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Mobile banking behavior and flow experience: An integration of utilitarian features, hedonic features and trust

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Mobile banking behavior and flow experience

MB behavior
and flow
experience

An integration of utilitarian features, hedonic features and trust

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Abstract

Purpose – Mobile banking or m-banking enables consumers to carry out their banking affairs with the help of mobile devices. Mobile-user banking interactions in the context of technology services create opportunities for positive experiences that can nurture trust, foster brand equity and eventually lead to long-term relationship building. The purpose of this paper is to examine the concepts of m-banking customer flow experiences and their role in affecting customer intention in the continued use of m-banking.

Design/methodology/approach – To achieve this main objective, a research model was developed by taking theoretical backgrounds and specific characteristics of m-banking into consideration for testing. The study to test this model was carried out in Iran, a developing country in the Middle East.

Findings – Results of the PLS-SEM analysis of 927 bank customers showed that the flow experience is positively influenced by both hedonic and utilitarian features. While, flow experiences influence trust and brand equity, individual mobility has a stronger effect on the intention to continue the use of m-banking compared with trust, flow experience and brand equity.

Originality/value – The current research provides various useful insights into customer engagement for conducting banking tasks via mobile technologies. Managers and decision makers can take into account the following insights to enhance positive flow experiences and loyalty intention of customers toward m-banking.

Keywords Hedonic features, Individual mobility, Mobile banking or m-banking, Utilitarian features

Paper type Research paper

1. Introduction

One of the most recent mobile technological wonders (Shaikh and Karjaluo, 2015) and one of the most recent financial services sector innovations which has added a pure mobility element to service consumption (Mishra and Bisht, 2013; Oliveira *et al.*, 2014) that in turn enabled customers to have convenient access to different value-added banking services is mobile banking (MB) or m-banking (Anderson, 2010). In the context of banking services the development of m-banking, as the latest technological advances in this domain, has changed the way financial services are translated (Oliveira *et al.*, 2014). As Mohammadi (2015c) noted, it is expected that more than one billion people all around the world will use m-banking by 2017. The way financial services are designed, as well as, delivered and the way customers interact with other societal constituents would be improved (Lee *et al.*, 2015).

M-banking allows bank customers to use a portable computing device or smart phone to perform banking tasks such as bill payments, monitor account balances, find ATM locations or make money transfers (Oliveira *et al.*, 2014). Therefore, it is becoming an



inseparable part of how business is being done (Ahluwalia and Varshney, 2009; Mohammadi, 2015c). M-banking, however, inevitably encounters numerous challenges while it continually tries to attract potential consumers that makes its mass acceptance uncertain (Lin, 2011). Thus far, m-banking has failed to earn the potential customers trust so is still in its early stages (Zhang *et al.*, 2012). As Dineshwar and Steven (2013) indicated, the use of mobile phones/smart phones to access financial information and conduct banking transactions is not as widespread as expected. In Iran, this corresponds with what Hanafizadeh *et al.* (2014) and Mohammadi (2015c) believed that despite increased accessibility of m-banking and technological progress, the number of users does not match expectations which warrant further investigations into its reasons.

Previous studies have applied different theories, for instance, the innovation diffusion theory and the technology acceptance model to explore behavioral patterns of m-banking users. While m-banking is increasingly playing an important role in bringing financial services to people in developing countries, particularly in the Middle East (Thye Goh *et al.*, 2014), however, only a limited number of previous studies have explored the driving factors for acceptance from the customers perspective in this region (Al-Somali *et al.*, 2009). The focus of this study is on Iran as a developing country in Middle East with a large population of over 80 million people. As Hanafizadeh *et al.* (2014) and Mohammadi (2015c) indicated, the increasing need to encourage consumers to use cell-phones for their banking affairs along with the negative trend regarding the adoption and continuous use of this innovation in Iran make it necessary to explore what the drivers of MB acceptance and continues usage in this country.

Most Iranians are still using m-banking precursors such as the telephone bank, the bank branch and the ATM (Hanafizadeh and Khedmatgozar, 2012). This indicates that along with the adoption of new technologies like the m-banking system there is a need to determine the factors influencing its adoption and loyalty intention (Mohammadi, 2015c) which was the aim of this study. As noted from previous literature (Püschel *et al.*, 2010; Schierz *et al.*, 2010), customer intention to continuously use appears to be an imperative predictor which affects their usage of technology-based banking services. Therefore, this study aimed to fill a gap in literature by addressing this research into the main reasons behind the low prevalence of m-banking among Iranian customers through determining the factors that influence customer continuous usage intention with regard to m-banking. This differentiates this study from some previous ones such as Hanafizadeh *et al.* (2014) and Mohammadi (2015c) conducted in Iran regarding m-banking.

On the other hand, it has been indicated 24 percent of annual online and technology revenue is lost globally because of poor online consumer experiences (Gregoriadis, 2011). In spite of the importance of customer experiences in relation to business performance, little attention has been given to the customer experiences in technological development which result from consumer interactions from encounters with technology services (Rose *et al.*, 2012). The technology and information system (IS) consumer experience is important for m-banking services. Customers may seek both utilitarian and hedonic benefits when making MB that may potentially lead to a “flow” state. Although, flow has been examined in past studies in e-commerce settings (Bilgihan *et al.*, 2015), however, it has received less attention in the context of m-banking.

The term flow as a situation where people act with a sense of concentration, deep involvement, total control and enjoyment was first defined by Csikszentmihalyi (1975). As Hung *et al.* (2012) indicated, later research works used similar definitions, claiming that flow is the enjoyment people experience when acting with total involvement. Past research works have noted that applying the flow concept to understand customer experiences in service settings would be promising, however, it is still an underdeveloped field (Guo, 2004; Huang *et al.*, 2016; Nusair and Parsa, 2011; Xiang and Gretzel, 2010), particularly for services like m-banking. Therefore, this study integrated a model of flow, which aimed to develop continuous usage of m-banking in banking services.

A unique characteristic of m-banking services is that clients have to base their judgment on the information provided in the software and applications. Particularly, customer banking tasks are usually on the basis of appearances, as conveyed in, for instance, quality information, images, pictures and video clips of the services. Therefore, the promise of banking tasks and transactions depend, to a great extent, on the online experience with the user interface and how individuals interact with the service setting. In the context of services, flow experiences are important to keep customers satisfied (Bilgihan *et al.*, 2015; Nusair and Parsa, 2011). To compete with other banking services, m-banking must offer compelling banking experiences to foster customer adoption and usage intention. Delivering better banking interactions provides an opportunity for the bank brand to offer its customers an optimal banking experience, where the client is deeply involved and completely immersed in the banking activity. As Teng *et al.* (2012) noted, flow is an important concept in explaining customer behavior in computer-mediated environments.

Accordingly, the objective of this study was to enhance the understanding of the flow and concept of customer experiences with m-banking banking services. Therefore, the primary aim of this study was to develop a theory-based model of flow experience that enhances brand equity and trust to encourage customer adoption and continuous usage of this technology. More specifically, this study aimed to explore the direct influence of utilitarian and hedonic m-banking features on the flow experience; the influence of utilitarian m-banking features on trust and the impact of hedonic m-banking features on brand equity; the impact of flow experience on trust, brand equity and m-banking continuous usage intention; and the influence of a social driver (social influence) and an individual driver (individual mobility) on m-banking continuous usage intention.

2. Literature review

According to Lin (2011), m-banking is so important that technology and IS professionals have described it as one of the most important and promising recent developments in the field of banking business and mobile commerce. This banking and financial services IS technology is an extension into mobile network and devices. Different characteristics like location independence and time, as well as, secured transactions through the use of personal smart phone to identify the account owner and to confirm the transaction (Mallat *et al.*, 2004) have led to a rapid growth in m-banking (Lee *et al.*, 2015). It is consequently likely that customers will opt for the novelty and convenience of m-banking with the proliferation of mobile phone technology and ubiquitous connectivity. Researchers have proved that changing technologies and customer preferences can have significant influence on the success of a bank's service distribution strategies (Amin *et al.*, 2017; Oliveira *et al.*, 2014). Since banks achieve competitive advantage by offering m-banking to consumers, the issues related to its mass usage are of high importance (Au and Kauffman, 2008; Dineshwar and Steven, 2013; Mohammadi, 2015c).

Offering a unique experience is the key to winning the minds and hearts of customers (Pine and Gilmore, 2011). They believed that customers appreciate the experience even more than the actual tangible value. Therefore, the experience is an important element of the overall service/product being used (Bharwani and Jauhari, 2013; Morosan *et al.*, 2014). Consequently, researchers examine customer experience with services using the "flow" concept as a potential measure of customer experience (Ding *et al.*, 2011; Novak *et al.*, 2000). As mentioned, the term "flow" defines a situation in which individuals act with a sense of concentration, total control and deep involvement (Bilgihan *et al.*, 2015). Customer interactions with bank brand-related stimuli on the m-banking can lead to a state of flow. In fact, flow variables are related to attractive consequences in technology service contexts, such as positive perceptions and attitudes (Agarwal and Karahanna, 2000; Huang, 2003), positive affect (Chen, 2006), exploratory behavior with increased learning (Skadberg and Kimmel, 2004) and future intention of use (Bilgihan *et al.*, 2015; Siekpe, 2005).

3. Research model and hypotheses

Pine and Gilmore (2011) suggested that offering a unique experience is the key to winning the hearts and minds of consumers. Their work argues that consumers appreciate the experience more than the actual tangible value. Consequently, the experience is a vital element of the overall product/service being used (Bharwani and Jauhari, 2013; Gopalani and Shick, 2011; Morosan *et al.*, 2014; Ramanathan and Ramanathan, 2011). Accordingly, researchers examine the consumer's shopping experience with online services using the "flow" construct as a potential measure of the consumer's experience (Ding *et al.*, 2011; Novak *et al.*, 2000; Rose *et al.*, 2012). As stated earlier, the term "flow" describes a situation in which people act with a sense of total control, concentration and deep involvement. Consumers' interactions with MB can lead to a state of flow.

3.1 Utilitarian feature, hedonic features and flow experience in services

In addition to seeking utilitarian benefits like price, ease of use and product/service offering comparisons in m-banking services clients may also consider hedonic benefits like visually appealing services designs that provide enjoyment from the m-banking experience. Accordingly, numerous elements of hedonic and utilitarian features of technology can create a flow experience (Gharbi and Tunis, 2002). Service drivers need to understand the flow drivers to enhance the customer experience (Bilgihan *et al.*, 2015; Kudeshia and Kumar, 2017; McGinnis *et al.*, 2008).

