

Achieving Recommendation Intention in Mobile Banking: A Serial Mediation Approach

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ABSTRACT

This study explores the critical elements driving the recommendation intention of mobile banking users in India. It explores the relationship between ease of use and recommendation intent via serially mediating roles of satisfaction and continued intention. It also explores the relationship between cost and recommendation intent by studying the serially mediating roles of satisfaction and continued intention. It combines the two resulting in an integrated framework. The study utilized the analytical approach by Hayes for testing the hypothetical model. The path coefficients were calculated using Model 6 (PROCESS). The findings reveal that satisfaction and continued intention are serially mediating the relationship between ease of use and recommendation intention as well as cost and recommendation intention. The major contribution of this research study to existing literature is that it culminates with the ‘action’ of ‘recommendation to use’ rather than continued intention.

KEYWORDS

Continued Intention, India, Mobile Banking, Recommendation Intention, Serial Mediation

INTRODUCTION

Consumers have taken on new electronic mobile devices at an unprecedented rate over the last 10 years. A massive rise in mobile devices’ usage has made it a subject of interest for researchers (Tam and Oliveira, 2017). Mobile banking is a plug-in that bank clients may use to carry out their transactions through a hand-held mobile device. It provides clients with added utility of “anytime anywhere” banking facilities (Lee and Chung, 2009). Mobile banking provides a diversified collection of services e.g. monitoring balances in savings and current deposits making money transfers or disbursing bills. It has grown quite rapidly and reduced substantially the need to visit the bank frequently. It’s a leap forward in the development of internet banking. Mobile banking’s scope requires more research into its use and acceptance (Verissimo, 2016, Awad & Dessouki, 2017).

In India, m-banking has grown by 92% and 13% respectively concerning size and cost as per RBI’s report for 2017-18 Y-O-Y basis. Despite the reported growth millions of Indian bank customers

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still deter from using the mobile platform of banking. The use of mobiles for banking is less common than expected (Shaikh and Karjaluoto, 2015). Mobile banking is critical for enhancing the customer base of Indian banks given the huge underbanked urban and unbanked rural people. The recent development of telecommunication services (including low-cost data availability) and the easy availability of reasonably priced smartphones in India may be tapped favorably by Indian bankers to enhance the user base of mobile banking services.

Prior studies are done to identify the various antecedents of m-banking usage intentions (Teng Ling and Seng, 2018; Choudrie et al., 2017; Lee et al., 2012; Singh & Srivastava, 2014; Singh and Srivastava, 2018; Ramos Ferreira, Freitas and Rodrigues 2018; Wang et al., 2015; Makanyeza, 2017; Verissimo, 2016). However, there are a few studies on the consequences of mobile banking usage such as continuance intention, retention, etc. (Shaikh and Karjaluoto, 2016; Foroughi et al., 2019; Thich, 2021). The m-banking client's post-usage behavior has not been adequately explored in past. Further none of the earlier studies have integrated antecedents and consequences of such behavior holistically. The current research is expected to enhance the banker's awareness about what motivates existing customers to continue using m-banking and also recommending it to new ones. Three stages in the acceptance of a novel technological product are "Intention" "Adoption" and "Continuance" (Cheung et al. 2003). The present research aims to ascertain the relevant determinants for each of these stages in m-banking acceptance and then tries to build a connection between them. Intention to use has been commonly examined using the constructs of "perceived usefulness" "perceived ease of use" "perceived risk" "trust" "social influence" "system quality" and "compatibility" in prior literature (Lee and Chung, 2009; Talukder et al., 2014; Verissimo, 2016). This research additionally explores a relatively less explored construct 'cost'. Cost is a very important factor for the adoption of any product by the customer. To establish consumers 'acceptance of new technology it becomes imperative that they perceive it as entailing reasonable price or cost (Premkumar et al., 1997). The current study advances the body of literature on this dimension. Past studies have explored intention to use and user behavior and found a positive association (Talukder et al., 2014). The present paper furthers literature by analyzing the impact of "continuance intention to use on 'recommendation to use. The two constructs are commonly used for analyzing the post-adoption behavior in literature. The study performs serial mediation to explore the role of two mediators 'Satisfaction' and 'Continued Intention' in researching the impact of 'ease of use' and 'cost' on 'recommendation intention'. The present study develops a comprehensive model to study the recommendation intention of mobile banking users.

Only initial approval is not enough for a new technology/platform its long-term longevity comes only when it is consistently used (Bhattacharjee, 2001a). It becomes imperative to focus on continued use by existing customers as much as on acquiring new customers to establish feet in m-banking technology (Gu et al., 2009; Engwanda, 2015). Continued use by existing customers would help bankers make full use of investment in mobile banking app development thereby having an encouraging investment return. In technology-driven companies, the continuous intention to use the products is important for good business performance as this aspect significantly influences business expenses and profits.

A very important element to ensure continued usage by an existing customer is the positive outcome of his/her prior experience. Satisfaction is an element of utmost importance when it comes to continued usage or continuance intent to do so. Kim et al.(2014) in their paper on mobile communications applications (MCAs) depicted that the user's satisfaction leads to postadoption behaviors such as continuance and recommendation intentions. On the other hand, some earlier related researches in information technology have proven that people more inclined to use it are more prone to endorse it (Oliveira et al., 2016).

