

The Role of Perceived Trust on Consumer Intention Toward Mobile Banking in Palestine

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Abstract:- Currently, banks are seeking to launch a set of new services such as: Mobile Banking (MB) and this to save time, effort, and money and provide convenience to customers and thus increase their profit. Despite their interest, none of them has conducted a survey to see how consumers are accepting mobile banking services in Palestine. In this paper, we will explain the concept of decomposed theory of planned behavior (DTPB) in its theoretical and research aspects and explain the intention of the consumers to adopt mobile banking services in the context of Palestine in detail, so we can understand the factors that may affect MB in Palestine and increase its spread. These factors may be electronic, attitudinal, and technology factors. In order to reach this result, a questionnaire was conducted, in which many customers participated. The number of useable questionnaires was about 682, and it was based on structural equation modeling to enhance these results and come out with integrated research. The results showed that attitude, perceived behavior control, and perceived trust had a positive effect on how consumers would accept the MB system in Palestine, but subjective norms had a negative impact on consumers' behavior intention. This result is in line with earlier findings in the literature.

Keywords:- Component; formatting; style; styling; insert (key words).

I. INTRODUCTION

The banking sector is considered to the first field that has managed to use Internet as a way to provide their services [1]. One the other hand, despite that the usage of internet banking has so many advantages and retail banks have spent large budgets, the customers still use the offline bank services instead of online ones [2], [3]. For instance, there is argument between [4] and [5] that Europe and English banks haven't managed to make their clients to be interesting and to have the desire to use and accept mobile banking. Past studied concentrated mainly on the variables that encourage the clients to use the services of mobile banking. According to [6]–[9] these variables rely on suitability, low price, reliability, available information, perceived usefulness, consumer awareness, privacy and safety. To encourage the clients to accept and use mobile banking, some authors [10], [11] needed researchers and professors to help them recognize this process by further selecting its factors. To enhance clients' satisfaction and to increase financial services, organizations are releasing the Internet banking services through mobile networks. This service, called mobile banking, refers to the usage of mobile network technology as channels to do financial services [12]. According to Kalaiarasi, Lakshmi, and

Stephan, (2017) the mobile banking has a great probability because mobile banking follows the line of the success of internet banking. So, mobile banking isn't only a normal development of internet banking, but it also provides a good substitution to other regular bank channels like ATMs, internet banking and offline branches. Although it is predicted that over one billion clients will use mobile banking in the world by 2017, this one billion represent only a low percent of only 15 of the mobile network clients in the worlds [14]. Moreover, a percentage of almost 50% of all mobile clients still only use the traditional banking services and they haven't any desire to use mobile banking [12].

As a result, the financial organizations are interested in providing applications and services through mobile banking way and this desire is increasing as fast as the cell phone penetrates. There is an intention to check the usage of this new banking way according to recent literature [15]–[17]. Because the majority of mobile banking studies have used many different methods and frameworks, it becomes hard to make comparison between these studies and to develop an adoption theory about usage this method (mobile banking). The current study aims at providing a complete mobile banking adoption framework by concentrating on determinants that affect the clients' desire as to whether to use mobile banking. Decomposed theory of planned behavior and well-known DTPB and technology adoption frameworks are the main determinants of the proposed integrated. The basic feature of this framework is that it provides a large number of constructs that predict and demonstrate completely the clients' usage of mobile banking in Palestine. Four parts were included in the paper to achieve the study goal. In the first part, the literature review is mentioned, and a short general overlook of the models of the innovation application and the suggested integrated adoption intention framework. Then, we explain the structure of the suggested framework. Also, the researcher mentions the suggested method to test the framework and also to analyze the data. At the end the researcher makes conclusions and propositions for the upcoming efforts and future research in this field.

