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The influence of e-banking service quality on customer loyalty

A moderated mediation approach

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Influence of
EBSQ on
customer
loyalty

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Abstract

Purpose – Providing high-quality e-banking services is considered a basic strategy for attracting and retaining customers with electronic-banking platforms. The purpose of this paper is to empirically investigate a comprehensive moderated mediated mechanism for enhancing customer loyalty toward e-banking platforms via e-banking service quality (EBSQ) practices. Reliability, website design, privacy and security and customer service and support are the dimensions of EBSQ.

Design/methodology/approach – Data were collected through structured questionnaires from a sample of 1,028 e-banking users in India. To test the hypotheses, a structural equation modeling approach was used.

Findings – The findings showed that of the EBSQ dimensions, reliability along with privacy and security enhanced customer loyalty to e-banking. The initial trust in e-banking mediates the effects of EBSQ dimensions on customer loyalty except for website design. The mediation effects of initial trust varied between high and low-involved consumers.

Research limitations/implications – This study was conducted with e-banking users in one country using cross-sectional data. Hence, the model should be replicated among e-banking users in other countries and with the longitudinal data.

Practical implications – Establishing a loyal customer base is an important goal for banks. This study demonstrates which specific EBSQ dimensions banks should emphasize to enhance consumers' initial trust and loyalty toward e-banking services.

Originality/value – This study suggests a moderated mediated mechanism for enhancing customer loyalty to e-banking, which incorporates initial trust as a mediator and consumer involvement as a moderator. It applies cognitive-motivation-relational theory to link EBSQ dimensions with customer loyalty. Thus, this study enables a better understanding of this theory in the e-banking context.

Keywords Customer loyalty, Moderated mediation, e-banking service quality, Initial trust in e-banking, Involvement in e-banking

Paper type Research paper

1. Introduction

Advancement in information technology and the widespread use of the internet have changed service delivery methods in the last few decades. The brick and mortar system has been replaced by a click and portal system to provide customized services to consumers (Shaikh and Karjaluo, 2015) and banks are not an exception. Banks are now providing their services through an electronic-banking (e-banking) channel. Personal computers are the medium by which customers can use e-banking services, with the terms “Online banking,” “internet banking,” “electronic banking” and “e-banking” used interchangeably in the literature (Amin, 2016; Ayo *et al.*, 2016; Yap *et al.*, 2010). E-banking means the process through which a customer digitally interacts with a bank via computers without the need of a human contact (Jayawardhena, 2004). At the initial stage, e-banking was used to provide information about banking services. However, today's customers are using online banking both as a transactional as well as an informational medium, and experiencing the wide range of banking services it has to offer including account inquiry, bank statement



download, cheque book order, bill payment, fund transfer, fixed deposit management, stock investment and insurance term payment (Tan and Teo, 2000). E-banking enables consumers to conveniently enjoy an array of customized banking services and assists banks in order to offer their services to a large number of consumers in a cost-efficient manner (Narayanasamy *et al.*, 2011; Yoon and Steege, 2013; Amin, 2016).

Due to the increasing rate of adoption of e-banking systems, banks face stiff competition in attracting and retaining customers with their e-banking platforms. In this context, providing high-quality e-banking service is considered a basic strategy for gaining competitive advantage in this service delivery platform (Jayawardhena, 2004; Butt and Aftab, 2013; Kandampully *et al.*, 2015; Makanyeza and Chikazhe, 2017). Essentially, enhancing the service quality of e-banking is viewed as the best strategic tool to make customers loyal to the e-banking system (Brun *et al.*, 2014).

Consumer-perceived service quality evaluations could vary from context to context (Parasuraman *et al.*, 2005), and accordingly customer perceptions and expectations of service quality can differ between physical banking and e-banking (Lin *et al.*, 2014; Arcand *et al.*, 2017). Hence, researchers have developed the e-banking service quality (EBSQ) scale to measure and understand customer expectations and perceptions of quality of e-banking services. However, the scant research has investigated the influence of EBSQ dimensions on customer behavioral outcomes, such as satisfaction, purchase intention, loyalty and retention in detail. This research addresses this gap.

In previous studies, the influence of generic service quality measures has been investigated, particularly in relation to customer behavioral outcomes, including customer satisfaction and loyalty in physical banking and e-banking contexts (Butt and Aftab, 2013; Ahmad Al-Hawari, 2014; Amin, 2016). However, these studies tend to offer limited practical insights for financial services providers in enhancing customer loyalty to e-banking platforms. The dimensions in the generic service quality measures differ from those in EBSQ (as explained in Section 2). Similarly, the influence of service quality on customer loyalty has been investigated in other online and electronic service delivery contexts, such as online retailing contexts (Kim *et al.*, 2009) but these contexts are different from the e-banking context.

Thus, the main purpose of this study is to propose and empirically investigate a comprehensive moderated mediated mechanism for enhancing customer loyalty to e-banking platforms via EBSQ practices. First, this study investigates the influence of the dimensions of EBSQ on customer loyalty. This study also proposes initial trust in e-banking as a mediator for the association between the EBSQ dimensions and customer loyalty, and suggests these mediation effects vary depending on the different levels of the consumer involvement in e-banking. Thus, it proposes a comprehensive moderated mediated mechanism for enhancing customer loyalty to the e-banking platform.

This study has both academic and practical implications. This study makes a significant contribution to the literature relating to customer behavior, service quality and customer loyalty with a special emphasis on bank marketing and financial services marketing. This study also suggests a moderated mediated mechanism for enhancing customer loyalty to e-banking that incorporates initial trust as a mediator and consumer involvement as a moderator. Additionally, this study applies cognitive-motivation-relational (CMR) theory (as explained in detail in the literature review section) to link EBSQ dimensions with customer loyalty. Thus, this study enables a better understanding of this theory in the e-banking context which also contributes to customer behavior and bank marketing literature.

Practically, this study offers several recommendations to banks about which specific EBSQ dimensions they need to improve to make customers loyal to e-banking services. Establishing a loyal customer base is an important goal for banks (Coetzee *et al.*, 2013), and so they put considerable efforts into understanding which service quality dimensions have a

significant impact on customer loyalty to their services (Al-Alak, 2014; Kandampully *et al.*, 2015). This study demonstrates which specific EBSQ dimensions banks should lay more emphasis on to enhance consumers' initial trust in and their loyalty to e-banking services.

2. Literature review

2.1 E-banking service quality (EBSQ)

Since all banks offer e-banking services nowadays, a basic strategy to gain competitive advantage is providing superior quality in this service delivery platform (Pousttchi and Schurig, 2004; Amin, 2016). The concept of "EBSQ" has therefore gained a prominent place in the services marketing literature during the last decade. EBSQ is defined as "consumers' evaluation of the quality of banking services delivered through internet" (Jun and Cai, 2001). Globally, both marketing academics and practitioners have become increasingly interested in this concept (Jun and Cai, 2001; Jayawardhena, 2004; Herington and Weaven, 2009; Al-Hawari, 2015; Liang and Pei-Ching, 2015; Amin, 2016; Ayo *et al.*, 2016).

