diffusion studies [Rogers, 2003], which show that early adopters of technological innovations are typically younger, have higher incomes, are better educated, and have higher social status and occupation.

The age has a considerable moderating impact on the relationship between the predictors and intention to use mobile banking apps between perceived ease of use, perceived usefulness with the intention to use mobile banking as their p-value is less than 0.05, but age has no effect on the relationship between the service quality and intention to use mobile banking apps, as p-value is greater than 0.05. In our study the more users agree and will use the mobile banking were young between age 21 to 45. Most respondents were in their 20s (39.6 percent were between the ages of 21- 30, 36.8 percent were between the ages of 31-45), which support by the study (Joshua & Koshy, 2011), that found that typical electronic banking users were young or that the elderly had more resistance to change and a negative attitude toward using mobile banking services [Laukkanen et al. 2007]. According to some studies, respondents aged 50 and up were most eager to use mobile banking services [Suoranta & Mattila ,2004], typical

mobile banking users were aged 30 to 49 [Laukkanen & Pasanen, 2008], and middle-aged or older customers were the primary users of electronic banking [Laforet & Li 2005; Dasgupta et al. 2011].

Regarding to gender in this paper, the results show that gender have no effect on the relationship between the predictors and intention to use mobile banking apps, as their p-values are greater than the confidence level of 0.05. Also, the total sample involved 288 responses, the majority (n=193, 67%) were female and (n=95, 33% were Males. The large number of female replies is since the poll was distributed via email to students and staffs in QU, and most of the candidates are females. In addition, the survey was forwarded to WhatsApp groups and Twitter dedicated solely to females. The high number of female responses has been supported by (Riquelme and Rios,2010) study recruited 681 respondents in Singapore using gender as a moderating variable in an extended TAM and found that the influence of social norm on intention to adopt and perceived ease-of-use on the perception of perceived usefulness was larger among women than among men. In contrast, (Puschel et al. 2010) surveyed 666 people in Brazil and discovered that most mobile banking users were men.

CHAPTER 6: CONCLUSION

This chapter begins by discussing and reflecting on the study's findings. In addition, we conclude with the study's implications. Followed by an assessment of the research's limitations. Finally, recommendations for future research are made.

6.1. Conclusion

This chapter summarizes our findings and makes recommendations for top management. The chapter concludes by outlining the limitations of the current study and identifying potential future research directions. This study aims to identify and explore the primary factors that influence the intention to use mobile banking in Qatar. The most relevant aspects that affect intention to use mobile banking in Qatar were identified using the TAM and ISSM models with addition of new determinates trust.

Perceived usefulness, perceived ease of use and service quality are the most significant factors of intention to use mobile banking, according to the findings. System quality, information quality and trust, on the other hand, have no significant impact intention to use mobile banking.

Perceived usefulness, perceived ease of use, system quality, service quality, information quality and trust account for 70.7 percent of the total variance in intention to use mobile banking in this paper. Furthermore, all statistics components and model parameters values of the TAM and ISSM theory may be confirmed as plausible and predictive in a Qatari environment. The constructs developed by the modified TAM and ISSM models were sufficient to explain intention to use mobile banking in Qatar. A more thorough theoretical view of intention to use mobile banking in Qatar was provided by extending the modified two models to include one variable more.

The hypotheses in this research were tested using an online survey distributed via social media and email to those over the age of 18 who used the mobile banking applications in Qatar. SPSS software and Excel were used to test the proposed model using regression analysis and factor loading. According to the findings, the most important factors that influence intention to use mobile banking in Qatar are Perceived Usefulness (PU), Perceived ease of use (PEOU) and Service quality (SERVQ). Also, they show a strong positive link between the factor itself with the dependent variable intention to use mobile banking apps. However, Trust (T), System quality (SYSQ) and Information quality (IQ) indicate that there is no relationship and no influence on the intention to use mobile banking in Qatar.