II. LITERATURE REVIEW

According to Faqih and Jaradat, (2015) and Tam and Oliveira, (2016), mobile banking is an implementation of m-commerce by which the clients can get access their bank accounts through mobile phones to help them use and fill in financial transactions like payment of stocks, balancing cheques, reviewing account statuses. According to Luo, Li, Zhang, and Shim, (2010), mobile banking is considered to be an advanced method that enables the clients to use banking

services via a channel which enhance interactions between the clients and the bank with the use of mobile devices like mobile phone or personal digital assistant (PDA). Palestine is known to be a new country in mobile banking sector and want to progress and flourish in this sector. However, the clients are provided with mobile banking services in the majority of public and private banks, but these services still aren't used because the clients aren't get accustomed to the channel used to get these services and the major significant factor is the lack of the trust to use electronic systems [21]–[23]. It is clear that if the clients don't like mobile banking systems, they won't use these services. Today, however mobile banking adoption is late in Palestine, it is known that the banks are aware of the chances, which they can get through the usage of technology. The banks are really progressing at a high speed toward having an advanced mobile banking and supplying the clients with services in greater levels. On the other hand, however the great budget used in the sector of mobile banking, some reports demonstrated that some clients not use this channel, despite of having access to it so, the researchers are studying behavioral factors that have an impact on the clients adoption of mobile banking, will enable the banking systems to detect the factors associated with the usage of the technology and to support the pertinent factors to motivate the clients to use this services in order to develop the mobile banking services. As a result there is a need to check and investigate to detect factors that affect the usage of the mobile banking system and clients intention regarding it [9], [24], [25]. Various theories are presented to detect factors that make clients adopt new technologies and data systems and use them like Theory of Planned Behavior[26], and Decomposed theory of Planned Behavior[27].

In 1995, Taylor and Todd introduced the decomposed theory of Planned Behavior (DTPB)[28]. According to Luarn and Lin, (2005) the theory of planned behavior was presented through breaking down structure of attitude, subjective norm and perceived behavioral control. As a result, the researchers had the power to clarify the behavioral intentions and can demonstrate behavioral events obviously (Pedersen, 2005). The behaviors is identified by "intention to use" through the decomposed theory of planned behavior. "Intention to use" consequently is based on the attitude towards behavior, subjective norm and perceived behavioral control. The perceived usefulness refers to the range to which someone believes that when he or she adopts a specific technology, his or her job performance will get better [30]. According to (DTPB) the Perceived ease of use identified as the extent to which someone believes that adopting a specific system does not demand much exertion. According to[31], Perceived website characteristic refers to the degree of user-friendly and responsive, effective, reliable and very good to ensure that consumers interact with it to which is suitable for the present values, past knowledge and recent needs of the expected adopters. While the theory of planned behavior easily clarifies the link between beliefs structure and the prerequisite of intention, as a summary, the decomposed theory of planned behavior, provide an integrated a way to explain the factors influencing someone's decision to adopt technology information[32].

III. OBJECTIVE OF THE STUDY

This paper is based on the DTPB model and applying it to determine the extent of consumer acceptance of mobile banking services and the factors that may affect their acceptance. Therefore, this research focuses on understanding the specifications that suit the consumers, their expected behavior and the controllable behavior, as well as studying the trust that may face customers in implementing this service. Figure1 shows an illustrated model for these four aspects, which is the biggest four challenges which customers may face at implementing a mobile banking system.

IV. RESEARCH MODEL

Figure1 illustrates the proposed research model, which is based on the DTPB and the extensive literature review related in the previous section. The model asserts that the adoption of mobile banking is determined by the behavior Intention (BI), Attitude (ATT), perceived behavior control (PBC), Subjective Norms (SN), and the perceived trust (PT) from other theory, The rationale for the variables and the proposed relationships between them is explained in the following section.