E-banking provides some unique services that are not available in offline banking, such as lack of interpersonal interaction, ubiquity and localization (Bauer *et al.*, 2005). The ubiquity of e-banking services means access to banking services at any time and from anywhere (Al-Hawari, 2015). Localization means banks can track the location of the users and provide location-based banking services, such as information on the availability of ATMs (Yoon and Steege, 2013; Amin, 2016). Therefore, scales developed to measure service quality in generic service delivery contexts or offline banking contexts were not appropriate for measuring service quality in the e-banking context.

Service quality evaluation is context bounded (Cai and Jun, 2003; Ladhari, 2009). Dimensions of the SERVQUAL model introduced by Parasuraman *et al.* (1988) (generic service quality measurement scale) are not appropriate to evaluate customer perceptions and expectations of services in the e-banking context. Most of the dimensions and items of the generic service quality scale are appropriate for traditional services which involve interpersonal encounters between staff and customers (Cox and Dale, 2001). Traditional human interactions are irrelevant for the online banking context. Therefore, the generic service quality scale, as designed to capture customer perceptions and expectations of service involving personal interaction between consumers and employees, is not appropriate for virtual environments like online banking where customers interact with technology rather than service personnel. In the e-banking context, the quality of the website (portal) serves as the interface between customers and bank (Bauer *et al.*, 2005).

Researchers have therefore attempted to measure service quality in the e-banking context (Jun and Cai, 2001; Jayawardhena, 2004; Ho and Lin, 2010; Hussien and Abd El Aziz, 2013; Amin, 2016; Ayo *et al.*, 2016). They tend to mainly consider reliability, website design, privacy and security and customer service and support as the crucial dimensions explaining EBSQ. Enhancing EBSQ, particularly these dimensions of e-banking services, will enable banks to retain a loyal customer base to their e-banking services (Wong and Sohal, 2003; Demirci-Orel and Kara, 2015).

2.2 Customer loyalty

Consumer retention is a complex process and key to the success of an organization (Bowen and Chen McCain, 2015). Loyal customers are less sensitive to price changes and motivate potential customers to use a specific provider's services by spreading positive word of mouth (Akbar and Parvez, 2009). Therefore, loyal customers are considered an asset to an organization. In the e-banking context, customer loyalty could be defined as "consumer tendency to frequently visit the bank's website, regularly avail e-banking services and spread a positive word of mouth about e-banking services" (Jeong and Lee, 2010; Kaur *et al.*, 2012; Amin, 2016). In particular, loyal e-banking customers tend to spread positive word of

mouth through electronic devices and social media pages, thereby giving a positive impression of e-banking to other customers (Kaur *et al.*, 2012). They will also prefer e-banking over other banking channels (Kandampully *et al.*, 2015). Gera (2011) indicated that if consumers receive quality interactive services over an e-banking website, they will re-use this platform for availing banking services and recommend others to use it. Focusing on e-banking loyalty is important for banks to maintain relationships with consumers and to attract potential consumers (Amin, 2016). Therefore, banks should develop marketing strategies to provide superior value to customers to make them loyal to e-banking services (Kotler *et al.*, 2014).

Customer loyalty can be understood from both attitudinal and behavioral perspectives (Oliver, 1999; Zeithaml, 2000). From the behavioral perspective, customer loyalty can be understood as the frequency of using particular services in a specific category compared with the total services availed by consumers in that category (Neal, 1999). From the attitudinal perspective, customer loyalty can be understood as “customer tendency to continue a relationship with a service provider” (Zeithaml, 2000). In this study, both perspectives have been combined to understand customer loyalty.

2.3 Theoretical support

CMR theory, developed by Lazarus (1991), is used in this study to provide theoretical support for the association between EBSQ and customer loyalty to e-banking service. This theory suggests an association between cognitive evaluation and emotional response. Cognitive orientation occurs when individuals make an evaluation of their environment based on their goals, beliefs and values which in turn results in emotional response to the cues presented in the environment. Researchers have used CMR theory to explain the relationship between service quality and customer responses, such as customer satisfaction, purchase intention and customer loyalty (Brady and Robertson, 2001; Nicholls *et al.*, 2012; Sivapalan and Jebarajakirthy, 2017). They suggest service quality is associated with the cognitive evaluation of services, whereas customer responses, such as purchase intention and customer loyalty, are perceived as emotional responses.

Consistent with the argument above, this study suggests that EBSQ is a cognitive evaluation, whereas customer loyalty is an emotional response. E-banking customers evaluate the cues presented in the e-banking environment. EBSQ dimensions (reliability, website design, privacy and security and customer service and support) are the cues in the e-banking environment that e-banking customers cognitively evaluate. This evaluation results in their loyalty to e-banking which is a behavioral response to the e-banking environment and e-banking services.

2.4 Influence EBSQ dimensions on customer loyalty

As previously discussed, EBSQ will drive customer loyalty to e-banking services. In this section, we show the association between EBSQ dimensions and customer loyalty. The literature tends to define reliability, privacy and security, website design and customer service and support as the main dimensions of EBSQ (Jun and Cai, 2001; Jayawardhena, 2004; Ho and Lin, 2010; Hussien and Abd El Aziz, 2013; Amin, 2016; Ayo *et al.*, 2016). Therefore, we used these four dimensions as the EBSQ dimensions for this study.

The first EBSQ dimension is reliability, which refers to “the ability of the service provider to perform the promised services accurately and consistently” (Parasuraman *et al.*, 2005, p. 23). In the context of e-services, consistency in providing quality services (Pakdil *et al.*, 2012), availability of error-free services, and accuracy in delivering promised services (Saccani *et al.*, 2014) influence customers to stay with service providers. Reliability is also a crucial aspect in EBSQ which influences customers’ favorable response to e-banking services (Wolfenbarger and Gilly, 2003; Blut *et al.*, 2014). Timely transaction processing and

an accurate billing system are the key success factors of e-banking which contribute to retaining customers with this platform (Liang and Pei-Ching, 2015; Shankar and Kumari, 2016). Thus, we hypothesize the following:

H1. Reliability of e-banking services positively influences customer loyalty to e-banking providers.

The next EBSQ dimension is privacy and security, which refers to “the degree to which customers believe that the site is safe from intrusion and that personal information shared over the platform is protected” (Hussien and Abd El Aziz, 2013, p. 561). There are no face-to-face interactions between the customers and service provider in the e-banking context, which creates some concerns with privacy and security issues while doing financial transactions using e-banking websites (Jin and Kim, 2010; Ahmad Al-Hawari, 2014). If online banking service providers ensure safe transactions and keep privacy of personal information, consumers are more inclined to trust them (Thaichon *et al.*, 2014; Shankar and Kumari, 2016). A transparent privacy and security policy helps generate favorable consumer responses to the service provider (Orel and Kara, 2014). Thus, we hypothesize the following:

H2. Privacy and security of e-banking services positively influences customer loyalty to e-banking providers.