Customer satisfaction assessment may highlight the factors that cause satisfaction or dissatisfaction with a bank's quality of service; this understanding may help banks improve the loyalty of customers (Kumbhar, 2011). Customer loyalty can result from their continued intent to use the banker's m-banking

services. Kim & Lee (2013) showed in their paper that “ease of use” affects satisfaction significantly. Spathis et al. (2004) and Dimitriadis (2011) examined service cost as a major predictor directly influencing customers’ opinion about service quality. To promote market adoption and continuity of use service firms must ensure that the overall cost of their product is easily perceivable as fair and affordable by their customers.

OBJECTIVE OF STUDY

The current study is undertaken for probing the critical elements driving the continued usage of m-banking in India. It further explores the likelihood of the existing mobile banking user recommending it to a new customer. The study seeks to unearth some conducive determinants important for widespread adoption of this technology in a persistent fashion. Apart from exploring the pre-cursors leading to m-banking adoption the current study additionally intends to reveal its consequences. To our knowledge, the present work is a unique study that combines the antecedents and consequences of mobile banking usage in an integrated structure.

The remaining paper is ordered in the following manner. To start with, the theoretical background is reviewed and hypothesis development is elaborated. Third, the research methodology comprising of the data gathering process is elucidated. Fourth the outcomes are concisely testified and analyzed. Lastly, the discussion, conclusion, and managerial implications are mentioned.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Mobile banking can be defined as making mobile payments for products and services and availing other banking services enabled on mobile devices which include wireless handsets radiofrequency devices personalized digital assistants and communication-based devices (Chen and Nath, 2008). These mobile banking apps are registered with banks thereby enabling secure fund transfer from the payer’s bank to the bank account of the payee irrespective of the device and service provider (Ng and Yip, 2010).

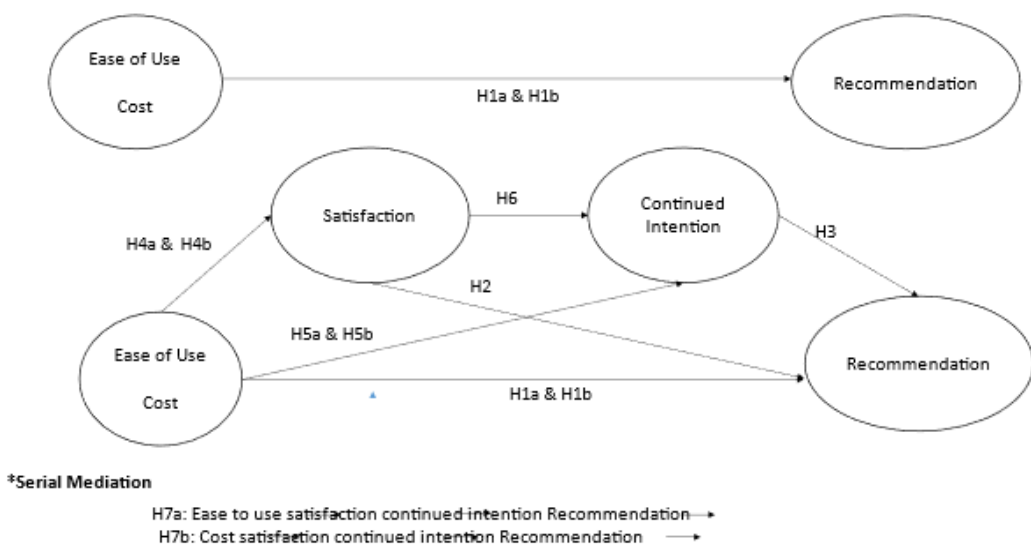
The most cited model in the existing literature is the technology acceptance model (TAM) (Davis, 1989) and unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al., 2003). These are the highly acclaimed frameworks among the researchers (Chung and Kwon, 2009; Kleijnen et al., 2004; Luarn and Lin, 2005; Yu and Fang, 2009) for understanding factors having an impact on intention to use towards mobile payments and other similar technologies. Some researchers have also introduced Perceived Risk as a factor affecting acceptance of technology regarding financial transactions (Luarn and Lin, 2005; Wang et al., 2003). However, TAM explores only the usage intention and the actual use of the technology. The construct of ‘continued intention’ has been drawn from TAM and the constructs of ‘ease of use’ and ‘cost’ have been drawn from extensions of this theory, by Pikkarainen et al. (2004) in the context of online banking. This version comprised of six factors perceived ease of use (PEOU), perceived usefulness (PU), information on online banking, perceived enjoyment, quality of internet connection, and security and privacy. Then there was a study by Mozdzyński (2018) which brought out the importance of trust, perceived cost, and experience on ‘intention to use’ for merchants. A positive and favorable outcome is anticipated if there is an appropriate fit between the technology (mobile banking platforms) and the task (convenient payment and perceived cost) is accomplished. The performance benefits and utilization have represented as ‘satisfaction’ in the model, which leads to continued intention. This is the focus of the task technology fit (Goodhue and Thompson, 1995) model. Thus we have integrated the TAM and task technology fit model (indirectly), to better explain recommendation intention (for mobile banking).