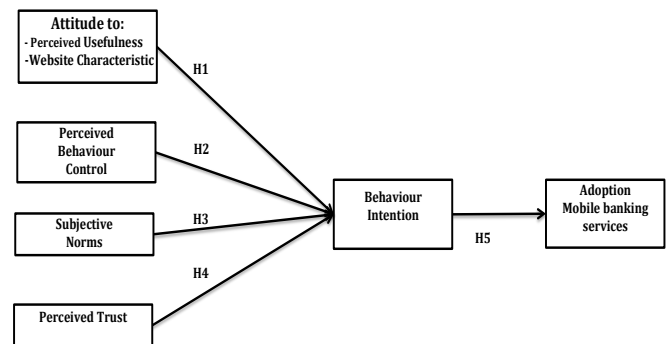


Fig 1:- Conceptual Model of the study

A. Attitude (ATT)

Attitude - which means the behavior of the consumer towards the commodity and how to accept it either by praise or ostracism. In a previous study, [33] have shown that consumer beliefs influence greatly on their behavior when dealing with any system for the first time and by studying it, we can see how it can behave towards this new system accurately and effectively. As we said earlier, ATT here represents how consumers think about the benefits of mobile banking, perceived usefulness and website characteristics.

The perceived usefulness (PU) is consumer perception of how to increase profit and banking performance when applying the online banking system[34], [35]. In the same way, mobile banking enhances banking performance by providing an easier way to control banking services at any time, anywhere, save time, money, time until return to use a PC and other benefits. Many other papers have shown that consumer attitudes and intentions can be influenced by perceived usefulness [36]–[39]. Therefore, the possibility of applying mobile banking services is increasing by increasing the interest of consumers from using these online banking services.

Mobile banking is closely linked to the development of distinctive, easy and specific features of the e-banking website because it is documented as a good source of appropriate services[40]. The availability of accessing the consumer to the bank at any time to do some banking services is important in banking management, even if the bank's working hours are over. The site must be user-friendly and responsive, effective, reliable and very good to ensure that consumers interact with it [31]. Moreover, increasing security precautions at the site, and thus reducing the fear of cyber thefts when dealing with money can increase Consumers' confidence in mobile banking. Thus increasing the reliability and the advantages of this service can overcome the disadvantages and thus increasing the possibility of applying mobile banking services. Research has shown that consumer attitudes and intentions are heavily influenced by the characteristics of the website[41]–[43]. The research of [12] showed that consumers welcomed and accepted the application of mobile banking services unexpectedly, so this is evidence of their intention to continue to use mobile banking services. The following steps should be followed when applying this service:

H1. Attitude has a positive effect on consumers' intention to adopt mobile banking service.

B. Perceived Behavioral Control (PBC)

Perceived behavioral control is defined as the resources and opportunities available to an individual who offer the conditions necessary for adopting a certain behavior [26]. In the proposed framework, perceived behavioral control is based on the potential user's perception about whether he/she is capable of using mobile banking services and possesses the required knowledge and resources to adopt the mobile banking services. [28]Decomposed this dimension into self-efficacy, resource-facilitating conditions, and technology- facilitating conditions. Following [44], self-efficacy is defined as one's judgments of his or her capability of performing a behavior. Applied to mobile banking services, self-efficacy describes consumers' judgments of their own capabilities to obtain product information and purchase products or services with mobile banking [45]. Resource-facilitating conditions refer to resource elements, such as time and money, and the resource compatibility issues that constrain usage [28], [46]. Technology-facilitating conditions refers to technology factors, such as hardware, software, and technology compatibility issues that constrain usage[28], [46]. Therefore, the study propose the following hypothesis:

H2. Perceived control behavior has a positive effect on consumers' intention to adopt mobile banking service.

C. Subjective Norms: (SN)

The subjective norms means that the individual believes that he/she should do the usual work or reject unusual actions, which is what the people who are important to him and those around him want [47]. These criteria are agreed on and based on certain beliefs that can be expected by close relatives and friends. Individuals usually follow and implement these standards and have a good and beloved image at a specific group of close associates [48]. [49]Explained that these criterion and beliefs greatly affect the behavior of individuals and cannot be ignored by any research. These beliefs have

been taken into account in many researches such as mobile banking [48],[49]. The study has therefore confirmed that social beliefs positively influence the acceptance of mobile banking services. Therefore, the study propose the following hypothesis:

H3. Subjective Norm has a positive effect on consumers' intention to adopt mobile banking service.