Different technology features (e.g. utilitarian vs hedonic) cause the differential importance of ease of use, usefulness and enjoyment (Childers *et al.*, 2002). As Venkatesh (2000) noted, utilitarian performance is judged based on whether a specific purpose is accomplished. Flow elicits favorable technology and service evaluations of the utilitarian features (Huang, 2003). Past studies have confirmed that better user perceptions of the utilitarian aspects (e.g. easier navigation) in technology-based services correspond with more opportunities to achieve flow (Bilgihan *et al.*, 2015). Besides, Choi *et al.* (2007) have proved that utilitarian aspects stimulate the flow experience. Consequently, following hypothesis was made:

H1. The utilitarian features of m-banking affect the flow experience.

Feelings like fantasy, happiness, sensuality, awakening, as well as, enjoyment are the reasons why people use e-commerce and technology-based services (McGinnis *et al.*, 2008). Besides, Hsu *et al.* (2012) have proved that the flow experience is important in affecting behavior like continuance intention to use. Childers *et al.* (2002) highlighted hedonic characteristics' importance of technology. Hedonic features are related to the perceived enjoyment and are used to measure the affective aspect of technology's appeal (Bilgihan *et al.*, 2015; Hampton-Sosa and Koufaris, 2005). Hedonic m-banking features are expected to create flow experiences for m-banking consumers. A greater perception of technology's interactivity through hedonic features would lead to the increased achievement of flow experiences (Koufaris, 2002; Skadberg and Kimmel, 2004). Therefore, this lead to the following hypothesis:

H2. The hedonic features of m-banking affect the flow experience.

3.2 Utilitarian features and trust

Trust successfully decreases uncertainty and risks (Chang, 2013; Suh and Han, 2003) and consequently creates a sense of safety (Bilgihan *et al.*, 2015; Nikander and Karvonen, 2001). Research related to user behavior has highlighted the key role of trust in stimulating favorable responses for any service to be used in the future (Casaló *et al.*, 2010; Nadeem *et al.*, 2015; Ruiz-Mafe *et al.*, 2014). A successful m-banking is one that attracts consumers and makes them feel that the offered services are trustworthy, reliable and dependable. Consumers may have

concerns that the m-banking system is vulnerable to system intruders or hackers (Lee *et al.*, 2015). Customer trust needs to be formed and retained in the long term (Hanafizadeh *et al.*, 2014). Past research indicates that improvement in ease of use of technology, as well as, utility nurtures trust in the minds of customers (Chien *et al.*, 2012). Accordingly, Cyr (2008) pointed out that utilitarian user-interface design concepts are crucial antecedents to technology and service trust. Lowry *et al.* (2008) and Bilgihan *et al.* (2015) believed that utilitarian quality aspects like functionality and navigation positively influence trust. Therefore, this led to the next hypothesis:

H3. The utilitarian features of m-banking affect trust.

3.3 Hedonic features and brand equity

Brand equity is among one of the most important features of marketing and promotion (Lin (2013). The technology-based applications (smart phones and tablets) provide a new channel for the distribution and communication of a brand. It is expected that the m-banking hedonic features have a positive influence on brand equity through exposure. According to Lowry *et al.* (2008), service quality from an esthetic point of view positively influences brand image. Accordingly, a study by Bilgihan *et al.* (2015) confirmed that hedonic features positively influence brand equity. Accordingly, this led to another hypothesis as follows:

H4. The hedonic features of m-banking affect brand equity.

3.4 Flow experience, trust, brand equity and intention to continuous use

Consumers' trust or lack thereof in the m-banking system will influence the acceptance and usage of the system (Lee *et al.*, 2015; Luarn and Lin, 2005). According to Dailey (2004), in technology environments, flow decreases the undesirable outcomes possibility, such as service or technology avoidance and negative attitudes. Hampton-Sosa and Koufaris (2005) indicated that technology and service appeal, as well as, smooth transitions are key predictors of trust that in turn has a significant impact on the consumer's intention to use the service. A study by Bilgihan *et al.* (2015) proved that flow experience is positively, as well as, significantly related to trust. Therefore, this led to the next hypothesis:

H5. The flow experience in m-banking affects trust.

Automatic arousal occurs once individuals experience positive emotions, leading to cognitive broadening in which a person's attention, thoughts and behavioral repertoires (e.g. playing, exploring) are broadened or extended (Fredrickson *et al.*, 2003). Accordingly, it is expected that the positive emotions arising from the flow experience of interacting with an e-commerce service increases customer knowledge regarding the brand and strengthen connection with the brand (Bilgihan *et al.*, 2015). In the context of service, Nah *et al.* (2011) proved the positive association between the flow experience and brand equity. Thus, this generated the following hypothesis:

H6. The flow experience on m-banking affects brand equity.

According to Smith and Sivakumar (2004), flow experience influences different types of online and technology behaviors. Besides, flow is positively connected to transaction intentions (Bilgihan *et al.*, 2015; Wu and Chang, 2005). In addition, Rose *et al.* (2012) have pointed out that firms must continuously provide a compelling technology consumer experience (flow) in order to build continuous usage intention and loyalty in the technology context. A study by Bilgihan *et al.* (2015) confirmed that flow experience has a direct positive impact on continuous intention to use a technology service. Therefore, this study proposes to test that m-banking system which represents a convincing customer experience would be able to attract customers. Therefore, the following was hypothesized:

H7. The flow experience in m-banking affects the intention to continue using m-banking.

3.5 Trust, brand equity and intention to continuous use

Trust is undermined by the risky/uncertain nature of privacy and security issues and by countless sources of information which can distract or disorient customers in digital environments (Nadeem *et al.*, 2015). In the distribution channel connections area, numerous research works have described trust as a company belief in its business party, honesty and other factors related to this perception (Geyskens *et al.*, 1998). In addition, Das and Teng (2001) defined this concept as the tendency to trust in a business partner that is capable of being trusted. Trust and perceived risk are interrelated notions which have often been identified as crucial barriers for the adoption of online and mobile services (Featherman and Pavlou, 2003; Gefen *et al.*, 2003; Jamshidi *et al.*, 2015). As Kim, Shin and Lee (2007) noted, the primary trust of people in services is expressed as the essential factor for using m-banking, once MB was perceived as associated with higher risk in comparison with ordinary banking. The association between trust and the use of m-banking has been proved by Hanafizadeh *et al.* (2014). Therefore, this generated the following hypothesis:

H8. Trust in m-banking affects the intention to continue using m-banking.

As Wood (2000) noted, the brand equity notion highlights the importance of developing a long-term focus within brand management. Feldwick (1996) and Bilgihan *et al.* (2015) classified brand equity as a measure of customer attachment strength to a brand as a description of the beliefs and associations that the customer has regarding the brand. Actually, since a strong brand name conveys a product quality, a strong brand name would be able to facilitate customer differentiation of brands (Aaker, 2012). Accordingly, empirical studies have proved that brand equity has a direct impact on loyalty (Nam *et al.*, 2011). A recent study conducted by Bilgihan *et al.* (2015) confirmed the positive significant association between brand equity and intention to continue use of a technology. Similar results for m-banking services are expected in this study. Therefore, this led to the following hypothesis:

H9. Brand equity affects the intention to continue using m-banking.

3.6 Individual mobility

Individual mobility is defined as the degree to which a person seeks a mobile lifestyle (Schierz *et al.*, 2010). As Laukkanen *et al.* (2007) indicated, mobile IS provides one of the most recent innovations in representing services that add the pure mobility element to service consumption. Since mobile services correspond excellently to a mobile lifestyle and offer a means to enjoy services in virtually any life situation, highly mobile individuals will have a higher intention to use mobile services (Mohammadi, 2015b). Consequently a person's mobility positively influences a user's continuous intention to use and is a crucial driver of the mobile IS (Schierz *et al.*, 2010). Therefore, in this study people mobility is assumed to have a positive influence on the intention toward continuous usage of m-banking. Thus, based the above assumption the following was hypothesized:

H10. Individual mobility affects the intention to continue using m-banking.

3.7 Social influence

Social influence is known as an antecedent directed behavioral intention (Oliveira *et al.*, 2014). Social influence is a degree to which a person perceives that it is important for others to believe that he/she uses the new technology or comply with the expectations of other (Chou and Katelin, 2016; Venkatesh *et al.*, 2003). People who are socially persuaded that they possess the abilities to master difficult situations and are provided with provisional skills for effective action are likely to mobilize greater effort compared with those who only receive the performance aids (Mohammadi, 2015b; Shippee and Keengwe, 2014). Accordingly, individual

behavior is affected by the way family members or peers value the m-banking use. The people may feel a sense of being professional and trendy by using a new service technology like m-banking (Oliveira *et al.*, 2014). Therefore, the following hypothesis arose in this connection:

H11. Social influence affects the intention to continue using m-banking.

On the basis of literature review the proposed model, consisting of the various hypotheses, to be tested in this study is given in Figure 1.

4. Research design

4.1 Participants/Sample pool

The study was carried out in Teheran, the capital city of Iran. To a respondent, m-banking was described as a mobile commerce application which provides the user the opportunity to make everyday bank transactions (block lost cards, check book requests, make money transfers, balance inquires, etc.), financial inquiries (foreign exchange rates, ATM locations, statement requests, bank balance, etc.) and mobile brokerage (financial instruments trading) using a mobile phone, tablets or other portable devices (Oliveira *et al.*, 2014). In order to increase validity, the respondent who was familiar with m-banking and had previous experience of its usage was asked indicate this while filling in the questionnaire. Indeed, this was the first question in the questionnaire for screening purposes to determine if the respondent had used any of the abovementioned m-banking services in the last year. Participate in the study was voluntary. Besides, to reduce a self-reporting bias and encourage participation, all respondents were given the opportunity to receive the findings of the study.

