

Adaptation of the Technology Acceptance Model (TAM) to the Use of Mobile Banking Services

MAHMOOD JASIM ALSAMYDAI

Professor Dr. Department of marketing, Faculty of Economic and Administrative Science, Al- Zaytoonah Private University of Jordan

P.O Box: 141522, Amman 11814, Jordan

Email: Mahmod_Jasim2000@Yahoo.Com

Tel: 0096265862982

Abstract

The current study aims to adapt the Technology Acceptance Model (TAM) to the use of mobile banking services in Jordan through examining the researches and subjects related to this topic. In this study the TAM model has been modified by introducing two new dimensions, which are the factors of quality and experience to the five dimensions that the TAM model, which introduced by Davis in 1986, originally composed of them. Thus this study sample consists of seven dimensions, which are the three following factors: quality (the quality of information and quality of service and the quality of the system), perceived ease of use the experience, the perceived usefulness, attitudes, behavioral intention and the use. In light of this, the current study extended these necessary dimensions and factors in order to be expanded in line with the banking business, especially in the mobile banking services in Jordan. The development of the seven hypotheses was based on the dimensions of the study as well as on the relevant literature. In addition, eight hypotheses were added to measure the correlation between the different constraints of the studied model. A questionnaire consisting of (24) questions covering the dimensions and hypothesis of the study was designed in order to collect the required data for examining hypotheses and reaching conclusions. The questionnaire used in this study was designed and developed based on an initial pretested survey distributed to a sample consisting of (238) customers of the Jordan Banks. It is found that all the variables of this study (all dimensions included in the study sample) are affected by the use of mobile banking services with value of mean(4.45). All seven hypotheses for the first group were accepted as well as for the eighth hypothesis, concerning the relationship of the link between the components of study model. The statistical analysis showed that the positive correlation between all of these components consisted of a stronger correlation (positive relationship) between each of the attitude and the use of mobile banking services with a value of coefficient correlation (0.377). As for the dimensions, the strongest correlation is found to be between (perceive ease of use) and (experience) with the value of correlation (0.534).

Key Words: Technology, Acceptance, Model, Perceived, Use, Mobile Banking Services.

Introduction

Nowadays the world is experiencing a significant acceleration in the emergence and development of new technologies in various fields, especially in the products and services industry. This technology has played an active and important role in the development of the characteristics of the products and the services. These products are offered with a variety of new characteristics for customers, which required customers possessing the skill, experience and willingness to accept and use these products. In addition to that, the process of accepting new technologies by the consumers is facing problems and there is a behavioral tendency to resist changing among individuals, which stands in the way of the acceptance of the use of new

technology. The Technology Acceptance Model (TAM) by Davis in 1986 is one of the models that attempted to address the process of acceptance of the technology and the uses by consumers. This model includes five factors: perceived ease of use, perceived usefulness, behavioral intention, attitudes and actual usage. Many attempts to adapt the TAM in various fields were found in literature, such as: Gelik & Yilmaz (2001), Nokoo et al., (2013), Chau & Lai (2003), Dillon & Morris (1997) and Venkatesh (2000). On the other side, adaptation of the TAM to the mobile banking services is found to gain an increasing importance lately, as can be found in the published research of Alsamydai et al., (2014), Rommle & Nel, (2012), Chung & Kwon (2009), Clark (2008) and Laforet & Li (2005), where other researchers have focused on mobile banking services, but without adjustment of the acceptance technology model (TAM) in the acceptance of the use of these services. The current study is trying to adapt the technology acceptance model (TAM) to the use of mobile banking services, where such modern technology is still used by a specific type of customers in Jordan. The adaptation of the TAM model will be made by the addition of two factors: the quality factors, which includes three type of quality: the quality of information, the quality of services and the quality of the system; the other factor that has been added is the experience. In this study instead of the original TAM model, which consists of five dimensions of the original TAM model, a seven dimensional TAM model is applied in this study, which also considers the nature of the banking business, especially mobile banking services in Jordan. This study aims to find out the impact of each of the six dimensions on the seventh dimension (the use of mobile banking services), as well as knowing the nature of the correlation between them and aims to identify which one of the dimensions has more correlation and a positive relationship with the use of mobile banking services. The knowledge provided by this study, will help in building a clear strategy to accept the use of mobile banking services, as well as laying the groundwork for the future studies of this important topic.

Research Questions

There are some studies that found in literature about the applications of the technology acceptance model in different areas, such as: commerce, shopping, online purchase, e-vender by consumers, or by on the web. It is found that there is limited study applying the TAM in the field of mobile banking services in the Jordanian banking sector. This study will try to answer the following questions:

- Can this model be adapted to accept the use of technology in the field of mobile banking services as this type of banks are new in the Jordanian banking sector?
- Is it possible to adapt the original technology acceptance model by Davis (1989) with some additions and adaptations provided by some researchers, such as Nunkoo et al (2013) and Eray et al., (2001).
- Is it possible to formulate a model, which is consistent with the nature of the Jordanian customer, the Jordanian banking sector and the work of Jordanian mobile banking?
- Is the quality of each of (the information, the services and the system) reflected on the ease of use and realization of the perceived usefulness?
- Is the perceived ease of use, the experience usefulness perceived reflected on attitudes towards the use of mobile banking services?
- Are the attitudes towards the use reflected on the behavioral intention and the mobile using mobile banking services?