D. Perceived Trust (PT)

Perceived trust refers to the readiness of someone without any past trial, or reliable, important information to take the danger for the sake of achieving a necessity [50]. Also, the trust has been considered as an obstruction for clients to use online and mobile services [46], [51], [52]. According to Mazhar, Rizwan, Fiaz, and Ishrat,(2014) says, Privacy and furtiveness worries controlling the new electronic ways provided by financial organizations and banks are the cause of making people not using mobile banking and internet banking. Additionally, primary trust is a significant and crucial key for clients to use mobile banking especially if they believe that the mobile banking usage is linked to a greater risk than traditional banking [54]. Koenig-Lewis, Palmer, and Moll, (2010) made conclusion about the trust and willing to adopt mobile banking believing that there is no direct link between both of them instead, they linked through indirect variants like compatibility and perceived risk have its effect on usage adoption. Therefore, it is necessary to determine these variants and its influence on the intention and usage adoption. Therefore, the study propose the following hypothesis:

H4. Perceived Trust has a positive effect on consumers' intention to adopt mobile banking service.

E. Behavioral Intention (BI)

In previous research in the IS/ IT department, it was emphasized that behavioral intention is a strong motivation and the main engine in accepting new services and systems and consumer desire to continue them[26], [56], [57]. Therefore, this research confirms that the application of mobile banking system can be expected by a detailed study of the desire of consumers and their behavioral intent to continue using this service. This theory has been proven in many previous research and studies of the Internet banking system, most notably [31], [58] which proved this relationship and a lot of other researches, so we should follow the following steps when applying any new system. Therefore, the study propose the following hypothesis:

H5. Behavior intention has a positive effect on adoption of mobile banking service.

V. RESEARCH METHODOLOGY

A. Study Population and Sample

Population here means the number of bank customers and includes all the customers in the banks of Palestine. The sample is the groups of banking customers in Palestine, including students such as university students and workers, such as employees, businessmen and others. These studies can be easily measured by knowing these numbers. As for the size of the sample, we cannot easily identify them. Therefore, we relied on [59] as well as we used it to analyze the responses

and obtain the desired results. And the number of samples we want in this research is about 1000. The usable responses here are the responses of some consumers' of banks with a bank account in addition to using the system of mobile banking.

Construct	Item	Loading	AVE	VIF	CR	CA
Attitude	ATPU1	0.8488	0.739	3.505	0.8946	0.8245
	ATPU2	0.8808				
	ATPU3	0.8490				
	ATWC1	0.9045	0.835		0.9106	0.8042
	ATWC1	0.9239				
Perceived Control Behavior	PBC1	0.7236	0.590	1.551	0.8515	0.7657
	PBC2	0.8795				
	PBC3	0.7295				
	PBC4	0.7306				
Subjective Norms	SN2	0.7656	0.697	1.050	0.8723	0.8758
	SN3	0.7689				
	SN4	0.9591				
Perceived Trust	PT1	0.7297	0.657	2.991	0.8921	0.8430
	PT2	0.7886				
	PT3	0.8867				
	PT4	0.8701				

Table 1. Construct Validity and Reliability for independent Variables.

B. Instrument development

The instruments which were developed here are based on researchers studied and previous studies related to all the services of mobile banking and online banking, the examination of these research and purification of all that may be useful in the development of appropriate instruments and the most important of these instruments is the questionnaire. This questionnaire is divided into two aspects: the first aspect is the demographic profile and the personal data of customers such as age, educational stage, gender, job, annual income, living standard, whether he uses mobile banking services and how to accept it, as well as the type of information technology that may be related to banking services, The second part focused mainly on questions about the basic concepts of ATT, SN, PBC, BI, and PT which we adopted in this study from (Taylor & Todd, 1995). The Items of PT was adopted from [60]with answering scale of five points and were 1: 5 for disagree: totally agree respectively.