However, an individual’s behavior is considered nearly synonymous with his intention to behave in a particular manner. This intention is derived from two antecedents namely consumers’ attitude towards purchasing a product as well as certain subjective norms about that particular behavior. The

‘Theory of Planned Behavior (TPB) is an extension of the ‘Theory of Reasoned Action (TRA) and seemingly reduces the singular dependence on intentions to predict the behavior of an individual. This theory incorporates behavioral control’ which is a combination of various perceived factors facilitating or impeding the performance of behavior to varying extents. The behavioral control’ is determined by the resources skills and other prerequisites possessed by an individual determining his behavior. Hence TPB espouses that behavioral intention is determined by a fluctuating mix of attitudes and subjective norms. According to Shaw Shiu et al. (2000), TPB qualifies as the dominant expectancy-value theory with multifarious applications. Also, it possesses a superior predictive ability Vis a Vis TRA (Beck and Ajzen, 1991; Giles and Cairns, 1995). A noteworthy adaptation of this theory is the TAM (Davis, 1989) which attempts to explain factors determining acceptance of computers (F. Davis, 1989; Bagozzi et al., 1989). The TAM proposed that perceived usefulness (“the degree to which a person believes that using a particular system would enhance his or her job performance”) and perceived ease of use (“the degree to which a person believes that using a particular system would be free of physical and mental efforts”) were the main drivers for acceptance of technology. Several researchers have used TAM in the context of explaining acceptance of online technologies like e-commerce (Pavlou, 2003) online shopping (Gefen et al., 2003; Tong, 2010) mobile instant messaging (Jiang and Deng, 2011) mobile commerce (Wei et al., 2009) and mobile payments (Dahlberg et al., 2003).

The rationale behind this combination of theoretical models is the objective of this study which is to achieve the intention to recommend (for mobile banking) from consumers.

Figure 1. Conceptual model



Taking a cue from the TPB, the cost perception will facilitate or impede continued usage intention and consequentially intention to recommend. Multidimensional linkages with perceived cost have been explored. For instance the association between cost and satisfaction by Su et al (2008) who have studied the value-percept diversity model and cost-benefit theory. They found that perceived cost had an impact on the satisfaction of consumers (using interactive recommendation agents). According to the J D Power report (2013), online pharmacies harbored enhanced customer satisfaction, Vis, a Vis physical pharmacies, largely because of perception of lower costs. There are also perceived

switching costs that incorporate how consumers perceive efforts required to switch service providers. These efforts can be measured in terms of money, time, and psychological labor (Jones et al., 2000). Consumers may continue with a service provider for the sake of economizing switching costs (Heide & Weiss, 1995). Several researchers have surmised that in the case of Information Systems, switching costs would lead to resultant customer loyalty, beyond customer satisfaction (Bhattacharjee et al., 2012; M. K. Kim et al., 2004; Ray et al., 2012; Zhou & Lu, 2012). Hence cost has a significant impact on satisfaction and consequentially on the recommendation. Zhou (2011) and Abu Salim et al (2017), investigated post-adoption behavior and continuance usage in the case of mobile services and financial services and the results revealed that confirmation of expectations, ease of use, usage cost, and utility had a significant impact on users' satisfaction. Ease of use would entail the simplicity of learning and operating a system (Davis, 1989). Easier is the interaction with the system, lesser the reasoning and thinking effort involved in its adoption (Moore and Benbasat, 1995). Since ease of use has an impact on satisfaction, which would consequentially lead to an impact on recommendation (Lee, 2019). Thus we propose:

H1a: There is a significant association between ease of use and recommendation

H1b: There is a significant association between cost and recommendation

Customer satisfaction with a service has a direct impact on their continuance intention. Some researchers have gone on to study post-adoption behavior (Zhou, 2011; Li and Liu, 2014 and Chun and Ming, 2014) in the case of mobile services and social networking sites. They found that the satisfaction of customers had a positive impact on their continued usage intention. In the case of financial services like mobile banking and health insurance, researchers' (Abu Salim et al, 2017 and Foroughi et al, 2019) findings revealed that satisfied customers are likely to retain their service providers, which in time are most likely to recommend the service to others. Some other researchers have attempted to establish a relationship between a consumer's continuance intention and their recommendation to use or spreading positive word of mouth. Luo and Chea (2018) while studying the post-adoption behaviors (for websites) found that continuance intention had a positive relationship with a recommendation to use. Thus we propose:

H2: There is a significant association between satisfaction and recommendation

This study aims to achieve recommendation intention (by consumers), which is extending both TAM and TPB. Several researchers in the process of studying post-adoption or post-acceptance behavior have attempted to establish a relationship between a consumer's continuance intention and their recommendation to use or spreading positive word of mouth. Zhou in 2011, Li and Liu (2014), and Kim et al (2014) investigated this association in the case of mobile-based services, Information systems continuance, and mobile communication applications. Their findings reveal that satisfaction had an impact on both continuance intention and recommendation intention and there was a direct relationship between users' intention to continue usage and intention to recommend. Luo and Chea (2018) while studying the post-adoption behaviors (for websites) found that continuance intention had a positive relationship with the recommendation to use. Thus we propose:

H3: There is a significant association between continued intention to use and recommendation