In addition, the moderating influences of age, and gender were investigated. females were found to believe that mobile banking was beneficial to them and met their needs and satisfied. Also, they regarded that the mobile banking using and experience to be simple to use, and they are more likely to use the mobile banking from now. The age group 21-45 has the most positive attitude toward mobile banking, and they outperformed other age groups in terms of perceived usefulness, perceived ease of use and service quality in intention to use mobile banking.

6.2. Implications for Practice

The findings of this paper have ramifications for both research and practice. On the practical view, the outcomes reveal that compatibility is a strong driver of the desire to utilize mobile banking, while perceived danger is a major deterrent. Customers of banks are wary about taking risks. As a result, banks should look for strategies to create trust to mitigate this risk. Customers who trust the bank will continue to undertake financial transactions over the mobile banking channel, even if it is dangerous, since

they trust the bank to act in their best interests. Mobile banking is predicted to attract more technologically aware clients, resulting in a rise in customer base, revenue, and profitability. Even though ATMs, phone, and internet banking are the most common channels for completing personal financial transactions today, mobile banking is predicted to become a future banking service channel. Banks, on the other hand, must provide more mobile banking services and raise customer awareness. This can be accomplished by placing advertisements on their websites, in newspapers, on social media, on television, or via SMS messages, which can be an effective approach to promote the usage of mobile banking services. As a result, enhanced marketing efforts, particularly through advertising, will assist banks in raising customer awareness and attracting more customers to adopt mobile banking services.

The results of this study can help a variety of banking institutions better understand the elements that influence intention to use mobile banking in Qatar. The primary goal of this study, from a practical standpoint, is to ensure that any IS model is more beneficial for the community. This can only happen if IS model is utilized on a regular basis (Bhattacherjee, 2001; Tella, 2012; Veeramootoo et al., 2018). This paper provides a clear picture of the primary elements that influence whether people will use mobile banking or not. The results of this study may be valuable to bank policymakers, who can utilize them to improve their internet banking channels to encourage continuous use. The data suggest that service quality (SERVQ), perceived ease of use (PEUO), perceived usefulness (PU) are the most important predictors of intention to using mobile banking (Intenuse).

Service quality (SERVQ) is an important factor in deciding whether to using mobile banking or not. Thus, banks should focus on the demands of their customers,

provide timely and dependable services, and demonstrate appropriate knowledge, personal care, and attention. As a result, continuous use of mobile banking services will be encouraged.

Banks in Qatar must prioritize service quality to earn clients' trust. consumers must feel secure when conducting online purchases. Furthermore, because user satisfaction is a significant aspect, banks in Qatar must personalize services and administer them effectively to achieve customer contentment and encourage them to use mobile banking.

The study found that there are few studies in Qatar that have sought to apply the two models TAM and ISSM in the context of intention to use mobile banking. Furthermore, this study revealed the dearth of theoretical models that investigate and analyze the elements that may be linked to mobile banking acceptance and use, especially for the ISSM model.

Furthermore, this study developed a conceptual model to explain the brevity and provide a deeper understanding of the elements affecting intention to use mobile banking and the relationships between them. In Chapter 4, this conceptual model was tested and validated. The proposed model might be utilized as a guide by financial organizations, banks and ministries of finance that want to implement and accept mobile banking in the framework of this study.

As a result, the findings of this paper might be used as a decision-making tool to assist Qatari financial institutions and banks in implementing and disseminating intention to use mobile banking. Additionally, it is critical to improve the mobile

banking apps that might be used during the online payment or any other services to make life easy for all customers.

Furthermore, this paper will be used in conjunction with policies issued by the Ministry of Finance and banks as well as their strategic plan for achieving a successful experience with mobile banking. Because the study is halfway through this experience, future research can be built on the current research. Because this study's answers and input came from different people across Qatar, totaling 288 people, the results can be applied to all Qatari people. As Qataris were the most common group with (56.9%), followed by non-Qataris with (43.1%). Because it is so close to the actual population, this is thought to be a suitable representation for real-world data (World Population Review, 2021).