4.2 Instrumentation

A self-administrated questionnaire, which was the instrument used in this study, was divided into two main parts. The first section of the survey included questions directed to the demographic characteristics of the respondents such as gender, age, education, income and occupation. The next section comprised questions related to scale items (indicators), to measure each construct. Accordingly, the measures in the questionnaire were on the basis of extant literature and were selected due to their previous confirmed validity and reliability, as well as, their relevance to the proposed research model (see Table AI for the items used and their sources). Flow, utilitarian features and hedonic features were defined as given in Huang (2005) and Bilgihan *et al.* (2015). For trust, items were used from Oliveira *et al.* (2014)

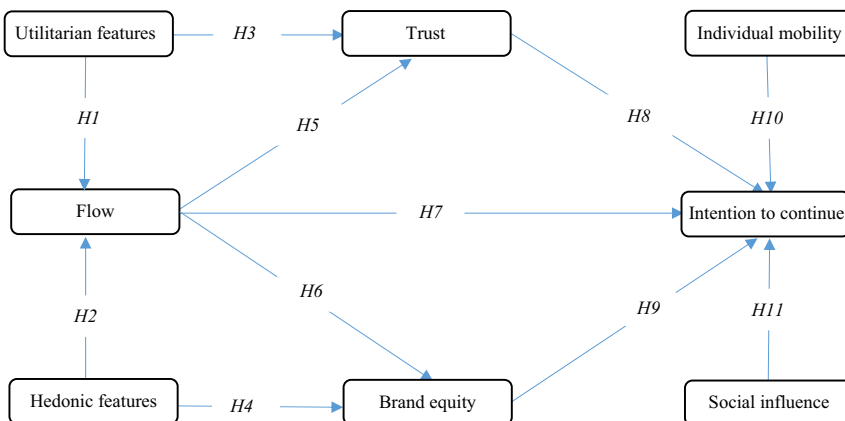


Figure 1.
Proposed research
model and hypotheses

and for brand equity, the items were adapted from Yoo *et al.* (2000) and Bilgihan *et al.* (2015), while the measures of individual mobility were selected and adapted from Schierz *et al.* (2010). The social influence construct was composed of four items (Oliveira *et al.*, 2014) and intention to continuance use was measured by using four items (Escobar-Rodríguez and Carvajal-Trujillo, 2014). A five-point Likert type scale (i.e. 1 = strongly disagree to 5 = strongly agree) was used to measure the responses to the constructs statements.

The questionnaire items were validated by a panel of IS academics (five persons) and banking professionals (five persons). A number of modifications were made to the items based on the opinions of the panel, to make the meanings clearer. Besides, in order to ensure validity, a field test was conducted using 20 bank customers who had previously used m-banking. Accordingly, only minor amendments were made to the wording of some items to increase clarity. In addition, minor modifications were made to a few words that these individuals had highlighted as being unclear. As the questionnaire was originally created in the English language but as it was intended to be used in Persian (Farsi) the English version was translated to Persian by researchers and a professional native English translator, who separately translated the English version into Persian. After a careful check of differences between these separately translated versions, a final version of a Persian questionnaire was adopted. Following this, another native English profession translator translated this final Persian version back into English to ensure consistency between Persian and English versions of the questionnaire (Brislin, 1970; Escobar-Rodríguez and Carvajal-Trujillo, 2014; Venkatesh *et al.*, 2012). The questionnaire is given in Table A1.

4.3 Sampling and data collection

As this study focused on m-banking usage, the respondents were selected from bank customers. As mentioned, respondents who were familiar with m-banking and had previous experience of its usage were asked to so indicate while filling the questionnaire. As mentioned, in order to test the items of the instrument, a pilot study was carried out among a group of 100 bank clients who were not included in the main survey. The finding from this phase showed that all the items of the questionnaire were reliable and valid. Following the pilot study, the study was carried out with the respondents constitute from the customers of a major bank in Tehran, capital city of Iran, using the self-administrated questionnaire. The bank was selected due to its reputation in providing m-banking services and having diverse customer groups comprising of various ages, ethnicity and backgrounds. In fact, this allowed the representation of wider customer segmentations that in turn provided a better picture with regards to a multi-faceted customer segmentation (Tan *et al.*, 2014). Accordingly, using a systematic sampling technique, every second client entering the bank was selected and he/she was asked to describe his/her level of agreement to each statement of the questionnaire. After a period of six weeks (February 14 to March 28, 2015) 1,032 completed questionnaire out of 1,300 distributed were collected. The sample appears to be sufficient for the further analysis by considering different types of minimum sample size requirements (Cochran, 1977; Hair *et al.*, 2014; Krejcie and Morgan, 1970).

4.4 Data analysis

This study used structural equation modeling (SEM) in order to analyze the data and test the proposed hypotheses. The SEM, a second generation technique, allows researchers to include unobservable variables measured indirectly by indicator variables. It also facilitates consideration for measurement error in the observed variable of a study (Chin, 1998). There are two approaches in applying SEM, namely, the variance-based techniques and covariance-based techniques. The PLS technique within the SEM arena represents the ability to integrate many measures or indicators of study with the related constructs (Chin, 2000; Gefen and Straub, 2005; Haenlein and Kaplan, 2004; Henningson *et al.*, 2001;

Hulland, 1999; Straub *et al.*, 2004). The PLS procedure has been gaining importance and use in technology acceptance studies in recent years (Alaiad and Zhou, 2014; Zhou, 2012). The PLS is a multivariate technique to test structural models that estimate the model parameters and minimize the whole model dependent variables residual value (Escobar-Rodriguez and Carvajal-Trujillo, 2014; Hsu *et al.*, 2006). The PLS was used in this study since the research model was considered as complex and the research model had not been tested in the literature. This study proposed several new constructs for explaining m-banking usage, making the model predictive instead of theory confirmatory. Therefore, this research applied PLS-SEM, using SmartPLS 2.0 V 3 (Ringle *et al.*, 2005), to achieve its objective. In the meantime, the Statistical Package for the Social Sciences v.21 was utilized for some of the data.

5. Results and findings

5.1 Sample profile and data screening

According to Hair *et al.* (2014), the primary issues need to be addressed including missing data, outliers, suspicious response patterns and data distribution. Then, following these recommendations, if the number of missing value per observation (respondent) is more than 15 percent the corresponding observation must be eliminated from the data set. As a result, 64 cases of observations which had more than 15 percent missing values per observation (more than five unanswered questions in an observation) were eliminated from the 1,032 returned data set.

The next criteria to be assessed were the questionnaires with suspicious patterns in answering. The collected data set was examined for suspicious response patterns like straight lining (the same answer for a high proportion of questions in the questionnaire) on the basis of Hair *et al.*'s (2014) recommendation. Accordingly, 41 of the surveys which were suspicious from the point of straight lining were removed from the returned surveys. In addition, an attempt was made to identify outlier cases, using the Z-score test. All of the Z-scores of the variables were found to be within the acceptable threshold of -3 and $+3$ (Kline, 2011). Therefore, this confirmed that the case of outliers was not an issue with the data set. Lastly, two distribution measures: skewness and kurtosis that evaluate the extent data deviation from expected normality (Hair *et al.*, 2010) were investigated. The skewness and kurtosis standard errors were found to be well within the satisfactory threshold (-2 and $+2$) for both constructs and items separately. As a consequence, these outcomes (Table V) clearly established the normality of distribution of the data set. After the above screening tests, the data set yielded a sample size of 927 usable responses for further analyses which are described in subsequent sections.

After the data screening phase described above, the demographic characteristics of respondents were evaluated. The demographic profile of the respondents is summarized and given in Table I. The population sample that constituted this study is more feminine (55.7 percent) than masculine (44.3 percent) and younger than 40 years old (more than 60 percent of respondents), which is similar to the Iran Center of Census and Statistics Report (Mohammadi, 2015c). Overall, these features point to the fact that the sample set is a representative one.

5.2 Analysis of the measurement model

The empirical analysis of this study was carried out by an analysis of the measurement model and structural model (Anderson and Gerbing, 1988). The PLS technique (Terzis and Economides, 2011) was performed with the SmartPLS 2.0 v 3 software. The evaluation of the measurement models consists of composite reliability and Cronbach's α in order to assess internal consistency, and evaluation of outer loadings of the indicators along with the AVE to

Table I.
The demographic
profile of the
respondents

Distribution	Frequency total: 927	100%
<i>Gender</i>		
Male	411	44.3
Female	516	55.7
<i>Age</i>		
18-28	192	20.7
29-39	367	39.6
40-50	153	16.5
51-60	178	19.2
Above 60	37	4
<i>Education</i>		
Primary	156	16.8
Secondary	88	9.5
Diploma	143	15.4
Bachelor	263	28.4
Master	200	21.6
Doctorate	77	8.3
<i>Occupation</i>		
Manager	100	10.8
Executive	274	29.6
Clerical	179	19.3
Student	184	19.8
Others	190	20.5
<i>Income</i>		
Below R1,500,000	269	29
R1,501,000-3,000,000	307	33.1
R3,001,000-5,000,000	183	19.7
R5,001,000-7,000,000	63	6.8
Above R7,000,000	105	11.3

measure convergent validity. Besides, the Fornell-Larcker criterion and cross-loadings were used to evaluate the discriminant validity (Chin, 2010; Hair *et al.*, 2011, 2014). The outcome of analysis given in Table II showed that Cronbach's α and composite reliability of all constructs are well above the minimum acceptance level of 0.70 which in turn prove the reliability of the constructs (Bagozzi and Yi, 1988; Gefen *et al.*, 2000; Ifinedo, 2006).

Furthermore, as mentioned earlier, the AVE and outer loading were assessed to show convergent validity. The AVE values of 0.678 (brand equity), 0.556 (flow), 0.810 (hedonic features), 0.736 (intention), 0.789 (individual mobility), 0.882 (social influence), 0.738 (trust) and 0.776 (utilitarian features) were well above the minimum acceptance level of 0.50, which in turn indicate on average, the construct explains more than half of its indicators variance (Fornell and Larcker, 1981; Hair *et al.*, 2011).

Moreover, outer loading for the majority of constructs were found to be well above the minimum acceptance level of 0.708 (Table II and Figure 2). Nevertheless, one indicator (BE4 = 0.539) did not met this minimum acceptance level. However, instead of automatically eliminating the indicators that have an outer loading below 0.70, the impact of item removal on composite reliability, as well as, content validity of the construct must carefully be considered (Hair *et al.*, 2011, 2014). In other words, indicators which have an outer loading between 0.40 and 0.70 must be considered for deleting, only if their removal leads to an increase in AVE or composite reliability above the minimum suggested threshold (Hair *et al.*, 2014).

Construct	Item	Loading	AVE	CR	α	MB behavior and flow experience
Brand equity	BE1	0.866	0.678	0.890	0.825	67
	BE2	0.932				
	BE3	0.895				
	BE4	0.539				
Flow	FL1	0.722	0.556	0.833	0.735	
	FL2	0.813				
	FL3	0.706				
	FL4	0.735				
Hedonic features	HF1	0.885	0.810	0.944	0.922	
	HF2	0.903				
	HF3	0.921				
	HF4	0.889				
Intention	INTU1	0.880	0.736	0.917	0.881	
	INTU2	0.895				
	INTU3	0.877				
	INTU4	0.772				
Individual mobility	MO1	0.859	0.789	0.937	0.911	
	MO2	0.899				
	MO3	0.907				
	MO4	0.886				
Social influence	SI1	0.938	0.882	0.967	0.955	
	SI2	0.953				
	SI3	0.947				
	SI4	0.919				
Trust	TR1	0.757	0.738	0.918	0.880	
	TR2	0.886				
	TR3	0.907				
	TR4	0.877				
Utilitarian features	UF1	0.849	0.776	0.932	0.903	
	UF2	0.923				
	UF3	0.893				
	UF4	0.856				

Table II.
Measurement statistics of construct scales (item, loading, AVE, CR and α)

Because the analysis in this study showed that the related construct (brand equity) has already achieved the minimum composite reliability (0.70) and acceptable threshold of AVE (0.50), therefore, these criteria were well above this starting point. Thus, there was no reason for removal of the item which was below 0.70 (Hair *et al.*, 2014). For that reason, all items were retained for further analysis.