The association between ease of use and satisfaction has been explored in different contexts. Drawing from the TAM and TPB, ease of use and perceived cost will predict continued intention to use as well as customer satisfaction. Some researchers (Chorng and Shu-Chen, 2013; Ashraf et al, 2016; Baharon and Yap, 2017) have investigated satisfaction of customers and intention to purchase related

to websites. They have found that perceived ease of use has an impact (direct or indirect) on and is a significant predictor of satisfaction and motivates purchase intention. In the case of mobile financial services Lee et al (2012) have investigated factors affecting intention to use mobile-based financial services. They purport that connectivity and personal innovativeness directly influence ease of use and perceived monetary value has a notable impact on perceived usefulness. Verissimo (2016, 2018) has extensively explored enabling and restricting factors impacting mobile banking app usage and concluded that lower risk perception, higher ease of use, and compatibility along with utility resulted in greater utilization of mobile banking apps. He has also explored the factor of ease of use in the context of mobile health apps. Taking a cue from the theoretical background, the negative anticipated emotions are represented by the cost element, which impacts satisfaction. The association between cost and satisfaction has also been viewed in several dimensions with Su et al (2008) attempting to study the value-percept diversity model and cost-benefit theory. They found that perceived cost had an impact on the satisfaction of consumers (using interactive recommendation agents). Zhou (2011) and Abu Salim et al (2017), attempted to study post-adoption behavior and continuance usage in the case of mobile services and financial services and the results revealed that confirmation of expectations, ease of use, usage cost, and utility had a significant impact on users' satisfaction. According to the J D Power report (2013), customers of online pharmacies were more satisfied as compared to physical pharmacies, because of a perception of lower costs. Thus, we propose:

H4a: There is a significant association between ease of use and satisfaction

H4b: There is a significant association between cost and satisfaction

Ease of use here implies hassle-free use of technology, wherein the consumers can use technology effortlessly. This is rather important in the case of technically naïve consumers. Ease of use can have multiple dimensions, like easily operating a system, learning and interacting with it (Davis, 1989); the degree of complexity of a system in terms of ease of learning and operations (Moore and Benbasat, 1995; Rashed & Santos, 2014). Although there is increasing diffusion of mobile banking amongst the Indian population, however the percentage of people using this platform remains rather small. Hence the simpler (to use) consumers find this digital payment system, the higher the adoption and continued intention to use and consequentially recommend. The cost has also been investigated by several researchers as an antecedent to usage intention. In the context of small retailers, cost reduction can be a driving force for the adoption of mobile banking (Singh and Sinha, 2020). These costs could include, payment processing costs, adoption costs, operation costs, and so on. Mallat (2007) also purported that perception of the cost would impact acceptance and usage intention for technology by merchants. This was further supported by Hayashi and Bradford (2014), by saying that the second most important factor affecting the adoption of mobile payments was cost perceived by retailers. Other studies supporting this view that the perceived cost will affect the intention to use mobile payments by merchants have been documented by Chong et al., 2010 and Dwivedi et al.2017. Hence, we propose:

H5a: There is a significant association between ease of use and continued intention to use

H5b: There is a significant association between cost and continued intention to use

Taking into cognizance the TPB, satisfaction with a service can mold the attitude of a consumer, which will impact the continued intention to use the service. It is this satisfaction that results in desire and intention. Customer satisfaction with a service has a direct impact on their continuance intention. Some researchers have studied post-adoption behavior (Zhou, 2011; Li and Liu, 2014 and Chun and Ming, 2014) in the case of mobile services and social networking sites. They found that the satisfaction of customers had a positive impact on their continued usage intention. In the case of financial services like mobile banking and health insurance, researchers' (Abu Salim et al, 2017

and Foroughi et al, 2019) findings revealed that satisfied customers are likely to retain their service providers. Thus we propose:

H6: There is a significant association between satisfaction and continued intention to use

Several researchers have explored satisfaction as a mediator in different contexts. Nettet et al (2011) and Ching-Shu Chen (2012) have examined the relationship between satisfaction (of customers) and loyalty (both offline and online) and found that satisfaction mediated the relationship between ease of use and loyalty or continued intention to use. Gizem Kurt (2013) explored ethical issues in online retailing. He revealed a significant relationship between ethical practices of online retailers and trust harbored by consumers and loyalty, with satisfaction as the mediator. Others like Chun-Lin and Ming-Kuei (2014) have explored the moderating role played by switching costs on the relationship existing between consumer satisfaction and intention to continue usage (of social networking sites). Their unique findings revealed that customer satisfaction displays a reverse S-shaped function of continuance intention to use in case of these sites when there is high switching cost. Mohamed et al (2014) provided some insights into the continued intention (of consumers) towards online shopping (in Malaysia). They used the TAM and the 'Expectation Confirmation Theory and concluded that customer satisfaction has an impact on the continued intention for shopping online. However, perceived ease of use (for a website) does not have an impact directly on continued intention and may be mediated by satisfaction; while Kuang-Heng and Trong (2017) have explored the antecedents of satisfaction having an impact on continued intention towards using e-books. They found that quality of service and utility have positive impacts on customer satisfaction; subsequently, the satisfaction of readers had a significant positive impact on their continued intention. However, perceived risk and perceived ease of use did not have a significant impact on satisfaction. In the case of financial services Abu Salim et al (2017) have found a direct relationship between satisfaction (of customers) and customer retention (continuance intention); also there is an impact of the cost of service on the perception of quality by customers and their continued intention. Thus we propose:

H7a: The relationship between ease of use and recommendation is serially mediated by satisfaction and continued intention to use

H7b: The relationship between cost and recommendation is serially mediated by satisfaction and continued intention to use

