



E-Relationship Quality And Its Antecedents: An Empirical Investigation In Internet Banking Context

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ARTICLE INFO	ABSTRACT
	<p>Research offers some indication that service quality can be a strong predictor of building long-term relationships with the customer, but there is much empirical support available to show the process of building relationship quality on the online platforms in the Indian context. The present study, theoretical investigate the most frequently studied dimensions of relationship quality that is trust, satisfaction, and commitment in an online context. Then, discuss their antecedents (website characteristics). Thereafter, it will empirically investigate the impact of website characteristics on e-relationship quality. To analyze these relationships, online and offline survey has been conducted. With the help of exploratory and confirmatory factor analyses, the study analyses e-relationship quality as third-order construct and website characteristics as a second-order construct. Results from structural equation modeling identify the significant impact of website characteristics on e-relationship quality.</p> <p>Keywords: E-relationship quality, e-trust, e-satisfaction, e-commitment, website characteristics, security and privacy, ease of use, website design</p>

Introduction

The Indian market place is growing fast. Usage of internet is growing in business transaction. Report of International Journal of Advance Research Foundation summarized that India faced a gold period in internet sector between 2013 and 2018 (Suginraj, 2017). At an international level, India is expecting high growth in e-commerce that estimated to account for 1.61 percent of global GDP in 2022 (Statista, 2020). Forrester's report mentions that India was expected more than 55 percent of growth between 2012 and 2016 due to their favorable key factors (Suginraj, 2017). Those factors can be based on larger population using internet and smartphones, increasing standard of living in the masses and a great portion of customers are initiating online purchases.

Now, it can be seen that story has changed for India in the last ten years. Now-a-days, customers prefer online platforms and simultaneously the government is also supporting e-commerce. This increases the requirement for the companies to change their strategy to approach the customer. Companies need to understand how they can approach customer on online platforms and how they can change their current marketing strategies with digital marketing strategies.

This reality in the economy transit the relationship marketing strategy for service based companies. Relationship marketing was taken as a central point in business market strategies (Gummesson, 2008; Palmatier, 2007). It mainly focuses on building long-term relationships between service providers and customers. In the literature, there are certain theories that had been empirically tested in offline business and were observed how they worked out. Today, it appears that as an increase in the usage of the internet by business and customers, increases the need to alter the basic principle of relationship marketing. That means the concept of building relationships needs to be re-conceptualized on online transactions.

Hong and Wang (2009) said that researchers need to redefine the meaning and concept of relationship construct in an online context. That means more research needs to be conducted in order to modify and build the framework of building relationships in online platforms. Similarly, relationship quality seems as part of relationship marketing and indicates the strength of relationship between buyer and seller (De Wulf et al., 2001; Palmatier et al., 2006). Major portion of literature accepts that relationship quality has three dimensions that indicate the strength of relationship namely: trust, satisfaction and commitment.

There is a lack of theoretical and empirical research work that is available to understand the factors contributing in developing relationships in e-commerce. Unlike dimension of relationship quality, antecedents of relationship quality are totally different in both offline and online environments. If we look at this in a broader perspective, in an online environment physical interaction of seller and buyer has been replaced with website visit. Common antecedents on an offline environment are like opportunistic behavior of the seller, communication during exchange of transaction, seller's image etc. These antecedents cannot be the same for e-relationship quality.

There are very few studies examining the antecedent of relationship quality in online environments (Bansal et al., 2004; Chung and Shin, 2010; Brun et al., 2016). These researches explored web base variables that were not explored in relationship quality earlier. Present study is also testing four web base (information available on website, security and privacy, ease to use of website and website design or appearance of website) variables as antecedents of e-relationship quality (Chung and Shin 2010; Brun et al., 2016). We will also test the impact of web characteristics on dimension of e-relationship quality in online banking context.

Literature review

E-Relationship quality

Relationship quality is an intangible aspect that exists between buyer-seller interactions in the market. Relationship quality is considered to be an indicator of how well a relationship is established by firms with their customers. E-relationship quality indicates this aspect of relationships in online platforms. Today, with growing usage of the internet among people, organizations have various opportunities to expand their business to online platforms. E-relationship quality basically indicates the strength and depth of relationships created during web transactions (Ching and Ellis, 2006; Das, 2009; Kearns and Hair, 2008; Brun, Rajaobelina

Hence, Hong and Wang (2009) suggested that the research should be redefined and re-conceptualized to define this new dimension of relationship with customers in a technological context. There are some researches that explore the concept of e-relationship quality (Chung and Shin, 2010; Walsh et al., 2010; Tsao and Hsieh, 2012; Brun, Rajaobelina and Ricard, 2016). These authors validate the significant impact of e-trust, e-satisfaction and e-commitment (main dimensions of e-relationship quality) on establishing long-term relationships with customers. Some authors explored the dimensions of e-relationship quality individually (e.g. Chung and Shin, 2010; Walsh et al., 2010) whereas some studied dimensions collectively and tried to give a conceptual framework on the working of it (De Wulf, Odekerken-Schroder and Lacobucci, 2001; Brun, Rajaobelina and Ricard, 2016).