As the Fornell-Larcker criterion and cross-loading provide evidence in regards to the discriminant validity of the constructs (Hair *et al.*, 2014), thus, the first test (cross-loading) results (Table III) showed that each indicator loading on its associated construct is higher than all of their cross-loading with other constructs (Chin, 2010). Besides, the analysis showed that the square root of each variable's AVE, comprising brand equity (0.823), flow (0.745), hedonic features (0.900), individual mobility (0.888), intention (0.858), social influence (0.939), trust (0.859) and utilitarian features (0.881) were all higher than these constructs correlation with other latent variables of the model (Table IV), which prove discriminant validity of the measures (Hair *et al.*, 2011; Henseler *et al.*, 2009)

5.3 Analysis of the structural model

Having carried out the valuation for the validity and reliable of the outer model, the next step was to evaluate the significance of the inner path structural model. The structural model explains the connections between latent constructs of study (Anderson and Gerbing, 1988).

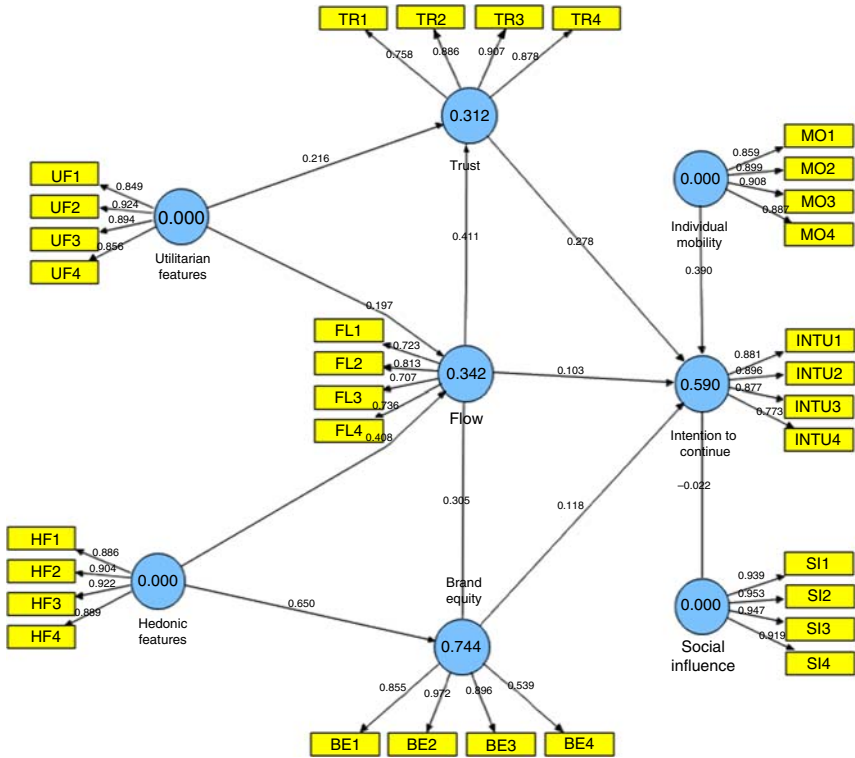


Figure 2.
Results of PLS
path diagram

Thus, the inner model estimates were examined, since the outer model provided evidence of reliability and validity. Therefore, after establishing reliability and validity, the primary assessment criteria for PLS-SEM outcomes are coefficient of determination (R^2 values) and also path coefficients level and significance. In addition, collinearity, the f^2 effect size and the Q^2 predictive are evaluated in the assessment of the structural model (Hair *et al.*, 2014).

In this regard, after fitting a model of both independent and dependent constructs a key check is the test for collinearity in the data set, since it is important that the independent concepts are not strongly intercorrelated. Then, considering the tolerance and VIF, the analysis of the four set of predictors for collinearity, namely, utilitarian features and hedonic features as predictors of flow; utilitarian features and flow as predictors of trust; brand equity, flow, individual mobility, social influence and trust as predictors of intention to continue use and hedonic features and flow as predictors of brand equity indicated that all VIF were below the threshold of 5 and tolerance, as well, was above 0.2 (Hair *et al.*, 2010) which consequently means collinearity among the predictor constructs is not issue in the structural model of this study (Table V).

The R^2 value of brand equity (0.744), flow (0.342), intention (0.589) and trust (0.312), as shown in Figure 2, can be considered to be at a moderate level (Hair *et al.*, 2014; Henseler *et al.*, 2009). However, R^2 level of above 0.20 would be considered high in disciplines like consumer behavior (Hair *et al.*, 2011).

After the R^2 values evaluation, the effect size (f^2) of different exogenous concepts on endogenous latent variable was examined. The effect size of single predictors regarding their related dependent concept is evaluated by comparing between the explained amount of

	Brand equity	Flow	Hedonic features	Intention	Mobility	Social influence	Trust	Utilitarian features
BE1	<i>0.866</i>	0.517	0.722	0.415	0.377	-0.073	0.407	0.661
BE2	<i>0.932</i>	0.611	0.755	0.450	0.399	-0.118	0.444	0.678
BE3	<i>0.895</i>	0.539	0.750	0.425	0.381	-0.091	0.428	0.700
BE4	<i>0.539</i>	0.510	0.443	0.367	0.327	-0.048	0.352	0.354
FL1	0.547	<i>0.722</i>	0.494	0.381	0.361	-0.007	0.369	0.471
FL2	0.496	<i>0.813</i>	0.421	0.383	0.308	-0.021	0.338	0.410
FL3	0.418	<i>0.706</i>	0.309	0.266	0.232	-0.075	0.271	0.287
FL4	0.534	<i>0.735</i>	0.453	0.466	0.459	-0.083	0.543	0.418
HF1	0.704	0.466	<i>0.885</i>	0.397	0.371	-0.067	0.430	0.798
HF2	0.688	0.513	<i>0.903</i>	0.439	0.389	-0.043	0.432	0.791
HF3	0.811	0.548	<i>0.921</i>	0.477	0.420	-0.074	0.470	0.740
HF4	0.759	0.539	<i>0.889</i>	0.480	0.423	-0.062	0.475	0.733
INTU1	0.529	0.519	0.501	<i>0.880</i>	0.764	-0.060	0.711	0.442
INTU2	0.446	0.447	0.438	<i>0.895</i>	0.624	-0.031	0.613	0.391
INTU3	0.417	0.440	0.435	<i>0.877</i>	0.559	-0.056	0.568	0.378
INTU4	0.296	0.328	0.306	<i>0.772</i>	0.449	-0.033	0.497	0.239
MO1	0.418	0.420	0.422	0.594	<i>0.859</i>	0.000	0.767	0.378
MO2	0.376	0.394	0.375	0.587	<i>0.899</i>	0.012	0.710	0.320
MO3	0.365	0.387	0.357	0.628	<i>0.907</i>	0.001	0.696	0.336
MO4	0.442	0.469	0.427	0.718	<i>0.886</i>	-0.025	0.703	0.389
SI1	-0.095	-0.066	-0.068	-0.052	-0.011	<i>0.938</i>	-0.043	-0.051
SI2	-0.109	-0.073	-0.068	-0.051	-0.014	<i>0.953</i>	-0.055	-0.044
SI3	-0.085	-0.037	-0.053	-0.049	0.014	<i>0.947</i>	-0.026	-0.024
SI4	-0.098	-0.054	-0.070	-0.049	-0.004	<i>0.919</i>	-0.028	-0.039
TR1	0.414	0.507	0.367	0.522	0.530	-0.060	<i>0.757</i>	0.281
TR2	0.409	0.430	0.420	0.609	0.699	-0.053	<i>0.886</i>	0.374
TR3	0.425	0.423	0.459	0.654	0.763	-0.022	<i>0.907</i>	0.418
TR4	0.462	0.462	0.475	0.637	0.767	-0.007	<i>0.877</i>	0.425
UF1	0.608	0.514	0.693	0.422	0.386	-0.037	0.433	<i>0.849</i>
UF2	0.658	0.484	0.748	0.341	0.324	-0.033	0.355	<i>0.923</i>
UF3	0.717	0.486	0.754	0.411	0.380	-0.057	0.410	<i>0.893</i>
UF4	0.634	0.418	0.803	0.343	0.317	-0.019	0.336	<i>0.856</i>

Note: The italic value is the amount we confirm and emphasize as response and the amount must be loaded

Table III.
Cross-loadings
and loadings of
construct items

	Brand equity	Flow	Hedonic features	Individual mobility	Intention	Social influence	Trust	Utilitarian features
Brand equity	<i>0.823</i>							
Flow	0.679	<i>0.745</i>						
Hedonic features	0.825	0.575	<i>0.900</i>					
Individual mobility	0.453	0.473	0.446	<i>0.888</i>				
Intention	0.505	0.515	0.500	0.716	<i>0.858</i>			
Social influence	-0.103	-0.062	-0.069	-0.004	-0.054	<i>0.939</i>		
Trust	0.498	0.528	0.503	0.808	0.707	-0.040	<i>0.859</i>	
Utilitarian features	0.743	0.543	0.848	0.402	0.434	-0.042	0.439	<i>0.881</i>

Note: The square root of AVEs are represented in italic numbers

Table IV.
Fornell-Larcker
criterion

Table V.
Normality and
collinearity

Construct	Skewness	Kurtosis	Construct (second set, trust)	VIF	Tolerance
Utilitarian features	0.117	-1.228	Utilitarian features	1.420	0.704
Hedonic features	-0.071	-1.150	Flow	1.420	0.704
Brand equity	-0.059	-1.049	Construct (third set, intention)	VIF	Tolerance
Flow	0.387	0.759	Brand equity	1.976	0.506
Individual mobility	0.179	-1.142	Flow	2.042	0.490
Intention	0.369	1.379	Individual mobility	2.934	0.341
Trust	0.130	-1.090	Social influence	1.015	0.986
Social influence	-0.142	-1.848	Trust	3.183	0.314
Construct (first set, flow)	VIF	Tolerance	Construct (fourth set, brand equity)	VIF	Tolerance
Utilitarian features	3.569	0.280	Hedonic features	1.496	0.668
Hedonic features	3.569	0.280	Flow	1.496	0.668

variance with a predictor included and omitted in the model of study. The path direction, path coefficient as well as effect size (f^2) value of brand equity as one of endogenous constructs of study is given in Table VI. It was found that hedonic features as exogenous constructs of this study had a large effect size on brand equity while the effect size of flow on this concept was rather small.