The next EBSQ dimension is website design, which includes “various elements of the e-banking website that consumers use to interact with the website including navigation, detailed information, and transaction processing” (Wolfenbarger and Gilly, 2003, p. 193). E-service providers tend to design their website in a way that can provide in-depth information, reduce search efforts, and enhance interactivity with customers (Kim *et al.*, 2009). Such website designs will in turn enhance customer trustworthiness in e-commerce platforms, and will encourage them to become loyal to the online service providers (Lee *et al.*, 2006). Similarly, an advanced and interactive e-banking website interface enhances customer satisfaction (Kim *et al.*, 2009; Vera and Trujillo, 2013; Amin, 2016) and willingness to use online banking services more frequently (Li and Yeh, 2010). Based on this discussion, we hypothesize the following:

H3. Website design of e-banking services positively influences customer loyalty to e-banking providers.

The next dimension of EBSQ is customer service and support, which means services given to customers to resolve their needs as well as speedy response to their complaints (Blut *et al.*, 2015). In the e-banking context, customers seek professional care and support if they encounter any hassles using e-banking services. Particularly, when e-banking providers update their technologies and websites, customers tend to seek technical support from e-banking providers (Thaichon *et al.*, 2014). If an online customer care support team provides quick solutions to customer’s queries, effectively demonstrating a hassle-free and transparent recovery policy, then customers tend to trust the service providers (Blut *et al.*, 2015; Quach *et al.*, 2016). In turn, these customers will remain loyal to them and spread positive word of mouth about their services. Based on the preceding discussion, we hypothesize the following:

H4. Customer service and support of e-banking services positively influence customer loyalty to e-banking providers.

2.5 Mediating effects of initial trust in e-banking

Trust refers to “customer confidence in the quality and reliability of the services offered” (Garbarino and Johnson, 1999, p. 71). Initial trust and cumulative trust are two phases of

trust (Kim *et al.*, 2009). As cumulative trust is followed by initial trust, building initial trust is very crucial in the adoption of online services (Kim *et al.*, 2009). Over the past decade, initial trust has received significant consideration in the consumer behavior and information system literature (Kim *et al.*, 2009; Butt and Aftab, 2013; Thaichon *et al.*, 2014; Saleem *et al.*, 2017; Oghazi *et al.*, 2018). In the context of e-banking, customers do not experience face-to-face interactions with bank employees. Therefore, in this context, initial trust helps reduce customers' perceived risks (Zhao *et al.*, 2010). As such, initial trust is considered a crucial antecedent of customer loyalty to e-banking serving as a pillar in establishing a long-term relationship between customers and service providers (Hong and Cho, 2011). Trust enhances customers' long-term commitment to service providers, thereby enhancing customer loyalty to them (Kassim and Asiah Abdullah, 2010; Sanchez-Franco, 2009; Butt and Aftab, 2013). This study proposes that initial trust in e-banking can be a mediator for the association between EBSQ dimensions and customer loyalty. The discussion of these mediator effects follows.

The first dimension of EBSQ regards reliability. In the e-banking context, consumers are commonly concerned with timely and error-free banking transactions (Kim *et al.*, 2009). If customers feel that e-banking services are accurate and timely, they are more likely to trust in e-banking services and continue to use them in the future. Privacy and security issues are also major concerns for consumers interested in using e-banking services (Shankar and Kumari, 2016). If e-banking service providers ensure a secured e-banking platform for completing financial transactions and guarantee the privacy of customers' personal information shared over the platform, then consumers will be more likely to consider the e-banking providers trustworthy (Cases *et al.*, 2010), and will become loyal to them.

Website design is the next dimension of EBSQ. In the e-banking context, speedy transaction and page processing, regularly updated and concise content on the e-banking website and presentation style of the website all enhance customer trust in e-banking providers (Thaichon *et al.*, 2014) and consequently, customers will become more loyal to them. Customer service and support is the next EBSQ dimension. In the e-banking context, the empathetic behavior of the customer care team, easy access to their services (e.g. 24/7 access) and the provider's commitment to resolving customer queries all enhance customer trust in e-banking providers. Consequently, customers will develop long-term relationships with them. The above discussion suggests that customers' initial trust in e-banking mediates the association between EBSQ dimensions and customer loyalty to e-banking providers. Hence, the following battery hypothesis is formulated:

- H5.* Initial trust in e-banking mediates the association between the (a) reliability, (b) privacy and security (c) website design and (d) customer service and support and customer loyalty to e-banking providers.

2.6 Moderating effects of consumer involvement in e-banking

In the e-commerce context, consumers' responses to products and services, such as their attitudes, tend to vary depending on their involvement with the e-services (Breugelmans and Campo, 2011; Parment, 2013; Behe *et al.*, 2015; Gohary *et al.*, 2016; Algharabat *et al.*, 2018). Involvement with products or services refers to the perceived personal relevance of a product or service based on the interests, needs and values of consumers (Park *et al.*, 2007). The literature shows that online service providers can enhance consumer trust in their services by providing quality services; however, this association varies between high- and low-involved consumers (Martin *et al.*, 2011). Precisely, the effect of service quality on trust is higher for high-involved consumers than low-involved consumers. Consumer cognitive effort in evaluating the cues presented in the environment varies between high- and low-involved consumers (Laurent and Kapferer, 1985; Petty *et al.*, 1983). Since consumer

involvement level moderates environmental cues, and the association between service quality and consumer trust, this study proposes that consumer involvement in e-banking might moderate the strength of the mediation effects that initial trust in e-banking has on the association between EBSQ dimensions and customer loyalty.

Consumers who are highly involved in online shopping are more likely to search, analyze and make online purchase decisions more carefully than low-involved consumers (Gamliel *et al.*, 2013). High-involved consumers tend to spend more time using online platforms, and carefully look at the information provided in the platforms (Im and Ha, 2011). They carefully evaluate the accuracy and reliability of the services provided, developing trust and loyalty when the service provider meets their promises. In contrast, low-involved customers tend to overlook the information provided by e-service providers, and their reliability and accuracy of the services, which results in customers' lack of trust and loyalty to the e-service providers (Kim *et al.*, 2009; Gamliel *et al.*, 2013). Similarly, customers who are highly involved in e-banking tend to carefully evaluate information on e-banking providers and their services, and have greater concerns and expectations of the security and privacy of their transactions over e-banking platforms. Therefore, when e-banking providers deliver such a secured e-banking platform, high-involved customers feel more trusting and loyal to them than low-involved customers do.