Brun et al. (2014) developed a scale of 21 items to measure different components of e-relationship quality. They further used this scale in their next research to measure e-relationship quality in banking (Brun, Rajaobelina and Ricard, 2016). They investigated two broader constructs as antecedents of e-relationship quality. First construct was related to relationship variable that included perceived relationship benefits, communication and conflict as three variables (based on traditional relationship marketing) whereas second construct is related to website characteristics that mainly includes convenience, website, information quality, ease of use and, security and privacy (cover online antecedents of relationship quality). This research found out that website characteristics have a significant impact on dimensions of e-relationship quality in banking. There are different antecedents used by researchers for ultimately targeting long-term relationships in online business. Table 1 shows few of the researches that have been done in the past. They showed multiple antecedents, dimensions and consequences of e-relationship quality.

Table 1: Important Studies for Exploring Concept of E-relationship Quality

AUTHORS	PURPOSE	ANTECEDENTS	DIMENSIONS
McKnight, Choudhury and Kacmarc, 2002	Trust building model on website	Structure assurance Perceived web vendor reputation Perceived web quality	Trust on vendor
Flavia, Guinaliu and Gurra, 2006	Investigate the impact of perceived usability of website on e-loyalty	Perceived usability (easy to use, informative, and easy to navigate)	Website satisfaction, Trust on website
Mukherjee and Nath, 2007	Expand commitment-trust theory of Morgan and Hunt (1994) in online retailing	Shared value, Communication, Opportunistic behavior, Privacy and security, Relationship benefits, Termination costs	Commitment Trust
Walsh, Hennig-Thurau, Sassenberg and Bornemann, 2010	Comparison between offline and online environment in retailing industry	-	Satisfaction, Competence trust, Benevolence trust, Commitment
Tsao and Hsieh, 2012	Explore how relationship quality influence e-WOM	-	Trust, Commitment,

			Satisfaction
Obal and Kunz, 2013	Process of developing trust between different generation in e-service	Feedback mechanism, Navigation, Vendor advice, Privacy,	Building trust in different generation
Rafiq, Fulford and Lu, 2013	Building customer loyalty in online retailing	Perceived relationship investment	E-trust, E-satisfaction, E-commitment
Ladhari and Leclerc, 2013	Development of loyalty in financial services	Efficiency, Information quality, Responsiveness, Website design,	E-satisfaction, E-trust
Brun, Lova Rajaobelina and Line Ricard, 2016	Model for building e-relationship quality in banking	<i>Relationship Characteristics:</i> Perceived, Relationship benefits, Communication, Conflict <i>Website characteristics:</i> Convenience, Website design, Information quality, Ease of use, Security and privacy	E-trust, E-satisfaction, E-commitment
Menon, and Balakrishnan, 2018	Impact of e-relationship quality and e-service quality on e-loyalty	E-service quality	E-trust, E-satisfaction, E-commitment

Present study considers e-relationship quality as a third order multidimensional construct and is following the framework mentioned in De Wulf et al. (2001) and Brun et al. (2016). It is very important to have a profound clarity on the basic concept of relationship quality and how it works in an offline environment, before conceptualizing this development process in the online environment. Although, present research has restricted its antecedents of e-relationship quality to web characteristics. Literature has found a significant and positive impact of website characteristics on e-relationship quality (Chung and Shin, 2010; Walsh et al., 2010; Brun, Rajaobelina and Ricard, 2016).

Dimensions of E-relationship Quality

E-trust

Trust is defined as the customer's belief that their needs will be fulfilled in the future by the firms (Anderson and Weitz, 1989). The trust of customers usually indicates that the integrity and reliability of the firm relies on the seller's performance (Anderson and Weitz, 1989; Moorman, Zaltman and Deshpande, 1992; Ganesan, 1994; Grayson and Ambler, 1999). While measuring the strength of relationship quality, the perceived level of trust between both buyer and seller is an important dimension (Wong and Sohal, 2002). Whereas, Palvia (2009) describes e-trust as "the belief that allows consumers to willingly become vulnerable to web retailers, after taking the retailers' characteristics into consideration". Web based trust is not fundamentally different from traditional base trust.

In the literature trust as construct has often conceptualize as comprising of three elements: 1) competency of the partner as it relates to the belief that partner have all required skill and knowledge to perform the service for fulfill the demand of the customer; (2) trust in partner's honesty (or credibility) as it relates to the belief that certain rules of conduct will be followed and obligations or promises will met; and (3) trust in the benevolence of the partner relates that partners value the interest and wellbeing of others to do good (Ganesan, 1994; Grayson and Ambler, 1999; Brun et al., 2016).

