

Critical Factors Influencing E-Banking Service Adoption in Jordanian Commercial Banks: A Proposed Model

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Abstract

The primary purpose of this current research is to conduct an investigation into the factors affecting the acceptance of E-Banking by clients who have access to the internet and elicit the opinion of non-internet users about E-Banking. To develop a theoretical framework model for the current study, a literature review relating to the technology acceptance model (TAM) and its various adaptations is being undertaken. The E-Banking has been chosen as an innovative service, whose possible adoption by customers will be investigated. It is believed that the successful adoption of E-Banking will be cost and convenience beneficial for all stakeholders in the financial sector. The current research model purposes an extension to the technology acceptance/ adoption models that account essential factor influence E-Banking services adoption in the Jordanian commercial banks.

Keywords: Jordanian commercial banks, E-Banking service, technology acceptance model, critical factors

1. Introduction

In Jordan the potentials of E-Banking service were introduced to the banking sector in mid-2002. Since then Jordanian commercial banks have been active in developing E-Banking, and M-Banking services. The banking sector in Jordan is eager to contribute to the enhancement the role of internet, mobile services in the banking transactions. Thus, the primary objectives of the current research are to investigate and measure the impact of the critical factors influences adoption of E-Banking Services.

The current research will also review available literature concerning essential factors affecting the adoption/ acceptance of E-Banking services by clients who have access to the internet and elicit the opinion of non-internet users about E-Banking. It is apparent that there is a lack of research on the issue under consideration. This has motivated the venture into this unsearched area to see whether bank account holders who have access to the internet will adopt E-Banking services.

2. Literature Review

2.1 Technology Acceptance Model (TAM)

The TAM, firstly proposed by (Davies, 1986), was conceived to predict (Fishbein & Ajzen, 1975), and explain an individual's IT/IS acceptance (Hu, et al., 2008).

The Technology Acceptance Model (TAM) is an extension of the Theory of Reasoned Action (TRA). TRA was originally proposed by Fishbein and Ajzen in 1975 in an attempt to understand behavior and predict outcomes. TRA assumes that a person takes into account the implications of his/ her action before deciding whether or not to engage in certain behavior. It also posits that the main determinant of a person's behavior is behavior intention. The premise of TAM is that people behavioral intention to accept and actually use a certain technology is determined by two constructs namely; perceived usefulness and perceived ease of use (Davis, 1989). User's attitude and belief as proposed by TAM is perceived to be an important factor which influences the use of new technology. A person whose attitudes toward information technology are positive will have higher acceptance of the use of technology in question, compared to another person whose attitudes toward that technology are negative. Many empirical researches (e.g. Davis, et al., 1989; Agarwal & Karahanna, 2000; Venkatesh, et al., 2003, 2007; Adams, et al., 1992; Segars & Grover, 1993) have shown support for TAM. Thus, the technology acceptance model is generally referred to as the most influential theory in IT and Information Systems (Benbasat & Bark, 2007).

However, TAM has been criticized for not being able to fully reflect the specific influences of technological and usage-context factors which may alter user acceptance (Quan, et al., 2010; Davis, et al., 1989). Others (e.g. Venkatesh, et al., 2003; Chau & Hu, 2002; Moon & Kim, 2001; Mathieson, et al., 2001) argue that TAM requires extension and adjustment in order to comply with the specific characteristics of technology under consideration. They further point out that although the findings of TAM's application have been shown to be valid, it is not possible and feasible to apply them to the evaluation of factors affecting the voluntary acceptance of certain E-services by individual end users or customers. This is simply because TAM findings are oriented toward the adoption of technologies in companies. Thus, a number of researchers have adjusted and extended the TAM, either by adding new constructs to it, or making certain constructs redundant. Besides, Venkatesh, et al., (2003) proposed an extended TAM which unifies eight popular models and combined them to the unified theory of acceptance and use of technology to illustrate how information systems are accepted, and to highlight the factors impacting intention to use them (Venkatesh, et al., 2003). The Unified theory of acceptance and use of technology (UTAUT) represents a shift from fragmented view of IT adoption or acceptance to a unified integrated single theory (Abu Shanab, et al., 2010). Kaasinen, et al., (2002) and Keat and Mohan (2004) modified the value component (from perceived usefulness) and added two components: trust and perceived ease of adoption. In a study by Quan, et al., (2010) the "attitudes" construct was removed for simplification. O'cass & French (2003) are of the opinion that TAM should not be confined solely to the adoption of technological perspective, and that other non-computer based technological adoption should be encouraged to add a marketing flavor to the findings, and to be more specific. The researcher concluded that most of the technology acceptance models have been extensively tested in the developed countries. More specifically, the IT literature lacks technology acceptance adoption models in the Arab world. Therefore, it is vital to conduct study in terms of E-Banking services adoption in the Jordanian Commercial Banks.