Since high-involved consumers have more technical and product (or service) knowledge and are further aware of complex issues relating to e-services, they are more likely to resolve their technical problems on their own (Thaichon *et al.*, 2014). That is, they are less dependent on customer care support teams. However, low-involved customers are more reliant on customer care teams to resolve technical difficulties because of their lack of knowledge of e-services (Quach *et al.*, 2016). Therefore, high-involved consumers give less value to customer support teams, and customer care services have less impact on building their trust and loyalty to e-banking service providers compared with low-involved consumers. The preceding discussion in this section indicates that the indirect effects of each EBSQ dimension on customer loyalty to e-banking via initial trust might vary across the levels of consumer involvement in e-banking. In other words, consumer involvement in e-banking moderates the mediation effects that initial trust has on the association between EBSQ dimensions and customer loyalty to e-banking. Accordingly, we hypothesize the following battery hypothesis:

- H6.* The mediation effects of initial trust on the association between (a) reliability, (b) privacy and security, (c) website design and customer loyalty to e-banking are stronger at a high level of consumer involvement in e-banking than the low level of involvement and (d) the mediation effects of initial trust on the association between customer service and support and customer loyalty to e-banking are stronger at a low level of consumer involvement in e-banking than the high level of involvement.

Control variables. Literature shows that demographic factors, such as age, income and education also drive customer loyalty to e-banking (Oliveira *et al.*, 2014; Sharma *et al.*, 2017; Sathye, 1999). Particularly, customer responses to e-banking tend to vary depending on their age. Young people are more exposed to new technology than the older generations; hence, the former can easily adopt e-banking, and become loyal to its services (Floh and Treiblmaier, 2006). Loyalty to e-banking could also differ depending on the income level of banking customers. Those who earn high income tend to receive and spend large sums in their transactions. They prefer offline banking to online banking because they receive special services and priority treatment from banks during their offline transactions, which they cannot avail online. Therefore, high income people tend to be more loyal to offline banking than online banking (Gan *et al.*, 2006). Customers' educational attainment also affects their responses to e-banking. For example, the higher

the customers' education, the greater their technical skills are to adopt e-banking, suggesting a positive relationship between education and loyalty to e-banking (Stavins, 2001; Gan *et al.*, 2006).

2.7 The proposed conceptual model

Based on the aforementioned literature review and the hypothesized relationships, a conceptual model has been developed for this study, which is illustrated in Figure 1. This model shows previously discussed hypotheses.

3. Research method

3.1 Sample and survey administration

The prevalence of the internet and developments in information and communication technology are the key drivers of online banking penetration (Luo *et al.*, 2010). India holds the second position in internet penetration around the globe with 422m internet connections in 2016 (Telecom Subscription Report, 2017). There is enormous potential for e-banking growth in India, and therefore the Indian e-banking context seems an ideal setting to investigate EBSQ and customer loyalty to e-banking.

Data were collected through structured questionnaires from e-banking users. The surveys were administered via both online and offline modes. The online survey was sent to the randomly selected e-mail address of e-banking users obtained from a marketing research company. A total of 1,000 online questionnaires were administered and 587 responses were received. After discarding incomplete surveys, a total of 502 valid surveys were used for analysis.

The offline face-to-face survey was administered by visiting various bank branches and ATMs in five metro cities in India (Delhi, Chennai, Mumbai, Kolkata and Hyderabad) and their adjacent suburban areas. From each city and their adjacent suburban area, ten bank branches and ten ATMs were selected randomly from the list of all the bank branches and ATMs in the cities. Every tenth customer who approached the branch/ATM was randomly approached to participate in the survey. Participants had the option of responding to the survey either immediately or at a time of their own convenience. A total of 1,000 surveys were administered offline and 601 attempted surveys were received. After excluding incomplete surveys, 526 valid surveys were used for further analysis.

A total of 1,028 responses were used in this study. Independent sample *t*-tests showed that there was no significant difference between early and late respondents either in regards to their demographic profiles or study constructs. This indicates the absence of non-response bias (Armstrong and Overton, 1977). Independent samples *t*-tests were also conducted to compare the accuracy, representativeness and non-response bias between

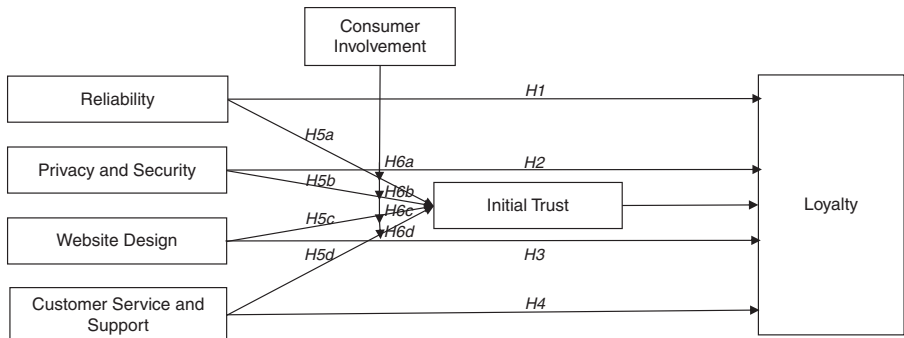


Figure 1. Conceptual framework

online and offline survey respondents. The results showed that there was no significant difference between online and offline survey respondents either in regards to their demographic profiles or study constructs (Deutskens *et al.*, 2006). Table I presents the demographic profiles of the respondents.

3.2 Measures and instrument development

The survey questionnaire contains three sections. The first section contains a screening question. The next section comprises items relating to study constructs. In the third section, respondents were asked to provide their demographic information.

The items measuring study constructs were taken from previously validated scales. However, these scales were modified to suit the e-banking context, where appropriate. Reliability was operationalized using four items in which the first two were taken from Jayawardhena (2004) and the remaining from Hussien and Abd El Aziz (2013). Privacy and security was measured using three items taken from Quach *et al.* (2016) whereas four items obtained from Jayawardhena (2004) were used to operationalize website design. Five items were used to operationalize customer service and support in which first three were obtained from Quach *et al.* (2016) and remaining from Wolfenbarger and Gilly (2003). Five items taken from Zhou (2011) were used to measure initial trust. Three items measuring consumer involvement and four items operationalizing e-banking loyalty were taken from Filieri and McLeay (2013) and Amin (2016), respectively. The items operationalizing all the constructs were measured with the five-point scale ranging from 1 to 5. Demographic characteristics of consumers, such as age, income and educational qualification also

Category	<i>n</i>	%
<i>Gender</i>		
Male	581	56.5
Female	447	43.5
<i>Age (years)</i>		
18–30	443	43.1
31–45	364	35.4
46–60	167	16.2
Above 60	54	5.3
<i>Income</i>		
Less than \$200	271	26.4
\$201–400	456	44.3
\$401–600	187	18.2
Above \$600	114	11.1
<i>Educational qualification</i>		
Secondary or below qualification	187	18.2
Higher secondary	323	31.5
Bachelor's degree	389	37.8
Postgraduate degree or higher	129	12.5
<i>Occupation</i>		
Unemployed	44	4.3
Government or semi-government sector	341	33.2
Private sector	426	41.4
Self-employment	171	16.6
Retired	46	4.5

Note: *n* = 1,028

Table I.
Demographic profiles
of the respondents

influence e-banking loyalty (Oliveira *et al.*, 2014; Sharma *et al.*, 2017). They were not considered for hypotheses development, but instead assumed to be control variables in this study. The data concerning these control variables were also sought through this survey instrument.

