



## Enhancing relationships in e-tail: Role of relationship quality and duration

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### ARTICLE INFO

#### Keywords:

Relationship quality  
Self-brand connect  
Loyalty  
Interaction  
e-service quality

### ABSTRACT

This research deals with antecedents and outcomes of relationship quality in e-tail. SMART-PLS analysis of survey data from India ( $n = 644$ ) showed that perceived value, e-service quality, interaction, discounts and transaction related factors were found to have a positive effect on relationship quality (RQ). RQ mediates the relationship between these antecedents and self-brand connect and loyalty. Support for serial mediation was found with RQ and self-brand connect preceding loyalty formation. Relationship duration positively moderated the effect of RQ on self-brand connect. RQ was conceptualized as a formative second order factor. E-tailers may invest in antecedents of RQ and they may devise strategies to increase the duration of relationships.

### 1. Introduction

E-tailing is gaining importance day-by-day and has a huge potential to expand in the global market. E-tail is important world-wide and in India, the setting of this research, it is growing rapidly as well. While customers enjoy the benefits, e-tail firms are beset with high customer acquisition costs, low transaction value, deep discounts and product returns (Dennis, 2017). Higher operating costs and investments could be recouped if consumers continue to transact with the firms, i.e., develop habitual buying behavior. We believe that quality of relationship may motivate habitual buying and intend to examine factors that motivate consumers to form relationships with e-tail firms. We define e-tailing as follows in line with Kim et al. (2009). E-tailing is defined the process by which online retail firms sell products by taking orders online and fulfil the same offline. In our study, e-tail firms include large multi-product online retailers in India including Amazon, Flipkart and online apparel e-tailers like Myntra and Jabong. Omni-channel retailing is “the process by which retailers sell merchandise or services through all wide-spread channels, whereby the customer can trigger full channel interaction and/or the retailer controls full channel integration (Beck and Rygl, 2015)”. Multi-channel retailing is “the process by which retailers sell merchandise or services through more than one channel or all wide-spread channels, whereby the customer cannot trigger channel interaction and/or the retailer does not control channel integration (Beck and Rygl, 2015)”. Consider a shopper John. John orders a shirt from Amazon for USD 50. He searches and pays online and the shirt is then delivered home two days later. This is e-tail. Consider another shopper Susan. She

wants to buy a branded leather accessory (e.g., Hidesign, Michael Kors). She can buy the same from the company's exclusive stores or a multi branded outlet (e.g. Shopper's Stop) or the company's website or an e-tailer website (e.g. TataCLIQ, Flipkart), different channels through which the organization sells its merchandise. The consumer has the opportunity to buy from any of the channels and the organization does not have control of the channels. This is an example of multi-channel retailing. Finally, consider another shopper Ram, who wants to buy a reputed brand of watch (e.g. Titan, a famous brand in India). The brand sells watches through their exclusive stores and the company's website. Ram has the choice to buy either from the store or the website. The organization could allow Ram to place orders online and pick up the phone from the outlet or vice versa. This form of channel integration is called omni-channel. This research deals with only e-tail not omni-channel or multi-channel retailing.

Relationship marketing is an established research stream that explains consumer-firm relationship formation for mutual benefits. Pal-matier et al., (2006) in their meta-analytic study identified seller-focused, customer-focused and dyadic antecedents that lead to loyalty, word-of-mouth, continuity and cooperation. These relationships were mediated by satisfaction, trust, commitment and relationship quality. This model was evaluated in the e-tailing context by Verma et al., (2016). Of specific interest is Relationship Quality (RQ from now on), which embodies the overall quality of the consumer-firm relationship. Defined as the degree of appropriateness of a relationship to fulfil needs of the customers (Hennig-Thurau and Klee, 1997), this research conceptualizes RQ as a multi-dimensional construct comprising

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<https://doi.org/10.1016/j.jretconser.2020.102293>

Received 24 January 2020; Received in revised form 1 July 2020; Accepted 31 August 2020

Available online 12 September 2020

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**Table 1**  
Summary of literature on relationship quality.