Study Objective

The specialists and workers in the field of technological development concern with certain matters, which are: first, how to make the customers accept the modern technology provided at the level of products and services. Secondly, the regulations required so that the customers who attempt to deal with the modern technology acceptance will have a positive impact on the development of such technology. This study focuses on the technology acceptance model and how to adapt it in a variety of subjects related to the internet and commercial activities; sales and purchasing electronic. In the same direction, this study sheds

the lights on the adaptation of this model and its uses and also deals with the model of mobile banking services within the following objectives:

- Adapting the technology acceptance model in the field of use the mobile banking services
- Figuring out the possibility of formulating a model for the acceptance of technology of using the mobile banking services in Jordan.
- Find out the role played by specific factors, such as: the quality of (information, services, and system) and the reflection on all of the perceived ease of use and perceived usefulness
- Find out the effect of the perceived ease of use, the experience and perceived usefulness, on the attitudes towards the use of mobile banking services.
- Find out the reflection of the attitudes on each of the behavioral intentions and its impact on the acceptance of the use of the mobile banking services.

Study Model

The model of this study is based mainly on the technology acceptance model presented by (Davis 1989), (Pavlou 2003), (Celik et al 2011- 2014) in addition to the model provided by the (Al Samydai2014), about the factors influencing the use of banking services and continuing to deal with the electronic services banks model (Al samydai et al 2012). Therefore, the study model has been adapted as follows:

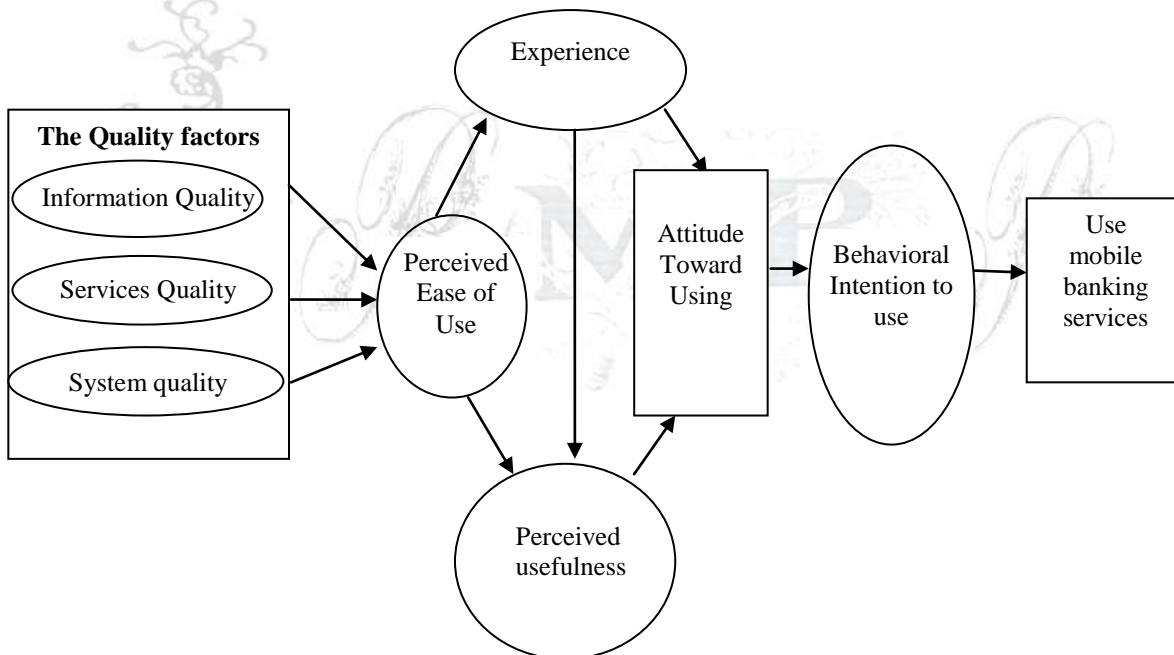


Figure (1) Study Model

Literature Review and Hypotheses Development

The aim of the current study is to adapt the Technology Acceptance Model (TAM) to the use of Mobile Banking Services. The literature, which are related to the factors included in this study model are listed below:

The Quality Factor: This factor is divided into three areas:

a) Information Quality:

According to Shih (2004) the information quality is a result of the information system. Where previous studies have noted that the quality of information used is the measuring of systems. (Celik and Yilmaz, 2011), on the other hand, the quality of the information: includes an assessment of the effects of the web usage. Perceived information quality is used in the information perceived by consumers on the internet. It is assumed that the perceived service quality affects the perceived usefulness (pu), perceived ease of use (PEOU) attitude towards mobile banking services and use acceptance.

b) Service Quality:

According to Alsamydai et al., (2012), the service quality in the context of offline and online services has considerable attention within the literature. Generally, service quality has been identified as consumer's comparison between service expectation and service performance. Parasurman states that as well as there is a subjective comparison that customers have between the quality of service, which they receive and what they actually get (Parasurman et al., 1985; Gefen, 2002). The service quality is determined by the total utility received by the beneficiary of the service (Alsamydai et al 2012). Moving to the online context, research has identified e-service quality as a web-based service or an interactive service that delivered on the internet (Ghosh et al 2004), where the overall customer assessment and Judgment of e-service delivery in the virtual marketplace (Rowley 2006). It was found by a study by Alsamydai et al., (2012) that there are significant relations between the service quality, perceived usefulness (PU), consumer's satisfaction and continuity of dealing with e-banking services.

c) System Quality:

This refers to the ability of the information system to conduct transaction. The system quality measurements have been used to measure the performance of information systems. The supporting functions of an information system are the measure of its quality (Celik & Yilmaz, 2001).

H1: Quality factors have a significant positive effect on the individual perceived ease of use.

- Perceived ease of use (PEOU):

Perceived ease of use is defined as the degree in which a person believes that using a particular system would be free from effort (Nunkoo et al 2013).

Davis (1989) argued that perceived ease of use also influences, in a significant way, the attitude of the individual through two main mechanisms: self-efficacy and instrumentality. The Self- efficacy term, which was introduced by Bandura (1982), explains that the more the system is easy to use, the greater should be the user's sense of efficacy. According to Nunkoo et al., (2013) many researchers (e.g. Aladwani, 2002; Moon & Kim 2001) have studied the relationship between perceived ease of use and perceived usefulness. Perceived ease of use can also contribute in an instrumental way in improving a person's performance. Due to the fact that the user will have to deploy less effort with a tool which is easy to use, they will be able to spare efforts to accomplish other tasks (Davis, 1986).

H2: Perceived Ease of use (PEOU) has a significant positive effect on perceived usefulness, experience and attitude towards using mobile Banking Services.

- Experience:

According to Alsamydai et al., (2014); mobile banking experience generally influences a customer's usage, the degree to which a mobile banking experience affects a consumer's varies and it is a subject in which the

particular technical support being examined. The use of mobile banking depends on the technical support itself and the experience level of the individuals using it. However, the limited prior experience of using mobile banking services will contribute positively to the perceived usefulness. According to Chung & Kwon, (2009) mobile banking experience has been found to be associated with perceived usefulness. In the study of Alsamydai et al., (2014), the experience has an effect on the consumers' attitude, intentions and usage of mobile banking services.

H3: Experience has a significant positive effect on the attitude and the behavioral intention in the use of mobile banking services.

- Perceived usefulness (PU):

Perceived usefulness is defined as the extent to which an individual believes that he or she would benefit from using mobile banking service (Alsamydai et al 2014).

The importance of perceived usefulness has been widely recognized in the field of electronic banking (Guriting & Ndubis, 2006, Laforet & Li, 2005, Liao Cheung 2002, Bhatti, 2007). Previous researches have consistently argued that there is a positive relationship between perceived usefulness of mobile banking intention and attitude toward mobile banking and mobile banking usage (Alsamydai et al 2014, Kim et al 2007, Bhatti 2007, Pavlou, 2003, Venkatesh 2000, Davis 1996, Davis et al 1989) For example, Chau and Lai's (2003) examined the contributing factors towards the consumers' adoption of internet banking and determined that perceived usefulness was found as an important factor in fostering a positive attitude towards accepting the internet banking services. Moreover, many researches reaffirmed that the perceived usefulness is an important factor to refine the technology acceptance model (TAM) (Davis, 1993, Taylor & Todd 1995). Therefore, Perceived usefulness will influence their intention to accept and use e-banking services, this complies with Chau and Lai's (2003) study, in which they examined the contributing factors towards consumer's adoption of internet banking and found that perceived usefulness (PU) has a positive effect on the attitude towards accepting the internet banking services.

Alsamydai et al., (2014) found that the perceived usefulness (PU) has a positive effect on the attitude, intention and usage of mobile banking services.

H4: Perceived Usefulness (PU) has a significant positive effect on attitude and behavioral intention use mobile banking services.

- Attitudes towards using (ATU):

Attitude is an important concept in the research of marketing and information systems. It is also an important construct for the information systems researches, for the technology acceptance model (TAM) that predicts the use of perceived ease of use, attitude, intention, and use. Psychological construct because they have been found on influence and have been to influence and predict many behaviors (Alsamydai, et al 2014).