C. Instrument Validity and Reliability

In order to determine the validity of instruments for consumers, we relied on two senior academics to present the questionnaire. They had extensive experience in studying the empirical research and how to present and rely on the results. They have confirmed the validity and acceptance of the online version of the questionnaire and its presence on the Internet. Some of their ideas were used to develop the questionnaire, such as rewriting the questions to be easier for the participants to understand, in addition to making sure that there was an option to answer the questions. To ensure that the questionnaire is realistic, not to exaggerate or to have questions unrelated to research, a pilot test was sent to 30 customers using mobile banking services to evaluate it. When

the questionnaire was done, a 'limit to one' option was developed to ensure that the questionnaire did not reach many people and thus to obtain fewer responses to the extent to which the questionnaire was accepted and made valid to customers. We relied on the Cronbach's alpha coefficient to find out the extent of the reliability of the questionnaire, which confirms the internal consistency of this questionnaire. The results showed that the value of Cronbach's alpha was (0.87) for ATT items, (0.91) for SN items, (0.88), (0.92) for PBC items, (0.84) for BI items, and 0.88 for whole instrument.

VI. RESULTS AND DISCUSSION

A. Analysis on Respondents' Profile

When examining 1000 samples mentioned above, we found about 682 usable samples. 68.2%. For males, they were the most and they were about 63.2%, the majority of them were young from 20-29years old about 43.7%. About 41.3% had a university degree, while those who use the Internet more than four years were about 69.9%.

B. Constructs Validity and Reliability

In this paper we will rely on the partial least squares (PLS) method of structural equation modeling technique to evaluate the model and test it. Here we put the dataset obtained (from 682 questionnaires) into SMART PLS 3.0 so that we can analyze them in detail and count them in tables. PLS have many pros, the most important of which is its ability to analyze input data in the way you need as a statistical analysis of other structural equation modeling techniques. Validation and reliability tests for the measurement model are important to apply it and test the customer behavior. This test includes composite reliability, factor loading, the validity of the convergence, and the validity of the discrimination[61], [62]. In Tables1 and Table2, it was found that reliability can be studied separately by the Cronbach's alpha reliability (CA) and composite reliability (CR) and all the results were higher than 0.7. So it clarified that the internal consistency in this results well and the model was reliable. To examine these results well, the Collinearity was made by VIP value to study the non-interactive variables and to ensure that they are not effective, such as dependent and dependent variables. The values ranged between 1.050 and 3.505 and these results were very satisfactory as they achieved the desired goal. But the element should be higher than 0.708 and has a free cross-loading effect after being loaded as required within the linked construct. The Table1 with results shows optimal load results. As well as the results of average Variance Extracted (AVE), that exceeded 0.5, which achieved the appropriate level of convergent validity. Table3 shows the standard Fornell-Larcker standard matrix and emphasizes the absence of problems that may affect the discriminatory validity or lead to malfunction. In the end, this research showed that its results were ideal and achieved the required level of experience, which suggested from [61].

Construct	Item	Loading	AVE	CR	CA
Behavior Intention	BI1	0.8966	0.820	0.9318	0.8900
	BI2	0.9434			
	BI4	0.8753			
Adoption Mobile service	AD1	0.7683	0.612	0.8633	0.7888
	AD2	0.7728			
	AD3	0.7994			
	AD4	0.7890			

Table 2. Construct Validity and Reliability for dependent Variables

Const ruct	AMS	AT-PU	AT-WC	BI	PBC	PT	SN
AMS	0.783						
AT-PU	0.609	0.860					
AT-WC	0.714	0.561	0.914				
BI	0.880	0.606	0.772	0.906			
PBC	0.613	0.406	0.633	0.608	0.769		
PT	0.727	0.777	0.647	0.762	0.453	0.822	
SN	0.148	0.060	0.143	0.113	0.177	0.034	0.835

Table 3. Discriminant validity for construct Fornell-Larcker Criterion

C. Structural Model

In this study, R2 predictive power and predictive relevance are performed to study the full power of the model accurately and in detail according to [61]. In Figure2 we shows the predictive power of this proposed model as well as the results of the path coefficient in the structural model and these results were extracted by the PLS algorithm and its study. The data and results show us about 77.5% of the results and proposals for the adoption of mobile banking, despite their variety.