On the other hand, e-trust is defined as the perception of customers about the competence of a company in online business. It includes the perception of customers about service delivery, information available on site, and image of site (Bart et al., 2005; Urban et al., 2009). Unlike offline trust, e-trust has different dimensions such as website, internet or technology for building customer reliability on sales persons (Bart et al., 2005). All three element of trust, which discussed earlier also explains in online business: (1) competence relates to how efficiently, timely and accurate execution of web based transaction, (2) integrity defines by the reliable information which is available on the website and (3) benevolence of company is indicate by the efforts they made to resolve the problem of customer in online transaction (Flavian et al., 2005; Toufaily et al., 2010; Brun et al., 2016).

In the way of online relationship quality, e-trust was one of the three dimensions that study the most. Yoon (2002) and Chen et al. (2007) suggested how the mechanism of initial e-trust building with the customer significantly affects their e-loyalty. They categorized the initial process into three dimensions of online trust. First is the technical base, which includes perceived usefulness, user friendliness, and enjoyment of technology by the customer. Second relates to uncertainty of transactions and security. Third and last

category was related to competency that was created by company size, reputation, willingness to customize, level of interaction between buyer and seller through the website.

Present research proposes the following hypothesis regarding e-trust as the dimension of e-relationship quality.

H1a: E-trust is a dimension of e-relationship quality.

E-satisfaction

Satisfaction is defined as a state where the customer is assured regarding future performances of the firm, given the past consistent satisfactory performances (Winder, 2005). Whereas, e-satisfaction conceptualizes the customer's viewpoint regarding internet retail experience as compared to traditional retail experience (Szymanski and Hise, 2000). In the past, it was considered as a central focus for building online relationships with customers (Szymanski and Hise, 2000).

For understanding the role of satisfaction in relationship building, Bitner (1990), argued the assessment of satisfaction effects by service quality and linked it with loyalty in the future. After measuring overall satisfaction, subsequent retention and repurchasing behavior, the author recognized a positive link between satisfactions in general from a transaction and overall satisfaction from the relationship (Bitner, 1990; Storbacka et al., 1994).

In literature, e-satisfaction studies as natural antecedents of e-loyalty. Anderson et al. (2003) investigated various factors that could possibly moderate the relationship between e-satisfaction and e-loyalty. They identified two major factors that moderated this relationship. First factor relates to the individual level that includes three major variables namely inertia, motivation from convenience, and purchase size (in money terms). Second factor relates with the business level factor that shows how the customer's trust on organization and perceived value from organization moderated the relationship of satisfaction and loyalty in online transactions.

Online relationship studies have evolved over a period of time. There are different drivers that have been tested for e-satisfaction. Bansal et al. (2004) explored various antecedents of e-satisfaction and found out the relationship between e-satisfaction and behavioral outcomes of customers. The online antecedents were easy to use, information availability and product selection. Kim et al. (2009) empirically tested the impact of four dimensions of e-tail quality (fulfillment/ reliability, responsiveness, website design and security/ privacy) on e-satisfaction and e-trust. The study concluded that customer's reliability for fulfillment of the order and retailer's website design had direct and significant effect on e-satisfaction (Urban et al., 2000).

For the present study, e-satisfaction is taken as a one-dimensional construct. It measures the overall satisfaction of customers from web base transactions (Szymanski and Hise, 2000; Brun et al., 2016). E-satisfaction refers to the perception of customers about the information available on the website, website design, and ease of use. It is also trying to measure the overall experience of the customer from the website.

Present research proposes the following hypothesis regarding e-satisfaction as the dimension of e-relationship quality:

H1b: E-satisfaction is a dimension of e-relationship quality.

E-commitment

Commitment is an important key component for successful relationship exchange. It is to ensure both parties' intentions are to maintain the relationship for a longer time (Gundlach et al., 1995). Storbacka et al. (1994) said "Commitment is defined as the parties' intentions to act and their attitude towards interacting with each other. High relationship value will affect commitment positively" (Storbacka et al., 1994). Degree of commitment in a relationship is a direct indicator that the relationship is valued by both the parties and has the consistent motivation to maintain the relationship (Dwyer et al., 1987; Moorman et al., 1992; Morgan and Hunt, 1994; Gundlach et al., 1995).

In the similar context, e-commitment is an indicator of a customer's intention to continue this relationship in online business. In past studies of e-relationship quality, commitment remained comparatively less tested as a construct of e-relationship quality than satisfaction and trust in e-commerce (Brun et al., 2016), but it had a significant impact on e-loyalty (Chung and Shin, 2010; Walsh et al, 2010; Brun et al., 2016).

Earlier, Huntley (2006) argued that for industrial marketing, commitment and relationship quality were different constructs. This was because relationship quality between both the parties was specified by the level of coordination and collaboration they had. Hence it meant that relationship quality construct was more attitude related and commitment was more related with sustainable investment over a period of time (Huntley et al., 2006).

Although past studies conceptualized commitment as a construct in an offline business, Brun et al. (2016 and 2014) defined the three sub- constructs (Affective Commitment, Normative Commitment, and Calculative Commitment) of Commitment in online business.