2.2 A Proposed E-Banking Service Adoption

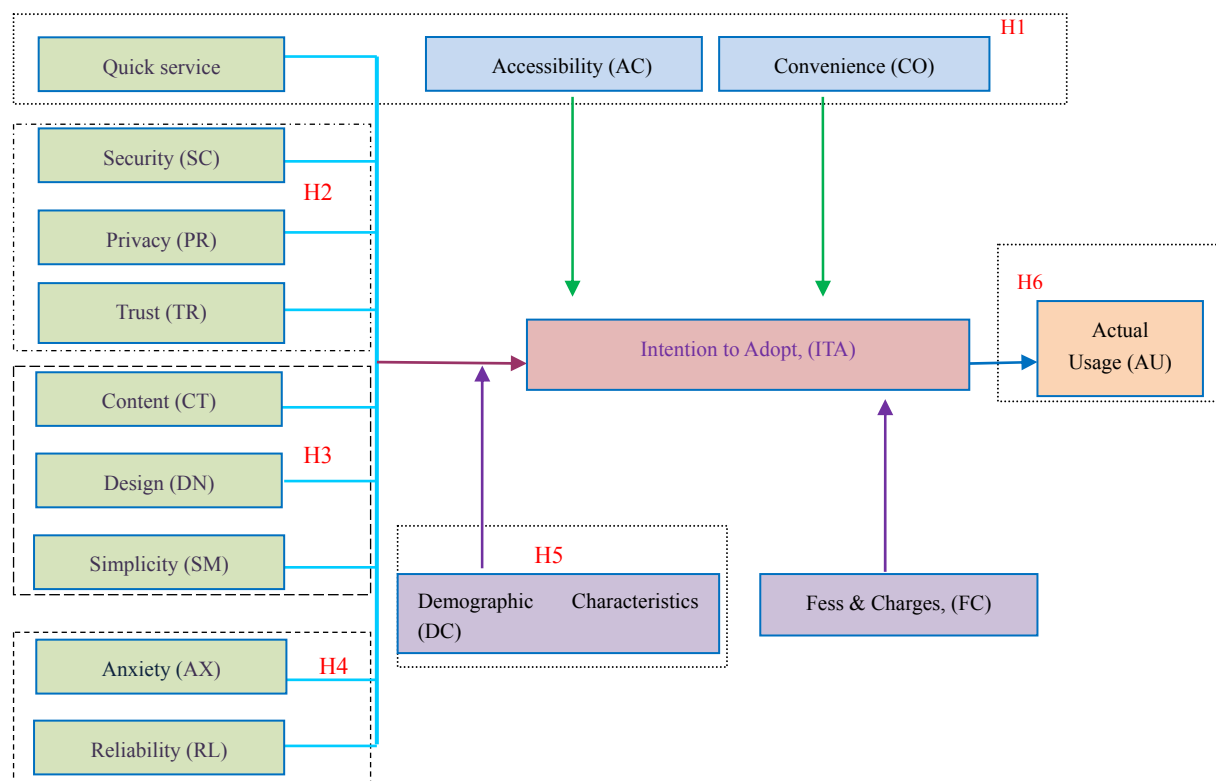


Figure 1. E-banking acceptance model

Source: Compiled in light of literature review and experts comments (during pilot study).

Based on previous studies, a number of variables thought to be impacting the process of adoption of products and services will be discussed and later embodied in a suggested model. These variables are as follows:

2.2.1 Convenience, Accessibility and Quick E-Service Delivery

E-Banking provides three major advantages: convenience (Meuter et al., 2002), speedy service (Karjaluoto, et

al., 2002), and accessibility (Al-alak & Alnawas, 2010), compared to traditional retail banking services. Indeed, the rationale behind the establishment of E-bank Services in the first place is to enable bank account holders to conduct transactions with higher degree of convenience and speed, and to access internet banking services at all times and places. Apart from that, the accessibility of computers is perceived as a measure of relative advantage (Delvin, 1995; Ainscough & Lockett, 1996; Daniel, 1999; Black et al., 2001; Polatoglu & Ekin, 2001; Suganthi, et al., 2001; Gerrard & Cunningham, 2003). Obviously, both bankers and clients would be satisfied with a service delivery that is convenient, quick and easily accessible.

