
The Determinants of Intention to Use Digital Banking Services in Kuwait

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Abstract: Online banking is the use of the Internet on supported devices such as computers, tablet devices, and or smartphones to remotely access banking services and carry out various transactions. Online banking offers multiple advantages to the customers, such as ease of access, use of banking services anytime and from anywhere, lower costs, less time consumption, and speed of transactions. Banks provide such a platform to ensure that their customers are satisfied and remain with them for a longer period. The aim is to achieve various factors such as customer satisfaction, customer retention, and customer loyalty. This research aims to determine key drivers for the intention to use digital banking services, i.e., e-banking and m-banking in Kuwait. Data was collected from 202 bank customers using a questionnaire. All items were measured by a 5-point Likert scale. Factor analysis identified the following variables: 1. Perceived usefulness, 2. Perceived ease of use, 3. Perceived risk, 4. Subjective norm, 5. Perceived behavioral control, 6. Trust, 7. Word-of-Mouth, 8. Attitude, and 9. Intention. Average scores concluded that respondents gave the highest value for the usefulness of digital banking services. Respondents worry about their privacy, especially when providing personal information, and fear of phishing. Findings suggest that people's behavior towards digital banking services is not influenced by their family, friends, peers, or other people. Trust in bank's digital services is a major concern. Finally, the majority of respondents indicated their intention to use e-banking or m-banking but were not completely sure of it.

Keywords: Digital Banking Services, Mobile Banking, E-Banking, Kuwait

1. Introduction

(Spalević et al., 2019) pointed out that global finance has undergone considerable change because of ongoing technological advancement [36]. (World Bank, n.d.) study pointed out that a significant volume of information is now accessible in digital form due to rapid technology improvements. Financial institutions' business strategies have had to change as a result of enhanced Internet accessibility and a rise in the usage of mobile devices such as computers, mobile phones, and tablets, with a new emphasis placed on digital payments and platforms [41]. The World Bank's numbers demonstrate the upward trend in Internet users worldwide. Globally, the percentage of Internet users

increased from 7% in 2000 to 60% in 2020. Additionally, the number of mobile devices operating worldwide was 15 billion in 2021. (Statista, 2022) Also, anticipates that these numbers will reach 18.22 billion by 2025 [37]. According to the Communication and Information Technology Regulatory Authority – CITRA (n.d.) there were 99.7% of Internet users (95.7% of individuals used the Internet daily), while 97% of the population was covered by 5G in Kuwait in 2020. Furthermore, there were 158% mobile-cellular subscriptions per 100 inhabitants and 130% mobile-broadband subscriptions per 100 inhabitants in Kuwait in 2020. Also, 98.5% of households owned smartphones, and 87.7% of households owned portable devices (laptops and tablets). All the mentioned facts indicate the vital role of the Internet and

mobile devices in individuals' everyday lives. The IT developments alter how financial services are provided and help create cutting-edge solutions that meet clients' financial needs. Banks' customers can check their account balances, make digital payments, move money between accounts, receive payments, and more by using the Internet and mobile devices. Consequently, bank customers' behavior has changed, as seen by the decreased frequency of their in-person branch visits. Digital transactions are becoming increasingly popular in recent times. The emergence of the coronavirus has further highlighted the importance of digital banking services in performing financial activities.

(Ipsos, 2021) Pointed out in a study that 84% of individuals in Kuwait used e-banking/m-banking during the pandemic [21]. Additionally, as a result of the pandemic, 42% of users used digital banking services more often, 44% of users did not change their behavior regarding their usage, and 14% of users used digital banking services less often. Also, 73% of respondents in Kuwait intend to continue using digital banking services indicating the significance of this type of service for individuals.

Considering that it is crucial to identify and determine which factors drive the intention to use digital banking services, this paper aims to reveal the key predictors of an individual's behavior.

This paper is structured as follows. After the section literature review, the sample characteristics and result of factor analysis are presented. Next, the state and drivers of individuals' intention to use digital banking services were examined. The last segment comprises the key conclusion and suggestions for further research.