The exogenous constructs of hedonic features and utilitarian features for explaining the endogenous latent variable flow had an f^2 effect size of 0.134 and 0.029 (Table VI). These results demonstrated that these concepts had significant medium and small effect on flow as endogenous construct, respectively. However, exogenous latent variable flow which is supposed to explain endogenous latent variable trust, had the effect size of 0.375, which considering the rule of thumb for the f^2 can be considered in to be at a large level.

Moreover, this study used blindfolding in order to evaluate the predictive relevance of the path model (Hair *et al.*, 2011). The analysis of blindfolding in Table VII showed that predictive relevance Q^2 of flow had a value of 0.182, which is higher than 0 and consequently indicates that the model has a predictive relevance for this construct. Besides, the predictive relevance Q^2 of brand equity was well above 0 with the exact amount of 0.497

Table VI.
Path coefficients and
effect size (f^2)

Path	Path coefficient	Effect size (f^2)	Path	Path coefficient	Effect size (f^2)
Hedonic features → brand equity	0.650	0.353	Flow → intention	0.103	0.008
Flow → brand equity	0.305	0.083	Trust → intention	0.278	0.037
Hedonic features → flow	0.408	0.134	Individual mobility → intention	0.390	0.091
Utilitarian features → flow	0.197	0.029	Brand equity → intention	0.118	0.013
Flow → trust	0.411	0.375	Social influence → intention	-0.022	0.001
Utilitarian features → trust	0.216	0.099			

Table VII.
Blindfolding and
predictive relevance

Endogenous constructs	Notation	Q^2 predictive relevance	Result
Flow	FL	0.182	Acceptable predictive relevance
Brand equity	BE	0.497	Acceptable predictive relevance
Trust	TR	0.228	Acceptable predictive relevance
Intention	INTU	0.420	Acceptable predictive relevance

that implies that the model of this study has predictive relevance for this endogenous construct. In addition, on the basis of the blindfolding results, the predictive relevance of trust and intention were 0.228 and 0.420 separately, higher than 0 which in turn proved that the model of study has a predictive relevance for these latent variables. Thus, all Q^2 values are noticeably above 0 which provides support for the model predictive relevance in regards to the endogenous latent construct of the study model.

Finally, the next criteria evaluated were the path coefficient and hypothesis testing which shows the strength of connections between latent constructs of research model. To assess different proposed hypotheses, the bootstrapping process was performed using 5,000 bootstrap samples as recommended by Hair *et al.* (2014). Thus, an examination of different hypotheses was conducted, focusing on path coefficients, *t*-values, as well as, *p*-values.

Utilitarian features were found to have a significant positive influence on flow ($\beta = 0.197, p < 0.01$) and trust ($\beta = 0.216, p < 0.01$), confirming *H1* and *H3*. This is consistent for hedonic features which positively and significantly influence both flow ($\beta = 0.408, p < 0.01$) and brand equity ($\beta = 0.650, p < 0.01$) which indicated that *H2* and *H4* were confirmed (Table VIII). The result also pointed to the influence of flow on trust ($\beta = 0.411, p < 0.01$), brand equity (*t*-statistic = 11.672, $p < 0.01$) and intention to continue use of m-banking (*t*-statistic = 3.101, $p < 0.01$) supporting *H5, H6*, as well as, *H7*.

Besides, it was found that trust ($\beta = 0.278, t$ -statistics = 6.816), brand equity ($\beta = 0.118, p < 0.01$) and individual mobility (*t*-statistic = 9.073, $p < 0.01$) were connected to the intention to continue use of m-banking in a positive manner, supporting *H8-H10* of the model in this study. However, the *H11* was rejected since there was no significant association between social influence and intention to continue use of m-banking ($\beta = -0.022, t = 1.025$).

6. Discussion and conclusions

6.1 Contributions

The necessity of investigating the main factors influencing the adoption and continuous usage of new technologies is clear as demonstrated by numerous studies (Amin *et al.*, 2017; Hanafizadeh *et al.*, 2014). Accordingly, investigation into the customer experience in technology-based m-banking is an emerging area of research. While m-banking was examined in this study, the findings may be generally applicable to other technology service contexts. The main focus of this study was to develop and test a theoretical model that investigates the antecedents and consequences of the flow experience with m-banking. The findings of this research highlight the importance of pleasurable features in m-banking

Hypothesis	Path	β (path coefficient)	<i>t</i> -value	Result
<i>H1</i>	Utilitarian features → trust	0.216	6.828	Supported
<i>H2</i>	Flow → trust	0.411	14.321	Supported
<i>H3</i>	Hedonic features → brand equity	0.650	27.483	Supported
<i>H4</i>	Flow → brand equity	0.305	11.672	Supported
<i>H5</i>	Hedonic features → flow	0.408	7.010	Supported
<i>H6</i>	Utilitarian features → flow	0.197	3.260	Supported
<i>H7</i>	Flow → intention	0.103	3.101	Supported
<i>H8</i>	Trust → intention	0.278	6.816	Supported
<i>H9</i>	Individual mobility → intention	0.390	9.073	Supported
<i>H10</i>	Brand equity → intention	0.118	3.823	Supported
<i>H11</i>	Social Influence → intention	-0.022	1.025	Not supported

Note: $p < 0.01$

Table VIII.
Hypotheses testing
results summary

in creating positive customer experiences as these features are linked to fun, pleasure and playfulness that users anticipate from a technology service.

The results also showed that while such characteristics are very important in creating flow, utilitarian elements can also be critical. Thus, when attempting to enhance m-banking customer experience, these features must not be disregarded. In fact, the traditional approaches in brick and mortar commerce are not applicable in technology service contexts. Rather, concepts such as participation, interaction, engagement and immersion are important for technology services (Bilgihan *et al.*, 2015).

As e-commerce matures, crucial features of m-banking would shift from statistic to more interactive components. Besides, the advent of Web 2.0, Ajax, Silverlight, Flash, landing pages and online widgets help technology services to enhance consumer experiences (Bilgihan *et al.*, 2015). Both financial service companies and banks have to find the most appropriate technology partners and enter into the most advantageous alliances if they are interested in expanding m-banking (Lee *et al.*, 2015). Marketers and financial service developers are encourage to take cues from highly developed entertainment industries, such as video games and movies, to introduce more seductive aspects to m-banking design, as positive experiences increase both brand equity and consumer trust in services.

Even though, this study examined the flow experience in m-banking services, the outcomes may be generally applicable to other service contexts to some extent. Accordingly, this research contributes to extant research on technology service experiences in numerous ways. Whereas previous research works in the psychology and marketing fields have used the flow construct to study how the flow experience affects consumer assessments, as well as, behaviors (Korzaan, 2003; Novak *et al.*, 2000), how m-banking services could foster flow has not been explored in depth. In addition, past research works have not examined the influence of various m-banking features on the flow experience for this technology-based service usage. Thus, this research tested a model with the flow experience precursors in e-banking services by establishing a link between m-banking features and the flow experience.

As the trends in technology continue to expand, new digital applications and a host of new research opportunities for consumer behavior and marketing scholars continue to expand as well (Hoffman and Novak, 2009). It is important to note that since the m-banking experience is a consumption event in and of itself, it is more interesting, as well as, motivating compared to traditional service banking for many customers. Besides, remembering that technology services generate flow only under limited conditions is important (Hoffman and Novak, 2009). In view of that, the proposed model in this study highlighted the importance of utilitarian and hedonic features. In addition, consistent with Bilgihan *et al.* (2015), it was cleared that flow leads to brand equity and creates trust.

This study helps technology marketers distinguish between factors, namely, utilitarian and hedonic features that make a distinct difference in m-banking experiences. Consumer interactions with m-banking services create chances for positive experiences that can foster brand equity and trust. Whether services and products are provided in a virtual or traditional environment, consumer interactions with environmental settings influence their behaviors and emotional responses (Bilgihan *et al.*, 2015). Particularly, bank software of m-banking design and graphic presentations are comparable to the overall ambience of the bank's physical environment and therefore influence consumer perceptions. Actually, m-banking software and applications design provides cues about a bank.

The m-banking experience is well characterized by a complete absorption in what one does and bank m-banking utilitarian features help customers have a sense of personal control and consequently intrinsically rewarding experience. Therefore, functionality, reliability and navigation play key roles in creating positive experiences in technology service contexts (Bilgihan *et al.*, 2015). The outcomes of this research also suggest that bank m-banking hedonic features are important in fostering positive brand equity, highlighting

the importance of m-banking services and applications esthetics in forming and sustaining a positive attitude toward a brand. In addition, the model in this study validated the association between utilitarian features and trust. This finding is in accordance with Kim, Shin and Lee (2007), linking relative benefits of m-banking and user trust. Actually, trust would be formed when the user finds performance gains from using the m-banking services (Oliveira *et al.*, 2014). Therefore, utilitarian features are key precursors in m-banking trust that in turn positively affect loyalty and intention to continue use of this financial technology service. The results of this study confirmed the relationship between trust and intention to continue use of m-banking. This finding is consistent with previous IS adoption studies (Lian, 2015; Nadeem *et al.*, 2015) in general and m-banking studies (Hanafizadeh *et al.*, 2014) in particular. Basically, the concern of most people when using new technologies would be trusting technology for doing jobs (Koenig-Lewis *et al.*, 2010).

This study examined a social driver (social influence) and an individual driver (individual mobility) which have been seldom used in the m-banking usage context. Individual mobility was found to be a significant predictor in this study which concurs with what Mohammadi (2015b), Dahlberg *et al.* (2003) and Schierz *et al.* (2010) pointed out in their studies on IS acceptance and usage. Following a rapid growth of social mobile network in Iran, increasing the customer arousal by advertising the use of m-banking can be helpful in this regard. On the other hand, social influence was found to have no significant effect on intention to continue use of m-banking. The rationale behind this finding is that m-banking is a service that is personal and very sensitive. Actually, the need to show off or impress others would be overshadowed by the need to keep transactions confidential and the financial data secure (Oliveira *et al.*, 2014).