2.2.2 E-Security, Privacy and Trust

As many bank account holders are concerned with the risk associated with E-Banking transactions, the perceived lack of financial and non-financial security is definitely a stumbling block (Jun et al., 2004). Financial security is about conveying financial information online (e.g. an account number, account statement, transfers, etc.), whereas non-financial security is related mainly to showing personal information (e.g. e-mail, telephone number, etc.). Security is defined as the protection of data against accidental or intentional disclosure to unauthorized persons, or unauthorized modifications or destruction (Mirza, et al., 2009). Furthermore, bank account holders often fear that their personal information might be leaked to unauthorized circles via the internet (Davis, 1993; Dumortier & Goemans, 2001; Miyazaki & Fernandez, 2001). Clients are also concerned about the trust ability of the E-bank's privacy policies (Gerrard & Cunningham, 2003). Other studies show that security and privacy are associated with trust in the sense that trust is often invoked by the academia to synchronize the issues of security, privacy, fulfillment and confidence (Lynch & Lundquist, 1996). Indeed, numerous empirical studies have found that trust constitutes a major critical factor influencing the success of E-Banking because uncertainties often surround banking transactions over the internet (Zhang & Tang, 2006; Chellappa, 2000; Gerrard & Cunningham, 2003).

2.2.3 Content, Design and Simplicity of the Banking Web Site

According to Laukkanen, et al. (2008) consumer resistance to internet banking, especially among those who are not fully familiar with the world of internet, is mainly attributed to technical issues such as design, content and complexity not only of the web site but also the ways and means of using the site itself. Another study shows that sophisticated web site design and crowded content discourage customers from using the web site and benefit from it (Pikkarainen, et al., 2006). Earlier studies on internet banking show that the complexity or poorness of the web site design and content might deter visitors from using the services provided via such web sites (Gerrard & Cunningham, 2003; Howcroft et al., 2002; Black et al., 2002). Simplicity is defined as the betterment of tools that enables the provider of services to deliver the benefit that satisfies an unspoken consumer's need by inserting better pictures and finding better ways of sharing to their potential customers (Piew, et al., 2010). Lau (2007) suggests that in order for a web site to be truly appealing and attractive to customers, it should be designed in such a way as to deliver the maximum benefits as perceived by end-users themselves.

2.2.4 Anxiety and Reliability

A study by Laukkanen, et al. (2008) reveals that psychological dimensions such as anxiety, prior beliefs, traditions and image are even greater sources of resistance to E-Banking Services than other factors. The term anxiety is most often used to describe unpleasant emotional state which characterized by tension and apprehensive (Abu Shanab et al., 2008). The anxiety motivates users to avoid condition that produce anxious feelings Reliability refers to the extent to which a user believes that he or she can rely on the E-banking service provided and feel satisfied with it (Lee & Lin, 2005). In this sense, both reliability and anxiety might be regarded as constructs impacting the intention to use E-Banking services (Quan & Jianxin, 2010; Piew, et al., 2010; Al-alak, 2004).

2.2.5 Fees and Charges

It has been empirically found that customers will be more likely to accept new technologies if the advantages gained from the use of such technologies exceed the costs incurred (Davis, 1989). Cost savings have enabled internet-based banking to offer E-Banking services at lower or no service fees, and to offer higher interest rates on interest-bearing accounts than traditional banks (Poon, 2008; Gerlach, 2000; Jun & Cai, 2001). Other studies (e.g. Howcroft et al., 2002; Karjaluoto, 2002; Karjaluoto, et al., 2002; Poon, 2008; Gerrard, et al., 2006; Kuisma, et al., 2007; Laukkanen, et al. 2008) argue that even though internet banking users largely perceive that the service fees are acceptable, for some non-adopters the relative advantage of internet banking may be poor due to the fact that a great deal of expenses will be incurred in buying a computer and getting online, when the costs might exceed the benefits.

2.2.6 Demographic Characteristics: Gender, Age, Income, and Education

Research in the field of E-Banking suggests that demographic characteristics such as gender, age, income and education). Impact the intention to use certain E-Banking services. Wilson (2000) reveals that low income consumers would be less likely to pay for a monthly fee to subscribe to an internet service, and would be less likely to have a home computer. previous study reported that males were moved likely to adopt or accept E-Banking (Al-Qisi, 2009). However, other researchers reveal that level of education is factor capable of impacting the intention to use E-Banking services (Sathye, 1999; Matilla, et al., 2003; Laforet & Lee, 2005; Polatoglu & Ekin, 2001; Akinci et al., 2004; Eriksson, et al., 2005; Wan et al., 2005; Jaruwachirathanakul & Fink, 2005).