6.3. Limitations

Although this work adds to the field's theoretical and practical knowledge, it does have several limitations that should be noted by future researchers.

First, the gender distribution of the sample was unbalanced, since the majority of the respondents were female, while male were poorly represented. According to the statistics, the majority (n=193, 67%) were female and (n=95, 33% were Males respondents.

The context in terms of location and time is the second major limitation of this paper. The research was limited to Qatar, and the time was short to get more respondents. As a result, the findings of the study may not be applicable to other nations or time periods. Thus, subsequent longitudinal investigations can be done to improve the study model's validation.

Third, this study does not consider factors other from TAM and ISSM models, such as risk, security, ubiquity, convenience, attitude, or can be add more moderate variables like experience or user involvement. Future research will need to look at the impact of intention to use mobile banking while considering moderating parameters including age, gender, experience, or user involvement, should be investigated to see if they influence the intention to use mobile banking. This paper's research model served as a foundation for additional research and improvement of (TAM) and (ISSM) models.

Moreover, this study had a cross-sectional time horizon. This means that each participant's data was only collected once (Orlikowski and Baroudi, 1991). Unlike in longitudinal studies, the researcher is unable to replicate the findings, which may reduce the reliability of the results (Orlikowski and Baroudi, 1991). The importance of conducting longitudinal studies in this type of research stems from the fact that consumer habits change over time because of changes in technological services (Venkatesh and Davis, 2000). Future studies should use longitudinal studies to re-collect the findings.

Furthermore, a cross-cultural study between Qatar and other developed or developing countries could provide more clues regarding the factors influence the intention to use mobile banking.

As a result, future research will be motivated to re-examine the critical role of trust, system quality, and information quality for further investigation. Future research should consider the significant impact of culture in this regard. Indeed, culture has greatly influenced customers' perceptions, attitudes, habits, and behavior toward new systems (i.e. Al-Gahtani et al., 2007; Lee et al., 2007; Zhang et al., 2018). As a result,

researchers could see the nature of Qatari culture and how it could moderate the impact of key predictors of mobile banking adoption and loyalty.

6.4 Future Studies

Considering the research findings, debate, and research limitations indicated earlier, a list of future investigations, both inside and outside Qatar, are suggested to investigate the context influence. First, new researchers can concentrate on the three primary variables which are PU, PEUO, SERVQ, where they can provide a variety of different area to evaluate.

New researchers are urged to apply the same conceptual model to a variety of GCC nations to develop a broad range of comparisons and demonstrate optimal practices. Also, from both a theoretical and practical one, looking at issues other than those we investigated might be advantageous. Future researchers can also do more in-depth analytical tests to reduce the number of variables employed in this study and any constraints or add more variables.

Furthermore, we recommend that qualitative research methods be used, as further investigation and studies will assist banks and financial institutions in Qatar in exploring a variety of variables that affect intention to use mobile banking.

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Appendix A

Qatar University Institutional Review Board **QU-IRB**

QU-IRB Registration: IRB-QU-2020-006, QU-IRB, Assurance: IRB-A-QU-2019-0009

DATE:	September 7, 2021
TO:	Lolwa ALNaimi
FROM:	Qatar University Institutional Review Board (QU-IRB)
PROJECT TITLE:	1800752-1FACTORS INFLUENCING THE INTENTION TO USE MOBILE BANKING IN QATAR.
QU-IRB REFERENCE #:	QU-IRB 1581-E/21
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	September 7, 2021
REVIEW CATEGORY:	Exemption category # 2&4

Thank you for your submission of New Project materials for this project. The Qatar University Institutional Review Board (QU-IRB) has determined this project is EXEMPT FROM IRB REVIEW according to Qatar Ministry of Public Health regulations. Please note that exempted proposals do not require renewals however, any changes/modifications to the original submitted protocol should be reported to the committee to seek approval prior to continuation.