Literature	Conceptualization of RQ	Type of Study, Context	Antecedents	Brief results
Crosby et al. (1990)	Uni-dimensional; comprising of Trust and Satisfaction	Empirical, Life insurance sales	Salesperson expertise, similarity	RQ mediates relationship between similarity, expertise and future purchase intention
Storbacka et al. (1994)	Customer Satisfaction and Relationship strength	Conceptual	Service quality	Higher the strength of relationship, higher the profit
Bejou et al. (1996)	Multi-dimensional; Satisfaction and Trust	Empirical, Financial services	Selling orientation, similarity	Expertise, customer and selling orientation impacts retention through RQ
Hennig-thurau and Klee (1997)	Multi-dimensional; Overall quality, Trust and Commitment	Conceptual	Quality, satisfaction	Customer satisfaction enhances retention through RQ
Hennig-Thurau (2000)	Multi-dimensional; Trust and Commitment	Empirical, video recorders and cameras	Strategic communication	Strategic communication enhances RQ
De Wulf et al. (2001)	Multi-dimensional; Satisfaction, Trust and Commitment (reflective)	Empirical, food and apparel	Relationship investment	RQ mediates relationship between Relationship investment and behavioral loyalty. Relationship Proneness and Category Involvement emerge as moderators
Hennig-Thurau et al. (2002)	Multi-dimensional; Satisfaction, Trust and Commitment	Empirical, Multiple categories	Confidence, social and special treatment benefits	Confidence, social and special treatment benefits positively impacts RQ which in turns enhances WOM and loyalty
Kim and Cha (2002)	Multi-dimensional; Satisfaction and Trust (reflective)	Empirical, Hotels	Customer, service orientation and service attributes	RQ mediates the relationship between customer orientation, relationship orientation, service attributes and share of purchase, relationship continuity and WOM
Wong and Sohal (2002a)	Overall evaluation of RQ comprising of Trust and Satisfaction	Empirical, Retail stores	Service Quality	Service quality has a positive effect on RQ
Wong and Sohal (2002b)	Overall evaluation of RQ (single item)	Empirical, Retail stores	Salesperson trust and commitment	Salesperson Trust has a direct effect on RQ and has a positive effect on RQ indirectly through Salesperson Commitment
Literature	Conceptualization of RQ	Type of Study, Context	Antecedents	Brief results
Keating et al. (2003)	Multi-dimensional; Trust, Effort, Value, Understanding, Communication, Customer Power	Empirical, Online shopping	Interaction, problem solving	Trust and Effort emerged as significant dimensions of RQ
Lang and Colgate (2003)	Multi-dimensional; Trust, Affective Commitment, Social bonds, Satisfaction, Conflict	Empirical, Online and IVR based banking	Interaction	Conflict, Trust and Satisfaction emerge as significant dimensions of RQ
Roberts et al. (2003)	Multi-dimensional; Satisfaction, Trust, Commitment and Affective conflict (reflective)	Empirical, Banking services	Consumer interaction	RQ mediates the relationship between interaction, service quality and loyalty
Uлага and Eggert (2006)	Multi-dimensional; Satisfaction, Trust and Commitment	Empirical, B2B firms	Value	Relational value enhances RQ which in turn expands relational continuity
Lin and Ding (2005)	Multi-dimensional; Satisfaction and Trust	Empirical, Internet Service Providers	selling behavior, quality, service recovery	RQ mediates relationship between selling behavior, network quality, service recovery and loyalty. Prior experience enhances RQ
Eastlick et al. (2006)	Multi-dimensional; Trust and Commitment	Empirical, Online insurance	Information choice	Information choice strategy of firms has a positive effect on RQ
Moliner et al. (2007)	Multi-dimensional; Satisfaction and Trust	Empirical, Travel services	Functional, social and emotional value	Functional, social and emotional value has a positive effect on RQ which in turns enhances commitment
Wong et al. (2007)	Multi-dimensional; Trust and Satisfaction	Empirical, Financial services	Interaction and information sharing	RQ mediates the relationship between interaction and willingness to refer
Walsh et al. (2010)	Multi-dimensional; Satisfaction, Trust and Commitment	Empirical, Online and Offline retail	Satisfaction	RQ is relevant both in online and offline context
Ou et al. (2011)	Multi-dimensional; Trust, Commitment, Identification, Reciprocity, Intimacy	Empirical, Collegiate football	–	General specific model and hierarchical models of RQ are all valid
Ou et al. (2011)	Multi-dimensional; Satisfaction and Trust (reflective)	Empirical, Retail industry	Sales behavior, expertise, Service quality	RQ mediates the relationship between service quality and commitment, loyalty
Literature	Conceptualization of RQ	Type of Study, Context	Antecedents	Brief results
Song et al. (2012)	Multi-dimensional; Cooperation, Adaptation and Atmosphere	Empirical, Manufacturing	Business relationship function, buyer performance	RQ mediates the relationship between business relationship function and buyer's performance
Rafiq et al. (2013)	Multi-dimensional, Satisfaction, Trust and Affective Commitment	Empirical, e-retail	Resource, effort, attention and perceived relationship investment	Disaggregated and reflective models of RQ are valid
Dai and Chen (2014)	Multi-dimensional; Satisfaction, Trust and Commitment	Empirical, hospitality	Mutuality of interest, concern for others	RQ mediates the relationship between mutuality of interest and loyalty, cooperation, participation
Giovanis et al. (2015)	Multi-dimensional; Satisfaction, Trust, Calculative and Affective Commitment	Empirical, Auto repair	Fairness, service quality	RQ mediates the relationship between Fairness, Service Quality and Loyalty
Nyffenger et al. (2015)	Multi-dimensional; Hot Brand RQ (passion, intimacy) and Cold Brand RQ	Empirical, Airline	Self-congruence, partner quality	RQ mediates the relationship between self-congruence, partner quality and WOM, price premium, share of wallet

satisfaction, trust and commitment. Following a literature review of RQ, the authors found that RQ has been conceptualized as a multi-dimensional construct with satisfaction, trust and commitment as the predominant dimensions. However, based on procedures suggested by Jarvis et al., (2003) and Coltman et al., (2008) on conceptualizing multi-dimensional constructs, the first research objective is to develop RQ as a formative construct. This is because causality flows from the constructs (satisfaction, trust and commitment) to RQ.