Attitude is defined as a positive or negative evaluation of people, objects event, activities, ideas, or just about anything in environment. Attitudes are generally having positive or negative views of a person, place, thing, or event (Zimbardo et al 1999). The original TAM (Davis, 1986), and the models of Taylor and Todd (1995, Morris and Dillon (1997) indicated that attitude exerts a positive effect on the behavioral intention, (Nunkoo, et al., 2013).

Attitude towards mobile banking has received considerable attention within the consumer behavior literature. It has been found that the attitudes and intention towards mobile banking were both influenced by the customer's perceived usefulness (Alsamydai, at el 2014). The concept of attitude towards behavior seems to play an important role in predicting and understanding consumer intention and behavior (usage of

mobile banking services) (Ajzen, 1991; 2002; 2005, Alsamydai et al., 2013; 2014; Bansal & Tayler, 1999, Smith et al., 2008, Pavlou, 2003).

According to the study of Alsamydai et al., (2014) attitude has a positive effect on intention and use of mobile banking services.

H5: Attitude toward mobile banking services has a significant positive effect on behavioral intention to use.

- Behavioral intention to use (BITU).

According to Fishbein and Ajzen (1975) the behavior intention is defined as a measure of strength of one's intention to perform a specific behavior. Behavioral intention refers to an individual's willingness to perform (Ajzen, 2003) or not to perform a specific future behavior (Konerding, 1999). It has been considered as an important predictor of an individual's behaviors (Ajzen, 2002, Castaneda Munoz-Leiva & luque 2007).

Behavioral intention is considered to be an important mediator in the relationship between the independent variables and the use of specific system (Venkatesh, 2003). The relationships between attitude, intention, and behavior have been studied and confirmed in numerous studies; such as: Kraus, (2008) and Olso & Zanna (1993), where both have suggest that attitude, which is a relatively permanent and stable evaluative summary about an item, is important.

Having into account the intentions towards the use of mobile banking services, it is reasonable to consider the variables of the technology acceptance model (TAM) in predicting the intentions to use mobile banking for transactions. Moon and Kim (2001) have investigated the impact of perceived usefulness and ease of use on consumer use of the internet. Where in the study of Alsamydai et al., (2014) the behavior intention toward using mobile banking services significantly affect the usage of mobile banking service.

H6: Behavioral intention towards mobile banking services has a significant positive effect of use the mobile banking services.

Use of Mobile Banking Services:

The literature review has indicated that during the past decades there has been much research regarding online banking services. Practically every step in the proposed mobile banking services process required the customer's attitude and behavioral intention towards using these services (Mobile Banking Services), (Moon & Kim, 2001; Pavlou, 2003; Alsamydai et al., 2014), for this reason, the argue about the customer's attitude and intention towards mobile banking significantly affects the usage of mobile banking services and customer's perception is an active argue.

Ease of use and perceived usefulness (Bhatti, 2007; Chau d lai's, 2003; Davis et al., 1989; Kim et al., 2007; Pavlou, 2003; Venkatesh, 2000; Venkanlesh & Davis, 1996; Ven katesh & morris, 2000, Alsamydai et al., 2014).

H7: use of mobile banking services is influenced by the quality factors perceived ease of use experience, perceived, usefulness, attitude and behavioral intention towards the use of mobile banking services.

The second category: an examination of the contracts of the model of the study.

H8: There is a significant relationship between the constructs of the study model, the quality factors, and perceived ease of use, perceived usefulness, experience, attitude, behavioral intention and the use of mobile banking services.

Methodology:

Data Source

The current study methodology is mainly based on two types of data sources necessary to conduct this study:

- Secondary Sources: Data and information obtained from reviewing the literature and research findings related to this study and its objectives. Also used in the designing and development of the study's model.
- Primary Source: The data necessary to develop the final questionnaire of the study's that was distributed to (26) Jordanian customers of Commercial banks in order. To determine the appropriateness of the instrument and limit and identity the most relevant items to be included in the final questionnaire, final drafting which included (24) questions distributed over seventh dimensions.

The Scale and Dimension:

The process of sailing is an essential tool in almost every marketing research situation (Malhotra et al 2004) and is most commonly used for assessing how people feel or think about objects or constructs (Neuman, 2003). Having taking into consideration the criteria for selecting a scaling technique (Alsamydai et al 2013), for example, information needed by the study and the characteristics of the respondents as well as the meld of administration (Alvin et al 2003), the quintet (Likert) scale was Chosen for the current study, Therefore, all the focal constructs of the current study were measured on quintet (Likert) scale ranging from strongly agree, agree, neutral, Disagree and strongly Disagree.