We will retain a copy of this correspondence within our records.

Documents Reviewed:

- Other - QU-IRB Check List.pdf (UPLOADED: 08/26/2021)
- Proposal - FACTORS AFFECTING CUSTOMERS INTENTION OF USING MOBILE BANKING IN QATAR August 16.docx (UPLOADED: 08/26/2021)
- Qatar University - IRB Application - Qatar University - IRB Application (UPLOADED: 08/26/2021)
- Questionnaire/Survey - Lolwa Arabic Version Aug 16.docx (UPLOADED: 08/21/2021)
- Questionnaire/Survey - Lolwa survey August 16.docx (UPLOADED: 08/21/2021)

If you have any questions, please contact QU-IRB at 4403 5307 or qu-irb@qu.edu.qa. Please include your project title and reference number in all correspondence with this committee.

Best wishes,

Dr. Ahmed Awaisu
Chairperson, QU-IRB

Institutional Review Board
(IRB)
Office Of Academic Research

This letter has been issued in accordance with all applicable regulations, and a copy is retained within Qatar University's records.

جامعة قطر
QATAR UNIVERSITY

العوامل المؤثرة في نية استخدام الخدمات المصرفية عبر الهاتف الجوال في قطر

أعزائي المشاركين:

نود دعوتكم للمشاركة في هذه الدراسة البحثية والتي تعتبر متطلب أساسي ضمن متطلبات درجة الماجستير في إدارة الأعمال في كلية الإدارة والاقتصاد في جامعة قطر، تحت عنوان (العوامل المؤثرة في نية استخدام الخدمات المصرفية عبر الهاتف الجوال في قطر) والتي حصلت على الموافقة من قبل لجنة المراجعة المؤسسية (QU-IRB) تحت الرقم ..... للمزيد من الاستفسار حول الامتثال الأخلاقي لهذه الدراسة يمكنكم التواصل مع اللجنة عبر البريد الالكتروني الموضح تاليا

qu-irb@qu.edu.qa

محور الدراسة هو تقييم العوامل المؤثرة في نية استخدام الخدمات المصرفية عبر الهاتف المحمول في قطر، حيث تمت الاستعانة بعدة عوامل لقياس نية استخدام هذه الخدمات ومنها جودة الخدمة، جودة النظام، جودة المعلومات، الثقة، الفائدة المتوقعة، سهولة الاستخدام.

يجب التنويه على ان المشاركة في هذه الدراسة البحثية طوعية، ومن شأنها أن تساهم في تعزيز وتطويرنظام الخدمات المصرفية داخل دولة قطر مستقبلا، و ستتطلب الإجابة على هذا الاستبيان مدة ما بين 10-15 دقيقة أو أقل. المعلومات التي سيتم جمعها ستبقى سرية وآمنة للغاية حيث لا يمكن سوى للباحثين في هذه الدراسة الوصول إليها. من غير المطلوب منكم تزويدنا بأية معلومات تدل على هويتكم. ولن يتم إعادة استخدام البيانات لأي غرض آخر في المستقبل كما انه لا يصاحب هذا الاستبيان اي مخاطر، ويمكنكم الانسحاب من تعبئة الاستبيان في أي وقت كما يمكنكم الامتناع عن الاجابة على أي سؤال ايضا. أرجو عدم تعبئة الاستمارة في حال كان عمرك أقل من 18 سنة. من خلال النقر عل رابط الاستبيان فإنكم تعطون موافقتكم الكاملة على المشاركة في هذه الدراسة البحثية.

إذا كان لديكم أي أسئلة، يمكنكم الاتصال بي عبر البريد الالكتروني la080037@qu.edu.qa أو بمشرف المشروع الدكتور عماد احمد ابوشنب، كلية الادارة والاقتصاد، جامعة قطر عبر البريد الالكتروني eabushanab@qu.edu.qa او على رقم الهاتف 4403 5077.

