EXPLANATORY RESEARCH OF CUSTOMERS ACCEPTANCE OF INTERNET BANKING: CASE OF TUNISIAN BANKS

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ABSTRACT

This article investigates the prerequisites influencing the acceptance of Internet banking among customers of Tunisian banks. This research tries to identify and test determinants of internet banking acceptance by customers. Theories and models of information technologies acceptance and some researches concerning Internet banking adoption offer a conceptual framework to apprehend keys factors that influence customers' Internet banking use. An empirical study conducted on 165 Tunisian customers, who use Internet banking, suggests the importance of their perceptions of usefulness, ease of use, and confidentiality of their personal information as key determinants of Internet banking acceptance. Theoretical and managerial contributions for practitioners and bank authorities are deducted from the results of this study.

Keywords: Internet Banking (IB), TAM, Customer Acceptance, Usefulness, Ease of Use, Confidentiality Perception.

INTRODUCTION

Thirty years after the launch of the first e-commerce sites on the Internet, e-commerce continues to excite the research and business communities. Among the industries most influenced by e-commerce, the banking sector appears affected by the technological revolution. In particular, this sector relies on information which, in turn, relies heavily on information and communication technologies (ICT) to acquire analyze and deliver data for all users. In this regard, information and communication technologies support innovations that transform the logics, contents, conditions, tools, and channels of service delivery in banks (Aboobucker & Bao, 2018; Rahi et al., 2019; Sharma et al., 2020, Naeem & Ozuem, 2021). Social policy models, which have difficulty in keeping up with the rapid changes in the economic and social structure, are insufficient to produce solutions to current problems. Parallel to the increase in the urban population, employment, housing, accommodation, transportation, etc. The problems are the main ones. As the problems trigger and feed each other, the institutions and rules responsible for producing solutions are gradually losing their functions. Institutional inadequacies aggravate social problems, and as a result, the deterioration in social indicators becomes remarkable. The deep gap between regions, between different income groups within the same province, and between men and women in education, health, access to social services and implementation results, among other factors, is due to the inadequate implementation of recent reforms in the public administration and again in the banking sector (Sipahi & Artantas, 2021).

Since the 1990s, characterized by fierce competition in the banking industry, banks have been supporting their interest in electronic platforms for the distribution of financial services (Kumar and al., 2018). Despite the importance placed on the bank branch network in the sense that this traditional method of service delivery is the most widespread, the Internet has rapidly contributed to changing the way personal financial services are designed and delivered. Thus, commercial banks have introduced IB by integrating it into their information systems to improve their operations and to face the competition. Indeed, the technological revolution is characterized by the implementation of a new conception relating to the bank-

customer relationship. Such a relationship must now be focused on the absorption of the gigantic amount of information produced by and for banking customers during their financial operations. IB can then be defined as an Internet-based system allowing bank customers to access their accounts and use banking services via PC.

However, the success of this initiative depends on the willingness of bank customers to accept and adopt IB. This implies the need to understand the factors that encourage the use of electronic delivery channels for banking services including IB rather than traditional methods of service delivery (Naeem & Ozuem, 2021). Indeed, the benefits of using IB are numerous for both banks and customers. For the bank, these benefits include reduced transaction costs, faster transaction execution, increased efficiency for goods and services, and improved customer satisfaction. While the benefits to customers center on the fact that they can access banking services quickly, anytime, and anywhere, the acceptance of IB by bank customers is not clear. Thus, benefits are a necessary but not enough condition for understanding the IB use.

Few types of research that explore the factors determining the acceptance of IB by bank customers in emerging economies (Ajimon, 2018; Rahi et al., 2019; Sharma et al., 2020, Naeem & Ozuem, 2021), like Tunisia, IB is still very much in its infancy (Ajimon, 2018). It would then be interesting to identify the factors that influence the acceptance of IB by customers of Tunisian banks. The understanding of the determinants of the IB use supposes in this respect the analysis of how the banking customers perceive, express, and use this innovative practice. The purpose of the reflection is to consider how to promote an acceptable and engaging innovation for the banking customers. Therefore, by explaining the IB use through the perspective of banking customers, the results of this study can be useful not only for bank authorities to develop more user-accepted IB systems, but also to provide insights into how to present this innovation to potential users. In this sense, this research tries to explain HOW to achieve the acceptance of IB by the customers of Tunisian banks.