Past research has examined many factors that contribute to RQ including value (Ulaga and Eggert, 2006; Moliner et al., 2007), service quality (Storbacka et al., 1994; Giovanis et al., 2015); interaction (De Wulf et al., 2001; Lang and Colgate, 2003) and other factors including relationship investment, website design, selling behavior and expertise (Crosby et al., 1990; Rafiq et al., 2013). However, these studies have examined the antecedents of RQ only on a piecemeal basis. Hence, the second objective of this research is to develop a holistic nomological model to evaluate antecedents and consequences of RQ in online settings.

While generally research has examined only the main effects, i.e., role of antecedents on RQ, limited research has been done on the role of moderators. Product category involvement and relationship proneness have been tested as moderators (De Wulf et al., 2001; Nambisan and Baron, 2007). In the online world, relationship duration is important (Lin and Ding, 2005); however, its moderating role is hitherto untested. Therefore, the third objective of this research is to examine the role of relationship duration as a moderator.

In sum, we define RQ as a formative construct, develop an integrative nomological model that tests the antecedents and consequences of RQ and finally, evaluate the role of relationship duration in amplifying RQ or its effects.

## 2. Literature review and hypotheses development

### 2.1. Relationship Quality

Relational exchanges are different from discrete exchanges in that they encompass comparison of outcomes to alternatives in order to determine dependence on providers. Additionally, positive outcomes over time increase trust and relationship norms are developed (Lambe et al., 2001). While discrete exchanges are independent of past history or potential future interactions, relational exchanges involve commitment of resources based on past transactions and create expectations of continued exchanges (Rokkan and Haughland, 2002). Social Exchange Theory and Service Dominant Logic provide a basis for development of customer-firm relationships. Social Exchange is conceptualized as a joint activity of two or more actors in which each has something the other values (Lawler, 2001). E-tailers provide privileges and special offers to frequent customers (compared to other customers), resulting in mutual benefits. Further, these exchanges happen without explicit arrangement or negotiation and incorporate tangible objects, reciprocity, social rewards and psychological states (Molm, 1990). Repeated and frequent exchanges arising out of joint activities based on interpersonal relationships result in social solidarity comprising trust, commitment and social unity (Lawler and Yoon, 1996). Effectively, social exchange by one party engenders obligation in the other party to reciprocate with benefits resulting in brand connect, loyalty and word of mouth (Dai and Chen, 2014).

Relationships are part of the foundational premises of Service Dominant Logic proposed by Vargo and Lusch (2004). Service dominant logic focuses on value co-creation, offering value proposition to customers and value is realized through interactivity and customization of products/services. Since relationships are social contracts, e-tailers of products and services enable consumers to form relationships with the firm. Additionally, the relational content approach (Morgan et al., 2000) describes relationship formation as an outcome of economic and social benefits. On the whole, relational norms, reciprocity and value

realization enable relationships to emerge from satisfactory transactions.

Palmatier et al., (2006) identified a set of constructs that mediate RM efforts leading to outcomes. According to them, commitment (enduring desire to maintain a relationship), trust (confidence in seller's reliability and integrity) and satisfaction (affective state towards a relationship), are indicators of a global mediator. RQ is defined as the overall assessment of the strength of a relationship, defining different but related aspects of a relationship (Crosby et al., 1990; DeWulf et al., 2001; Moliner et al., 2007). In line with this conceptualization, this research believes that customers may evaluate service providers' ability to fulfill their expectations (satisfaction); they may also evaluate the honesty and benevolence (trust) before forming a relationship (commitment). At any point in a relationship, all three factors are relevant and reduction in one of the factors may reduce RQ. Verma et al., (2016) extend Palmatier's model for online relationships. Relational benefits, relationship investment and dyadic antecedents vary due to virtual nature of business, but the role of relational mediators are significant in the online context as well.

RQ captures customers' perception of how well the whole relationship fulfils the expectations, predictions, goals and desires of the customer (Jarvelin and Lehtinen, 1996). RQ is in reality a combination of satisfaction, trust or commitment. Other factors of RQ include reciprocity (Kim et al., 2011a; Achen, 2016), social bond (Lang and Colgate, 2013), intimacy and identification (Achen, 2016). According to Walsh et al., (2010), trust comprises competence and benevolent trust. Commitment is conceptualized as calculative and affective commitment (Giovanis et al., 2015). Two studies have considered the affective component of commitment (Lang and Colgate, 2003; Rafiq et al., 2013). According to affect theory of social exchange, relational cohesion is expected to result in affect. Therefore, affective aspects of commitment would enhance the relational ties and provide positive outcomes. Hence, affective commitment is considered a dimension of RQ.