إذا كنتم ترغبون في المشاركة ، يرجى الضغط على الزر التالي:

- نعم - لا

شكرا لوقتكم الثمين

الباحثة

Institutional Review Board
(IRB)
APPROVED

جامعة قطر
QATAR UNIVERSITY

القسم الأول : المعلومات العامة
يرجى اختيار الاجابة المناسبة:

1- الفئة العمرية

20-18	30-21	45-31	45 وأكثر
☐	☐	☐	☐

2- الجنس

ذكر	انثى
☐	☐

3- المستوى التعليمي

ثانوية او اقل	دبلوم	بكالوريوس	دراسات عليا
☐	☐	☐	☐

4- الجنسية

قطري	غير قطري
☐	☐

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QATAR UNIVERSITY

القسم الثاني :يرجى الإشارة إلى أي مدى توافق أو لا توافق على اي من العبارات التالية:

1- غير موافق بشدة 2- غير موافق 3- محايد 4- موافق 5- موافق بشدة

	جودة الخدمة	1	2	3	4	5
1.	I believe that operations through mobile banking are fast اعتقد ان الخدمات المصرفية عبر الهاتف الجوال سريعة					
2.	The systems used for mobile banking are reliable استطيع الاعتماد على الأنظمة المستخدمة في الخدمات المصرفية					
3.	I find the operations performed through mobile banking are specific to my requests اجد ان الخدمات المصرفية عبر الهاتف الجوال مطابقة لطلباتي					
4.	I find the operations performed though mobile banking are complete اجد ان الخدمات المصرفية عبر الهاتف الجوال مكتملة					
5.	I can access mobile banking services from anywhere, any time. الخدمات المصرفية عبر الهاتف الجوال متوفرة في جميع الأوقات ومن جميع المناطق					
	جودة النظام	1	2	3	4	5
1	Mobile banking quickly loads all the text and graphics. الخدمات المصرفية عبر الهاتف الجوال تعمل على تحميل جميع الخرائط والنصوص بصورة سريعة					
2	Mobile banking systems are compatible with my mobile phone الخدمات المصرفية عبر الهاتف الجوال متوائمة مع هاتفي الجوال					
3	Mobile banking is easy to navigate سهولة تصفح الخدمات المصرفية عبر الهاتف الجوال					
4	Mobile banking is visually attractive الخدمات المصرفية عبر الهاتف الجوال جذابة بصريا					
	جودة المعلومات	1	2	3	4	5
1	Mobile banking provides me with information relevant to my needs الخدمات المصرفية عبر الهاتف الجوال توفر لي المعلومات التي احتاجها					
2	Mobile banking provides me with sufficient information. الخدمات المصرفية عبر الهاتف الجوال توفر لي المعلومات الكافية					
3	Mobile banking provides me with accurate information. الخدمات المصرفية عبر الهاتف الجوال توفر لي معلومات دقيقة					
4	Mobile banking provides me with up-to-date information. الخدمات المصرفية عبر الهاتف الجوال توفر لي معلومات محدثة					
	الثقه	1	2	3	4	5
1	The mobile banking application that I am using is totally trustworthy الخدمات المصرفية عبر الهاتف الجوال التي استخدمها تستحق الثقة					
2	Trusting mobile banking application is not difficult من السهولة بمكان الثقة في الخدمات المصرفية عبر الهاتف الجوال					
3	I have trust in the technology that mobile banking is using اثق في التكنولوجيا المستخدمة في الخدمات المصرفية عبر الهاتف الجوال					
4	I would trust my bank telecommunication operator to provide secure data connections to conduct internet/ mobile banking					