The objective of this paper is first to identify the preconditions for acceptance of IB, then to present a model of pre-conditions of acceptance of IB, and finally, to test it empirically with a sample of bank customers who subscribe to the service of online banking in the Tunisian context. The aim is to try to understand why customers accept or reject IB in Tunisia. It is concerning the importance of this innovative practice for bank customers and banks that this phenomenon is examined in this article.

However, in this study, the development of these tools at the local level tried to determine which factors increase the level of according to the results found, most local governments want to increase transparency used Web 2.0 and social media tools for the purpose of corporate dialogue concept and e-participation of the web 2.0 tool its use is still taking its first steps at the local level to increase has been revealed.

LITERATURE REVIEW AND MODEL DEVELOPMENT

Individuals' behavior regarding the acceptance and use of information and communication technologies has been the subject of several information systems kinds of research (Taylor & Tood, 1995; Lassar et al., 2005; Yiu et al., 2007; Qureshi et al., 2008; Mardiana et al., 2015; Aboobucker & Bao, 2018; Kumar et al., 2018; Rahi et al., 2019). Many models have been developed to explain this behavior. The theoretical underpinnings of these models are drawn primarily from social psychology research. The most widely used theories, which are inherent to this discipline, are the theory of reasoned action (Flanders, 1975) and the theory of planned behavior (Ajzen, 1991). These theories formed the basis of Davis' (1989) model of technology acceptance.

According to the theory of reasoned action, an individual's behavioral intention is influenced by his or her attitude toward the behavior in question as well as his or her

subjective norms. This implies that the behavior is completely controlled by the individual (Flanders et al., 1975). However, in some situations, the behavior may be beyond the individual's control. This observation led to the emergence of the theory of planned behavior (Ajzen, 1991), which aims to complete and perfect the first theory developed. Ajzen (1991) introduced the concept of perceived behavioral control, which refers to the individual's perceptions of *"...the presence or absence of the resources and opportunities necessary"* (Ajzen & Madden, 1986) to perform a behavior (Mathieson, 1991).

Based on the various works done on these two theories, Davis (1989) develops the Technology Acceptance Model, commonly referred to as TAM, to study user behavior toward computers. This model posits that acceptance of an information system is determined by two fundamental concepts, which are perceived usefulness and perceived ease of use (Guriting & Ndubisi, 2006, Mardiana et al., 2015; Lai, 2017, Ajimon, 2018; Rahi et al., 2019). Perceived usefulness is defined by Davis (1989) as the degree to which an individual believes that using a particular system will improve their work performance. Perceived ease of use, on the other hand, refers to the degree to which a person believes that using a particular system will be effortless (Davis, 1989).

In sum, the TAM, which has been widely applied to various types of technologies and users, has repeatedly shown success in predicting the acceptance of different new technologies. The TAM was developed for the work context where people behave more rationally than in their free time. Although banking is a private matter, it seems to have some similarities with the work context, since both involve relatively low levels of entertainment and a high focus on efficiency (Eriksson et al., 2005). Recently, TAM is being used for online shopping adoption (Eriksson et al., 2005), another activity that has similarities with IB. Therefore, the TAM may be relevant in explaining bank customers' choices regarding IB use (Lichtenstein & Williamson, 2006).

However, previous studies on technology adoption do not express consensus regarding the relative magnitude of the effects of perceived usefulness and perceived ease of use (Im et al., 2008). Many TAM studies also show that perceived usefulness and perceived ease of use are not the only determinants of technology acceptance (Pikkarainen et al., 2004). To this end, the original TAM is extended by Venkatesh & Davis (2000), who introduce its extension (TAM2). The TAM2 explains perceived usefulness and intention to use in terms of the social influence process (subjective norms, willingness, and image) and the cognitive instrumental process, such as job relevance, quality of results, demonstrability of results, perceived ease of use. Based on the theory of reasoned action, these two authors add the subjective norms construct to the GAT (Mardiana et al., 2015; Hernandez & Mazzon, 2007).