Most studies listed in Table 1 have analyzed the dimensions of RQ individually. Kim et al. (2011) defined RQ as a general specific model whereas Rafiq et al., (2013) tested RQ as a disaggregated model and reflective model. However, theoretical and empirical criteria are necessary to design and validate reflective or formative constructs (Diamantopoulos, 2005). Jarvis et al., (2003) and Coltman et al., (2008) identify the nature of construct (conceptualization), direction of causality (from item to construct), low item inter-correlation, absence of collinearity and nomological net for indicators as conditions for a construct to qualify as a formative one. According to Jarvis et al. (2003), low correlation between constructs, changes in lower order constructs affecting higher order constructs and not vice-versa and absence of multi-collinearity are necessary conditions for a construct to be considered a higher order formative construct. In our case, satisfaction, trust and commitment are distinctive constructs. Further, changes in satisfaction, trust and affective commitment affect RQ.

In this research, we examine the propensity of RQ to develop self-brand connect and loyalty. This is possible when value creating episodes lead to sequences and result in relationships (Gronroos, 2004). Investments by organizations in terms of providing value, ensuring service quality, effective interactions, developing transaction enabling factors and attractive discounts enables episodal satisfaction. Repeated and frequent exchanges arising out of joint activities results in social solidarity comprising trust and commitment (Lawler and Yoon, 1996). Relational cohesion is expected to result in positive affect and hence affective aspects of commitment would enhance the relational ties and provide positive outcomes. On the whole, satisfaction, trust and commitment together are required to develop emotional connect with the brand and increase loyalty intention. Absence of one of them would hamper the quality of relationship and hamper self-brand connect/loyalty intentions. Hence, RQ is conceptualized as a formative construct. Thus, satisfaction, trust and commitment represent different aspects of the RQ construct, cause the RQ construct and are interchangeable;

fitting all the requirements for a formative construct (Jarvis et al., 2003). Hence, this research in line with Jarvis et al., (2003) and Coltman et al., (2008) conceptualizes RQ as a higher order formative construct comprising satisfaction, trust and affective commitment.

### 3. Antecedents to relationship quality

#### 3.1. Customer perceived value

Value is defined as a trade-off between benefits accruing from purchase, use of products/services and costs incurred by consumers, usually money, time and psychic costs (Zeithaml, 1988). In the online context, utilitarian value, a cognitive evaluation based on return on investment and experiential value, hedonic evaluation comprising playfulness and aesthetics have been defined (Mathwick et al., 2001). Dorai and Varshney (2012) describe perceived value in terms of product, service quality, relational attributes and extrinsic factors. Utilitarian value is also defined as product offering, information, monetary savings and convenience, whereas hedonic value is described as extent of adventure, social enjoyment, self-gratification, idea about products, role enhancement and value realized through sale and discounts (Chiu et al., 2014).

Value enables positive perceptions and encourages online shopping behavior leading to repurchase intention (Forsythe et al., 2006). Utilitarian and hedonic shopping value in the online context strengthens preference and lead to continuity intention (Overby, 2006). Wu et al., (2014) developed an e-shopping value scale, which has a positive effect on repurchase. In line with this, we conceptualize utilitarian value as quality, monetary saving, attractive products and offers (Overby and Lee, 2006). Convenience value comprises convenience, special benefits and recognition based on past experience as conceptualized by Wu et al. (2014). In the relationship marketing literature, value is defined as a multi-dimensional construct comprising functional, social and emotional dimensions (Moliner et al., 2007); relational value (Ulaga and Eggert, 2006); product, service, website and informational quality (Lin and Ding, 2005; Kim and Cha, 2002; Kim and Niehm, 2009; Giovanis et al., 2015). Value is defined as an antecedent of RQ and indirectly enables relational continuity (Ulaga and Eggert, 2006), loyalty (Lin and Ding, 2005; Kim and Niehm, 2009; Rafiq et al., 2013); share of purchase and word of mouth (Kim and Cha, 2002).

**H1a.** Utilitarian value is positively related with RQ.

**H1b.** Convenience value is positively related with RQ.

#### 3.2. Transaction Enabling Factors

In order that RQ emerges, the seller has to invest in the relationship and the buyer has to perceive the benefits of such investments. Firms undertake significant investment to create attractive web sites as these possibly substitute for store environment in the offline context; in other words, an e-tailer does not have a physical store and hence an attractive website may act as a proxy for this. The effect of firm controlled retail drivers like promotion, price, merchandise and supply chain are likely to have a profound effect on consumers' shopping experiences (Grewal et al., 2009). Both computer factors (site security, product information and display, payment options, purchase tracking) and human factors (language options, search features, feedback options) are important in engendering positive attitude towards e-tail sites (Hausman and Siekpe, 2009). However, the success of their efforts depends on how customers perceive the website in terms of atmospherics, product information, policies and promotions. Hence, we club all these factors together and term them "transaction enabling factors". In sum, we adopt Loureiro and Roschk's (2014) conceptualization of transaction enabling factors that includes graphic design (visual appeal, schemes, color) and information design (product information, comparison, prices, terms and conditions). Song and Zahedi (2005) show that web elements influence shoppers' salient beliefs, change their attitudes and purchase interests. Effective

websites attract and maintain customer interest through information and graphics (Loureiro and Roschk, 2014), and focus on factors like layout, design, merchandise description, pricing policies, offers and discounts, animation, enhancing interaction and provide opportunities for seeing reviews and recording feedback (Eroglu et al., 2003). From a behavioral perspective, atmospheric cues influence shoppers' emotional and cognitive states which result in positive shopping outcomes.

