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A study of mobile banking loyalty in Iran

Hossein Mohammadi

Department of Public Administration, Allameh Tabataba'i University, Tehran, Iran

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ABSTRACT

The purpose of this paper is to explore barriers, the mediating role of usability and the moderating effects of personal innovativeness and subjective norms on consumers' attitudes towards use of mobile banking in Iran. Based on the consumer data collected through a survey, structural equations modeling (SEM) and path analysis were employed to test the research model. The results revealed that "system compatibility" was found to be the main factor affecting users' attitudes towards use of mobile banking. "Resistance" showed a significant negative effect on both ease of use and usefulness. "Perceived usefulness" mediated the relationship between ease of use and users' attitudes. At last, both subjective norms and personal innovativeness moderated the relationships between usefulness and attitude. The sample was only composed of mobile banking users and non-users were not studied. Past studies have seldom examined the role of individual drivers like personal innovativeness and social drivers like subjective norms as moderating variables in the context of developing countries.

1. Introduction

Mobile banking (MB) is one of the recent mobile technological wonders (Shaikh & Karjaluoto, 2015) and one of the most recent innovations in the financial services sector, which has added the element of pure mobility to service consumption (Laukkanen, Sinkkonen, kivijarvi, & Laukkanen, 2007; Mishra & Bisht, 2013; Oliveira, Faria, Thomas, & Popovic, 2014) and enabled consumers to gain convenient access to value-added and banking services, even in countries with low incomes (Anderson, 2010; Boor, Oliveira, & Veloso, 2014; Wonglimpiyarat, 2014). As Juniper Research (2013) revealed, more than one billion people are expected to use m-banking globally by 2017. It improves the way personal financial services are designed and delivered as well as the way consumers interact with other societal constituents (Lee, Harindranath, Oh, & Kim, 2014; Oliveira et al., 2014). It is, consequently, becoming an inseparable part of how business is being done today (Ahluwalia & Varshney, 2009; Boor et al., 2014; Wonglimpiyarat, 2014). While mobile banking constantly tries to attract potential customers, it inevitably encounters many challenges which make its mass usage uncertain (Lin, 2011). As Zhang, Zhu, and Liu (2012) note, mobile banking is still in its early stages and has, so far, failed to earn the trust of potential consumers. Also as Shaikh and Karjaluoto (2015) and Dineshwar and Steven (2013) point out, the use of mobile phones to conduct banking transactions and access financial information is not as widespread as expected which is in correspondence with what Hanafizadeh, Behboudi, Khoshksaray, and Shirkhani Tabar (2014) concluded that despite technological progresses and increased accessibility of mobile banking in Iran, the number of users does not match experts' expectations – a fact that warrants investigation into its reasons.

Past studies have used information technology adoption theories such as the Technology Acceptance Model (TAM), Innovation Diffusion Theory (IDT) and the Unified Theory of Acceptance and Use of Technology (UTAUT) to explore mobile banking users' behavioral patterns. Some of these studies have taken the barriers and the drivers of online banking adoption into consideration. However, only a limited number of published works explore the factors driving mobile banking acceptance from the consumers' perspective in the context of developing countries in the Middle East (Al-Somalli, Gholami, & Clegg, 2009), while m-banking is increasingly playing a key role in bringing financial services to people of this region (Goh, Suki, & Fam, 2014). Additionally, the effect of individual and social stimuli in overcoming consumers' reluctance towards the use of mobile banking seems to be a research gap in this area which needs to be taken into consideration. This paper is focused on Iran as a developing country in the Middle East, which possesses a large population of over 75 million individuals. As Hanafizadeh, Behboudi, et al. (2014) note, the growing need to encourage clients to use cell-phones for their banking purposes combined with the negative trend in the adoption of this technology in Iran, make it imperative to study what are the barriers of mobile banking usage along with the role that individual and social stimuli such as personal innovativeness and subjective norms can

E-mail addresses: Hossein662@gmail.com, H.mohammadi901@st.atu.ac.ir

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play in fading consumers' reluctance. This study differs from some past studies as follows. First, as Shaikh and Karjaluoto (2015) note, past studies have limited and mainly focused on SMS banking in developing countries and virtually no studies have addressed the use of m-banking applications via Smartphones or tablets which is addressed in this study. Second, this study contrary to the past studies which study both the users and non-users of mobile banking, has to do with mobile banking usage and just users are selected to ensure that they have a benchmark to compare variables including system compatibility between the banks. Third, it uses social and individual variables such as subjective norm and personal innovativeness as moderators which is considered as the main contribution of the paper. Therefore, this study extends the theoretical model and helps the better prediction of users' behavior.

Most of Iranian banking transactions are now conducted through SHETAB system. SHETAB or "Information Exchange Network among Banks" is a comprehensive electronic network relating to banking affairs in Iran, which has been established by the Central Bank of Islamic Republic of Iran. It is aimed to organize a national switch to link different banks' payment gate to each other. It performs a variety of functions such as exchange, payment, electronic buying, money transferring, bill affairs, and account checking. It is organized to help consumers to use banks services even after daily work hours and in a 24/7 way (Hanafizadeh, Behboudi, et al. (2014)). According to Hanafizadeh and Khedmatgozar (2012) most of Iranians are still using the precursors of mobile banking like ATM, Bank branch and Telephone bank. This shows that along with the adoption of new technologies, the adoption of mobile banking needs to discover the factors affecting its acceptance that is what we are aimed to in this study in Iran.