2. Literature Review

During the last ten years, the interest of scientists and academic staff in investigating individuals' behavior related to digital banking services such as e-banking and m-banking has increased. Thus, this research highlights, the importance of expanding the analysis and enriching the literature related to the mentioned topic in Kuwait.

E-banking, often known as online or internet banking, is regarded as the pioneer and represents the foundation for developing mobile banking tailored to customer preferences. According to Tan *et al.* (2010), e-banking refers to a website portal that allows users to access various banking services [39]. (Thakur, 2014) described e-banking as a self-service channel, mobile banking is the most similar substitute for e-banking [40]. Muñoz-Leiva *et al.* (2017) defined a mobile banking application as a service a bank provides to consumers via mobile phone or tablet [28]. Checking account balances, paying bills, sending money to family or friends, sending money between accounts, and finding an ATM or branch represent the most important m-banking and e-banking features. (Dahlber *et al.*, 2008) pointed out that ongoing technological advancements create new and more practical features of digital financial services [15]. Chandran (2014) highlighted the pros and cons of digital banking

services [9]. The benefits are as follows: 1. Timesaving (clients don't need to visit a bank branch to check account balances, receive payments, or transfer money); 2. Convenience (customers can conduct financial activities whenever and wherever they choose); 3. Security (well-secured applications typically offer a security assurance or SMS a verification code. E-banking is thought to be less safe than m-banking); 4. Decrease in fraud; 5. Availability (customers have 24/7/365 access, which is crucial for people who live in rural locations); 6. Simple access to money (clients' financial resources and information are available even after the bank's working hours have ended); 7. Enhanced effectiveness (helps cut down on bank traffic and paper usage for both the client and the bank). The same author also pointed out some disadvantages, such as the possibility that the client will receive a fake SMS message/e-mail; issues with an internet connection or the phone's battery running low; the phone's incompatibility with antivirus software; the loss of a mobile phone. (Otamurodov, 2017) pointed out that, when using digital banking services, customers should concentrate on and pay attention to the bank's history and examine security-related information [30].

(Chauhan *et al.*, 2019; Hong, 2019; Giovanis *et al.*, 2019; Mehrad & Mohammadi, 2017; Alalwan *et al.*, 2016) Examined the impact of perceived ease of use on the intention to use digital banking services [10, 20, 18, 27, 3]. According to Davis (1986), ease of use refers to how little effort is required to use a system [16]. Additionally, this refers to how stressed out a person gets when using a specific system. Davis defines usefulness as "the degree to which a person believes that using a system would enhance his or her job performance". Thus, ease of use means to what extent mobile banking is simple and understandable for use by individuals. Since the application's use must be customized to the demands of clients, it is crucial that using it doesn't take any special mental effort.

Clients consider the advantages gained in terms of prices and time compared to other channels of communication with the bank when deciding whether to use the mobile application. Regarding this, it is important to investigate how individuals perceive digital banking services' usefulness. (George, 2018; Salimon *et al.*, 2017; Singh *et al.*, 2020; Priya *et al.*, 2018; Kalinić *et al.*, 2019) pointed out that the variable perceived usefulness has been examined by numerous authors in studies related to this topic [17, 34, 35, 31, 22]. (Tam & Oliveira, 2017) mentioned that Perceived ease of use and usefulness are considered important predictors of intention to use mobile banking [38]. If Individuals want to use digital banking services, they need to possess an appropriate device, resources, and knowledge. Ajzen (2006) defined perceived behavioral control as one's ability to carry out a particular behavior [1]. According to Akturan & Tezcan (2012), the use of digital technologies is important to take into account the fear of individuals related to the potential risks that may arise and deter individuals from using them [2]. Risk is the term used to describe the client's need to get past their security concerns to use the mobile banking application service. According to