This current study was divided into seven dimensions relating to the different constructs of the study model:

- Dimension (1) The quality Factors
- Dimension (2) Perceived ease of use
- Dimension (3) Experience
- Dimension (4) Perceived usefulness
- Dimension (5) Attitude
- Dimension (6) Behavioral intention
- Dimension (7) use of mobile banking services

Analyzing Method:

Many of the methods and statistical techniques are used to get the results and analysis to access for the purpose of this study, and the means include the using of: Descriptive Analysis, Cronboach's alpha, on sample t-test was also used for testing the hypotheses and spearman's correlation coefficient.

Results:

Test of Reliability:

A reliability coefficient of (Cronboach's Alpha) 70% or higher is considered "acceptable" in most social science research. The result of this test in the current study is .77 as table (1)

Table (1) reliability coefficient

Cases	Cronboach's Alpha	No. Items
238	.77	24

Results General:

By using descriptive analysis it was determined that the of all questions are over the midpoint (3) this results show in table (2)

Table (2) Descriptive statistics and one-sample t test

Questions	Mean	Std	T-Value	Sig
First Dimension: The Quality Factors				
1-To what Extent do information quality affect your acceptance use mobile banking service	3.68	1.14	9.31	.000
2-To what extent do service quality affect your acceptance use mobile banking service	4.56	.72	33.36	.000
3-To what extent do systems quality affect your acceptance use mobile banking service	3.75	1.80	6.43	.000
4-To what extent do quality factors affect your perceived ease of use mobile banking service	4.59	.71	33.28	.000
5-To what extent do quality factors affect your acceptance use mobile banking service	4.56	.69	34.54	.000
Second Dimension: Perceived ease of use (Peou)				
6-To what extent do perceived ease of use affect your perceived usefulness.	3.73	1.09	10.35	.000
7-To what extent do perceived ease of use affect your experience to use mobile banking services.	4.27	.85	23.15	.000
8-To what extent do perceived ease of use affect your perceived usefulness to use mobile banking services.	3.86	.97	13.65	.000
9-To what extent do perceived ease of use affect your acceptance to use mobile banking services.	3.51	1.15	6.88	.000
Third Dimension: Experience				
10-To what extent do experience affect perceived usefulness to use mobile banking services	3.50	1.17	6.56	.000
11-To what extent do experience affect your attitude toward use mobile banking services.	4.07	1.06	15.58	.000
12-To what extent do experience affect your acceptance to use mobile banking services.	4.55	.78	30.77	.000
Fourth Dimension: Perceived Usefulness (OP)				
13-To what extent does your perceived usefulness affect your behavioral intention to use mobile banking services.	4.32	.93	21.94	.000
14-To what extent does your perceived usefulness affect your acceptance to use mobile banking service	4.30	.84	24.19	.000
Fifth Dimension: Attitude				
15—To what extent does your attitude affect your behavioral intention to acceptance use mobile banking service	4.15	.91	19.41	.000
16-To what extent does your attitude affect your acceptance to use mobile banking services.	4.29	.88	22.57	.000
Sixth dimension: Behavioral intention				
17-To what extent do behavioral intention affect your acceptance to use mobile banking services.	4.68	.62	41.41	.000
18-Your behavioral intention toward mobile banking affect your acceptance to use mobile banking services.	4.46	.58	38.64	.000
Seventh dimension actual use				
19-. Is your acceptance to use mobile banking a result of the quality fatovs	3.62	1.33	7.24	.000
20- Is your acceptance to use mobile banking services a result of your experience perceived usefulness	4.07	1.02	16.23	.000
21-. Is your acceptance to use mobile banking services a result of your attitude	4.11	.82	20.93	.000
22-. Is your acceptance to use mobile banking services a result of your behavioral intention	4.09	1.01	16.78	.000
23-. Is your acceptance to use mobile banking services a result of their ease of use of mobile banking service	4.05	.91	17.78	.000
24- Do factor, Quality, Perceived use, experience perceived usefulness, attitude and behavioral intention affect your acceptance use mobile banking services	4.45	.77	28.94	.000

Testing Hypothesis:

The first category: Test results of first set of hypotheses of the study are shown in Table (3) Statistical analysis of this table illustrates an overall mean score of respondent which measures the dimension (D1, D2, D3, D4, D5, D6 and D7) that corresponds to the first category hypotheses. The mean values of these are (H1 = 4.21, H2=3.84, H3=4.04, H4=4.32, H5=4.22, H6=4.57 and H7= 4.07). These values are above the scale midpoint (3) with the standard deviation showing small dispersion. These result were further validated by one sample t-test which revealed that the overall mean difference for these dimensions as a whole was statistically significant (N=0.000) at (Ns=0.05) with a height T-Value (H1=34.19, H2=18.28, H3=21.69, H4=26.65, H5=26.04, H6=58.70 and H7=28.07), these scores are higher than tabular (tabular = 1.96). As a result, the set of the seven hypotheses are accepted, this results show in the table (3).