METHOD

SAMPLE AND PROCEDURE

The present study used a sample size of 224 respondents to study the variables. The study used a convenience sampling technique for data collection. The survey data was collected from the Delhi-NCR region of northern India for four weeks. Before surveying to assess the appropriateness of the scales a pilot study was conducted on a sample of 60 respondents. The results derived confirmed the validity and reliability of the scales. Hence the scales were used for further data collection. The authors distributed 350 survey forms through different channels of communication like email, WhatsApp, google link as well as in person. The order of the scale items was randomly placed to reduce the impact of social desirability. The target population had both males and females who were above 18-year-old and were using mobile banking. Of 350 surveys circulated, the authors received 240 surveys. Of 240 surveys 16 surveys were dropped due to incomplete information leaving the total respondents to 224. Of 224, 124 were males and 100 were females. 60 were in the age group

of 21-30 yrs., 67 in the age group of 31-40 yrs., 90 was between 41-50 yrs. 4 were between 51-60 yrs. and the remaining 3 were above 60 yrs. Regarding the occupation of the respondents, 116 were in service, 97 belonged to business class and the remaining 11 were students. 108 were married and 116 were unmarried.

For data analysis, SPSS and PROCESS Macro (Hayes) were deployed to test validity, reliability, and serial mediation analysis.

Measures

In the study, we have measured all the items on a five-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. Satisfaction was measured using Madan & Yadav's (2016) four-item scale; four items were taken from Chiu et al. (2005) to measure continuance behavioral intention. Cost and customer value addition scales were adapted from Hayashi and Bradford (2014). Subjective Norms were measured from scales of Fassnacht and K"ose (2007) and Schierz et al (2010) with the item "Many of my friends/relatives/ colleagues are using mobile banking". Recommendation to use was measured through a three-item scale of Oliveira et al. (2016). Ease to use was taken from a four-item scale of Venkatesh et al. (2012). However, one item was dropped from ease to use scale due to low factor loading.

Common Method Bias

To overcome the problem of CMB as recommended by Harman (1967) a single factor test was used. It was observed during factor loading that the first factor amounted to 27.6% of the overall variance. As the loading was below 50% the issue of CMB was ruled out for the present study.

DATA ANALYSIS AND RESULTS

Measurement Model: Reliability and Validity

As can be observed from the results of exploratory factor analysis in Table 1, the composite reliability of all the factors ranged from 0.83 to 0.92 and the Average variance extracted (AVE) ranged between 0.74 to 0.93 which was more than the minimum acceptance value of 0.5 as suggested by Hair et al (2010). The Cronbach alpha of the study variables was also found to be above 0.6 which was in the range of acceptance value as suggested by Nunally, (1978).

Table 2 of the present study reflects the correlation and discriminant validity of the study variables. The results show that the correlation between the variables was positive and significant. The discriminant validity of the study variables was assessed by calculating the square root of the AVE estimates. Discriminant validity is significant when its value exceeds the correlation value between the constructs. As is evident from the results, all the correlation values were less than the discriminant values of the constructs.

TESTING OF HYPOTHESES

Direct Effects

Results in Table 3 depict the direct relationship between the variables. A significant and positive impact of ease to use was found on recommendation ($\beta=.687, p<.01$), thus, proving the first hypothesis 1a of the study. Hypothesis 1b of the study that there is a positive association between cost and recommendation is also proved by the result ($\beta=.613, p<.01$). The result also witnessed a positive impact of satisfaction on recommendation ($\beta=.514, p<.01$), thus, proving the hypothesis of 2 the study. Hypothesis 3 of the study was also proven when the results witnessed a positive impact of continuance behavioral intention on recommendation ($\beta=.465, p<.01$). A positive association between ease of use and satisfaction ($\beta=.270, p<.01$) supported hypothesis 4a of the study. Hypothesis

Table 1. Analysis of measurement model: reliability and validity

Research Constructs		Descriptive Statistics		Cronbach	CR	AVE	Item Loadings
		Mean	SD				
Satisfaction (SAT)	SAT1	3.19	.91	0.89	0.89	0.68	0.879
	SAT2						0.852
	SAT3						0.726
	SAT4						0.827
Continuance Behavioral Intention (CBI)	CBI1	3.41	.83	0.87	0.88	0.66	0.887
	CBI 2						0.879
	CBI 3						0.876
	CBI 4						0.573
Ease to Use (EU)	EU1	2.35	.65	0.91	0.90	0.73	0.878
	EU2						0.874
	EU3						0.809
Recommend to Use (R)	R1	3.27	.93	.88	.85	0.65	0.745
	R2						0.883
	R3						0.791
Cost	C1	3.33	.99	.94	.93	0.80	0.895
	C2						0.92
	C3						0.872

Source: Authors' Survey, AVE=Average Variance extracted; CR= Composite Reliability

Table 2. Fornell-Larcker criterion: correlations and discriminant validity

S. No	Construct	Mean	SD	1	2	3	4	5
1	Continuance Behavioral Intention	3.40	.83	.81				
2	Satisfaction	3.19	.91	.40**	.82			
3	Recommend to Use	3.27	.93	.47**	.51**	.81		
4	Ease to Use	2.35	.65	.40**	.27**	.69**	.85	
5	Cost	3.33	.99	.48**	.36**	.61**	.74**	.89

Note: N=224, **correlation significant at .01 level; values of discriminant validity are represented diagonally

4b of the study was also supported by the results depicting a positive association between cost and satisfaction ($\beta=.361, p<.01$). A positive association between ease of use and continued behavioral intention ($\beta=.396, p<.01$) supported hypothesis 5a, and a positive association between cost and continued behavioral intention ($\beta=.476, p<.01$) supported hypothesis 5b of the study. Hypothesis 6 was also supported when a positive association was established between satisfaction and continued behavioral intention ($\beta=.401, p<.01$)