1. First was Affective commitment that indicated the psychological bond. It came out of a favorable feeling of a user for a firm's website (Gruen et al., 2000; Vesel and Zabkar, 2010; Brun et al., 2016). This bond was said to develop when the users identify and like firm's website (Brun et al., 2016).

2. Second was normative commitment. It was explained as a behavior of the customer which was the result of the obligation that a customer feels towards the company (Vesel and Zabkar, 2010; Brun et al., 2016). For example, a customer may continue to use a firm's website because in the past he had earned a huge amount of profit out of it.

3. Finally, they integrated Calculative Commitment as the cost that a customer associates with termination of his online relationship (Vesel and Zabkar, 2010; Brun et al., 2016). In other words, sometimes customers are bound to use a firm's website because termination of their relationship is associated with a certain amount of cost and effort they have to make.

Walsh et al. (2010) investigated the impact of affective commitment on overall relationship building model in both offline and online businesses. Results of the study shows that satisfaction and trust both have a strong co-relationship with commitment in offline rather than online, because of limited personal interaction of buyer and seller. On the other hand, it had an influence on loyalty in both the environments (offline and online). This result is further supported by Rafiq et al. (2013). They explained that perceived relationship investment and affective commitment had a direct and strong impact on e-loyalty.

Even after the limited support from past literature, present study has taken e-commitment as a third dimension of e-relationship quality. Here, e-commitment has further three dimensions and takes as second order construct: e-affective commitment, e-normative commitment and e-calculative commitment, in the development process of achieving e-loyalty. It proposes the following hypothesis regarding e-commitment as the dimension of e-relationship quality.

H1c: E-commitment is a dimension of e-relationship quality.

H1d: E-affective commitment is a dimension of e-commitment.

H1e: E-calculative commitment is a dimension of e-commitment.

H1f: E-normative commitment is a dimension of e-commitment.

Antecedents of E-relationship Quality

From literature's view point, present study can take multiple variables as antecedents of e-relationship quality in e-banking. For example, Pikkarainen et al. (2004) used perceived usefulness, perceived ease of use, perceived enjoyment, information on online banking, security and privacy and quality of internet connection as exogenous variables in their model of online banking. On the other hand, to examine the attitude of customers towards online banking, Karjaluoto et al. (2002) considered four variables namely prior computer experience, prior technological experience, personal banking experience and reference group influence.

Rotchanakitumnuai and Speece (2001) suggested two major factors that drive the customer's intention for adopting internet banking. First, website benefits that majorly include quality of information available on website, information accessibility to the customer, information sharing through website and transaction benefit that a customer can have. Second factor relates to multiple website barriers that customers face while adopting e-banking like organizational barriers, trust issues that individual customers had with banks and lack of legal support.

After considering all the literatures on e-relationship quality, present research is restricted to website characteristics as antecedents of e-relationship quality (Flavia et al., 2006; Ladhari et al., 2013; Brun et al., 2016)

Website Characteristics

Website characteristics basically include elements, features or qualities that make a company's website beneficial for its customers. Today, with the help of these online facilities, companies are trying to differentiate their services from their competitors. From past research, it can be seen that this dimension has a potential to impact long-term online relationships between buyers and sellers and so it can be considered as a driver of e-relationship Quality. Although, website characteristics are still in explorative stage as researchers are trying to prove its theoretical implication by empirical investigation (Bansal et al., 2004).

Website characteristics have been explored by past studies as the driver of online relationship building, but the variables explored by various studies were different depending upon the industry they were concerned to (like studying for online financial services, online shopping, searching for hotel servicing etc.) (Brun et al., 2016).

Chung and Shin (2010) considered convenience, website design, information quality, and security and privacy as important attributes of websites for impacting their e-relationship quality in the online shopping industry. On the other hand, Brun et al. (2016) explored relevant drivers of online relationship quality in net banking or financial service. They concluded that website design, information quality, security and privacy, and ease of use were important variables affecting different dimensions of e-relationship quality. Unfortunately, the study did not find a significant contribution of convenience as a driver.

In the literature of e-relationship quality, four variables of website characteristics that had been most frequently studied as drivers of three dimensions of e-relationship Quality, namely e-trust, e-satisfaction and e-commitment were as follows (especially in case of online banking or online financial services) (Chung and Shin, 2010; Brun et al., 2016):