For building relationships, Braun et al., (2009) found website design engenders online trust. Website quality also influences overall information quality resulting in loyalty (Kim and Niehm, 2009). In online apparel retail, Davari et al., (2016) establish the effect of assortment, website convenience and price transparency on patronage. Verma et al. (2016) classify website design and information quality as relational benefits which influence RQ. Hence:

**H2.** Transaction enabling factors are positively related with RQ.

#### 3.3. Discounts and promotions

Discounts in the e-tail space are widely prevalent (Krishna, 2017) to attract, motivate and retain customers. Deep discounting and predatory pricing are commonly practiced by e-tails firms (Das, 2019) even prompting the Indian Government to modify investment norms to protect small traditional retailers. Research has not dealt with role of discounts in the online context with some exceptions (Park and Lennon, 2009; Chatterjee and McGinnis, 2010; Chatterjee, 2011). Thaler (1985) describes transaction utility (discounts, offers) and acquisition utility (purchase and use) as two aspects associated with value of a purchase. In this research, we consider factors associated with transaction utility discounts. Usually, discounts are subsumed under utilitarian value (Grewal et al., 1998). Discounts, offers and promotions are associated with transaction utility. High discounts (Alford and Biswas, 2002) and customized promotions (Chatterjee and McGinnis, 2010) enhance evaluation of the offer, reduce search and increase purchase intention. In the e-tail industry, discounts and promotions play a significant role in weaning away customers from traditional channels, motivating loyal customers, attracting new customers and encouraging brand switching (Park and Lenon, 2009). Retailer promotions usually include price promotions based on frequency of purchase or loyalty programs (Ailawadi et al., 2009). They may include monetary or non-monetary forms with monetary discounts associated with utilitarian benefits, viz., savings and shopping convenience, whereas non-monetary forms are associated with benefits including entertainment, exploration and opportunities for value expression (Chandon et al., 2000). Discounts and promotions may be provided based on transaction history or loyalty. They may involve dynamic pricing or volume based discounts; or even communication strategies that could include messaging, deal framing and colors (Grewal et al., 2011).

Benefit congruency framework (Chandon et al., 2000) posits that monetary promotions are more effective for utilitarian products vis-à-vis hedonic ones for high equity brands. Non-monetary promotions are more effective for high equity hedonic products vis-a-vis utilitarian ones. Utilitarian benefits include monetary savings, product quality and shopping convenience. Hedonic benefits include value expression, entertainment and exploration. In the apparel industry, effective promotion strategies enhance store image and lead to repurchase intention (Park and Lenon, 2009). Chatterjee and McGinnis (2010) examine the role of targeted and universal promotions and conclude that targeted promotions enhance perceived value, maintain fairness perception and result in purchase intention. Similarly, Chatterjee (2011) used mental accounting theory and through an experimental design found evidence that reduced base price and promotions on higher priced products are perceived favorably. Reduced prices create feelings of satisfaction, and transaction based targeted promotions engender trust and on the whole enhance RQ. Therefore.

**H3.** The incidence of promotions and discounts is positively related



with RQ.

### 3.4. Interaction

Interaction/interactivity is a dyadic antecedent, i.e., it involves buyer and seller and enables RQ (Palmatier et al., 2006; Verma et al., 2016). Interaction, however, is different from marketing communication, since interaction may be consumer or seller initiated whereas marketing communication is essentially initiated by the seller. Interactivity is specifically a characteristic of the user (Steuer, 1992) and is defined as a multi-dimensional concept comprising active control, two-way communication and synchronicity relevant for online experiences (Liu and Shrum, 2002). In this research, we define interaction as a dyadic process comprising requests, queries and feedback posted by consumers and communication; and clarification and responses of the organization enabling a pleasant shopping experience. For example, if the e-tailer wants to launch a sales promotion campaign, and forwards a message on the same to the consumer, it denotes information. Likewise, a consumer can inform her/his opinion about merchandise to the organization; this too constitutes information. However, when a consumer wants help in selecting merchandise or know about the e-tailer's policies, processes and when the firm responds to the same, it is termed interaction. Overall, interaction is a dyadic process whereas information is one-sided. In online transactions, consumers may require information, expect queries to be resolved and grievances to be addressed. Song and Zinkhan (2008) find that perceived interactivity comprising speed of response and ability to communicate for a previous query affects satisfaction, repurchase and WOM. Both interactivity and information positive drive satisfaction (Ballantine, 2005). Johnson et al., (2006) show that the interactivity drives users' attitudes towards websites positively. In online contexts, social interaction has an important role in inducing customer satisfaction (Srivastava and Kaul, 2014).