Table 3. Direct effects

Hypotheses	Relationships	Std. coefficient	t value	Outcome
H1a	EoU REC	.687	14.09	supported
H1b	COST REC	.613	11.55	supported
H2	SAT REC	.514	8.94	supported
H3	CBI REC	.465	7.83	supported
H4a	USE SAT	.270	4.18	supported
H4b	COST SAT	.361	5.77	supported
H5b	COST CBI	.476	8.06	supported
H6	SAT CBI	.401	6.52	supported

Note: Source: Authors' Survey, **p<.05; EoU=Ease to Use, SAT=Satisfaction, CBI=Continued Behavioural Intention, REC=Recommendation

Sequential Mediation Analysis

The study utilized the analytical approach by Hayes (2013) for testing the hypothetical model. The path coefficients were calculated using Model 6 (PROCESS). As mentioned by Van Jaarsveld *et al.*, (2010), the PROCESS Macro besides testing the mediating effect of satisfaction (H2) and continued behavioral intention (H3) in isolation, also helps in assessing the “indirect effect passing through both these mediators” (H4). Figure 2 of the study illustrates the estimates of the path coefficients. The mediation approach suggested by Hayes (2013) ” directly tests the mediating effects between the predictor and criterion variables via bootstrapping procedure”. The study using bootstrapping at 10,000 subsamples reflected that at 95% confidence intervals, the indirect effects did not contain zero for any of the study variables viz., ease of use, cost, satisfaction, continued behavioral intention, and recommendation.

Figure 2. Serial mediation with ease of use as a predictor variable

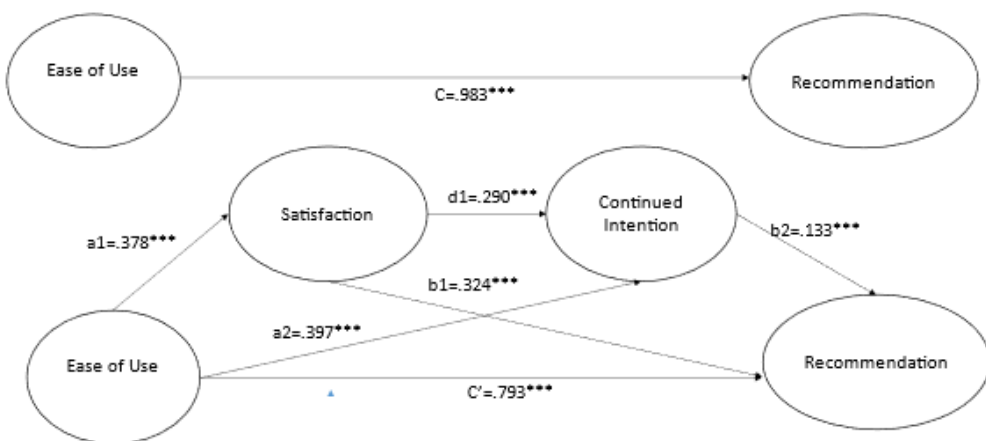
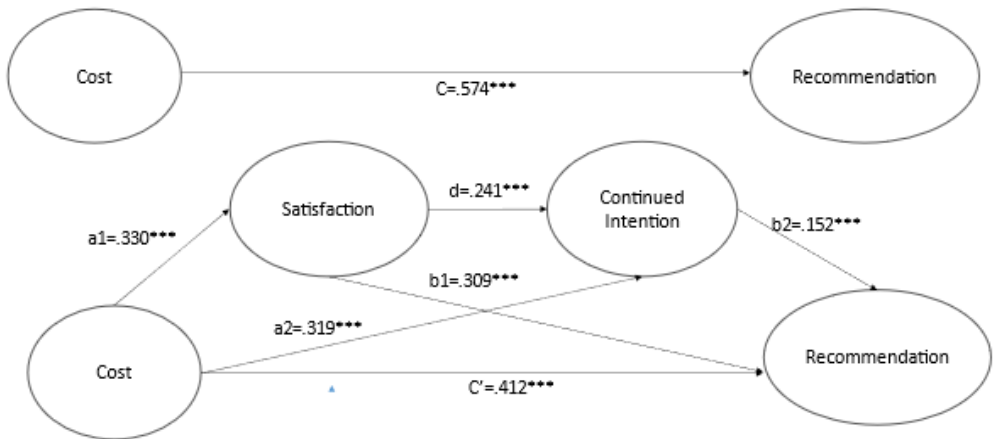


Figure 3. Serial mediation with cost as a predictor variable



Tables 4 and 5 depict the serial mediating effects to assess hypotheses 7a and 7b. It is found that there exists a significant indirect effect (indirect effect = .189, Boot SE = .0420, 95% Boot CI_[lower] = .1146, Boot CI_[upper] = .2791) for ease of use as a predictor variable. Similarly, there exists a significant indirect effect (indirect effect = .163, Boot SE = .0307, 95% Boot CI_[lower] = .1064, Boot CI_[upper] = .2259) for cost as a predictor variable. These results support that ease of use and cost leads to satisfaction and continuous behavioral intention which in turn leads to the recommendation, hence supporting hypotheses 7a and 7b.