1. First variable of website characteristics is 'information available'. It means that the latest, detailed and relevant information is provided on the website (Brun et al., 2016). Quality of information available on the website have a significant and positive impact on the initial trust building and overall satisfaction from online transactions (Szymanski and Hise, 2000; Loiacono et al., 2002; Bansal et al., 2004; Rotchanakitumnuai and Speece, 2004; Pikkarainen et al., 2004). Brun et al. (2016) showed in their empirically tested results that availability of relevant information on websites has a significant effect on all three dimensions of e-relationship quality.
2. Second variable was 'ease of using'. It indicates the ease of locating a website and understanding the information available on a website (Brun et al., 2016). In other words, this variable basically indicates whether a website is user friendly or not. Bressolles et al. (2008) supported 'Ease of using the website' as an important variable of website characteristics. It was further concluded in an empirical test conducted by Brun and his colleagues (2016) as an important variable of website characteristics which significantly impacts e-relationship Quality.
3. Third characteristic, 'Security and Privacy' means security in case of money loss in a transaction and confidentiality of the personal data shared on a website (Brun et al., 2016). Rotchanakitumnuai and Speece (2004) said that 'security and privacy' are two important features of a company's website for gaining initial trust of customers and motivating them in adopting internet banking. This result was also supported by Shankar et al. (2002). Security and privacy as perceived by a customer has a significant impact on their long-term relationship with a company (Zeithaml et al., 2002; Szymanski and Hise, 2000; Chung and Shin, 2010; Brun et al., 2016)
4. Fourth is 'Website design'. It includes creativity used in making content and visual appearance of a website (Brun et al., 2016). Donthu (2001) used this feature in SITEQUAL (Internet Shopping Quality) for site quality. Szymanski and Hise (2000) also showed an important contribution of site design for driving e-satisfaction.

Present study is also using these four variables (information availability on website, ease of using website, security and privacy, and website design) as elements of website characteristics which is taken as antecedent of e-relationship quality. Here, the first variable 'availability of information' indicates the relevant, reliable and accurate information that is given by the bank on the website. Whereas the second 'ease of using website' refers to user friendliness of the website. It means how clear and simple the website is. Third variable 'security and privacy' points out to the perception of the customer that his personal information is secured with the bank in online transactions and the bank will not use his information without their consent. Fourth variable that is 'website design' hints at the visual appearance and attractiveness of the website. Present model aspires to identify the relationship web base characteristics and e-relationship quality which we have discussed in the previous section. It proposes the following hypothesis regarding web site characteristics as the antecedents of e-relationship quality:

H2: Website characteristics have a significant positive effect on e-relationship quality.

H2a: Information availability is a dimension of website characteristics.

H2b: Security and privacy is a dimension of website characteristics.

H2c: Website design is a dimension of website characteristics.

H2d: Website design is a dimension of website characteristics.

Research Design and Methodology

Methodology

The reason for selecting the banking sector to test our online relationship quality model was that it is a service-based industry satisfactory to both relationship marketing and technological development (Ladhari et al., 2013). As a matter of fact, Agariya and Singh (2011) had a literature review of relationship marketing in a traditional context. They discovered that the banking industry was one of the three most studied sectors in this field. Furthermore, many studies into Web-based relationship marketing also revolve around the banking industry (Ladhari et al., 2013; Obal and Kunz, 2013; Brun et al., 2016; , 2018).

Data Collection and Sample Profile

For the purpose of data collection, about 700 people were approached via online platforms in the months of June to September, 2023. Out of these 700, 349 respondents had completely filled their questionnaires, thus giving a response rate of 49.85% in online sources. However, only 270 questionnaires were found usable and were used for the research. Similarly, 50 people were approached through offline sources in that same duration of June to September. Out of those, only 36 responses were useful and significant for the study analyses. Total of 306 responses were used for the analysis. This research investigated the perception of Indian customers towards e-relationship quality in banking. It is observable and practical in nature. In the analysis, the data has been collected using both primary and secondary sources. The primary data of the research was collected via a survey that was restricted in the Delhi NCR region.

Measures and Pretests

Firstly, in order to measure the construct of online relationship quality, a scale derived from prior research by Brun et al. (2014) was used. For the purposes here of, a valid, reliable, 21-item scale that represented a third-order construct with three dimension for online relationship quality was developed and tested. The satisfaction deemed unidimensional, commitment tri-dimensional (affective, calculative, and normative commitment), and lastly trust again as unidimensional as conceptualized with three facets (competence, benevolence, and integrity). After using exploratory and confirmatory factor analyses, we found e-relationship as a third-order construct with e-trust and e-satisfaction (as a unidimensional) as first dimension and commitment (further have two dimension: 1) Affective and normative, and 2) Calculative as second dimension. As for the antecedents of online relationship quality, the measurement items were adapted from prior empirical research (see Table 2 for a list of authors). Again by using factor analyses we found website characteristics as an antecedents is a second order construct with two dimensions. First is security and privacy. Second is ease of use and Website Designing. Due to the low factor loading we have to remove informational availability as a dimension of website characteristics. Whenever needed, items were reformulated, adapted, or developed. To evaluate the items in the questionnaire, a seven-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree), with exception for certain items such as demographic data, was used.