The literature review in the banking sector identifies a range of work regarding the determinants of bank customers' acceptance of IB (Aboobucker & Bao, 2018; Rahi et al., 2019; Sharma et al., 2020; Naeem & Ozuem, 2021). Qureshi et al. (2008) conclude that perceived security and privacy and perceived usefulness are the most important factors influencing acceptance of IB in Pakistan. Lallmahamood (2007) also shows in his study that perceived security and privacy, perceived usefulness, and perceived ease of use influence the intention to use IB in Malaysia. Yiu et al. (2007) point out that perceived usefulness is the most influential determinant of IB adoption in Hong Kong. The results of Guriting & Ndubisi's (2006) study show the direct effect of perceived usefulness and ease of use and the indirect effect of computer literacy and prior computer experience on the intention to adopt IB in Malaysia Borneo. Pikkarainen et al. (2004) show that perceived usefulness and information about online banking are the main factors influencing acceptance of IB in Finland. Chan & Lu (2004) find that subjective norms and self-image show positive and significant relationships to adopt IB and are the main factors affecting the intention of potential adopters. Wang et al.

(2003) introduce perceived credibility - which refers to users' perceived security and privacy - to improve understanding of IB acceptance in Taiwan.

The conceptual model is based on the results of the main theoretical recent works concerning the acceptance of new information technologies in general and IB, and mainly on those related to the application of the technology acceptance model (Aboobucker & Bao, 2018; Rahi et al., 2019; Sharma et al., 2020; Naeem & Ozuem, 2021). This research proposes a conceptual framework that deals with IB use by integrating personal prerequisites and IB credibility prerequisites. Thus, based on the literature review, a model indicating the acceptance of IB is developed (Figure 1). The model takes into consideration four variables that are assumed to influence IB use. The personal prerequisites are perceived usefulness and perceived ease of use, and finally, the credibility prerequisites of IB include perceived security of banking transactions and perceived privacy of personal information.

Banks may fail to renew mortgages when the value of real estate declines below the debt's principal. Even if cash flows and profits are sufficient to maintain the ongoing borrowing costs, loans may be called. This may happen exactly when there is little market liquidity and sales by others at depressing prices. It means that as things get bad, leverage goes up. Leverage magnifies profits when returns from the asset are more to offset borrowing costs leverage can also amplify losses. A company that borrows too much will go bankrupt or while a business defaults during a downturn, a less leveraged company can survive. Internet use is also very important in monitoring these.

Thus, the factors selected were chosen because they are the most significant in most of the empirical research reviewed.

Personal Prerequisites

The IB use is influenced by personal preconditions that are inherent to the personal characteristics of banking customers and their perceptions of their interaction with IB. Specifically; we will examine the effect of the concepts of perceived usefulness and perceived ease of use on IB use.

Perceived usefulness (PU)

The TAM states that perceived usefulness is a significant factor affecting the acceptance of an information system (Davis, 1989; Davis et al., 1989; Qureshi et al., 2008; Lai, 2016, 2017). In the context of IB, many researchers (Wang et al., 2003; Pikkarainen et al., 2004; Chan and Lu, 2004; Guriting and Ndubisi, 2006; Eriksson et al., 2005) show the ability of perceived usefulness to explain intention to use or IB use. Wang et al. (2003) also argue that the fundamental reason people use IB is that they find it useful for conducting their banking transactions. In this sense, the perceived usefulness of IB reflects banking customers' perceptions of the performance gains resulting from using IB to conduct banking transactions. These gains are reflected in the control of time and space constraints, convenience, speed, and ease of use of banking services. Based on the review of literature, it is hypothesized that:

H_{11} The perceived usefulness of IB has a positive effect on IB use.

Perceived ease of use (PEOU)

It is a major factor affecting the acceptance of an information system (Davis et al., 1989). Now, an information system or application that is perceived to be easier to use than others is more likely to be accepted by users (Lallmahmood, 2007; Pikkarainen et al., 2004; Davis, 1989). Several researchers (Rahi, et al., 2019; Qureshi et al., 2008; Lallmahmood, 2007; Guriting and Ndubisi, 2006; Eriksson et al., 2005; Chan & Lu, 2004; Wang et al., 2003) highlight the ability of perceived ease of use to significantly explain bank customers' intention or IB use. Thus, the easier the innovation is perceived to be to use, the more likely it will be

used by bank customers. These perceptions reflect bank customers' judgments about the effort required to use IB. The effort required is primarily determined by perceptions of ease of use and apprehension about using IB. Based on the review of literature, it is hypothesized that:

H_{12} Perceived ease of use has a positive effect on IB use.