As quoted in literature (Lin, 2011; Puschel, Mazzon, & Hernandez, 2010; Schierz, Schilke, & Wirtz, 2010; Shaikh & Karjaluoto, 2015), customers' attitudes and intentions appear to be the key predictors that influence their acceptance of technology-based banking services. This paper aims to fill a research gap by addressing the reason behind the low prevalence of mobile banking among Iranian consumers through exploring the factors that affect consumers' attitudes towards the use of mobile banking. Finally, having examined the mediating role of usability, the paper mainly intends to provide a valuable insight into how individual and social stimuli such as personal innovativeness and subjective norms moderate the effects of the factors. This differentiates this paper from some past studies carried out in Iran on mobile banking such as Hanafizadeh, Behboudi, et al. (2014).

The remainder of the paper is structured as follows: we address literature review in the next section. This is followed by the presentation of the research hypotheses, discussion of findings, conclusions, and finally recommendations for future studies.

2. Literature review

2.1. Technology Acceptance Model (TAM)

The Technology Acceptance Model proposed by Davis and Bagozzi (Bagozzi, Davis, & Warshaw, 1992) appears to be the most widely used innovation adoption model. This model has been used in a variety of studies to explore the factors affecting individual's use of new technology (Venkatesh & Davis, 2000). Davis (1989) suggests that the sequential relationship of belief–attitude–intention–behavior in TAM, enables us to predict the use of new technologies by users. In fact, TAM is an adaptation of Theory of Reasoned Action (TRA) in regard to information systems (IS) which notes that perceived usefulness and perceived ease of use determine an individual's attitudes towards their intention to use an innovation with the intention serving as a mediator to the actual use of the system. Perceived usefulness is also considered to be affected directly by perceived ease of use. In the case of system adoption, according to Hanafizadeh, Byron, and Khedmatgozar (2014), almost 40% of all papers in this section are carried out via TAM. This theory asserts that perceived usefulness and ease of use are fundamental determinants of system adoption and usage (Bankole, Bankole, & Brown, 2011). However, because the TAM excludes economic and demographic factors and external variables, it seemingly has limited use for explaining users' attitudes and behavioral intentions toward mobile service adoption (Venkatesh & Davis, 2000). Therefore, many m-banking adoption studies extend or supplement the original TAM by including additional constructs, such as relative advantage and personal innovativeness (Chitungo & Munongo, 2013), perceived risk, perceived cost of use, compatibility with lifestyle (Hanafizadeh, Behboudi, et al. (2014)), and perceived security (Hsu, Wang, & Lin, 2011). In fact, TAM provides the provision to add external variables as the determinants of perceived usefulness and perceived ease of use (Davis, 1989). What's more, TAM assumes that potential consumers are free to act and choose without limitation. In fact, consumers may come up with some constraints in practice that may prevent them to act freely such as the rationalization of traditional banking channels which is why many of them tend to adopt mobile banking over the past decade (Hanafizadeh, Byron, et al., 2014). Yousafzai, Foxall, and Pallister (2010), who compared three models (TRA, TPB, and TAM) in terms of their ability to predict customer online banking behavior, also indicated that TAM is superior to the other models and highlighted the importance of it in understanding online banking behavior.

On the other hand, there are other related theories that deserve to be mentioned. These are theories such as Theory of Planned Behavior (TPB) which discusses that adoption behavior is preceded by behavioral intention which in itself is a function of the individual's attitude, their beliefs about the extent to which they can control a particular behavior and other external factors. Social Cognitive Theory (SCT) is a framework for understanding, predicting, and changing behavior which introduces human behavior as a result of the interaction between personal factors, behavior, and the environment; Diffusion of Innovation Theory (IDT) which considers adoption of mobile banking as a social construct that gradually develops through the population over time; the Decomposed Theory of Planned Behavior (DTPB), an extended version of TAM, which models perceived ease of use and perceived usefulness as mediators of behavioral intention in which compatibility serves as an antecedent for both of them, and the Unified Theory of User Acceptance of Technology (UTAUT) which notes that four key constructs (performance expectancy, effort expectancy, social influence, and facilitating conditions) are the main determinants of consumers' usage intention and behavior (Martins, Oliveira, & Popovic, 2014; Shaikh & Karjaluoto, 2015).

2.2. Mobile banking

Mobile banking is a natural evolution of electronic banking which empowers consumers to complete financial transactions via mobile or handheld devices (Boor et al., 2014; Lin, 2013; Oliveira et al., 2014). Mobile devices allow the users to connect to a server, perform authentication and authorization, make mobile payments, and subsequently confirm the completed transactions (Kim & Mirusmonov, 2010). Since banks may achieve competitive advantage by providing mobile banking to customers, the issues associated with its mass usage are of high significance (Au & Kauffman, 2008; Dineshwar & Steven, 2013). Hence, users' attitudes and their intentions towards use of mobile banking are of immense importance to researchers, because it helps financial