	اثق ان مشغل الاتصالات البنكي الذي اتعامل معه يوفر قناة بيانات آمنة لإجراء الخدمات المصرفية عبر الانترنت					
5	I believe that my mobile banking provider will keep the commitments and promises made to me اعتقد ان مزود الخدمات المصرفية عبر الهاتف الجوال سيحافظ على الالتزامات التي قطعت لي					
	الفائدة المتوقعة	1	2	3	4	5
1	Using mobile banking app saves me time استخدام الخدمات المصرفية عبر الهاتف الجوال يوفر الوقت					
2	Mobile banking app is a practical option for making payments تعتبر الخدمات المصرفية عبر الهاتف المحمول طريقة عملية لاتمام عمليات الدفع					
3	Using mobile banking app enables me to carry out my day-to-day tasks الخدمات المصرفية عبر الهاتف الجوال تمكنني من القيام بمهامي اليومية					
4	mobile banking wallet is a trend of the modern lifestyle الخدمات المصرفية عبر الهاتف الجوال هي اسلوب الحياة الحديثة					
5	I believe that Internet banking enables me to manage my financial resources more effectively اعتقد ان الخدمات المصرفية تمكنني من ادارة مواردي المالية بشكل اكثر فعالية					
	سهولة الاستخدام	1	2	3	4	5
1	I can easily learn how to use mobile banking app استطيع تعلم استخدام الخدمات المصرفية عبر الهاتف الجوال بسهولة					
2	I can quickly become proficient in using the services offered through mobile banking يمكنني ان اصبح متمكن/متمكنة من استخدام الخدمات المصرفية عبر الهاتف الجوال					
3	The procedures of mobile banking app (steps of making payment, deposit, transfer fund) are simple to me إجراءات الخدمات المصرفية عبر الهاتف المحمول (خطوات الدفع، الإيداع، تحويل الأموال) بسيطة بالنسبة لي					
4	The interface of mobile banking is user-friendly and easy to understand واجهة الخدمات المصرفية عبر الهاتف المحمول سهلة الاستخدام وسهلة الفهم					
5	My interaction with the bank's Website and/or mobile banking application is clear and understandable. تفاعلي مع الموقع الإلكتروني للبنك وتطبيق الخدمات المصرفية عبر الهاتف المحمول واضح ومفهوم					
6	I think that the interaction with online banking / mobile banking does not require a lot of mental effort اعتقد ان استخدام الخدمات المصرفية عبر الهاتف الجوال لا تتطلب مجهود ذهني عالي					
	نية استخدام الخدمات المصرفية	1	2	3	4	5
1	I believe that I will use the services of mobile banking more in the future. اعتقد اني سأستخدم الخدمات المصرفية عبر الهاتف الجوال في المستقبل					

2	I believe that I will use/continue to use mobile banking in the next 6 months اعتقد بانني سأستمر في استخدام الخدمات المصرفية عبر الهاتف الجوال في فترة6 أشهر القادمة					
3	I intend to pay for purchases with mobile banking سأقوم باستخدام الخدمات المصرفية عبر الهاتف الجوال لعمليات الشراء					
4	Given that I have access to a web-enabled mobile phone, I predict that I would use Internet/mobile banking في حال توفر الانترنت سأقوم باستخدام الخدمات المصرفية عبر الهاتف الجوال					

يرجى المشاركة في حال كان هناك مقترح اضافي

.....

.....

.....

شكرا على مساهمتكم في حل الاستبيان

Institutional Review Board
(IRB)
APPROVED

Factors Influencing the Intention to Use Mobile Banking in Qatar.

Dear Sir/Madam:

This research is being conducted as part of my graduation project requirements in the MBA program at the college of Business and Economic, Qatar University. This survey will address The Factors Influencing the Intention to Use Mobile Banking in Qatar. (i.e., Service Quality, System Quality, Information Quality, Trust, Perceived Usefulness, Perceived Ease of Use). Therefore, we have adapted this questionnaire to collect data about users' perceptions regarding the factors influencing the intention to use mobile banking in Qatar.