To ensure content validity, the survey instrument was vetted by a panel of experts, such as banking professionals and professors with expertise in the marketing field, particularly bank marketing and e-commerce. The survey instrument, originally written in English was translated into the Hindi language. A translated version of the survey instrument was translated back into English and was cross-examined by two other bilingual researchers to ensure the reliability and validity of translated survey instrument. The respondents had the option of responding to either the English or the Hindi language survey based on their language proficiency. The survey instrument was pretested using two focus groups, each comprising eight e-banking users. Based on their feedback, some minor changes were incorporated into the wording and format of the survey instrument.

4. Results

4.1 Measurement model

Confirmatory factor analysis (CFA) using AMOS version 23 was performed to determine the validity, reliability and dimensionality of the constructs. The results of the CFA are presented in Table II. These results showed that the factor loadings of all the constructs were significant ($p < 0.001$) and above 0.7, the minimum threshold value. The average variance extracted (AVE) values of all the constructs were also above 0.5 and value of construct reliability of each construct is above 0.7. All these parameters indicate the convergent validity of items measuring the constructs (Hair and Anderson, 2010). The discriminant validity of the study constructs was tested as suggested by Fornell and Larcker (1981). The square roots of the AVE values presented in the upper diagonal of Table III for each construct were greater than the construct's correlation coefficients with other constructs. This is indicative of discriminant validity among constructs (Fornell and Larcker, 1981). In addition, Cronbach's α coefficients of each construct presented in Table II were above 0.7, indicating the reliability of constructs' measures. The goodness-of-fit indices in Table II shows acceptable model fit (CMIN/DF = 1.920 ($p < 0.001$), CFI = 0.98, GFI = 0.96, AGFI = 0.95, NFI = 0.97, TLI = 0.98, RMSEA = 0.030), confirming unidimensionality of the measurement model (Hair and Anderson, 2010).

Table III presents the mean, standard deviation and correlation coefficients for the study constructs. The results show that the majority of the constructs are significantly correlated with each other, and correlation regressions range from -0.39 to 0.58 . However, all correlations are less than 0.9, thereby suggesting there is no multicollinearity between these constructs (Tabachnick and Fidell, 2012).

4.2 Common method bias (CMB)

Because the data relating to both independent and dependent constructs were collected from the same respondents, they might be able to predict the association between independent and dependent variables which might result in a CMB. Several methods were used to check for CMB. Items measuring a marker variable that were theoretically unrelated to other variables were included in the questionnaire (Malhotra *et al.*, 2006). The correlation of the marker variable with other constructs in the study was relatively low, while the correlation matrix between the marker and the other variables was statistically significant after adjusting for CMB. Therefore, the results cannot be accounted for by CMB (Lindell and Whitney, 2001). This potential problem was also checked with the Harman one-factor test (Podsakoff and Organ, 1986). A factor analysis of seven focal constructs resulted in a seven-factor solution, which accounted for 72.67 percent of the

Influence of
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customer
loyalty

Construct	Statements	FL
Reliability AVE (0.70), CR (0.95), $\alpha = 0.92$	E-banking website provides the services exactly as promised	0.82
	E-banking always provides the services at the promised time	0.86
	Using e-banking, I can retrieve the transaction details on my account	0.82
	The information provided over e-banking website is accurate	0.85
Privacy and security AVE (0.74), CR (0.94), $\alpha = 0.92$	My personal information is protected on e-banking platform	0.92
	My financial information is protected on e-banking platform	0.85
	The transactions over e-banking website are secured	0.81
Website design AVE (0.74), CR (0.95), $\alpha = 0.91$	The e-banking website is updated regularly	0.84
	The e-banking website is well organized	0.85
	The e-banking website includes interactive features	0.90
	The e-banking website is easy to use	0.84
Customer service and support AVE (0.67), CR (0.95), $\alpha = 0.93$	Customer service personnel are knowledgeable of e-banking services	0.86
	Customer service personnel are always willing to help me on matters relating to e-banking	0.80
	My queries relating to e-banking are answered promptly	0.85
	E-banking customer care team has customers' best interests at heart	0.80
	E-banking customer care team can be accessed at any time (24/7 operating hours)	0.78
	The e-banking website usually fulfills its commitments	0.71
Trust AVE (0.67), CR (0.96), $\alpha = 0.93$	The e-banking services are concerned on the present and future interests of users	0.85
	The e-banking service provider has necessary experience to provide e-banking services	0.84
	The e-banking services are mutually beneficial to service providers and users	0.87
	The e-banking provider is equipped with required resources to provide e-banking services	0.80
	How much effort do you put into evaluating the given information over e-banking website?	0.77
Consumer involvement AVE (0.72), CR (0.91), $\alpha = 0.89$	Do you think deeply about the information available over e-banking website?	0.88
	How personally involved do you feel in e-banking transactions?	0.90
	I will recommend e-banking to other people	0.81
	I prefer e-banking above other channels of banking	0.82
	I would like to say positive things about e-banking to other people	0.87
E-banking loyalty AVE (0.68), CR (0.93), $\alpha = 0.90$	I intend to continue using e-banking	0.80

Notes: FL, factor loading; α , Cronbach's α ; CR, construct reliability; AVE, average variance extracted; CFI, comparative fit index; GFI, goodness-of-fit index; AGFI, adjusted goodness-of-fit index; NFI, normed fit index; TLI, Tucker-Lewis index; RMSEA, root mean square error of approximation. Fit indices CMIN/DF = 1.920 ($p < 0.001$), CFI = 0.98; GFI = 0.96; AGFI = 0.95; NFI = 0.97; TLI = 0.98; RMSEA = 0.030

Table II.
Summary of the
measurement model

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Reliability	3.36	0.86	0.84									
2. Privacy and security	3.53	0.89	0.36**	0.86								
3. Website design	3.52	0.75	0.39**	0.52**	0.85							
4. Customer service	3.87	0.80	0.40**	0.36**	0.35**	0.82						
5. Trust	3.51	0.94	0.39**	0.58**	0.31**	0.37**	0.82					
6. Consumer involvement	3.74	0.70	0.35**	0.57**	0.64**	-0.39**	0.53**	0.85				
7. E-banking loyalty	3.72	0.94	0.27**	0.33**	0.21**	0.23**	0.30**	0.31**	0.82			

Notes: Diagonal value indicates the square root of AVE of individual latent construct.
**Significant at $p < 0.01$

Table III.
Descriptive statistics
and correlation matrix
for the study
constructs

total variance; and factor one accounted for 19.75 percent of the variance. Since a single factor did not emerge and factor one did not explain the majority of the variance, a CMB is unlikely to be a concern in this data. Finally, this study specified a complex moderated mediation model thereby minimizing CMB as respondents are unlikely to use cognitive maps to visualize such relationships (Podsakoff and Organ, 1986).