Table (3) Testing Hypothesis –First Category

Test Value =3				
The hypothesis	Mean Score	Std Dev	T Value	Sig
H1: Quality factors have a significant positive effects individual perceived Ease of use.	4.21	.55	34.19	.000
H2:Perceived Ease of use (PEOU) have a significant positive effect on perceived usefulness, Experience and attitude towards using mobile Banking Services.	3.84	.71	18.28	.000
H3:Perceived Usefulness (PU) have a significant positive effect on attitude and behavioral intention use mobile banking services.	4.04	.74	21.69	.000
H4:Experience have a significal positive effects on attitude, behavioral intention use mobile banking services.	4.32	.76	26.65	.000
H5: Attitude toward mobile banking services has significant positive effect on behavioral intention to use.	4.22	.72	26.04	.000
H6: Behavior intention toward mobile banking services has a significant positive effect on continuity use of mobile banking services.	4.57	.41	58.7	.000
H7: Continuity use mobile banking services is influenced perceived usefulness, experience attitude, Behavioral intention toward use mobile banking service.	4.07	.58	28.07	.000

The Second Category: It test the construct of the study model in order to test the relationship between the components of the study model. Spearman correlation coefficient was adopted and hypothesis (H8) was developed. There is a significant relationship between the constructs of study model (The Quality factor, perceived ease of use, experience, perceived usefulness, and attitude. Behavioral intention and use of mobile banking services) results of the analysis of spearman's correlation coefficient are shown in the table (4).

Table (4) spearman's correlation coefficient

Diminutions	D1	D2	D3	D4	D5	D6	D7
D 1	1 .000						
D 2	.194** .000	1 .000					
D 3	.201** .000	.534** .000	1 .000				
D 4	.151* .000	.240* .000	.290** .000	1 .000			
D 5	.204** .000	.230** .000	.335** .000	.395** .000	1 .000		
D 6	.180** .000	.131** .000	-.185** .000	-.199** .000	.477** .000	1 .000	
D 7	.223** .000	.279** .000	.283** .000	.158** .000	.377** .000	.118* .000	1

Discussions and Conclusions

The current study aims to adapt the technology acceptance model (TAM) to the use of the mobile banking services by examining several areas related to this subject. For this purpose, a study model was developed, which included several factors. These factors were divided into seven dimensions including: the quality factors, perceived ease of use, experience perceived usefulness, attitude, behavioral intention and the use of mobile banking services. Two categories of the hypotheses were developed based on the literature review as well as a pre-test study. The first category includes seven hypotheses, in which each one covers a dimension included in the study model, where it represents the factors that affect the acceptance usage mobile banking services.

The responses of the studied sample to the questionnaires question (24 questions) were all positive. The highest value was on question (17) with a mean value of (4.68). This is related to the effect of the behavioral intention on the acceptance of using mobile banking services with a value of (T test. 41.41); this result is consistent with the findings (Moon& Kim 2001; Alsamydai et al 2014).

The analysis of the first dimension (quality factors) indicates that the quality of service affects the use of mobile banking services in the mean (4.56), where the T. value equivalent to (33.36), which is considered to be a high value, but it is consistent with what came out in the study of Alsamydai et al., (2014). This showed that the quality of service affects the customer's satisfaction in continuing to deal with electronic services. This is also consistent with what came in the study of Zhilin & Xiang (2004), which presented that the three quality factors, which are: the quality of information, quality of service and the quality of the system have positive relationships with all the dimensions of the study sample, on the other hand, it appeared that the higher value of the correlation coefficient was with the use of mobile banking services with a value of (0.223 **).

The second dimension concern is the perceived ease of use, which affects the experience of mean (4.27) and this represented a high value. It has an impact on all of the perceived ease of use (the use of mobile banking services), and the mean value (3.86) and ((3.51 which is less than the value of experience. However, the perceived ease of use)) has a significant relationship among all the dimensions but the strongest relationships among all were with experience, where the value of the correlation coefficient is found to equal 0.534** and with (Perceived ease of use) the value of the correlation coefficient is found to be 0.340 **, the obtained results are found in consistent with the findings by published researches (Nukoo et al., 2013; Aladwani, 2002; Mon & Kim, 2000). The (perceived ease of use) is associated with a positive relationship with the use of mobile banking and the value of correlation coefficient was found to equal (0.279).

The results of the study showed that (the perceived ease of use) has a significant positive relationship with all of (attitude towards use of mobile banking services) and the value of the correlation coefficient is found to be (0.230 **) and also has a significant relationship with (behavioral intention) correlation coefficient value (0.131 **). The obtained results are found in consistent with the results of Davis (1989). Also, the results of this study showed that the (perceived usefulness) has a significant relationship positive with attitude with a coefficient of (0.345 **) and (behavioral intention) with a coefficient of correlation of (0.199 **) and with banking services use where the value of the correlation coefficient is found to be around 0.158. This result is consistent with the results of all the following studies: Alsamydai et al., (2014); Bhatti (2007), Guriting et al., (2006), Laforct & Li (2005), Liao (2002), Kim et al., (2007) and Pavlou (2003).