DISCUSSION

Table 4. (a) Indirect effects: ease of use as a predictor variable

Indirect effects	Effect	Boot SE	95% confidence interval ^a	Figure path
USE SAT REC	.123	.0337	(0.048, 0.198)	(a1b1)
USE CBI REC	.053	.0224	(0.013, 0.101)	(a2b2)
USE SAT CBI REC	.015	.0072	(0.033, 0.030)	(a1b1+ a2b2+d1b2)
Total indirect effects	.189	.0420	(.1146, .2791)	

Note: ^a10,000 bootstrap samples for bias-corrected bootstrap confidence intervals.

This paper attempted the investigation of m-banking usage in India, its antecedents as well as consequences, using a cohesive model. Results supported all the proposed hypotheses. 'Ease of use' influences the level of satisfaction of mobile banking users significantly with a standardized coefficient of 0.27. A similar relationship has been reported earlier by Kim & Lee, 2013; Ashraf et al, 2016 and others. Cost also influences significantly the satisfaction level (of m-banking users) (standardized coefficient = 0.36) as testified by some earlier studies (Dimitriadis, 2011; Su et al., 2008; Zhou, 2011). Thus, a mobile banking user is more satisfied and contented if he/she is comfortable doing

Table 5. (b) Indirect effects: Cost as a predictor variable

Indirect effects	Effect	Boot SE	95% confidence interval ^a	Figure path
COST SAT REC	.102	.0248	(0.057, 0.155)	(a1b1)
COST CBI REC	.048	.0204	(0.012, 0.019)	(a2b2)
COST SAT CBI REC	.012	.0056	(0.028, 0.024)	(a1b1+ a2b2+d1b2)
Total indirect effects	.163	.0307	(.1064, .2259)	

Note: ^a10,000 bootstrap samples for bias-corrected bootstrap confidence intervals.

mobile banking transactions and perceives the cost of such transactions to be less. Mobile banking app interface should be designed keeping in mind the utility aspect. The construct of Satisfaction has been frequently used in technology acceptance studies for studying the technology users' actual behavior (Wixom & Todd, 2005). It has been extensively used to analyze repeat purchase and post-purchase behaviors in consumer behavior researches (Bhattacharjee, 2001a). Highly satisfied users are likely to talk positively and are more prone to a higher inclination to continue using (Kim *et al.*, 2014). These results corroborate with earlier researches and depict a substantial direct effect of Satisfaction on 'Continued intention to use' m-banking (Kim, Kang & Jo, 2014; Foroughi *et al.*, 2019; Thakur, 2014; Humbani & Wiese, 2019). Kim *et al.*, 2014 also showed the affirmative impact satisfaction has upon intent to recommend, besides continuance intention. The current paper explores the impact of continuance intent on positive recommendation and the results indicate a positive association between the two constructs. These findings conform with earlier literature ((Kim *et al.*, 2014; Luo & Chea, 2018).

The study explored serial mediating effects of satisfaction and continued intention in the 'ease of use-recommendation to use' relationship and 'cost-recommendation to use' relationship. The ease of use has a significant positive effect on the recommendation to use (standardized coefficient = 0.98). As theorized, this effect was serially mediated by satisfaction and continued intent. The indirect effect (0.189) was statistically significant. Similarly, the cost has a significant impact on the recommendation to use (standardized coefficient = 0.574). This effect was also serially mediated by satisfaction and continued intent (indirect effect amounted to 0.163)

Bankers in India are promoting m-banking apps for a variety of reasons. Thus, an in-depth understanding of antecedents and consequences of mobile banking usage shall enable them to take the requisite initiatives for enhancing its acceptance and ensuring widespread usage. It posits that the antecedents inducing 'continued intention to use mobile banking, include 'ease of use', 'perceived cost', 'satisfaction'. Further, the research hypothesizes that the 'continued intention to use mobile banking' positively affects the user's intention to recommend it; this makes up the consequence of mobile banking usage. The analysis reveals support for all the hypotheses.

Thus, the findings of the present research specify useful insights for bankers, to help them devise strategies to encourage mobile banking usage as well as the recommendation of the same to non-users.

THEORETICAL IMPLICATIONS

The study makes some notable contributions to theory as well. Firstly, it furthers the TAM to its logical conclusion of achieving recommendation intention by consumers. Secondly, it is one of the only studies which integrates the TAM and the task technology fit model (indirectly) to provide a more logical explanation for recommendation intention (for mobile banking). Thirdly it also takes into cognizance ease of use and perceived cost and their impact on recommendation intention. Lastly, it is the only study that explores the serial mediating effect of satisfaction and continued intention between ease of use and recommendation intention and perceived cost and recommendation intention.

Managerial Implications

Mobile phones are omnipresent in our lives. The millennials are used to performing most of their tasks on mobile apps. Hence, mobile banking has become imperative in the present-day scenario. Fast-growing mobile user strength in India, easy and cheap availability of internet facilities, have made this channel a critical means for the diffusion of banking facilities to various sections of banking clientele in general and the unbanked sections in particular. The first customer touchpoint between users and mobile banking app is the signing-up activity (Peñicaud *et al.*, 2013). This activity is largely facilitated via mediators (Peñicaud, 2012), hence it is prudent for banks to thoroughly train their service providing employees for imparting positive customer interaction experiences. Most of the unbanked Indian population has little formal education, which negatively impacts their m-banking approval (Iddris, 2013). For plugging the gap, a two-pronged approach needs to be adopted by banks, competent bank employees can run requisite training sessions for customers and also explain the value being delivered via this service. This will ensure not only adoption and usage but also long-term loyalty to the banks (Karjaluo *et al.*, 2019). This will plug the gap of lack of understanding of mobile banking and the ability to use it (Intermedia, 2013). Continued usage can make a meaningful contribution to financial inclusion. This in turn will ensure reduced dependence on cash for their commercial and business activities. It will facilitate for them beneficial services ranging from savings to loans and insurance and many more (Evans, 2018).