Customer interaction in both online and offline contexts has a positive impact on RQ (Roberts et al., 2003; Keating et al., 2003; Lang and Colgate, 2003; Wong et al., 2007; Nambisan and Baron, 2007). Additionally, strategic communication by consumers (Hennig-Thurau, 2000), information sharing (Wong et al., 2007) and seller induced information choice strategy (Eastlick et al., 2006) are other aspects of interaction that have a positive impact on RQ. Hence, we posit:

**H4.** Interaction is positively related with RQ.

### 3.5. Service Quality

"Service Quality" evaluates customer perception about services delivered by a provider vis-à-vis the expectations. In traditional services, the human element is important. However, in e-tail, the role of people is replaced by increasing levels of self-service. In offline settings, in addition to the core service (e.g. helping a consumer buy a mobile phone), ancillary services (salesmen explaining features of related products like an earphone) are required. In online settings, these aspects are replaced by a user interface (Van Riel et al., 2001). Literature is replete with numerous conceptualizations of e-Service Quality (Santos, 2003; Lee and Lin, 2005; Parasuraman et al., 2005). E service quality (e SQ from now on) evaluates all phases of a consumer's interaction with a website including visit, purchase and delivery and is conceptualized as a multi-dimensional construct incorporating reliability, responsiveness and additionally website related aspects (Zeithaml et al., 2002; Santos, 2003; Yang and Fang, 2004; Parasuraman et al., 2005; Fassnacht and Koese, 2006) which replace the tangibles dimensions in SQ. In e SQ, these include system availability, appearance, linkage, atmospherics, website design and system reliability. Additionally ease of use, access, timeliness, security and personalization emerge as user-oriented factors enhance e SQ (Yang and Fang, 2004; Lee and Lin, 2005). Parasuraman et al., (2005) suggest that it would be more appropriate to treat e SQ as a second order construct with first order dimensions. We reproduce the

extract from their paper (footnote 1 on Page 8), "... based on model specification criteria discussed by Jarvis et al., (2003), it might be more appropriate to treat the first order dimensions as formative indicators of the second-order latent construct." Hence, we have conceptualized e SQ as a formative second order construct.

Service quality has a direct positive effect on satisfaction, trust, commitment and RQ (Storbacka et al., 1994; Hennig-Thurau and Klee, 1997; Kim and Cha, 2002; Collier and Bienstock, 2006; Giovanis et al., 2015) in offline and online contexts. Verma et al. (2016) highlighted the effects of convenience and website design, essentially aspects of eSQ on RQ. Therefore.

**H5.** e-Service quality (e SQ) is positively related with RQ.

## 4. Consequences of relationship quality

### 4.1. Self-brand connect and loyalty

Escalas et al., (2003), define Self-Brand Connect as a measure of overlap between self and brand resulting in salience. Individuals with high self-concept develop closer ties with their favorable brands. Emotional connects to the brand result in traditional customer outcomes like satisfaction and positive attitude, user derived benefits, socialization and sentimentality (Grisaffe and Nguyen, 2011). The emotional bond becomes so strong that high self-brand connect consumers maintain a favorable view of the brand even if other users display negative behavior (Ferraro et al., 2013). Swaminathan et al., (2007) found evidence for the relationship between self-construal and self-brand connect. In their study, independent self-construal consumers develop strong individual connections to brands, whereas interdependent self-construal consumers display group level connections including patriotism or country-of-origin effects.

When consumers experience higher RQ, e-tailer service brands become more salient and a brand association develops. Strong brand associations engender connections to the brand that become reflective of self-concepts. Self-brand connect has a positive effect on brand attitudes, behavioral intention, loyalty and advocacy (Escalas et al., 2003; Escalas, 2004; Moore and Homer, 2008). In line with the above, we hypothesize that fulfilling consumer expectations enhance RQ and leads to self-brand connect, which in turn results in loyalty.

At times, loyalty is defined purely from a behavioral perspective (e.g. Jones and Taylor, 2007). However, loyalty requires favorable attitude in addition to repeat purchase (Dick and Basu, 1994). Favorable attitude arises out of level of commitment consumers' display to a frequently purchased brand (Bandyopadhyay and Martell, 2007). We include both behavioral and attitudinal loyalties in our conceptualization of loyalty. De Wulf et al., (2001) and Dai and Chen (2014) focus on attitudinal loyalty comprising intention to refer, pay price premiums, spread positive word of mouth, participate in brand events and cooperate with the firm. Eastlick et al., (2006) find positive effect of RQ's effect on behavior loyalty including repeat purchase and intention to continue. Based on this, we posit that superior RQ leads to attitudinal and behavioral aspects of loyalty. We summarize the consequence of RQ as:

**H6.** RQ is positively related with self-brand Connect.

**H7.** Self-brand connect is positively related with loyalty.

**H8.** RQ is positively related with loyalty.

Thus, this research posits that self-brand connect would mediate the effect of RQ on loyalty.