6.2 Practical and managerial implications

This study furthers the adoption and usage understanding of one of the innovative technologies that is deriving technology and service convergence as an emerging service paradigm, m-banking (Hanafizadeh *et al.*, 2014; Kim, Chan and Gupta, 2007). Besides, this study provides a model for examining future mobile digital technology developments in the financial sector as “customers move out of the bank queue and into the electronic age” (Osbourne, 2008). Furthermore, the current research provides various useful insights into customer engagement for conducting banking tasks via mobile technologies. Managers and decision makers can take into account the following insights to enhance positive flow experiences and loyalty intention of customers toward m-banking.

The findings of this study indicate that flow experience could be formed by both hedonic features and utilitarian features of m-banking. To encourage users and enhance the formation of positive flow experience some possibilities are suggested as follows. Possibility of controlling all aspects of the system while working, expanding requisite infrastructure, possibility of content printing and transferring by the way of application itself, appropriate arrangements of time and application environment, supporting content and information with images, videos and sounds, the presence of a fixed available menu for users, designing banking content and information must address aesthetic criterions and legibility are some alternatives in this regard. Therefore, banks must create an enjoyable and informative experience that ensures customer engagement (Jamshidi and Hussin, 2016; Nadeem *et al.*, 2015).

In addition, some alternatives such as attracting the overall attention of customers to the bank’s brand and constantly updating their know-how of m-banking system, providing users access to directly track transactions online and availing other potential advantages for users enhances the brand equity. On the other hand, building trust is a key to bringing about positive change in the loyalty and continuous use intention (Nadeem *et al.*, 2015). The importance of this is highlighted in results of this study indicating that better m-banking service quality will lead to trust in this technology. M-banking is a highly

personalized service that users are mostly concerned about confidentiality, as well as, security. Therefore, financial institutions and decision makers must focus on establishing a relationship of trust from a very early stage (Oliveira *et al.*, 2014).

7. Limitations and future research avenues

This study has limitations that open up avenues which can be addressed by future studies. First, different types of banking institutions such as commercial banks, retail banks, private banks or community development banks were not differentiated in this study. Tallon (2010) reported on the differentiation between various types of banking institutions. Therefore, taking this into account will be of great interest to create a more holistic research model (Oliveira *et al.*, 2014). Second, this study focused extensively on m-banking. Future studies can use the model of this study across different technology- and IS-based services such as e-banking, m-learning or e-organizational software and compare the differences and similarities to make further contributions.

Third, m-banking is very popular in rural areas (Matos and D'Aguiar, 2010). Accordingly, one future study direction could be to compare adoption and continuous use of m-banking in urban and rural areas. Fourth, different factors have different impacts on different cultures and consequently every culture should adopt different strategies in dealing with them (Mohammadi, 2015a). Therefore, further studies are needed to examine the role and impact of culture.

Fifth, the general population of consumers was targeted as respondents in this study. However, further studies can focus on specific generations such as Generation Y (1981-1991) (Aksoy *et al.*, 2013), as these customers have had an early exposure and are more frequent users of technology that leads to advantageous and disadvantageous in the form of cognitive, emotional and social outcomes (Immordino *et al.*, 2012; Nadeem *et al.*, 2015). Finally, as PLS equation modeling was used to analyze the data, therefore, it was assumed that the data are homogeneous which may be unrealistic (Ringle *et al.*, 2010). Consequently, future studies should use multi group analyses to identify heterogeneity or segment-level differences which could be done with finite mixture PLS tool in SmartPLS software. This method identifies different segments and subsequently their estimates for the association between constructs in the structural model (Amaro and Duarte, 2015; Ringle, 2006). A better understanding of the factors that affect intention to continue use of m-banking in different segments enhances the possibilities of developing marketing strategies that meet the needs of each segment.

Despite these limitations, it is hoped that academic researchers, marketers and bank practitioners can take advantage of the findings presented in this paper to better understand the continuous use of m-banking. The recommendations for future studies also present challenging directions for further research works.

References

- Aaker, D.A. (2012), *Building Strong Brands*, Simon & Schuster.
- Agarwal, R. and Karahanna, E. (2000), "Time flies when you're having fun: cognitive absorption and beliefs about information technology usage", *MIS Quarterly*, Vol. 14 No. 3, pp. 665-694.
- Ahluwalia, P. and Varshney, U. (2009), "Composite quality of service and decision making perspectives in wireless networks", *Decision Support Systems*, Vol. 46 No. 2, pp. 542-551.
- Aksoy, L., van Riel, A., Kandampully, J., Bolton, R., Parasuraman, A., Hoefnagels, A. *et al.* (2013), "Understanding Generation Y and their use of social media: a review and research agenda", *Journal of Service Management*, Vol. 24 No. 3, pp. 245-267.
- Alaiad, A. and Zhou, L. (2014), "The determinants of home healthcare robots adoption: an empirical investigation", *International journal of medical informatics*, Vol. 83 No. 11, pp. 825-840.

- Al-Somali, S.A., Gholami, R. and Clegg, B. (2009), "An investigation into the acceptance of online banking in Saudi Arabia", *Technovation*, Vol. 29 No. 2, pp. 130-141.
- Amaro, S. and Duarte, P. (2015), "An integrative model of consumers' intentions to purchase travel online", *Tourism Management*, Vol. 46 No. 12, pp. 64-79.
- Amin, H., Rahman, A., Razak, D. and Rizal, H. (2017), "Consumer attitude and preference in the Islamic mortgage sector: a study of Malaysian consumers", *Management Research Review*, Vol. 40 No. 1, pp. 112-131.
- Anderson, J. (2010), "M-banking in developing markets: competitive and regulatory implications", *Info*, Vol. 12 No. 1, pp. 18-25.
- Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No. 3, p. 411.
- Au, Y.A. and Kauffman, R.J. (2008), "The economics of mobile payments: understanding stakeholder issues for an emerging financial technology application", *Electronic Commerce Research and Applications*, Vol. 7 No. 2, pp. 141-164.
- Bagozzi, R.P. and Yi, Y. (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 16 No. 1, pp. 74-94.
- Bharwani, S. and Jauhari, V. (2013), "An exploratory study of competencies required to co-create memorable customer experiences in the hospitality industry", *International Journal of Contemporary Hospitality Management*, Vol. 25 No. 6, pp. 823-843.
- Bilgihan, A., Nusair, K., Okumus, F. and Cobanoglu, C. (2015), "Applying flow theory to booking experiences: an integrated model in an online service context", *Information & Management*, Vol. 41 No. 12, pp. 174-198.
- Brislin, R.W. (1970), "Back-translation for cross-cultural research", *Journal of Cross-Cultural Psychology*, Vol. 1 No. 3, pp. 185-216.
- Casaló, L.V., Flavián, C. and Guinaliu, M. (2010), "Antecedents and consequences of consumer participation in on-line communities: the case of the travel sector", *International Journal of Electronic Commerce*, Vol. 15 No. 2, pp. 137-167.
- Chang, K.-C. (2013), "How reputation creates loyalty in the restaurant sector", *International Journal of Contemporary Hospitality Management*, Vol. 25 No. 4, pp. 536-557.
- Chen, H. (2006), "Flow on the net-detecting web users' positive affects and their flow states", *Computers in Human Behavior*, Vol. 22 No. 2, pp. 221-233.
- Chien, S.-H., Chen, Y.-H. and Hsu, C.-Y. (2012), "Exploring the impact of trust and relational embeddedness in e-marketplaces: an empirical study in Taiwan", *Industrial Marketing Management*, Vol. 41 No. 3, pp. 460-468.
- Childers, T.L., Carr, C.L., Peck, J. and Carson, S. (2002), "Hedonic and utilitarian motivations for online retail shopping behavior", *Journal of Retailing*, Vol. 77 No. 4, pp. 511-535.
- Chin, W. (2000), "Partial least squares for IS researchers: an overview and presentation of recent advances using the PLS approach", paper presented at the International Conference on Information Systems: Proceedings of the 21st International Conference on Information Systems, New York, NY, March 14.
- Chin, W.W. (1998), "Issues and opinion on structural equation modeling", *MIS Quarterly*, Vol. 22 No. 1, pp. vii-xvi.
- Chin, W.W. (2010), "How to write up and report PLS analyses", *Handbook of Partial Least Squares*, Springer and McGill, pp. 655-690.
- Choi, D.H., Kim, J. and Kim, S.H. (2007), "ERP training with a web-based electronic learning system: the flow theory perspective", *International Journal of Human-Computer Studies*, Vol. 65 No. 3, pp. 223-243.
- Chou, S.Y. and Katelin, B. (2016), "Employees voice behavior revisited: its forms and antecedents", *Management Research Review*, Vol. 39 No. 12, pp. 1720-1737.
- Cochran, W. (1977), *Sampling Techniques*, McGill, Nevada.

- Csikszentmihalyi, M. (1975), *Beyond Boredom and Anxiety*, Jossey-Bass.
- Cyr, D. (2008), "Modeling web site design across cultures: relationships to trust, satisfaction, and e-loyalty", *Journal of Management Information Systems*, Vol. 24 No. 4, pp. 47-72.
- Dahlberg, T., Mallat, N. and Öörni, A. (2003), "Trust enhanced technology acceptance model-consumer acceptance of mobile payment solutions: tentative evidence", *Stockholm Mobility Roundtable*, pp. 22-23.
- Dailey, L. (2004), "Navigational web atmospherics: explaining the influence of restrictive navigation cues", *Journal of Business Research*, Vol. 57 No. 7, pp. 795-803.
- Das, T.K. and Teng, B.-S. (2001), "Trust, control, and risk in strategic alliances: an integrated framework", *Organization Studies*, Vol. 22 No. 2, pp. 251-283.
- Dineshwar, R. and Steven, M. (2013), "An investigation on mobile banking adoption and usage: a case study of Mauritius", paper presented at the Proceedings of 3rd Asia-Pacific Business Research Conference, pp. 25-26.
- Ding, X.D., Huang, Y. and Verma, R. (2011), "Customer experience in online financial services: a study of behavioral intentions for techno-ready market segments", *Journal of Service Management*, Vol. 22 No. 3, pp. 344-366.
- Escobar-Rodríguez, T. and Carvajal-Trujillo, E. (2014), "Online purchasing tickets for low cost carriers: an application of the unified theory of acceptance and use of technology (UTAUT) model", *Tourism Management*, Vol. 43 No. 14, pp. 70-88.
- Featherman, M.S. and Pavlou, P.A. (2003), "Predicting e-services adoption: a perceived risk facets perspective", *International Journal of Human-Computer Studies*, Vol. 59 No. 4, pp. 451-474.
- Feldwick, P. (1996), "Do we really need 'brand equity'?", *Journal of Brand Management*, Vol. 4 No. 1, pp. 9-28.
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Fredrickson, B.L., Tugade, M.M., Waugh, C.E. and Larkin, G.R. (2003), "What good are positive emotions in crisis? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001", *Journal of Personality and Social Psychology*, Vol. 84 No. 2, p. 365.
- Gefen, D. and Straub, D. (2005), "A practical guide to factorial validity using PLS-graph: tutorial and annotated example", *Communications of the Association for Information Systems*, Vol. 16 No. 1, p. 5.
- Gefen, D., Karahanna, E. and Straub, D. (2003), "Trust and TAM in online shopping: an integrated model", *MIS Quarterly*, Vol. 27 No. 1, pp. 51-90.
- Gefen, D., Straub, D. and Boudreau, M.-C. (2000), "Structural equation modeling and regression: guidelines for research practice", *Communications of the Association for Information Systems*, Vol. 4 No. 1, p. 7.
- Geyskens, I., Steenkamp, J.-B.E. and Kumar, N. (1998), "Generalizations about trust in marketing channel relationships using meta-analysis", *International Journal of Research in Marketing*, Vol. 15 No. 3, pp. 223-248.
- Gharbi, J.-E. and Tunis, E. (2002), "The influence of flow on hedonic and utilitarian shopping values", *Advances in Consumer Research*, Vol. 29 No. 23, pp. 483-484.
- Gopalani, A. and Shick, K. (2011), "The service-enabled customer experience: a jump-start to competitive advantage", *Journal of Business Strategy*, Vol. 32 No. 3, pp. 4-12.
- Gregoriadis, L. (2011), "Poor online experience costing business billions", *International Journal of Marketing*, Vol. 18 No. 3, pp. 176-193.
- Guo, Y. (2004), "A validity study and an examination of a model specifying antecedents and consequences of flow", unpublished doctoral dissertation, Texas A&M University, Delhi.
- Haenlein, M. and Kaplan, A.M. (2004), "A beginner's guide to partial least squares analysis", *Understanding Statistics*, Vol. 3 No. 4, pp. 283-297.