As for the attitudes, this study presented the effect of the attitudes on the behavioral intention and the use of mobile banking services, with mean values of (4.15) and (4.29) respectively. The current study indicated that there is a positive significant correlation between attitude and behavioral intention with a value of (0.477 **) and a lower correlation with the use of mobile banking services with a value of (0.377 **). This

result is consistent with several published studies by (Pavlou, 2003; Ajzen, 2002, Alsamydai et al., 2013; 2014, and Bascal & Taylor, 1999).

This study showed that the sixth dimension (behavioral intention) has a positive impact on the value of mobile banking services with mean value 1 of (4.68) and a positive correlation coefficient with a value of (0.118**). This complies with many of the behavioral studies that showed the effect of behavioral intention as a predictor of an individual's behavior (Caslaneda et al., 2007; Alsamydai et al., 2014). The study also showed that the mobile banking acceptance of the technology services is affected by overall factors: behavioral intention, attitude, perceived usefulness, experience perceived of use and quality factors. These factors are converging, due to that the use of mobile banking services is subjected to these factors that make the client accept the technology. In this study the model variables (TAM) has been developed by the addition of quality factors and experience in order to be more adapted to the banking sector environment within the mobile banking services in Jordan.

References

- Ajzen, I. (1991). The theory of planned behavior, organizational behavior and human decision processes 50(2) pp179-211
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32, 665-683.
- Ajzen, I. (2005). *Attitudes, personality and behavior*. New York: Open University Press.
- Aladwani, a.M.(2002) the development of two tools for measuring the easiness and usefulness of transaction web sites .*European journal of information systems*.Vol.11,no3,pp223-234..
- Alsamydai, Mahmood Jasim, Saad Galib Yassin, Husam Mustafa Alnaimi, Dima Mousa Dajani and Ihab Ali –Al Qirem. (2014) .The factors influencing customer usage of mobil banking, *International journal of business management & research*, Vo. 4, Issue 2, Apr 2014 pp 63-78.
- Alsamydai Mahmoo. Jasim, Hmod Mohammad Sanad and Soaad Abdul Fattah albairooti, (2014). Measuring consumers attitudes towards banking services offered by Iraqi public and private commercial banks, *International Journal of business ,management & research*, Vol 4,ISSUE 2, pp 109 -124 .
- Alsamydai Mahmood Jasim .Rudaina Othman Yousif and Ihab Ali Al-Qirem(2013) Measuring individual attitude towards Arbic-Speaking TV channels and the impact of these channels on current events , *International Journal of business and management* .8(1)73-88.
- Alsamydai mahmood jasim, Doma Mousa, Dojani and Saad G, Yaseen (2014). Factors influence the use of e-promotion means in Jordanian business organization, *International journal of management science*, Vol3.no 6. Pp 433-445.
- Alsamydai Mahmood Jasim, Rudaina Othman yousif, Mohammad Hamdi Alkhaswnet, (2012). The factors influencing consumers satisfaction and continuity to deal with e-banking services in Jordan, *Global Journal of management and business research*. Vol.12.Issue 14, Version 1.0, USA.
- Alvin, C.B& Ronald, F.B (2003), *marketing research: online application*, Upper Saddle River, N.J prentice Hall
- Bandura, A.M (1982). Self –efficacy mechanism in human agency, *American psychologist*, 37(2) , p122.
- Bansal,H.S & Taylor ,S.F (1999) The service provider switching model (SPSM) .A model of consumer switching behavior in the service industry , *Journal of service research* .2(2) pp200-218..
- Bhatti, T (2007) Exploring factors influencing the adoption of mobile commerce .*Journal of internet banking and commerce*, 12(3) pp1-13.
- Caslaneda, J, A, Murloz-Leiva, F and Luque,T (2007), Web acceptance model (wam) : Moderating effects of user experience, *information &management* .44(4) pp384-396.
- Chau, P, Y & Lai, V.S (2003). An empirical investigation of the determinants of user acceptance of internet banking. *Journal of organizational computing*, 13920 pp 123-145.