4.3 Hypothesis testing

Hypotheses were tested at the three stages: testing direct effects ($H1-H4$), testing mediation effects ($H5a-d$) and testing moderated mediation effects ($H6a-d$). A structural equation model using AMOS version 23 was performed to test both direct effects ($H1-H4$) and mediation effects ($H5a-d$), and the model had fit statistics, as shown at the bottom of Table IV. The VIF value of the model was below cut-off value 5.0, indicating the absence of multicollinearity in the model. The results of the test are summarized in Table IV. This structural model explained 67.4 percent of the variance in customer loyalty to e-banking.

The results in Table IV show that of the EBSQ dimensions, reliability ($\beta = 0.16^{***}$), and privacy and security ($\beta = 0.29^*$) have significant positive influences on customer loyalty to e-banking. Hence, $H1$ and $H2$ were accepted. However, website design ($\beta = -0.11^{ns}$) and customer service and support ($\beta = 0.06^{ns}$) did not have significant influence on customer loyalty to e-banking. Hence, $H3$ and $H4$ were rejected.

Next, mediation effects were examined. First, we examined conditions required for the presence of mediation effects. Schneider *et al.* (2005) suggest the conditions for mediation are satisfied when there is a significant relationship between predictor and mediator, and between mediator and outcome variable. Accordingly, the direct effects of each dimension of EBSQ on initial trust were examined, and the results showed that, except website design ($\beta = -0.05^{ns}$), all other dimensions – reliability ($\beta = 0.07^*$), privacy and security ($\beta = 0.37^{***}$) and customer service and support ($\beta = 0.15^{***}$) – had significant effects on initial trust. Initial trust also had significant effects ($\beta = 0.14^{**}$) on customer loyalty.

Proposed hypothesis/path relationships	(β)	SE
<i>Direct effects</i>		
Reliability → E-banking loyalty	0.16 ^{***}	0.04
Privacy and security → E-banking loyalty	0.29 [*]	0.11
Website design → E-banking loyalty	-0.11 ^{ns}	0.10
Customer service and support → E-banking loyalty	0.06 ^{ns}	0.04
Initial trust → E-banking loyalty	0.14 ^{**}	0.05
Reliability → Initial trust	0.07 [*]	0.04
Privacy and security → Initial trust	0.37 ^{***}	0.10
Website design → Initial trust	-0.05 ^{ns}	0.03
Customer service and support → Initial trust	0.15 ^{***}	0.04
Age → E-banking loyalty	-0.05 ^{ns}	0.05
Income → E-banking loyalty	0.02 ^{ns}	0.07
EQ → E-banking loyalty	-0.06 ^{ns}	0.06
<i>Indirect effects</i>		
Reliability → Initial trust → E-banking loyalty	0.01 [*]	0.01
Privacy and Security → Initial trust → E-banking loyalty	0.05 ^{**}	0.02
Website design → Initial trust → E-banking loyalty	-0.01 ^{ns}	0.01
Customer Service and support → Initial trust → E-banking loyalty	0.02 ^{**}	0.01

Notes: ns, not significant; EQ, educational qualification; CFI, comparative fit index; GFI, goodness-of-fit index; AGFI, adjusted goodness-of-fit index; NFI, normed fit index; TLI, Tucker-Lewis index; RMSEA, root mean square error of approximation. Fit indices CMIN/DF = 4.224 ($p < 0.001$); CFI = 0.96; GFI = 0.93; AGFI = 0.90; NFI = 0.95; TLI = 0.98; RMSEA = 0.056. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table IV.
The results of structural model

Following the recommendations of Byrne (2009), we next examined the indirect effects and their statistical significance using the bootstrapping procedure to determine the mediation effects. Bias-corrected bootstrapping was conducted for 2,000 resamples with a 95% confidence interval to evaluate indirect effects on customer loyalty. The bootstrap procedure in AMOS version 23 was utilized for this test. The results of this test are presented in Table IV.

Mediation effects can be divided into partial and full mediation effects. Partial mediation is assumed when both direct and indirect effects are significant whereas if indirect effect is significant and direct effect is not significant then full mediation is assumed (Cheung & Lau, 2008). The Bootstrapping results in Table IV showed that initial trust partially mediates the effects of reliability (direct effect = 0.16***; indirect effect = 0.01*) and privacy and security (direct effect = 0.29*; indirect effect = 0.05**) on customer loyalty to e-banking. However, there were full mediation effects of initial trust on the association between customer service and support (direct effect = 0.06^{ns}; indirect effect = 0.02**) and customer loyalty. Hence, *H5a*, *H5b* and *H5d* were accepted. However, there were no mediation effects of initial trust on the association between website design (direct effect = -0.11^{ns}; indirect effect = -0.01^{ns}) and customer loyalty. Nor was the condition of mediation satisfied (i.e. website design → Initial trust $\beta = -0.05^{\text{ns}}$) for website design, and so *H5c* was not accepted. The summary of the mediation effects are shown in Table V.

4.4 Moderated mediation

Moderated mediation effects were the next to be examined. To examine moderated mediation effects, as suggested by Hayes (2013), we performed moderated mediation tests using the regression bootstrapping method in the PROCESS module (Model 7). Prior to testing moderated mediation (Muller *et al.*, 2005; Preacher *et al.*, 2007), two conditions for moderated mediation were examined: (a) significant interactions between independent constructs and moderator on mediating variable; (b) significant interactions between mediator and moderator on outcome variable. In order to examine these conditions, two regression analyses were performed where initial trust was considered the dependent variable for first regression analysis, and the e-banking loyalty for the next. The results of the regression analyses appear in Table VI which suggest that apart from the interaction between website design and consumer involvement ($\beta = -0.07^{\text{ns}}$), other interaction effects – reliability and consumer involvement ($\beta = 0.13^{\text{***}}$), privacy and security and consumer involvement ($\beta = 0.31^{\text{***}}$), customer service and support and consumer involvement ($\beta = -0.12^{\text{***}}$) – were significant in predicting initial trust. These results indicate that the first condition for moderated mediation was supported for reliability, privacy and security and customer service and support. The results also show the significant interaction effect of consumer involvement and trust on e-banking loyalty ($\beta = 0.33^{\text{***}}$), thereby supporting the second condition.