- Hair, J.F., Ringle, C.M. and Starsdedt, M. (2011), "PLS-SEM: indeed a silver bullet", *Journal of Marketing Theory and Practice*, Vol. 19 No. 2, pp. 139-151.
- Hair, J.F., Black, W., Babin, B. and Anderson, R.E. (2010), *Multivariate Data Analysis*, Prentice Hall Inc., Englewood Cliffs, NJ.
- Hair, J.F., Hult, G.M., Ringle, C.M. and Sarstedt, M. (2014), *A Primer on Partial Least Squares Structural Equations Modeling (PLS-SEM)*, SAGE Publications.
- Hampton-Sosa, W. and Koufaris, M. (2005), "The effect of web site perceptions on initial trust in the owner company", *International Journal of Electronic Commerce*, Vol. 10 No. 1, pp. 55-81.
- Hanafizadeh, P. and Khedmatgozar, H.R. (2012), "The mediating role of the dimensions of the perceived risk in the effect of customers' awareness on the adoption of Internet banking in Iran", *Electronic Commerce Research*, Vol. 18 No. 4, pp. 1-25.
- Hanafizadeh, P., Behboudi, M., Koshksaray, A.A. and Tabar, M.J.S. (2014), "Mobile-banking adoption by Iranian bank clients", *Telematics and Informatics*, Vol. 31 No. 1, pp. 62-78.
- Henningsson, M., Sundbom, E., Armelius, B.Å. and Erdberg, P. (2001), "PLS model building: a multivariate approach to personality test data", *Scandinavian Journal of Psychology*, Vol. 42 No. 5, pp. 399-409.
- Henseler, J., Ringle, C.M. and Sinkovics, R.R. (2009), "The use of partial least squares path modeling in international marketing", *Advances in International Marketing*, Vol. 20 No. 17, pp. 277-320.
- Hoffman, D.L. and Novak, T.P. (2009), "Flow online: lessons learned and future prospects", *Journal of Interactive Marketing*, Vol. 23 No. 1, pp. 23-34.
- Hsu, C.L., Chang, K.C. and Chen, M.C. (2012), "Flow experience and internet shopping behavior: investigating the moderating effect of consumer characteristics", *Systems Research and Behavioral Science*, Vol. 29 No. 3, pp. 317-332.
- Hsu, S.-H., Chen, W.-H. and Hsieh, M.-J. (2006), "Robustness testing of PLS, LISREL, EQS and ANN-based SEM for measuring customer satisfaction", *Total Quality Management & Business Excellence*, Vol. 17 No. 3, pp. 355-372.
- Huang, C., Yang, M.L. and Wong, Y.J. (2016), "The effects of internal factors and family influence on firm's adoption of green product innovation", *Management Research Review*, Vol. 39 No. 10, pp. 83-98.
- Huang, M.-H. (2003), "Designing website attributes to induce experiential encounters", *Computers in Human Behavior*, Vol. 19 No. 4, pp. 425-442.
- Huang, M.-H. (2005), "Web performance scale", *Information & Management*, Vol. 42 No. 6, pp. 841-852.
- Hulland, J. (1999), "Use of partial least squares (PLS) in strategic management research: a review of four recent studies", *Strategic Management Journal*, Vol. 20 No. 2, pp. 195-204.
- Hung, C.-L., Chou, J.C.-L. and Ding, C.-M. (2012), "Enhancing mobile satisfaction through integration of usability and flow", *Engineering Management Research*, Vol. 1 No. 1, p. 44.
- Ifinedo, P. (2006), "Acceptance and continuance intention of web-based learning technologies (WLT) use among university students in a Baltic country", *The Electronic Journal of Information Systems in Developing Countries*, Vol. 23 No. 12, pp. 187-209.
- Immordino, M.H., Christodoulou, J.A. and Singh, V. (2012), "Rest is not idleness implications of the brain's default mode for human development and education", *Perspectives on Psychological Science*, Vol. 7 No. 4, pp. 352-364.
- Jamshidi, D. and Hussin, N. (2016), "Forecasting patronage factors of Islamic credit card as a new e-commerce banking service: an integration of TAM with perceived religiosity and trust", *Journal of Islamic Marketing*, Vol. 7 No. 4, pp. 214-229.
- Jamshidi, D., Hussin, N. and Wan, H.L. (2015), "Islamic banking services adoption as a new banking restructure: examining its adoption from the perspective of DOI theory and trust in Malaysia", *Humanomics: The International Journal of Systems and Ethics*, Vol. 31 No. 2, pp. 120-143.
- Kim, G., Shin, B.S. and Lee, H.G. (2007), "Understanding dynamics between initial trust and usage intentions of mobile banking", *Information Systems Journal*, Vol. 19 No. 3, pp. 283-311.

- Kim, H.-W., Chan, H.C. and Gupta, S. (2007), "Value-based adoption of mobile internet: an empirical investigation", *Decision Support Systems*, Vol. 43 No. 1, pp. 111-126.
- Kline, R.B. (2011), *Principles and Practice of Structural Equation Modeling*, Guilford press.
- Koenig-Lewis, N., Palmer, A. and Moll, A. (2010), "Predicting young consumers' take up of mobile banking services", *International Journal of Bank Marketing*, Vol. 28 No. 5, pp. 410-432.
- Korzaan, M.L. (2003), "Going with the flow: predicting online purchase intentions", *The Journal of Computer Information Systems*, Vol. 43 No. 4, p. 25.
- Koufaris, M. (2002), "Applying the technology acceptance model and flow theory to online consumer behavior", *Information Systems Research*, Vol. 13 No. 2, pp. 205-223.
- Krejcie, R.V. and Morgan, D.W. (1970), "Determining sample size for research activities", *Educational and Psychological Measurement*, Vol. 29 No. 4, pp. 87-102.
- Kudeshia, C. and Kumar, A. (2017), "Social eWom: does it affect the brand attitude and purchase intention of brand", *Management Research Review*, Vol. 40 No. 3, pp. 64-73.
- Laukkanen, T., Sinkkonen, S., Kivijärvi, M. and Laukkanen, P. (2007), "Innovation resistance among mature consumers", *Journal of Consumer Marketing*, Vol. 24 No. 7, pp. 419-427.
- Lee, H., Harindranath, G., Oh, S. and Kim, D.-J. (2015), "Provision of mobile banking services from an actor-network perspective: implications for convergence and standardization", *Technological Forecasting and Social Change*, Vol. 90 No. 45, pp. 551-561.
- Lian, J.-W. (2015), "Critical factors for cloud based e-invoice service adoption in Taiwan: an empirical study", *International Journal of Information Management*, Vol. 35 No. 1, pp. 98-109.
- Lin, H.F. (2011), "An empirical investigation of mobile banking adoption: the effect of innovation attributes and knowledge-based trust", *International Journal of Information Management*, Vol. 31 No. 3, pp. 252-260.
- Lin, Y.-C. (2013), "Evaluation of co-branded hotels in the Taiwanese market: the role of brand familiarity and brand fit", *International Journal of Contemporary Hospitality Management*, Vol. 25 No. 3, pp. 346-364.
- Lowry, P.B., Vance, A., Moody, G., Beckman, B. and Read, A. (2008), "Explaining and predicting the impact of branding alliances and web site quality on initial consumer trust of e-commerce web sites", *Journal of Management Information Systems*, Vol. 24 No. 4, pp. 199-224.
- Luarn, P. and Lin, H.-H. (2005), "Toward an understanding of the behavioral intention to use mobile banking", *Computers in Human Behavior*, Vol. 21 No. 6, pp. 873-891.
- McGinnis, L.P., Gentry, J.W. and Gao, T. (2008), "The impact of flow and communitas on enduring involvement in extended service encounters", *Journal of Service Research*, Vol. 11 No. 1, pp. 74-90.
- Mallat, N., Rossi, M. and Tuunainen, V.K. (2004), "Mobile banking services", *Communications of the ACM*, Vol. 47 No. 5, pp. 42-46.
- Matos, J.C. and D'Aguiar, L. (2010), "Measuring the evolution of monetary and financial services in Portugal", *IPM17: Implementing the 1993 System of National Accounts*, p. 283.
- Mishra, V. and Bisht, S.S. (2013), "Mobile banking in a developing economy: a customer-centric model for policy formulation", *Telecommunications Policy*, Vol. 37 No. 6, pp. 503-514.
- Mohammadi, H. (2015a), "Factors affecting the e-learning outcomes: an integration of TAM and IS success model", *Telematics and Informatics*, Vol. 32 No. 6, pp. 189-204.
- Mohammadi, H. (2015b), "Social and individual antecedents of m-learning adoption in Iran", *Computers in Human Behavior*, Vol. 49 No. 32, pp. 191-207.
- Mohammadi, H. (2015c), "A study of mobile banking loyalty in Iran", *Computers in Human Behavior*, Vol. 44 No. 32, pp. 35-47.
- Morosan, C., T. Bowen, J. and Atwood, M. (2014), "The evolution of marketing research", *International Journal of Contemporary Hospitality Management*, Vol. 26 No. 5, pp. 706-726.