Credibility Prerequisites for IB

Credibility Prerequisites refer to the degree to which one partner believes that the other partner has the competence to perform a job effectively and confidently (Wang et al., 2003). Thus, the credibility prerequisites of IB are introduced in this research model by two concepts related to the perceived security of banking transactions and perceived privacy of personal information. Indeed, Alalwan et al. (2018) claim that the guarantee of security and confidentiality are fundamental prerequisites before any commercial activity takes place. Yousafzai et al. (2003) also assert that consumers' concern about the security of their transactions and the protection of their personal information is the main barrier to e-commerce.

Perceived security (PSE)

Security refers to the threat that creates *"circumstances, conditions, or events that may cause damage to data or network resources in the form of destruction, disclosure, modification of data, lack of service and/or fraud, loss, and misuse"* (Lallmahamood, 2007). In the context of IB, threats can be generated either through the network and attacks on transactions or data transmissions or through unauthorized access to the account using false authenticity (Yousafzai et al., 2003). Thus, perceived security represents customers' perceptions of the degree of protection against these threats.

The issue of the security of IB is often cited as a reason for the reluctance of bank customers since the Internet offers new opportunities for fraud because of its novelty, dematerialization, and speed. According to Yousafzai et al. (2005), security concerns arise from the use of an open network where bank customers fear that their personal and financial information will become available to others via the Internet and can be used for fraudulent purposes. The need for security has been recognized in electronic banking and many technological responses have been put forward to secure electronic transactions conducted via the Internet. Examples include firewall technology and encryption of data flows between the bank's servers and the user's computer.

Thus, the evaluation of security features by banking customers, as well as their perception of the degree to which IB provides security for their banking operations, is an important consideration that affects the acceptance of this innovation. Based on the review of literature, it is hypothesized that:

H_{21} Perceived security of banking transactions has a positive effect on IB use.

Perceived confidentiality (PCO)

Lack of privacy has been identified as a major, if not the most critical, the barrier to e-commerce (Lallmahamood, 2007). In the context of IB, privacy refers to the protection of data that is stored, knowingly or unknowingly, during interactions with IB (Wang et al., 2003). Thus, IB users want to control what kind of data is collected, for what purposes, for how long the data is stored, how and for what purpose their data is processed (Kobsa, 2001 and Kobsa, 2002).

Many researchers insist that control of information is the main dimension of privacy preservation. For example, Aboobucker & Bao (2018) assert that concerns for private information control span the dimensions of environmental control and secondary information use control. The latter reflects the consumer's perceived ability to control the use of personal

information for other purposes, such as sharing a customer's personal information with a third party without their permission. It is about controlling the use of information that follows the transaction in which it is first collected. On the web, this manifests itself in IB users' concerns about web providers giving away their information without informing them, or having their permission to third parties.

Thus, banking customers' perception of the privacy of their personal information is an important consideration that influences their acceptance of IB. This leads to the following hypothesis:

H_{22} Perceived privacy of personal information has a positive effect on IB use.

The IB use (IBU)

The use of an information system is considered in several studies to be the acceptance of the system in question (Davis et al., 1989; Davis, 1993; Pikkarainen et al., 2004). In other words, the use of an information system is an indicator of its acceptance (Pikkarainen et al., 2004). Previous studies on the acceptance of IB incorporate as a dependent variable either the intention to use IB (Wang et al., 2003; Lallmahamood, 2007; Rahi et al., 2019; Sharma et al., 2020) or the IB use (Pikkarainen et al., 2004; Eriksson et al., 2005, Aboobucker & Bao, 2018). Nevertheless, other studies incorporate the intention and current IB use (Hernandez & Mazzon, 2007). In the case of our model, the IB use is chosen as an indicator of its acceptance.