As the main objective of the current study is to investigate the factors influencing the acceptance of E-Banking by bank account holders in Jordan, it is expected that the positive impact of such factors as effort expectancy, convenience, accessibility, quick service delivery, security, privacy, trust and anxiety, lack of reliability, fees and charges, content, design, simplicity and demographic characteristics, on clients' intention to use E-bank statement would also determine acceptance behavior, i.e. intention to use would be positively associated with acceptance behavior.

2.2.7 Behavioral Intention

Behavioral intention to adopt/accept E-Banking services measures a user's relative strength of intention to perform a behavior (Fishbein, Ajzen, 1975). It is an indicator of a person's motivation to perform specific behavior. Behavior intention is considered as the antecedent of actual behavior.

2.2.8 Actual Usage

(Davis, 1985) proposed that system use is a response that be explained by user motivation which in turn is directly influenced by external variables consisting of the actual system features and capabilities. Davis considered that the actual use of a system is a behavior. Actual use of behavioral usage is usually measured by amount of time using, frequency of use, actual number of usage and diversity of usage.

Research's Hypothesis

This model has strong behavioral elements assume that when banks users form behavioral intention to adopt or accept such technology such as E-banking they will be free to act without imitation. Thus, the researcher hypothesized that the intention to adopt/accept E- banking is a major determinant of whether the bank's user (client) will actually use or reject this technology.

Based on the research's model, the author suggests the following hypotheses:

H1: There will be a positive significant relationship between convenience, accessibility and quick service delivery and intention to adopt E-banking.

H2: There will be a positive significant relationship between security, privacy, and trust and intention to adopt E-Banking.

H3: There will be a positive significant relationship between content, design, and simplicity and intention to adopt E-Banking.

H4: There will be a positive significant relationship between anxiety and reliability and intention to adopt E-banking.

H5: There will be a positive significant relationship between fees and changes and intention to adopt E-Banking.

H6: There will be a positive significant relationship between intention to adopt a E-banking and the actual usage.

H7: The influence of convenience, accessibility, and quick delivery service on behavioral intention to adopt E-banking will be moderated by experience, gender, and age, such that the effect will be stronger for men and particularly for younger men at early stages of experience.

3. Methodology and Data

3.1 Population, Sampling and Instrument

The population of the study will be made up of all bank account holders who make use of E-Banking in Jordan. A convenient sample of 3000 respondents will be selected to obtain the required primary data. The study's instrument will be a self-administered questionnaire that will be developed and employed to achieve the objectives of the current study. To improve the structure design and content of the study's instrument, a pilot study will be carried out. The questionnaire will be revised in the light of comments received from 30 experts,

who include 15 academicians and 15 bank managers. The questionnaire will consist of two sections. Section 1 covers questions on respondent's profile, and Section 2 focuses on the variables that are believed to impact customer intention to adopt E-Banking.

Respondents will be asked to rank their level of agreement based on a 5-point Likert scale, ranging from '1' (strongly disagree) to '5' (strongly agree). The response rate is expected to be around 90.8%. The process of distributing the questionnaire will be drop-off approach (Aaker et al., 2004). On the basis of the logic of this method, the researchers will deliver the questionnaire to clients who categorically state that they have experience with E-Banking, after explaining to them the purpose of the study, the required procedures to fill out the questionnaire and answering any question with regard to any of the questionnaire's statement.

4. Conclusion

The purpose of this research is to conduct an investigation into the essential factors affecting the behavioral intention to adopt or accept of E-Banking service in the Jordanian Commercial Banks. The proposed model posits that Effort expectancy, convenience, accessibility quick service delivery, security, privacy, trust, content, design and simplicity of the banking website as well as anxiety, lack of reliability, fees and charges and E-service quality have a direct impact on the behavioral intention to adopt financial services. At the same time this research suggests a direct impact of the behavioral intention on the actual usage of the E-Banking service. The literature review indicated that TAM models were extensively used to explain the intention to accept and use specific technology in the developed countries more than Arab world. While some researches have been used TAM models in Arab business environment, to date very little research has been done to address E-Banking services adoption in Jordan.

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Notes

Note 1. <http://teletimesinternational.com/middleeast/3109/zain-jordan-signs-up-4500-for-mobile-Banking-service>

Note 2. <http://www.internetworldstats.com/me/jo.htm>