Table 2: Factorial structure for online relationship quality

Model	Construct	Composite reliability	AVE	Alphas	Adapted from
Dimension	Trust and satisfaction	0.891	0.506	0.92	Bhattacharjee, 2002; Brun, et al. 2014 and 2016,
	Affective and normative commitment	0.877	0.548	0.884	Brun, et al. 2014 and 2016
	Calculative commitment	0.780	0.544	0.841	Brun, et al. 2014 and 2016
Antecedents	Website security and privacy	0.829	0.621	0.818	Chung et al. 2010
	Ease of use	0.892	0.581	0.897	Bressolles et al., 2008
	Website Designing				Chung et al. 2010

Findings

In the following sections, the theoretical framework had been tested using structural equation modelling. A two-step approach, such as that recommended by Anderson and Gerbing (1988), was used where first the measurement model was estimated and then it moved onto the structural model.

Measurement model results

The study examined data using statistical packages like SPSS 23 and AMOS 23. A descriptive analysis (mean and standard deviation) was used to showcase and explain the data collected on different variables. A principal component analysis (PCA) was performed using varimax variables with Kaiser Normalization rotation process extracting factors with an eigen value above 1.0.

The gathered data was scrutinized with the aid of structural equation modeling (SEM) technique. This method is considered to be robust enough to take care of the measurement error present in the data set. The term structural equation modeling suggest two necessary aspects of the process: (a) that the causal procedures under study are shown by a series of structural, i.e. regression, equations, and (b) that these structural relations can be displayed pictorially to allow a clearer conceptualization of the theory under research. The hypothesized model can then be tried out statistically in a simultaneous analysis of the entire system of variables. Thus help in determining the extent to which it is consistent with the data. If goodness-of-fit is suitable and sufficient, the model arguments on the credibility of such relations are denied (Byrne, 2010).

Reliability

The final confirmatory factor analysis results determine unidimensionality, showing that the indicators each load on their respective construct. Statistics for each factor are presented in Table 2. More specifically, all coefficient alpha estimates are greater than 0.70 (Nunnally, 1978) (ranging from 0.818 for security and privacy to 0.94 for trust and satisfaction. As for composite reliabilities, they are all greater than 0.60 (Bagozzi & Yi, 1988) (ranging from 0.78 for calculative commitment to 0.892 for ease of use and website design). Reliability through internal consistency is thereby confirmed.

Validity

With the help of the comprehensive literature review and use of an expert panel in the scale development process the content validity was confirmed. Construct validity was tested by verifying both convergent and discriminant validity. In order to demonstrate the convergent validity, it is recommended that factor loadings be significant and greater than or equal to 0.60 (Hair et al., 2006). This threshold has been achieved for all items. In addition, the average variance extracted (AVE) was tested to discover if it was greater than or equal

to 0.50, which was the case for all constructs (ranging from 0.53 for calculative commitment to 0.89 for affective commitment). This demonstrated that variance owing to measurement error was less than variance explained by the construct (Fornell & Larcker, 1981). In order to show discriminant validity of the constructs, AVE must be more than the variance (squared correlations) between the proposed factor and all other factors (Fornell & Larcker, 1981). In the present study we test the discriminant validity for both construct (e-relationship quality and website characteristics) separately. Results in Table 3 show that discriminant validity is achieved for e-relationship quality. Similarly, Table 4 shows that discriminant validity for website characteristics is also achieved.

Table 3: Discriminant Validity Results for E-relationship Quality

Construct	E-trust and e-satisfaction (TS)	E-affective and e-normative commitment (CAN)	E-calculative commitment
E-trust and e-satisfaction (TS)	(0.506)		
E-affective and e-normative commitment (CAN)	0.364	(0.548)	
E-calculative commitment	0.231	0.501	(0.544)

Note: Diagonals of the table are showing values of average variance extracted (AVE) for each dimension; Values below AVE are squared correlation values.

Table 4: Discriminant Validity Results of Antecedents of E-relationship Quality (Website characteristics)

	WDE	WSI
WDE	(0.581)	
WSI	0.392	(0.621)

Note: Diagonals of the table are showing values of average variance extracted (AVE) for each dimension; Values below AVE are squared correlation values.

Structural model results

As for the structural model, it fits the data well (goodness-of-fit indices: $\chi^2(903) = 581.815$, $\chi^2/df = 1.986$, GFI = 0.862, CFI = 0.930, TLI = 0.922, RMSEA = 0.051 with 90% confidence interval of 0.059, 0.066). The results show that the conceptual model explains 95.3% of the variance of online relationship quality. By examining the structural model estimates, support is found for all hypothesized causal paths of the eight antecedents except for one, communication (Hypothesis 2). We elaborate further on this point in the discussion which follows.

For the aim of testing the impact of website characteristics on e-relationship quality, the following hypothesis was formed and tested with the aid of structural equation model (Figure 1).

Conclusions and Managerial Implications

This research examined several antecedents and consequences of multidimensional integrative constructs of e-relationship quality with the help of structural equation models. It was one of the very few studies that considered e-relationship quality as third order construct to test the effect of electronic variables on relationship building processes in online platform (Brun et al., 2014 and 2016).