Kleijnen et al. (2009), psychological and functional impediments represent barriers to the adoption of innovations [25]. (Alalwan et al., 2016) pointed out that as a result, it is possible to use perceived risk as a predictor of future user behavior [3]. Individuals have some fear that 1. digital banking services will not perform well, 2. someone else can access their account, 3. they can lose their money by mistake, 4. they can lose their time if problems with the services occur, etc. In general, trust is a key component since customers expect some level of privacy security and good protection against fraud attempts. (Altin Gumussoy et al., 2018; Obaid, 2021; Purohit & Arora, 2021; Belanche et al., 2022) examines the impact of social surroundings such as the influence of family, friends, peers, and other people whose opinion is important on an individual's behavior related to digital banking services [6, 29, 32, 7]. (Kawakami & Parry, 2013) considered that one of the most important variables in deciding whether to use new products/services is word-of-mouth [23]. For that reason, we assume that word of mouth possibly influences the intention to use digital banking services. An individual's attitude is their self-generated sensation about whether or not to engage in a particular conduct, and it can be a good or negative feeling. Hong (2019) states that an attitude refers to the extent to which a person views or judges the adoption of a banking service: favorably or unfavorably [20]. (Castaeda et al., 2007) define behavioral intentions as a person's future willingness to carry out a specific task. It is also seen as a crucial behavioral indicator [8].

Rabaa'i & AlMaati (2021) investigated which factors influence users' continuous intention to use digital banking services in Kuwait [33]. The authors revealed that perceived trust, satisfaction, self-efficacy, performance expectancy, and effort expectancy statistically significantly impact their behavior. A recent study conducted in Kuwait by Alghareeb (2022) shows that undergraduate students rate the item related to accessing mobile banking at any time with the highest score (the average score is 4.68 based on 300 responses) [4]. Respondents also highly value simplicity (4.55) and usefulness (4.46). The average score for satisfaction is 4.41 indicating that clients' banks provide adequate digital services. The lowest score is associated with the respondent's fear of providing their personal information (2.28). AL-Mutairi et al. (2019) also noted risk as a critical factor, given the average score of 2.88 out of 5 indicating that individuals are afraid to give personal details via digital banking service and this type of service is not safe/secure enough [5].

3. Methodology

To examine the attitudes of individuals towards digital banking services i.e., e-banking and m-banking, data was gathered by using a questionnaire. The population represents those who live in Kuwait and have an account in a bank operating in Kuwait. To determine the validity of the questionnaire, pilot research is carried out on 17 respondents. Respondents' feedback regarding the questionnaire's

structure, readability, and grammatical errors were significant for improving the questionnaire and, consequently, the research quality. After a pilot study, the questionnaire was revised, and the collection of data was conducted via e-mail and physically in various bank branches.

The considered sample size was 202, out of a total of 231 respondents who attempted the questionnaire. The data were cleaned and screened in the following stage for missing and unengaged responses and statistical outliers. The incomplete responses of 21 respondents were removed since they did not respond to all questions in the questionnaire. (Cheng, Kao, & Lin, 2021) Case-wise or list-wise deletion is a common practice of data cleaning to avoid data bias in cases where missing values exceed 50% of the study variables, and the deletion of cases does not affect the power of analysis [11]. As per Kim et al. (2019) For 8 respondents, the responses are deleted when it was determined that they had been straight-lining [24]. After the data were cleaned, the data for 202 respondents were processed in the following stage, forming a final sample size.

Factor analysis was used to identify key factors that potentially influence the behavior of bank clients regarding e-banking and mobile banking. Based on descriptive statistics, certain conclusions on respondents' perceptions related to digital banking services were made. All items within the questionnaire were measured by a five-point Likert scale (1= "Strongly disagree", 5= "Strongly agree").

4. Results and Discussion

The 202 responses were collected via e-mail and by visiting a bank branch. The structure of the respondents is presented in Table 1.

Table 1. The structure of the sample.