After testing these conditions, to examine whether the mediation effects vary depending on the degree of the consumer involvement (i.e. between low and high levels of consumer involvement), we used the moderated mediation test introduced by Hayes (2013). That is, as

Hypothesis	Direct effect	Indirect effect	Result
Reliability → Initial trust → E-banking loyalty	0.16***	0.01*	Partial mediation
Privacy and security → Initial trust → E-banking loyalty	0.29*	0.05**	Partial mediation
Website design → Initial trust → E-banking loyalty	-0.11 ^{ns}	-0.01 ^{ns}	No mediation
Customer service and support → Initial trust → E-banking loyalty	0.06 ^{ns}	0.02**	Full mediation

Notes: ns, not significant. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table V.
The summary of the
mediation effects

	Dependent variable: initial trust	Dependent variable: e-banking loyalty
<i>Direct effect variables</i>		
Reliability	0.07*	
Privacy and security	0.37***	
Website design	-0.05 ^{ns}	
Customer service and support	0.15***	
Consumer involvement	0.35***	0.23 ***
Initial trust		0.14**
<i>Interactions</i>		
Reliability × CI	0.13***	
Privacy and security × CI	0.31***	
Website design × CI	-0.07 ^{ns}	
Customer service and support × CI	-0.12***	
Initial trust × CI		0.33***
R^2 value	59.2	33.6
F value	184.74***	65.36***

Table VI.
Moderation effects of
consumer involvement

Notes: ns, not significant; CI, consumer involvement. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

suggested by Hayes (2013), we performed moderated mediation tests using the regression bootstrapping method in the PROCESS module (Model 7). Moderated mediation is assumed when the indirect effects of EBSQ dimensions on e-banking loyalty via initial trust differ significantly between one standard deviation above (+SD) and below (-SD) the mean value of consumer involvement. The results of this test are presented in Table VII.

As shown in Table VII, the indirect effect of reliability ($\beta = 0.029$ for low consumer involvement; $\beta = 0.090$ for high consumer involvement) and privacy and security ($\beta = 0.097$ for low consumer involvement; $\beta = 0.123$ for high consumer involvement) on e-banking loyalty through initial trust are positive and significant for both lower and higher levels of consumer involvement. The confidence intervals for both low and high levels of consumer involvement for these indirect effects do not cross the value of zero, indicating that these indirect effects are significant at both lower and higher levels of consumer involvement. The overall moderated mediation index for the association between reliability and e-banking loyalty (0.129, with confidence intervals varying between LLCI = 0.079 and ULCI = 0.179) and for the association between privacy and security and e-banking loyalty (0.066, with confidence intervals varying between LLCI = 0.019 and ULCI = 0.113) through initial trust were significant. This indicates that the mediation effect (indirect effect) significantly differs as the consumer involvement level increases from low to high. Thus, *H6a* and *H6b* were accepted.

The indirect effect of customer service and support on e-banking loyalty through initial trust is significant for both lower ($\beta = 0.106$) and higher levels of consumer involvement

Table VII.
Results of conditional
indirect effects for
lower and higher
consumer involvement

Paths	Consumer involvement	β	SE	Bootstrap 95% CIs	
				Lower	Upper
Reliability → Initial trust → E-banking loyalty	Low	0.029	0.011	0.008	0.052
	High	0.090	0.015	0.063	0.119
Privacy and security → Initial trust → E-banking loyalty	Low	0.097	0.019	0.060	0.137
	High	0.123	0.022	0.079	0.164
Customer service and support → Initial trust → E-banking loyalty	Low	0.106	0.016	0.076	0.139
	High	0.049	0.014	0.023	0.077

($\beta = 0.049$). The confidence intervals for both low and high levels of consumer involvement do not cross the value of zero, indicating that the indirect effect is significant at both lower and higher levels of consumer involvement. The overall moderated mediation index for this indirect effect was also significant ($\beta = -0.115$, with confidence intervals varying between $LLCI = -0.165$, $ULCI = -0.065$), indicating that the meditation effect (indirect effect) significantly reduces as the consumer involvement increases from low level to high level. Thus, *H6d* is supported. The condition (a) for the moderated mediation was not satisfied for website design. Thus, *H6c* was not accepted.

Moderated mediation analysis indicates that the indirect effect of reliability on customer loyalty and privacy and security on customer loyalty, via initial trust, significantly increases as the consumer involvement level increases from low to high. On the other hand, the indirect effect of customer service and support on loyalty via initial trust significantly reduces as the consumer involvement level increases from low to high. That is, there are significant and positive moderated mediation effects on the association between reliability and customer loyalty, and between privacy and security and customer loyalty. Furthermore, there are significant and negative moderated mediation effects on the association between customer service and support and customer loyalty.

In summary of the findings, of the EBSQ dimensions, only reliability and privacy and security have significant effects on loyalty to e-banking. Initial trust partially mediates the associations between reliability and e-banking loyalty and between privacy and security and e-banking loyalty. It also fully mediates the association between service and support and e-banking loyalty. The mediation effects that initial trust has on the association between reliability and e-banking loyalty, and on the association between privacy and security and e-banking loyalty, significantly increase as consumer involvement increases from low to high levels. In contrast, the mediation effects on the association between customer service and support and e-banking loyalty significantly reduce as consumer involvement increases from low to high levels.

5. Discussion

This study proposed a moderated mediated model to enhance e-banking loyalty via EBSQ practices. There were three sets of hypotheses. The first set was about the direct effects of EBSQ dimensions on e-banking loyalty. The findings showed that both reliability and privacy and security had significant effects on loyalty to e-banking. These findings are consistent with those reported in the literature (Blut *et al.*, 2014; Saccani *et al.*, 2014; Quach *et al.*, 2016). However, contrary to our prediction, website design did not have significant effects on loyalty to e-banking. Customers use e-banking for ease of transactions and convenience. They are less concerned with website aesthetics and more so with reliability, privacy and security. The results also indicated that customer service and support had no significant effects on e-banking loyalty. This might be because e-banking is now widely used by banking customers and only a minority tend to face difficulties in using e-banking services.

The second set of hypotheses was relating to the mediation effects of initial trust on association between EBSQ dimensions and customer loyalty. The findings showed that initial trust partially mediates the association between reliability and e-banking loyalty, and the association between privacy and security and e-banking loyalty, and fully mediates the association between service and support and e-banking loyalty. It is interesting to note that although customer support and service did not have direct effects on loyalty, it has indirect effects via initial trust. Overall, these mediation results indicate that providing reliable and accurate services, ensuring privacy of customers' personal information and security of their transactions and offering customer care services will enhance customer trust in e-banking services which in turn make them loyal to them. These findings are consistent with those

reported in the literature. However, initial trust did not have any mediation effects on the association between website design and e-banking loyalty. As previously discussed, in e-banking contexts, customers are more concerned with privacy, security and reliability of e-banking services and, hence are unlikely to place trust in website design and esthetics.

The third set of hypotheses examined the moderation effects of consumer involvement in e-banking on the mediation effects that initial trust has on the association between EBSQ dimensions and e-banking loyalty. The findings showed that the mediation effects significantly differ between low and high-involved consumers for the association between reliability and e-banking loyalty and for the association between privacy and security and e-banking loyalty. Consistent with our arguments in the literature review section, these findings indicate that customers who are highly involved in e-banking services, expect more reliable services, and a higher standard of privacy for their personal information and security for their transactions. When they find that e-banking services meet these expectations, they form greater initial trust resulting in their loyalty to e-banking services.