In fact, by studying the behavior of current users, the study of the actual IB use, it is possible to detect the factors that led them to accept this innovation (Hernandez & Mazzon, 2007). In contrast, by examining the behavior of potential users, the study of the intention to use, it is only possible to determine the factors that influence their intention. According to Fishbein et al. (2003), lack of skills and/or the existence of environmental constraints may prevent intention from being acted upon. Hence, the intention may not be a good predictor of acceptance under certain circumstances. In this study, usage behavior is measured by the frequency of IB use. This measure relates to similar considerations in the Davis (1989) study. It provides a picture of the behavior of bank customers regarding IB use.

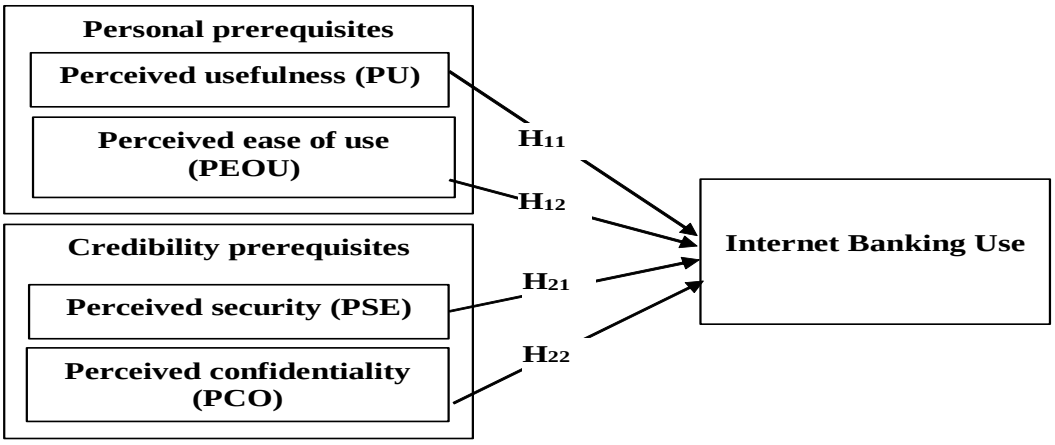

FIGURE 1
THE IB ACCEPTANCE MODEL

MATERIALS AND METHODS

The empirical validation of the conceptual model is carried out using a questionnaire administered to 300 customers of Tunisian banks. The questionnaire was administered, on the one hand, by e-mail to suitable persons whose e-mail address is available and, on the other

hand, by a face-to-face survey. The data collection allowed to collect the data and to retain 165 questionnaires effectively usable for this research, an effective response rate of 55%. The sample comprised 165 individuals, 76.5% of whom were men and 23.5% women. The age of the respondents ranged from 20 to over 60 years old with a concentration in the 30 to 39 age range (46.1%). Most of the bank customers surveyed have a monthly income between 500$ and 1000$ (32.2%). The distribution of the sample according to civil status, level of education, and profession allows us to know that the majority of respondents are married (66.1%), nationals of higher education (87%), and executives (50.4%).

The questionnaire distributed is based on existing measurement scales from previous research (Moore & Benbasat, 1995). The questionnaire thus established includes items measured by a 5-point Likert scale ranging from *"strongly disagree"* to *"strongly agree"*. To ensure the clarity of the items, the questionnaire was pre-tested with ten users of IB. Although it proved necessary to eliminate a few items that were not understood by the respondents, all of these pre-tests made it possible to develop the final version of the questionnaire. The data collected were analyzed in two stages. First, Principal Component Analysis (PCA) is conducted to assess the dimensionality and reliability of the constructs. Second, multiple linear regression was applied to test the research hypotheses and the relationships between the variables of the conceptual model.

RESULTS

Exploratory Factor Analysis

The dimensionality of the measurement scales was evaluated by a principal component analysis with Varimax rotation. Thus, the items of each construct form a single factor with an explained variance greater than (50%).

Table 1
MAIN RESULTS OF THE EXPLORATORY FACTORIAL ANALYSIS

Research variables	% of explained variance	Cronbach a
Perceived usefulness (PU)	56.95%	0.8
Perceived ease of use (PEQU)	71.33%	0.86
Perceived security (PSE)	73.61%	0.81
Perceived confidentiality (PCO)	68.27%	0.87

They also have factorial contributions greater than (0.6). Therefore, the dimensionality of all constructs is verified. The reliability and internal consistency of the items constituting a single dimension were assessed by Cronbach's alpha coefficient. All the variables studied have coefficients above the recommended threshold (0.7). The main results of the exploratory analysis are provided in the Table 1.