Results of the empirical results of the study showed that e-relationship quality was a third order construct of a two factor model, that included three dimensions namely e-trust, e-satisfaction and e-commitment. It had an important relationship with e-relationship quality in the Indian banking context. Because of the high correlations seen between two dimensions: e-trust and e-satisfaction, these constructs were not distinguished from each other and were put into the same factor.

Second factor included the third dimension of e-relationship quality which was e-commitment. E-commitment (third dimension of e-relationship quality) furthermore included three dimensions namely: e-affective commitment, e-normative commitment and e-calculative commitment. Results also corroborated that the first two dimensions of e-commitment (e-affective and e-normative commitment) were not distinguished from each other, so they were put into the single factor. First factor of e-commitment that hinted at the first two dimensions of e-commitment i.e. (1) e-affective commitment and (2) e-normative commitment had greater correlation with each other. Second factor included the third dimension of e-commitment i.e. (3) e-calculative commitment. Thus, in order to keep up the high relationship quality of banking, the bank needs to focus on these five dimensions (e-trust, e-satisfaction, e-normative commitment, e-affective commitment and e-calculative commitment) of e-relationship quality.

The results also confirmed that the first factor (consist of e-trust and e-satisfaction) was more significant than the second factor (consist of e-commitment) of e-relationship quality. This finding was in line with that of Brun et al. (2016) and Chung and Shin (2010) finding who stated that e-trust and e-satisfaction were more relevant dimensions of e-relationship quality than e-commitment.