## 5. Effect of relationship duration

Time is a critical factor in determining successful bonding of the customer with the firm and has a moderating effect on relationship duration (Gounaris and Venetis, 2002). Similarly, duration provides

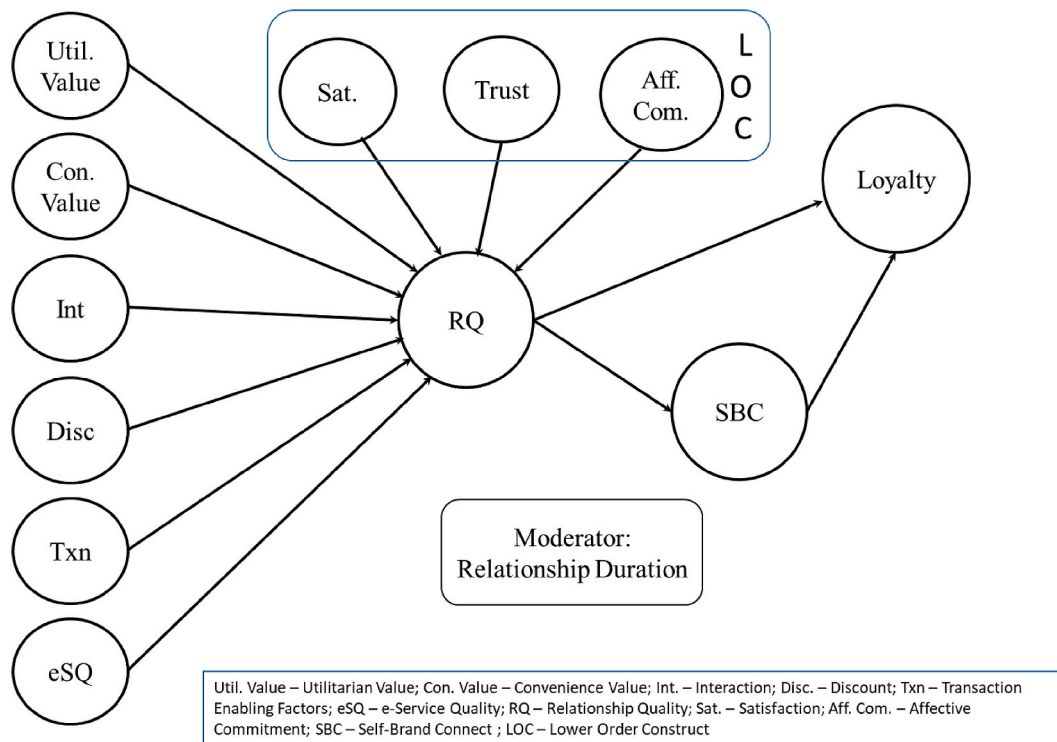


Fig. 1. Nomological model for empirical validation.

consumers and firms with more behavioral information which allows for better prediction and strengthened relationships (Anderson and Weitz, 1989). As an antecedent, duration showed positive effects on RQ in traditional retail, but was insignificant in the online retail context (Verma et al., 2016). Compared to new customers, those having longer relationships are familiar with the service levels, derive greater benefits and are in a better position to experience relationship quality. For such customers, a firm's actions are expected to strengthen RQ and enhance SBC and loyalty. Hence, we posit that:

**H9a.** Relationship duration moderates the effect of antecedents on RQ such that for customers with a longer relationship duration, the effect of antecedents on RQ is stronger, vis-à-vis those with a shorter relationship duration.

**H9b.** Relationship duration moderates the effect of RQ on self-brand connect such that for customers with a longer relationship duration, the effect of RQ on self-brand connect is stronger, vis-à-vis those with a shorter relationship duration.

In sum, we have developed a comprehensive nomological model to examine RQ, its antecedents and consequences for testing in the e-retail context, and included a relevant moderator as well (see Fig. 1).

## 6. Research methodology

In order to test the conceptual model, this paper undertook a survey in line with Fernando et al., (2018). India is a fast growing market for online commerce and hence was chosen as a setting to collect data. The conceptual model was tested by administering the questionnaire among respondents with prior online retail purchase experience. Usage of online e-tailing is prevalent among the youth (Choudhury and Dey, 2014) and naturally youth form an important respondent base. Apparels and electronic goods emerge as frequently purchased product categories online (Aswine, 2017). Considering the above, we created an online survey link and circulated it among graduate students and requested them to forward it to their student and non-student acquaintances for partial course credit, consistent with Fernando et al. (2018). Thus, the

sampling technique was akin to snowball sampling, in line with Fernando et al. (2018). The survey had a filter question which required the respondent to answer if (s) he had prior online shopping experience. Only if the respondent answered 'yes', (s) he was asked to fill the rest of the questionnaire. Over a period of six months, we were able to collect 644 responses. A brief description of the sample is summarized below:

### 6.1. Sample profile

Among 644 respondents 63 percent were males and 37 percent were females. 48% of respondents belonged to age category 16–25, 40% in 26–34 range and remaining 11% beyond 35 years. In terms of frequency of purchase, 38% of respondents purchased online at least once a month, 24% twice a month, 11% more than three times a month and 25% purchased occasionally (see Table 2). With respect to relationship duration, approximately 41% of respondents had transacted with their preferred e-retailer for three years and the balance 59% had a relationship of more than three years.