Your answers to the questions in this survey are essential for completing this study. The information collected will be kept strictly confidential. You are not required to reveal any confidential information and the survey will be completely anonymous. The information will be stored on a secured password-protected laptop and only the researcher will have access to it. The data will not be re-used for any other purpose in the future. All data will be permanently destroyed after three years. By clicking on the provided link, you give your full informed consent to participate in this research study. Answering this survey will take only 10 to 15 minutes. The time and effort you spend in answering this survey are highly appreciated. Your participation in this survey is voluntary and your feedback and all your suggestions will be confidential and used for research purposes only. You are not allowed to fill the survey if your age is less than 18 years, and you can skip any question or withdraw at any time. This study is approved by Qatar University Institutional Review Board (QU-IRB) under the approval No.: .....

If you have any questions about this research, kindly feel free to contact me and my supervisor at this email addresses: Lolwa Nasser AL Naimi (la080037@student.qu.edu.qa) and Emad Abu-Shanab (eabushanab@qu.edu.qa)

If you agree to participate tick "Yes" ☐, if not tick "No" ☐

General information: Please select the appropriate choice from the following:

1- Age

18-20	21-30	31-45	45- or More
☐	☐	☐	☐

Institutional Review Board (IRB)
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2- Gender

Male	Female
☐	☐

3- Education Level

High School or less	High Diploma	Bachelor	Postgraduate
☐	☐	☐	☐

4- Nationality

Qatari	Non-Qatari
☐	☐

Please indicate the degree to which you agree or disagree with the following statements.

	Service Quality	**Strongly Disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
1	I believe that operations through mobile banking app are fast					
2	The systems used for mobile banking app are reliable					
3	I find the operations performed through mobile banking app are specific to my requests					
4	I find the operations performed though mobile banking app are complete					
5	I can access mobile banking services from anywhere, any time.					
	System Quality	**Strongly Disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
1	Mobile banking app quickly loads all the text and graphics.					
2	Mobile banking systems are compatible with my mobile phone					
3	Mobile banking is easy to navigate					
4	Mobile banking app is visually attractive					
	Information Quality	**Strongly Disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
1	Mobile banking app provides me with information relevant to my needs					
2	Mobile banking app provides me with sufficient information.					
3	Mobile banking app provides me with accurate information.					
4	Mobile banking app provides me with up-to-date information.					
	Trust	**Strongly Disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
1	The mobile banking application that I am using is totally trustworthy					
2	Trusting mobile banking applications is not difficult					
3	I have trust in the technology that mobile banking uses					
4	I would trust my bank telecommunication operator to provide secure data connections to conduct internet/ mobile banking					
5	I believe that my mobile banking provider will keep the commitments and promises made to me					
	Perceived usefulness	**Strongly Disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
1	Using mobile banking app saves me time					

2	Mobile banking app is a practical option for making payments					
3	Using mobile banking app enables me to carry out my day-to-day tasks					
4	Mobile banking wallet is a trend of the modern lifestyle					
5	I believe that internet banking enables me to manage my financial resources more effectively					
	Perceived ease of use	**Strongly Disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
1	I can easily learn how to use mobile banking app					
2	I can quickly become proficient in using the services offered through mobile banking app					
3	The procedures of mobile banking app (steps of making payment, deposit, transfer fund) are simple to me					
4	The interface of mobile banking is user-friendly and easy to understand					
5	My interaction with the bank's Website and/or mobile banking application is clear and understandable.					
6	I think that the interaction with online banking / mobile banking does not require a lot of mental effort					
	Intention to use mobile Banking	**Strongly Disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
1	I believe that I will use the services of mobile banking app more in the future.					
2	I believe that I will use/continue to use mobile banking in the next 6 months					
3	I intend to pay for purchases with mobile banking					
4	Given that I have access to a web-enabled mobile phone, I predict that I would use Internet/mobile banking					

Do You have any comments?

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Thanks for your kind cooperation

Institutional Review Board (IRB)
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