The results of this study were satisfactory for predictive relevance or predictive power: predictive relevance was Q2 of 0.77; for predictive power the results were high and the model had a large with predictive relevance as shown in Figure2.

Table 4 demonstrates the path coefficient, which are linked to the suggested hypothesis and this hypotheses are determined by the PLS bootstrapping analysis. The value, which equals to 1.96 or more, must be the value of the rule of thumb as [63] is T-statistic and this value is equivalent to the significant value of 5% or lower. The researcher approves the four of suggested relation H1, H2, H4, and H5. The positive link between ATT and BI (Beta = 0.285; T-statistics = 4.58) is suggested by H1. The positive relation between PBC and BI of mobile banking adoption (Beta = 0.236; T-statistics = 6.48) is suggested by H3. The positive relation between PT and BI of mobile banking adoption (Beta = 0.424; T-statistics = 6.71) is suggested by H4. The positive relation between BI and adoption mobile banking service (AMS) (Beta = 0.880; T-statistics = 7.198) is suggested by H5. On the other hand we proposed that there is a positive relation between SN and BI to use mobile banking services, but the result revealed that there is a negative relation (Beta = -0.072; T-statistics = .00226) therefore, we reject the hypothesis H3.

In Palestine, BI has a great positive impact on adoption of mobile banking usage because the researcher has included all five hypotheses and they have a sufficient level of significance at 1%. PT is the priority of the factors that determine the usage variance followed by PBC, and ATT, but SN influences mobile banking adoption in Palestine negatively.

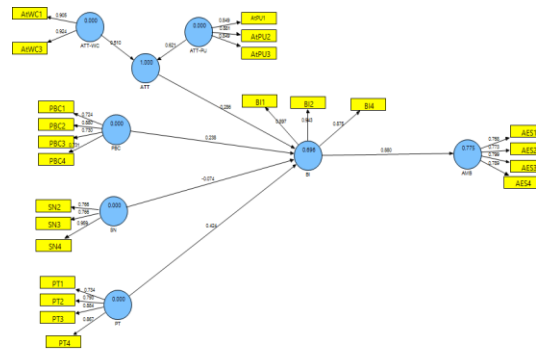


Fig 2:- Path Model - PLS Algorithm.

Hypothes No.	Path	Path Coefficien	T Statistics	Sig. Value (1tailed)	Status
H1	ATT-> BI	0.285659	4.582548	0.00001	YES
H2	PBC-> BI	0.236607	6.484393	0.00001	YES
H3	SN-> BI	-0.072551	2.848796	0.00226	No
H4	PT-> BI	0.424791	6.718775	0.00001	YES
H5	BI->AMS	0.88023	7.198423	0.00001	YES

t-values: 1.65 (10%); t-values: 1.96 (5%); t-values: 2.58 (1%)

Table 4. The hypothesis result and structural relationship

VII. CONCLUSION AND RECOMMENDATIONS

This paper seeks to test the factors which have an impact on consumers’ intention to use mobile banking in Palestinian banking sector, and to achieve this goal the researcher uses the DTPB(ATT, PBC, SNs) and also extends the DTPB through adding a new determinant which is called perceived Trust (PT) and this determinant come from the previous research[60]. It is demonstrated according to experimental results that the PT has great positive influences on consumers’ intention. According to these results, it is recommended that the banks should have full concentration to enable the new customers to be sure that these services are trust through adding a logo and provide a high security proof on the mobile application and the banks website for the sake of obtaining and increasing the quality of services and this will lead to getting new customers and keeping the present ones and enable the customers to get their needs. Additionally,the study also pointed out that SN has a negative impact on consumers’ intention to adopt mobile banking services. This indicates that Palestinian consumers’ have an individual culture and are not influenced by the opinions of those around them. The present study also recommends that researchers in the future should study in

depth this variable and revealing the elements that affect it. Because the findings of the present study are restricted to Palestinian banking sector, the study introduces recommendations and advices for future researchers to continue these studies and lead more researches on the effect of the trust on the intention of the consumers in various sectors and countries to be able to generalize the results.

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