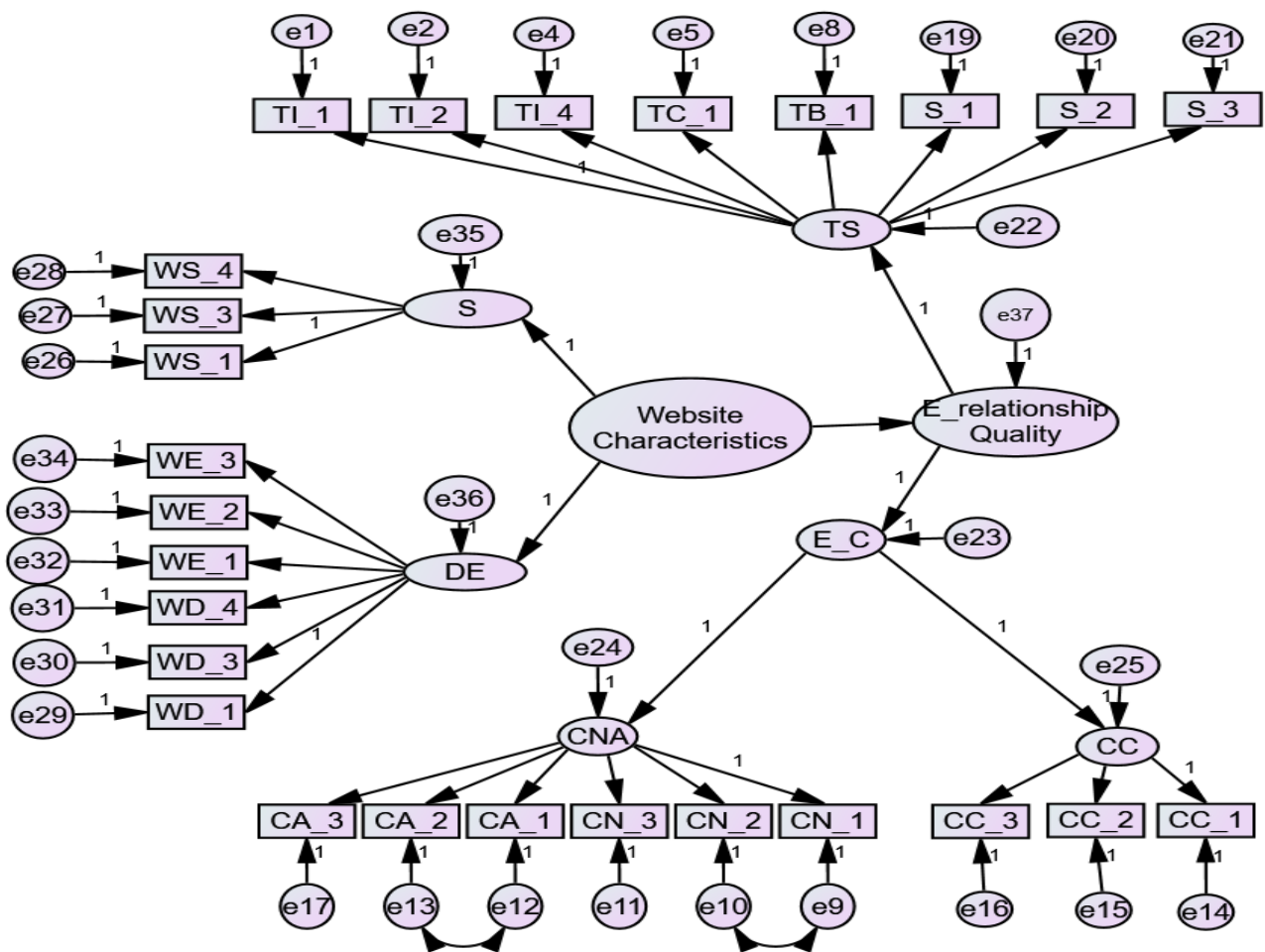


Figure 1: Website Characteristics and E-relationship Quality- Structural Model

Unlike in these studies, present research discovered that these two dimensions (trust and satisfaction) had a greater correlation. It explained that if a customer was able to trust an online banking system then the chances that he would also be satisfied from the transaction were higher.

In the similar way, unlike in past study (Brun et al., 2016) large correlation between e-affective commitment and e-normative commitment was found. After interviewing personally to some of the customer, a possible explanation for this was found. In India, each individual normally has more than one bank account but mostly they use net-banking of their most favorable bank. As stated before, net banking helps a bank to provide better service to their client. There is a high possibility that the customer is going to take most of the services like their EMI, bill payment, investment related transaction etc. from that account that will assist in forming an e-normative commitment of the customer. After certain transactions in future, this might lead to an e-affective commitment of customers. It advises that banks should try to give as many services to their customers in online platforms, so that they can aim for bettering both e-affective commitment and e-normative commitment in future.

Further the results indicated that antecedents of e-relationship quality (website characteristics), consist of three dimensions, have suitable reliability and each dimension has a crucial relationship with website characteristics in the Indian banking system. These outcomes of the study also indicated that out of four dimensions identified, namely: information availability, security and privacy, ease of use and website design, three dimensions were seen as important dimensions of website characteristics. One dimension, i.e., information availability, was let go during EFA due to cross loading of all its items with other dimensions.

The results also found that out of three, two dimensions (website design and ease of use) were not different. Therefore, studies showed website characteristics as second order constructs consisted only of two factor

models. In the research, security and privacy was found to be the most significant dimension than the other two variables (ease of use and website design). These results were also supported by Chung and Shin (2010), they also suggested that security and privacy was the most crucial dimension of website quality. In the study, Bressolles et al. (2008) also discovered Ease of use and website design as important dimensions of website characteristics.

Key objective of the research was to test the structural model that played a dominant role in confirming the development and maintaining the long term relationship with customers. This model was assessed in two phases. In the first phase, the effect of website characteristics (as antecedents) on e-relationship quality was tested. In the second phase, the effect of e-relationship quality on e-loyalty (as consequences) was tested.

In the first phase, results of the study hinted that website characteristics have an important and positive impact on e-relationship quality. This result was consistent with the finding of studies performed in the past (Lee et al., 2007; Bressolles and Nantel, 2008; Chung and Shin, 2010; Brun et al., 2016). In fact, Chung et al. (2010) summarized that information availability and security and privacy were the two most important dimensions of website quality which had a direct effect on customer satisfaction. Similarly Brun et al. (2016) showed that website characteristics (i.e. convenience, website design, information quality, ease of use, security/privacy) had a greater effect on e-relationship quality than relationship characteristics (i.e. perceived relationship benefits, communication and conflicts).

Limitation and directions for future research

Although the current research discovered interesting findings and implications for the marketers, it contained some restrictions as well which have been discussed below. These restrictions outlined the likely areas that could be taken care of in the future studies. Firstly, the study was performed in the city of Delhi. As such the study cannot be globalized to the whole country. Moreover, the sample chosen was on the basis of the convenience sampling approach and hence, it was not representative. Secondly, though it was attempted to collect data from all sorts of customers, the research was restricted to individuals that were relatively highly educated. Therefore, replicating the study was required to all available social classes of the society. This would help the marketers to form suitable marketing strategies relevant to the specific target market.

Thirdly, this research concentrated upon household consumers. The probable area for future study is that this research could be extended to corporate individuals also. Assessment can then be performed between household customer and corporate customers in terms of the dimensions affecting the quality of service in e-banking context.

Fourthly, this study tested the role of website characteristics (information availability, security and privacy, website design and ease of use) as an antecedents of e-relationship quality. Previous studies have shown certain other variables such as perceived relationship benefits, communication, conflicts, convenience, customer expectation etc. are also details to be used in studying the antecedents of e-relationship quality. However, these phenomena require additional investigations and validations. Hence, the duplication of this study on a larger scale with different national cultures is important for further standardization of the findings. Finally, the conclusion drawn from this research was based on cross-sectional data. With the cross-sectional data collected, this research was only able to take a snapshot of this model. However, a more strict analysis of our argument could be performed by using a longitudinal study to test this aspect. By using a longitudinal study in the future, research models in different time periods could be tested and thus comparisons can be made, enabling a greater understanding into the case of e-relationship quality.

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