Gender
1) Male 63%
2) Female 37%
Nationality
1) Kuwaiti 25%
2) Non-Kuwaiti 75%
Age
1) Under 18 0%
2) 18-24 years 9%
3) 25-30 years 22%
4) 31-35 years 25%
5) 36-40 years 24%
6) 41-50 years 17%
7) Over 50 years 2%
Education Level
1) High school 6%
2) College/University 82%
3) Master's degree 11%
4) Doctorate / PhD 0%

Most of the respondents are men, those who belong to the age group 31 - 35 years and who have graduated from college or university.

Factor analysis was used to reduce the initial set of questions (items) into a small number of factors that can be considered

predictors of intention. Table 2. presents detailed insights into the identified variables: Perceived Usefulness; Perceived Ease of

Use; Perceived Risk; Attitude; Subjective Norm; Perceived Behavioral Control; Trust; Word-of-Mouth, and Intention.

Table 2. Summary of identified variables.

Variables	Cronbach's Alpha	Number of items	Source
Perceived Usefulness	0.858	4	Wu & Chen (2005); Cheng et al. (2006)
Perceived Ease of Use	0.896	3	Wu & Chen (2005); Cheng et al. (2006)
Perceived Risk	0.807	11	
Performance risk	0.751	2	Lee (2009)
Social Risk	0.919	2	Lee (2009)
Time Risk	0.612	2	Lee (2009)
Financial Risk	0.752	2	Lee (2009)
Security Risk	0.928	3	Lee (2009)
Attitude	0.834	4	Wu & Chen (2005); Cheng et al. (2006)
Subjective Norm	0.971	3	Lee (2009); Wu & Chen (2005)
Perceived Behavioral Control	0.768	3	Lee (2009); Wu & Chen (2005)
Trust	0.902	5	Wu & Chen (2005)
Word-of-Mouth	0.728	4	Goyette et al. (2010); Clemes et al. (2012)
Intention	0.740	4	Lee (2009); Wu & Chen (2005); Cheng et al. (2006)

Source: Authors' calculation

Analyzing the average scores for every identified variable, i.e., for all items within each of them (Table 3), it was concluded that respondents gave the highest score for the item *I think that e-banking/m-banking is useful*, indicating

the beneficial role of digital banking services in meeting individuals' banking needs. Most respondents perceive digital banking services as not fully simple to use, so banks must provide services with reduced mental effort for their clients.

Table 3. Descriptive statistics for identified factors.