Banks, in India, have been trying to facilitate most of their operations of branch-level banking on online and mobile banking platforms and also motivate their clients to use m-banking apps as much as possible. Bankers float many loyalty and reward programs to ensure repeated usage by customers and consequential loyalty. There has been a sea change in the arena of marketing, from transaction/acquisition focus to retention/relationship focus. The rationale behind this strategy is cost reduction and optimal use of investments done in technology interventions. This is referred to as *Relationship Marketing*, which incorporates building and nurturing long-term relationships with current clients also besides securing new clients. The relationship with customers evolves from *customers as strangers* to *acquaintances*, then *friends*, and finally *customers as partners* (Ziethaml *et al.*, 2018). The predominant purpose of relationship marketing is the acquisition and retention of a tranche of loyal customers, who will ultimately result in profitability for the firm. This is a symbiotic relationship for both customers and banks. The benefits accruing to consumers are '*confidence benefits*', '*social benefits*' and '*special treatment benefits*'; and the advantages to the service firm include '*economic benefits*', '*customer behavior benefits*' and '*human resource management benefits*' (Ziethaml *et al.*, 2018). Then there is the *Relationship value of a customer*, which comprises of lifetime revenue and profitability contribution of a loyal customer to the organization. The lifetime value of a customer incorporates average revenues generated in his association with the firm, add on products sold and services (availed by the customer) over time, referrals accruing due to positive word of mouth by a customer, and costs borne while servicing the customer. This paper focuses on understanding the post-adoption behavior of m-banking consumers. An attempt is made to understand the critical antecedents to prolonged intent of using m-banking and recommending it. Results suggest that banks' marketing communications departments need to further stress building positive perceptions amongst bank customers regarding the cost involvement and ease of use. The communication should highlight the various value-added features of m-banking, like reward schemes, cashback, tie-ups with prominent traders for discounts, and so on for further promoting its usage. Further, results also provide insights to bankers and policymakers about the factors which are critical for attracting long-term commitment from customers using their mobile banking apps. For, enhancing the chances of satisfied customers' long-term association, people in their close network should be also convinced of the benefits of m-banking usage. Marketing managers may come up with schemes to give benefits to existing customers for new account opening of family members and friends (customer referrals). The same may also be used by bankers to secure positive recommendations from existing users to attract new users towards mobile banking apps.

LIMITATIONS AND FUTURE DIRECTION

The present paper mainly focuses on the serial mediating role of Satisfaction and Continued intention between Ease of use & Recommendation intent of the m-banking user and Cost & Recommendation intent. Furthermore, the influence of Cost & Ease of use on satisfaction; the influence of satisfaction on continued usage intention, and the influence of continued intention on recommendation intent is studied. However, trust, a critical construct for the financial service industry has been omitted from the research model. In the financial services industry, clients have apprehensions regarding the confidentiality of their transactions. RBI, the regulator of the Indian banking industry, has issued various guidelines in this regard. RBI requires that bankers offering mobile banking services must warrant that clients' sensitive information, confidentiality & integrity of financial dealings are safeguarded. Provision of IS audit and accreditation of mobile banking servers by external credible agencies is mandatory. Thus, trust and security are given due importance by the regulator as well. Future researches may incorporate this variable in the present model to make it more comprehensive. For better generalizability, other geographies can be explored. Demographic variables of the respondents can also be taken into consideration to gauge if there is any difference among the perception (of respondents) concerning gender, qualification, marital status, and so on while analyzing the constructs under study. The study has used a convenience sampling method which can be subject to common method bias. Future studies can utilize a longitudinal approach for robustness. Stratified sampling can be used to understand the perception of varied strata to assess the hypothesized model. The sample is limited to the northern region of India. Future studies can consider the sample across India for greater credibility.

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APPENDIX A

Scale Items	Measures
I would feel satisfied with the features of Mobile Banking (SAT 1)	Satisfaction
I would feel contented with the features of Mobile Banking (SAT 2)	
I would feel comfortable with Mobile Banking usage (SAT 3)	
I would feel pleased because it potentially fulfills my needs (SAT 4)	
I would recommend Mobile Banking to my friends and family to use it, if it is available. (R1)	Recommend to use
If I have a worthy experience with Mobile Banking, I would recommend friends to download the apps of services. (R2)	
I would recommend the apps on social platforms, if it is worth using. (R3)	
Interaction with Mobile Banking is clear and understandable (EU1)	Ease to Use
I think it is easy to use Mobile Banking to do what I want to do (EU2)	
In general, Mobile Banking is easy to use (EU3)	
I intend to continue using the mobile money services in the future. (CBI 1)	Continuance behavioral intention
I will regularly use mobile money services in the future. (CBI 2)	
My intentions are to continue using mobile banking services rather than any alternative means (CBI 3)	
I want to continue using mobile money services rather than discontinue its use. (CBI 4)	
Mobile Banking reduce the cost of processing payments (C1)	Cost
Mobile Banking installations cost is not very high. (C2)	
Mobile Banking is cheap to use (C3)	

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