EXPLANATORY RESULTS

The results of the empirical study conducted among a sample of Tunisian bank customers suggest the importance of certain factors in determining their behavior towards acceptance and IB use. Thus, significant effects of perceived usefulness of IB, ease of use, and perceived confidentiality of personal information on the IB use are found, with perceived confidentiality having the most significant influence.

For Tunisian bank customers, the perceived confidentiality of personal information is an important prerequisite for the acceptance of IB. The high value of the regression coefficient shows the importance of a favorable perception of the protection of personal information, which is stored when using IB, against any unauthorized access or communication to generate the acceptance of this innovation among banking customers. This result aligns with most of the research done on the acceptance of IB (Aboobucker & Bao, 2018; Qureshi et al., 2008; Lallmahmood, 2007; Hernandez & Mazzon, 2007).

However, the perceived security of banking does not exert a significant effect on IB use. This result can be explained by the fact that most Tunisian bank customers use IB mainly to benefit from the various consultation functionalities (account consultation: balance, movement and statements, consultation of outstanding checks and bills, consultation of exchange rates, and the stock market, etc.). Thus, the security of banking transactions is not a motivation because most customers prefer to carry out their banking operations, such as transfers, in a personal way and through the counters of bank branches. Certainly, in Tunisia, the importance of the branch in the distribution of banking services remains preponderant since customers continue to frequent the counters of their banks, despite the use of remote banking services. This result can also be explained by the lack of sufficient functionalities for carrying out operations at the level of online services provided by Tunisian banks until now (Table 2).

Table 2
SUMMARY OF THE RESEARCH RESULTS

The hypotheses	Conclusion
H11: The perceived usefulness of IB has a positive effect on its use	Confirmed
H12: The perceived ease of IB use has a positive effect on its use	Confirmed
H21: Perceived security of banking transactions has a positive effect on the IB use	Rejected
H22: The perceived confidentiality of personal information has a positive effect on the IB use	Confirmed

Regarding personal prerequisites, this study has shown the importance of the judgments made by bank customers on the usefulness and ease of IB use in determining their decision of acceptance and use. This refers to the fact that Tunisian bank customer's use IB taking into accounts the advantages it offers in comparison with other banking distribution channels (e.g. bank branch, ATM, telephone banking, and mobile banking).

Thus, given the performance gains to be achieved by its use and the ease of its use, bank customers tend to form favorable perceptions towards it and consequently, use it to consult their bank accounts and eventually perform a variety of banking operations. These results confirm the predictions and conclusions of some studies conducted on acceptance and IB use. For example, the study conducted by Aboobucker & Bao (2018) in Turkey, Qureshi et al. (2008) in Pakistan, the study conducted by Lallmahmood (2007) in Malaysia, the study conducted by Ravi et al. (2007) in India, the study conducted by Guriting & Ndubisi (2006) in Borneo (Malaysia), the study conducted by Yiu et al. (2007) in Hong Kong, and the study conducted by Wang et al. (2003) in Taiwan reach the same conclusions.

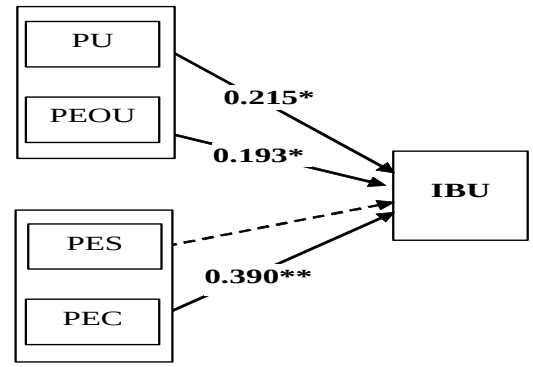

FIGURE 2
THE FINAL ACCEPTANCE MODEL FOR IB

DISCUSSION

In addition, the value of the regression coefficient of the perceived usefulness of IB (β=0.215) gives a certain lead to the importance of the latter compared to the perceived ease of use (β=0.193). This result is in line with previous studies done on TAM in general (Davis, 1989; Davis et al., 1989) and IB acceptance in particular (Chan & Lu, 2004; Pikkarainen et al., 2004; Eriksson et al., 2005; Yiu et al., 2007; Lallmahmood, 2007; Aboobucker & Bao, 2018) which show that perceived ease of use has less impact on technology acceptance than perceived usefulness. In this sense, the study by Davis (1989) shows that users are led to adopt a technology firstly for the functions it offers and secondly for the ease of taking advantage of these functions (Figure 2).