Factor	D	N	A	Mean	SD
Perceived Usefulness (PU)					
PU1: I think that using e-banking/m-banking would enable me to accomplish my tasks more quickly.	0%	4%	95%	4.248	0.554
PU2: I think that using e-banking/m-banking would make it easier for me to carry out my tasks.	0%	4%	96%	4.282	0.532
PU3: I think that e-banking/m-banking is useful.	1%	1%	98%	4.371	0.587
PU4: Overall, I think that using e-banking/m-banking is advantageous.	0%	8%	91%	4.213	0.696
Perceived Ease of Use (PEOU)					
PEOU1: I think that learning to use e-banking/m-banking would be easy.	12%	12%	76%	3.851	0.935
PEOU2: I think that interaction with e-banking/m-banking does not require a lot of mental effort.	16%	14%	69%	3.639	1.009
PEOU3: I think that it is easy to use e-banking/m-banking to accomplish my banking tasks.	9%	12%	79%	3.881	0.826
Perceived Risk (PR)					
Performance Risk (PERFRISK)					
PERFRISK1: E-banking/m-banking servers may not perform well because of slow download speeds, the servers' being down, or because the website is undergoing maintenance.	20%	21%	59%	3.450	0.972
PERFRISK 2: E-banking/m-banking servers may not perform well and process payments incorrectly.	37%	24%	39%	2.975	1.086
Social Risk (SOCRISK)					
SOCRISK1: I'm sure that if I decided to use e-banking/m-banking and something went wrong with online transactions, my friends, family, and colleagues would think less of me.	75%	13%	12%	2.134	0.971
SOCRISK 2: When my bank account incurs fraud, or the hacker invades, I will have a potential loss of status in my social group.	72%	18%	10%	2.084	0.945
Time Risk (TRISK)					
TRISK1: Using e-banking/m-banking service would lead to a loss of convenience for me because I would have to waste a lot of time fixing payment errors.	59%	16%	25%	2.584	1.126
TRISK2: It would take me lots of time to learn how to use, e-banking/m-banking services.	62%	27%	11%	2.307	0.895
Financial Risk (FINRISK)					
FINRISK 1: When transferring money on the Internet, I am afraid that I will lose money due to careless mistakes such as wrong input of account number and wrong input of the amount of money.	48%	20%	32%	2.792	1.100
FINRISK2: When transaction errors occur, I worry that I cannot get compensation from banks.	46%	12%	42%	2.941	1.220
Security Risk (SECRISK)					
SECRISK1: I would not feel safe providing personal privacy information over e-banking/m-banking.	20%	20%	60%	3.545	1.176
SECRISK 2: I'm worried about using e-banking/m-banking because other people may be able to access my account.	22%	21%	57%	3.470	1.185
SECRISK 3: I would not feel secure sending sensitive information across e-banking/m-banking.	18%	22%	59%	3.559	1.154
Attitude (ATT)					
ATT1: I think that using e-banking/m-banking is a good idea.	0%	3%	97%	4.252	0.509
ATT2: I think that using e-banking/m-banking for financial transactions would be a wise idea.	2%	18%	80%	3.941	0.710
ATT3: I think that using e-banking/m-banking is pleasant.	4%	35%	60%	3.743	0.806
ATT4: In my opinion, it is desirable to use e-banking/m-banking.	2%	17%	81%	3.995	0.649

Factor	D	N	A	Mean	SD
Subjective Norm (SNORM)					
SNORM1: People who are important to me would think that I should use e-banking/m-banking.	50%	31%	19%	2.569	1.073
SNORM2: People who influence me would think that I should use e-banking/m-banking.	49%	31%	20%	2.564	1.123
SNORM3: People whose opinions are valued by me would prefer that I should use e-banking/m-banking.	50%	30%	20%	2.579	1.100
Perceived Behavioral Control (PBC)					
PCB1: I think that I would be able to use e-banking/m-banking well for financial transactions.	2%	11%	87%	4.005	0.611
PBC2: I think that using e-banking/m-banking would be entirely within my control.	9%	18%	73%	3.782	0.812
PBC3: I think that I have the resources, knowledge, and ability to use e-banking/m-banking.	1%	10%	89%	4.183	0.663
Trust (TRUST)					
TRUST1: My bank is trusted as an e-banking/m-banking provider.	0%	4%	96%	4.292	0.536
TRUST2: I rely on e-banking/m-banking as a trusted medium of financial transactions.	3%	18%	79%	3.975	0.722
TRUST3: I trust that my bank provides security protection (technology) to prevent unauthorized intrusion.	1%	9%	90%	4.168	0.624
TRUST4: E-banking/m-banking service platform keeps its promises and commitments.	0%	18%	82%	4.069	0.650
TRUST5: E-banking/m-banking service platform is trustworthy.	1%	15%	84%	4.069	0.650
Word-of-Mouth (WoM)					
WOM1: I (will) use e-banking/m-banking because of positive word-of-mouth.	56%	27%	16%	2.550	0.987
WOM2: I (will) use e-banking/m-banking because of my friends and family members' recommendations.	56%	29%	15%	2.500	0.979
WOM3: I (will) use social media to share my opinion regarding e-banking/m-banking.	59%	24%	17%	2.465	0.983
WOM4: I (will) recommend the use of e-banking/m-banking to others.	6%	10%	84%	3.921	0.715
WOM5: I (will) discuss the user-friendliness of e-banking/m-banking with others.	20%	35%	45%	3.272	0.887
Intention (INT)					
INT1: I intend to use/keep using e-banking/m-banking for my banking needs.	2%	9%	89%	4.124	0.684
INT2: Using e-banking/m-banking for handling my banking transactions is something I am very interested in.	4%	22%	74%	3.921	0.788
INT3: I would see myself using e-banking/m-banking for handling my banking transactions.	4%	13%	83%	4.020	0.746
INT4: I would use e-banking/m-banking for all my banking needs.	50%	15%	35%	2.678	1.432