- Chong, M& Kwon, S (2009). The effects of customers mobile experience and technical support on the intention to use mobile banking, *Cyber psychology & behavior* .23(5), pp 539-543.
- Curiting, p & Ndubisi, N.D (2006) Borneo online banking: evaluating customer perception and behavioral intention, *manage Res .News*, 29(12) pp6-15.
- Davis ,F.D, (1989) and Bagozzi R,Wanshow ,P.P (1989) , User acceptance of compler technology , A comparison of two theoretical models , *management science* , Vol. 35,No8 , pp 982-1003.
- Davis, F.D, (1989) Perceived usefulness perceived ease of use and user acceptance of information technology > *MIS Quarterly*, Vol 13, No3 pp 319-340.
- Davis, F.D (1986) .Technology acceptance model for empirically testing new end –user information systems: Theory and results, Phd. Dissertation, Massachusetts institute of technology.
- Dillon, A & Moris, M, G (1997) User acceptance of information technology: Theories and models, annual review of information science on of technology, 31, pp3-32.
- Fishbein ,M & Ajazen ,I (1972) , Belief, attitude, intention and behavior , an introduction to theory and research reading MN.Addison –Wesley p6..
- Gefen, D (2000). Reflections on the dimension of trust and trustworthiness among online consumers. *The data base for advances in information systems* .33(30) p p.38-53.
- Gelik, H, Eray and Yilmaz Veysel (2011) Extending the technology acceptance model for adoption of E-shopping by consumers in Turkek. *Journal of electronic commerce research*, vol.12 No2 p 154.
- Ghash, S, Surjadjaja, h, and Antony .F.I. (2004). Optimization of the determinants of services operation. *Business process management Journal*. Vol.10.No.6 p 61.
- kim,D.J, Ferrin ,D.L and Rao ,H.R (2007)A trust –based consumer decision making model in electronic commerce , the role of trust perceived risk, and their antecedents decision support system, Vol44,pp544-564.
- Konerding, U. (1999). Formal models for predicting behavioral intentions in dichotomous choice situations. *Methods of Psychological Research*. 4(2),p1-32
- Kraus, S.J (1995) Attitudes and prediction behavior: A meta-analysis of the empirical literature, personality and social psychology Bulletin .21(1) pp58-75
- Laforet, S & Li, X (2005) consumers ‘attitudes towards online and mobile banking in China .*International journal of bank marketing*, 2 3(5), pp 362-380.
- Liao, Z Cheung, M.T (2002) .Internet –based e-banking and consumer attitudes: an empirical study, *info. Manage*, 39(41) pp 283-295.
- Malhotra, N, K (2004) *Marketing research: An applied orientation (4th Ed)* Upper saddle, River, N.J prentices.
- Moon, Jm & Kim, Y.G (2001). Extending the TAM for a world-wide-web context, *information and management*, 28, pp217-230.
- Neuman, W.L (2003). (2003) *Social research method, qualitative and quantitative approaches (5th ed)*. Toronto, Alyn & bocon.
- Olson, James M & Zanna Mark.p. (1993). Attitude, change, annual Review of psychology, 44 pp117-154
- Parasuraman, A Zeithaml, V.A and Berry L.L (1985). A conceptual model of service quality and its implication for future research. *Journal of Marketing*. Vol.49, pp 41-50.
- Pavlou, P.A (2003), Consumer acceptance of electronic commerce, Integrating trust and risk with the technology acceptance model, *international. Journal of electronic commerce* .7(3) pp 101-134.
- Robin Nunkoo, T.D, Juwaheer, and Tekranee Rambhunjun (2013). Applying the extended technology acceptance model to understand online purchase. *Behavior of traveler.Proceeding of 21st international business research conference 10-11 June (2013)*, Ryerson university, Toronto, Canada, ISBN, 978-1-922069-25-2.
- Rowley, J (2006) .An analysis of the e-service literature, towards a research agenda, *Internet research*, Vol. 16.No.3.pp 33-59.
- Selven .Glover and Izak Benbasat, (2010). A comprehensive model of perceived risk of e-commerce transaction, *International journal of electronic consumr*, winter 2010-2011 Vol. 15, N2, pp47-78.
- Shih, Y and Fang, K (2004). The use of a decomposed theory of planned behavior to study internet banking in Taiwan. *Internet Research* .Vol.14, No 3. Pp 213-23.

- Smith, J.Terry ,D,Mansted ,A,Louis,W,Kolter man ,D & Wolfs' (2008) ,The attitude – behavior relationship in consumer conduct , The role of norms , past behavior and self identity . The journal of social psychology, 148930 pp 311-333.
- Taylor, S.and Todd, P. A (1995). Understanding information technology usage: a test of competing models 'information systems research, Vol.6.No2 pp 144-176..
- Venkatest, V & Morris, M.G (2000). Why don't men ever stop to ask for directions? Gender, social influence. And their role in technology acceptance and usage behavior, Mis, Quarterly 24(1) pp115-139.
- Venkatest, V and Davis, F.D (1996) a model of the antecedents of perceived ease of use; development and test decision, science .27(3), pp 451-481.
- Venkatest, V (2000) .Determinants of perceived ease emotion into the technology acceptance model, information system research Vol.11. 4(4) pp 342-365.
- Zhilin, Y & Xiang, F (2004) Online service Quality dimension and their relationship with satisfaction a content analysis of customer reviews of securities brokerage services. International journal of services industry management, Vol.15, No, 3 pp 302-326.
- Zimbardo P.G & leippe M.R (1991). The psychology of attitude change and social influence, New York, McGraw .Hill pp1-10.