CONCLUSION

The use of theories and models of acceptance of the use of information technology and the literature on the adoption of IB, to explain the behavior of bank customers towards its acceptance and use, has identified key factors influencing the acceptance of such an innovation. The empirical validation of the model of acceptance of IB with a sample of 165 customers of Tunisian banks shows that the use of this new practice is influenced on the one hand, by good perceptions of its usefulness and ease of use expressing two personal prerequisites and on the other hand, a credibility prerequisite of IB reflected by the judgments made by bank customers on the protection of their personal information, which are stored when using IB, against any unauthorized access and communication.

It is, therefore, appropriate to the question, firstly, the theoretical contributions of the results obtained and, secondly, it is important to determine the managerial implications for banks. It is also essential to state the limits of this work and to propose avenues of research that will allow us to complete and extend, at a later date, the conceptual and methodological foundations established.

Theoretical and Managerial Contributions

From a theoretical point of view, the results presented contribute to the existing literature in two ways. First, this research contributes to the e-banking literature by providing insights into the factors that appear to affect the acceptance of IB. In other words, the results show that positive perceptions of personal privacy, usefulness, and ease of IB use are critical factors influencing its acceptance. Thus, these factors are significant antecedents of IB use. Second, this research contributes to the literature on technology acceptance. Indeed, the results show that perceived usefulness is more influential than perceived ease of use in explaining technology acceptance.

In addition to these theoretical contributions, several managerial implications are arising from the results of this study that can be taken into consideration in the context of the implementation of IB.

Indeed, the perceived confidentiality of personal information seems to be a key factor in the acceptance of IB. Therefore, without the protection of users' private information, IB can be considered as a threat for banking customers instead of an alternative banking channel. Therefore, further improvement of the quality of privacy of personal data must be continuously observed to guarantee the trust of customers. In the same vein, banks can motivate their customers to take advantage of the online services provided via the Internet portal by highlighting some sort of charter or ethical agreement guaranteeing privacy-compliant behavior. These measures help to create favorable perceptions among customers regarding IB.

Moreover, considering that substantial amounts have been invested in the installation of IB systems, it seems very important for the banking authorities to ensure that customers

will use this innovation. To achieve this objective, the banks' investments must not stop at the initial installation costs. This implies the need to develop beliefs of usefulness, ease of use, and privacy among banking customers about IB. Demonstrations, via video presentations for example in the banks' premises, and awareness-raising and initiation actions in the IB use can be promising and favorable practices to attract, reassure, explain the IB use and show the extent of the services offered by their bank on the Internet. Banks can also assign competent people to explain to bank customers the advantages of using IB, inform them, help them become familiar with the bank and its IB services, and stimulate their confidence in this innovation. In short, it is a matter of promoting this innovation to ensure a certain attractiveness to its use.

Limitations and Future Research

Despite the insights provided by the results of this research and the theoretical and managerial contributions it makes, some limitations may affect the reliability and validity of the results. Given the cross-sectional nature of the study, it was not possible to measure the variation in bank customers' perceptions over time. A longitudinal study could therefore better identify the determinants of acceptance of IB and their stability over time. In addition, the sample only includes users of IB, end consumers. This may affect the generalizability of the results since this study excludes non-users of IB who potential adopters may be.

Another limitation is inherent in the measures of acceptance. Indeed, our research model explains (45.6%) of the variance in IB usage. Thus, the percentage of unexplained variance suggests that the model has excluded other factors that may influence IB acceptance. This model suffers from the fact that other factors that can influence the acceptance of IB by customers of Tunisian banks are not introduced, such as confidence, experience in the use of the Internet, and the mastery of the computer tool.

The highlighting of these limitations leads to the proposed new and relevant research avenues. It would be relevant to integrate other factors to improve the understanding of the acceptance of IB. The introduction of these factors reflects the need for future research in the area of IB acceptance.

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