Source: Authors' calculation

Since the high rates given to risk items mean that individuals have some worries related to digital banking services, this concludes that the most problematic were privacy risks. Thus, individuals fear providing personal information via e-banking/m-banking and that someone else can access their account.

Regarding attitudes, respondents believe it is a good idea to use e-banking and m-banking, but average scores for another three items should be enhanced. Findings indicate that family, friends, peers, and others aren't crucial to individuals' behavior related to digital banking services. From the aspect of facilitating conditions, respondents generally think they have the resources, knowledge, and ability to use digital banking services. The majority of respondents do not fully trust their banks in providing digital services. Finally, most respondents answered that they intend to use e-banking/m-banking, but they are not fully sure about it. Interestingly, respondents don't want to use e-banking/m-banking for all their banking needs which implies they also prefer other interactions with the bank, such as visiting a bank branch.

5. Conclusion

The banking industry has experienced a tremendous transformation over the past 10 years, which implies that digital ones are progressively replacing traditional business models. This is a result of more frequent usage of mobile devices, such as mobile phones, tablets, and laptops, by individuals in daily life. To maintain their market position, banks should constantly monitor the preferences and

requirements of both current and potential digital banking services consumers.

This Study used a questionnaire to collect information on people's attitudes regarding e-banking and mobile banking. The population is made up of people who reside in Kuwait and have a bank account. The pilot study is conducted on 17 respondents to assess the validity of the questionnaire. The comments from respondents on the questionnaire's structure, readability, and grammatical problems were crucial for enhancing the questionnaire's quality. Following pilot research, the survey was redesigned and conducted both electronically and in-person for data collection. The total number of respondents was 202. Factor analysis was used to identify important variables that may have an impact on customer's intention to use e-banking and m-banking.

Based on the average value, we can conclude that respondents gave the highest score for the item *I think that e-banking/m-banking is useful*. This shows the significant role of digital banking services in addressing people's banking needs. Most respondents believe that using digital banking services is not entirely straightforward, so banks must offer their customers services that need less mental effort to utilize. Findings also suggest that privacy issues are the most significant, given the high scores provided to risk items, which indicate that people have some concerns regarding digital banking services. People worry that if they use e-banking or mobile banking to provide personal information, someone else might access their account. In terms of attitudes, respondents think it is a good idea to use m- and e-banking, but the average values for three additional items

need to be raised. Findings suggest that people's behavior in relation to digital banking services is not significantly influenced by their family, friends, peers, or other people. Regarding enabling circumstances, respondents believe they have the means, expertise, and capacity to use digital banking services. Most respondents don't have complete faith in their banks to deliver digital services. Finally, most respondents indicated that they plan to use e-banking or mobile banking but that they are unsure of it. It's interesting to note that respondents don't want to use e-banking or mobile banking for all their banking needs, suggesting they also prefer other types of interactions with the bank, including going to a branch and communicating face-to-face with a bank clerk.

The findings could help banks in enhancing digital services as well as appropriately adapt their operations to improve the user experience. The findings of this study could assist banks in developing an appropriate marketing plan. Future studies should focus on 1. examining additional variables and 2. developing an appropriate model that explains the intention to use digital banking services in Kuwait.

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Authors Contribution

All authors contributed to the study's conception and design. idea owner Yamen Nissi, Material preparation, data collection was performed by Yamen Nissi and analysis was performed by Yamen Nissi, Vladimir Simovic, and Marija Antonijević. The first draft of the manuscript was written by Yamen Nissi and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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