The findings also demonstrated that there was a significant difference in the mediation effects between low- and high-involved consumers for customer care and support and e-banking loyalty link. This indicates low-involved customers require more customer care and support than high-involved customers. Hence, when low-involved customers feel that they are getting adequate support from e-banking providers, their trust in e-banking providers increases which in turn make them loyal. However, the mediation effects did not significantly differ between low and high-involved consumers for the association between website design and e-banking loyalty. This might be because design, aesthetics and interactive features of e-banking websites are not the major concerns or expectations of e-banking users, regardless of the involvement level in e-banking. As previously mentioned, e-banking users are more concerned with convenience, reliability, safety, security and customer service of the e-banking services than the design or aesthetics of the website. Therefore, both low- and high-involved customers do not place their trust or loyalty on design aspects of the e-banking website.

6. Academic and practical implications

This study carries several academic contributions. First, this study has proposed a comprehensive moderated mediated mechanism to investigate the effects of EBSQ dimensions on e-banking loyalty. Moderated mediated models have not yet been featured in the extant services marketing or bank marketing literature for enhancing customer loyalty to e-banking services via EBSQ practices. We articulated that the effects of EBSQ dimensions on e-banking loyalty are mediated by the initial trust in e-banking and these mediation effects are moderated by involvement in e-banking. The findings support the mediation effects except for the website design, while the moderated mediation effects are supported except for the association between website design and e-banking loyalty. Thus, these findings provide adequate support for the moderated mediation mechanism introduced in this study.

Second, it is important to note that this study was carried out in India. India is the second largest populated country in the world next to China, has the second highest internet penetration rate in the world (The State of Broadband, 2016) and has seen enormous e-banking growth in the last couple of decades (Shankar and Kumari, 2016). However, insufficient research exists surrounding e-banking and customer behavioral outcomes to e-banking in the Indian context (Priya *et al.*, 2018). This study has shown valuable insights into the behavioral aspects of the e-banking customers in Indian context.

Third, we have used CMR theory developed by Lazarus (1991) to theoretically argue a relationship between EBSQ dimensions and customer loyalty to e-banking. This theory posits that cognitive evaluations of environmental cues result in behavioral responses

to the cues. We articulated that EBSQ dimensions are environmental cues presented in an e-banking environment. A cognitive evaluation of EBSQ dimensions results in e-banking loyalty which is a behavioral response to the e-banking environment. Thus, our study contributes to understanding CMR theory in the e-banking context.

Finally, most of the previous e-service related studies used service quality as second order construct and examined its impact on customer behavioral outcomes (Butt and Aftab, 2013; Amin, 2016; Ayo *et al.*, 2016). However, in this study, we considered EBSQ dimensions as first order constructs and investigated the effects of each dimension on e-banking loyalty through a moderated mediation model.

Overall, our findings are insightful and make important contributions to the services marketing and customer behavior literature, especially in the financial services marketing context. In particular, our study is useful to the researchers who are interested in furthering their understanding of e-banking.

Besides providing academic contributions, this study provides several practical implications for e-banking providers looking to enhance trust and loyalty to their services by providing quality services. Online banking service providers should be aware of the fact that service quality is a multidimensional construct and the influence of each dimension on trust and loyalty differs.

The findings suggest that privacy and security play a crucial role in building trust in and loyalty to e-banking. Customers are concerned with the privacy of their personal information and the safety of their financial transactions while using online banking. Banks should therefore ensure that customers' personal information shared over e-banking platforms is not accessible to any third party. To enhance the security of the financial transactions, banks should provide secure and unique personal identification numbers and always send login and transaction alerts to registered contact numbers and e-mail addresses. Banks should also send one-time usable passwords to customers via registered phone/e-mail to complete each transaction, thus preventing suspicious transactions. Although privacy and security are the primary concerns of e-banking customers in general, they are of greater importance to high-involved customers than low-involved customers. Therefore, it is recommended that e-banking providers make special efforts to disseminate their security and privacy policy to high-involved consumers. For example, they can send out e-mails explaining their security and privacy policy to customers who spend greater than average time in their e-banking sites.

Reliability was found to be another crucial EBSQ dimension driving initial trust and loyalty to e-banking. To meet the reliability concerns of e-banking users, banks should provide the promised services within the promised timeline. Banks should also ensure that the information they provide is accurate and up-to-date. Finally, although the customer service and support did not directly influence loyalty, it has significant effects on initial trust, which leads to customer loyalty. Banks should therefore provide adequate technical support to e-banking customers and ensure that customer service personnel are knowledgeable in e-banking services and willing to help e-banking customers. Moreover, banks should also be able to provide quick solutions to platform queries, as well as increased customer care to low-involved customers, as they tend to expect more customer care and support than high-involved customers.

7. Limitations and future research directions

This study suffers from a few limitations which future researchers may resolve. First, this study was confined to e-banking in India. However, consumer-perceived service quality evaluation is a culture specific phenomenon (Cronin and Taylor, 1992; Thaichon *et al.*, 2014). Therefore, to better generalize our findings, this study needs to be replicated with e-banking users in other countries. Second, the data for this study were cross-sectional. However, due

to the rapid changes adopted by banks and financial services institutions to e-banking services – such as technological developments and innovative marketing practices – the customers' attitudes, perceptions and evaluations of e-banking services are likely to change overtime. This indicates that replicating this study with the longitudinal data could reveal more interesting results.

This study opens multiple avenues for further research. First, the moderated mediated model proposed in this study is open for expansion. There may be additional moderating and mediating factors affecting the association between EBSQ dimensions and customer loyalty to e-banking. Future researchers can identify these mediators and moderators through the literature review and expand this study. They may also consider incorporating two mediators into the model that we have proposed in this study, then apply a moderator and examine how moderated mediation works with two mediators. For example, they may use Initial Trust and Customer Satisfaction as mediators and customer involvement as moderator, and examine this model.

Second, there may be some antecedents determining customer evaluations of service quality (Zeithaml *et al.*, 1988; Sultan and Yin Wong, 2014). That is, the evaluation of service quality can vary among customers due to these antecedents. For example, information on service providers forms the basis for evaluating service quality dimensions during a customer's service encounter (Sultan and Yin Wong, 2014; Sivapalan and Jebarajakirthy, 2017). The antecedents of EBSQ dimensions can be incorporated into the conceptual model proposed in this study.

Finally, it is interesting to see differences in the customer loyalty pattern to EBSQ dimensions based on customer demographic profiles. That is, similar studies can be conducted between different groups of customers (e.g. between young and elderly customers and between different income earning customers) and the comparative results between them can be analyzed. Such studies will provide useful insights to the banks and financial services providers to design EBSQ practices targeting specific customer groups.

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