- Nadeem, W., Andreini, D., Salo, J. and Laukkanen, T. (2015), "Engaging consumers online through websites and social media: a gender study of Italian Generation Y clothing consumers", *International Journal of Information Management*, Vol. 35 No. 4, pp. 432-442.
- Nah, F.F.-H., Eschenbrenner, B., DeWester, D. and Park, S.R. (2011), "Impact of flow and brand equity in 3D virtual worlds", *Cross-Disciplinary Models and Applications of Database Management: Advancing Approaches: Advancing Approaches*, p. 277.
- Nam, J., Ekinci, Y. and Whyatt, G. (2011), "Brand equity, brand loyalty and consumer satisfaction", *Annals of Tourism Research*, Vol. 38 No. 3, pp. 1009-1030.
- Nikander, P. and Karvonen, K. (2001), "Users and trust in cyberspace", paper presented at the Security Protocols, pp. 24-35.
- Novak, T.P., Hoffman, D.L. and Yung, Y.-F. (2000), "Measuring the customer experience in online environments: a structural modeling approach", *Marketing Science*, Vol. 19 No. 1, pp. 22-42.
- Nusair, K. and Parsa, H. (2011), "Introducing flow theory to explain the interactive online shopping experience in a travel context", *International Journal of Hospitality & Tourism Administration*, Vol. 12 No. 1, pp. 1-20.
- Oliveira, T., Faria, M., Thomas, M.A. and Popovič, A. (2014), "Extending the understanding of mobile banking adoption: when UTAUT meets TTF and ITM", *International Journal of Information Management*, Vol. 34 No. 5, pp. 689-703.
- Osbourne, D. (2008), "Mobile phone banking takes off", available at: www.news.com.au/technology/story (accessed February 12, 2010).
- Pine, B.J. and Gilmore, J.H. (2011), *The Experience Economy*, Harvard Business Press and McGill.
- Püschel, J., Mazzon, J.A. and Hernandez, J.M.C. (2010), "Mobile banking: proposition of an integrated adoption intention framework", *International Journal of Bank Marketing*, Vol. 28 No. 5, pp. 389-409.
- Ramanathan, U. and Ramanathan, R. (2011), "Guests' perceptions on factors influencing customer loyalty: an analysis for UK hotels", *International Journal of Contemporary Hospitality Management*, Vol. 23 No. 1, pp. 7-25.
- Ringle, C., Wende, S. and Will, A. (2005), *SmartPLS 2.0 v 3 (beta)*, Hamburg Publisher, available at: www.smartpls.de
- Ringle, C.M. (2006), "Segmentation for path models and unobserved heterogeneity: the finite mixture partial least squares approach", research paper on Marketing and Retailing, University of Hamburg, Hamburg.
- Ringle, C.M., Sarstedt, M. and Schlittgen, R. (2010), "Finite mixture and genetic algorithm segmentation in partial least squares path modeling: identification of multiple segments in complex path models", *Advances in Data Analysis, Data Handling and Business Intelligence*, Springer and Hamburg Publication, pp. 167-176.
- Rose, S., Clark, M., Samouel, P. and Hair, N. (2012), "Online customer experience in e-retailing: an empirical model of antecedents and outcomes", *Journal of Retailing*, Vol. 88 No. 2, pp. 308-322.
- Ruiz-Mafe, C., Martí-Parreño, J. and Sanz-Blas, S. (2014), "Key drivers of consumer loyalty to Facebook fan pages", *Online Information Review*, Vol. 38 No. 3, pp. 362-380.
- Schierz, P.G., Schilke, O. and Wirtz, B.W. (2010), "Understanding consumer acceptance of mobile payment services: an empirical analysis", *Electronic Commerce Research and Applications*, Vol. 9 No. 3, pp. 209-216.
- Shaikh, A.A. and Karjaluo, H. (2015), "Mobile banking adoption: a literature review", *Telematics and Informatics*, Vol. 32 No. 1, pp. 129-142.
- Shippee, M. and Keengwe, J. (2014), "mLearning: anytime, anywhere learning transcending the boundaries of the educational box", *Education and Information Technologies*, Vol. 19 No. 1, pp. 103-113.
- Siekpe, J.S. (2005), "An examination of the multidimensionality of flow construct in a computer-mediated environment", *Journal of Electronic Commerce Research*, Vol. 6 No. 1, pp. 31-43.

- Skadberg, Y.X. and Kimmel, J.R. (2004), "Visitors' flow experience while browsing a web site: its measurement, contributing factors and consequences", *Computers in Human Behavior*, Vol. 20 No. 3, pp. 403-422.
- Smith, D.N. and Sivakumar, K. (2004), "Flow and Internet shopping behavior: a conceptual model and research propositions", *Journal of Business Research*, Vol. 57 No. 10, pp. 1199-1208.
- Straub, D., Boudreau, M.-C. and Gefen, D. (2004), "Validation guidelines for IS positivist research", *The Communications of the Association for Information Systems*, Vol. 13 No. 1, p. 63.
- Suh, B. and Han, I. (2003), "Effect of trust on customer acceptance of internet banking", *Electronic Commerce Research and Applications*, Vol. 1 No. 3, pp. 247-263.
- Tallon, P.P. (2010), "A service science perspective on strategic choice, IT, and performance in US banking", *Journal of Management Information Systems*, Vol. 26 No. 4, pp. 219-252.
- Tan, G.W.-H., Ooi, K.-B., Chong, S.-C. and Hew, T.-S. (2014), "NFC mobile credit card: the next frontier of mobile payment?", *Telematics and Informatics*, Vol. 31 No. 2, pp. 292-307.
- Teng, C.-I., Huang, L.-S., Jeng, S.-P., Chou, Y.-J. and Hu, H.-H. (2012), "Who may be loyal? Personality, flow experience and customer e-loyalty", *International Journal of Electronic Customer Relationship Management*, Vol. 6 No. 1, pp. 20-47.
- Terzis, V. and Economides, A.A. (2011), "The acceptance and use of computer based assessment", *Computers & Education*, Vol. 56 No. 4, pp. 1032-1044.
- Thye Goh, T., Mohd Suki, N. and Fam, K. (2014), "Exploring a consumption value model for Islamic mobile banking adoption", *Journal of Islamic Marketing*, Vol. 5 No. 3, pp. 344-365.
- Venkatesh, V. (2000), "Determinants of perceived ease of use: integrating control, intrinsic motivation, and emotion into the technology acceptance model", *Information Systems Research*, Vol. 11 No. 4, pp. 342-365.
- Venkatesh, V., Thong, J.Y. and Xu, X. (2012), "Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology", *MIS Quarterly*, Vol. 36 No. 1, pp. 157-178.
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003), "User acceptance of information technology: toward a unified view", *MIS Quarterly*, Vol. 7 No. 11, pp. 425-478.
- Wood, L. (2000), "Brands and brand equity: definition and management", *Management Decision*, Vol. 38 No. 9, pp. 662-669.
- Wu, J.-J. and Chang, Y.-S. (2005), "Towards understanding members' interactivity, trust, and flow in online travel community", *Industrial Management & Data Systems*, Vol. 105 No. 7, pp. 937-954.
- Xiang, Z. and Gretzel, U. (2010), "Role of social media in online travel information search", *Tourism Management*, Vol. 31 No. 2, pp. 179-188.
- Yoo, B., Donthu, N. and Lee, S. (2000), "An examination of selected marketing mix elements and brand equity", *Journal of the Academy of Marketing Science*, Vol. 28 No. 2, pp. 195-211.
- Zhang, L., Zhu, J. and Liu, Q. (2012), "A meta-analysis of mobile commerce adoption and the moderating effect of culture", *Computers in Human Behavior*, Vol. 13 No. 2, pp. 167-185.
- Zhou, T. (2012), "Examining location-based services usage from the perspectives of unified theory of acceptance and use of technology and privacy risk", *Journal of Electronic Commerce Research*, Vol. 13 No. 2, pp. 135-144.

Appendix

Construct	Item	Questions	References (adapted)
Social influence	SI1	I find mobile banking trendy	Oliveira <i>et al.</i> (2014)
	SI2	The use of mobile banking gives me professional status	
	SI3	The people that influence me use mobile banking	
	SI4	My family and friends value the use of mobile banking	
Trust	TR1	Mobile banking seems secure	Oliveira <i>et al.</i> (2014)
	TR2	Mobile banking seems dependable	
	TR3	Mobile banking was created to help the client	
	TR4	Mobile banking seems reliable	
Flow	FL1	I experienced flow the last time that I used mobile banking service	Huang (2005) and Bilgihan <i>et al.</i> (2015)
	FL2	In general, I experience flow when I use mobile banking services	
	FL3	Most of the time when I use mobile banking services, I feel that I am experiencing flow	
	FL4	The last time that I used mobile banking services, I was fully engaged	
Brand equity	BE1	It makes sense to use mobile banking through this bank rather than other banks, even if they are the same	Yoo <i>et al.</i> (2000) and Bilgihan <i>et al.</i> (2015)
	BE2	Even if another bank-mobile banking has the same features as this bank, I prefer to use mobile banking through this bank	
	BE3	If there is another brand that is as good as this bank-mobile banking, I prefer to use mobile banking through this bank	
	BE4	If another bank-mobile banking is not different from X in any way, it seems smarter to use mobile banking through X	
Individual mobility	MO1	I would like to be able to keep in touch everywhere I am	Schierz <i>et al.</i> (2010)
	MO2	I could imagine having multiple jobs at a time	
	MO3	I would like to be able to coordinate my daily tasks no matter what time it is	
	MO4	I would like to be able to coordinate my daily tasks everywhere I am	
Utilitarian features	UF1	Chaotic – ordered	Huang (2005) and Bilgihan <i>et al.</i> (2015)
	UF2	Unreliable – reliable	
	UF3	Incorrect – correct	
	UF4	Not functional – functional	
Hedonic features	HF1	Weary – entertaining	Huang (2005) and Bilgihan <i>et al.</i> (2015)
	HF2	Disagreeable – agreeable	
	HF3	Not delightful – delightful	
	HF4	Not Thrilling – thrilling	
Intention	INTU1	I intend to continue using mobile banking services in the future	Escobar-Rodríguez and Carvajal-Trujillo (2014)
	INTU2	I will always try to use mobile banking services	
	INTU3	I plan to continue to use mobile banking services to manage my accounts	
	INTU4	Given the opportunity, I will use mobile banking services	

Table AI.
Measurement items

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