Established scales used in prior research were used to test the conceptual model. We chose the Yang and Peterson (2004) scale for loyalty since it evaluates behavioral and attitudinal loyalty in online contexts. We modified the scale developed by Rafiq et al. (2013) and Giovanni et al. (2015) to evaluate relationship quality, trust and affective commitment; Rafiq et al. (2013) tested the scale in an e-tail context and so we chose this. The Wu et al. (2014) shopping value scale was used to evaluate convenience and utilitarian value, as it evaluated value experienced in online shopping. Similarly, eSQ (Parasuraman et al., 2005), transaction enabling factors (Song and Zahedi, 2005) and interaction (Ballantine, 2005) have all been tested in the online context and this research used them. The first question in the questionnaire checked whether the respondent had prior online retail purchase experience. If the respondent answered in affirmative, (s) he was allowed to proceed with the questionnaire, else (s) he was thanked for their effort and the survey was terminated. The exact wording of the question was "I have purchased products and/or services through mobile "Apps" or websites of e-retail companies (e.g. Amazon, Flipkart, Snapdeal, Myntra)".

**Table 2**  
Sample description.

	Gender	Age	Online shopping frequency	Relationship Duration
<b>Gender</b>				
Male	406			
Female	238			
<b>Age</b>				
16-25		319		
26-34		258		
≥35		67		
<b>Online shopping</b>				
Once a month			245	
Twice a month			155	
Thrice and above			71	
Occasionally			161	
<b>Relationship Duration</b>				
Less than three years				264
Greater than three years				380

We used 5-point scales for all scales except for loyalty and self-brand connect for which we used 7-point scales. In survey research, common method bias could be an issue. To prevent the problem of common method bias, we used 7-point scales for two variables. Common method bias is defined as “biasing effects when measuring two or more constructs with the same method may have on the estimates of relationships between them” (Podsakoff et al., 2012). When we use different point scales for different variables, the issue of common method bias is mitigated, as this minimizes common scale properties. This is consistent with Podsakoff et al., (2012). Podsakoff et al. (2003, pp. 888) state that “another way to diminish method biases is to use different scale points for the criterion and predictor variables.” In our case, the criterion variables are loyalty and self-brand connect (this research used 7-point scales for these) and the others were the predictor variables (for which 5-point scales were used). This approach has also been followed recently (e.g. Hedhli et al., 2016; Harindranath et al., 2019).

Partial Least Square Structural Equation Modelling (PLS-SEM) was used to test the conceptual model in this research with the help of the software Smart PLS 2.0. The reasons for using PLS-SEM over Covariance Based SEM (CB-SEM) are: First this research is an extension of existing structural theory and Hair et al. (2011, p. 144) suggested that “PLS-SEM is preferred if the research is an extension of existing structural theory”. Second, PLS-SEM permits the use of both reflective and formative constructs in the same model, while CB-SEM does not provide identification for formative constructs (and we have two formative constructs). Third, PLS is preferred to explain the relationship between the constructs of large complex models. As suggested by Hulland et al., (1996), a prototype is considered to be moderately complex if it has more than seven constructs, the present model has thirteen first order and two second order constructs, rendering the model suitable for analysis using PLS-SEM.

**7. Analysis and results**

**7.1. Outer (measurement) model assessment**

The assessment of the measurement model involves estimation of reliability, convergent validity and discriminant validity. In the initial run, all the items in the PLS-PM were included, however, certain items which had factor loadings less than 0.600 were eliminated (Fornell and Wernerfelt, 1987). The factor loadings of the retained items are shown in the table provided in the Annexure (Table A1.), the factor loadings of the items were greater than 0.717 signifying strong convergent validity (Carmines and Zeller, 1979).

Internal consistency of items was established as Cronbach alpha

**Table 3**  
Results of the causal model.

A. Results of the causal model				
Path/Hypothesis	Path Coeff.(t-value)	Confidence Intervals		Support for Hypothesis
		Lower	Upper	
UV - > RQ (H1a)	0.176 (4.167) ***	0.096	0.258	Yes
CV - > RQ (H1b)	-0.050 (1.220) ns	-0.133	0.028	No
TXN - > RQ (H2)	0.201 (5.021) ***	0.126	0.281	Yes
INT - > RQ (H3)	0.196 (4.980) ***	0.119	0.273	Yes
DISC - > RQ (H4)	0.350 (8.792) ***	0.271	0.425	Yes
ESQ - > RQ (H5)	0.120 (2.797) ***	0.038	0.203	Yes
RQ - > SBC (H6)	0.543 (19.970) ***	0.491	0.598	Yes
RQ - > LOY (H8)	0.104 (2.331) *	0.195	0.339	Yes
SBC - > LOY (H7)	0.302 (7.372) ***	0.219	0.379	Yes
B. Impact of predictor construct (s) on criterion variable				
Predictor	Criterion	R <sup>2</sup>	Q <sup>2</sup>	Effect
Utilitarian, Convenience Value; Transaction enabling factors; Interaction, Discount, e-Service Quality	Relationship Quality	0.547 (f <sup>2</sup> = 0.832)	0.544 (q <sup>2</sup> = 0.870)	Large
Relationship Quality	Self-Brand Connect	0.300	0.296	Moderate
Relationship Quality, Self-Brand Connect	Loyalty	0.160	0.159	Moderate
<i>High f<sup>2</sup> (effect size) and q<sup>2</sup> (predictive relevance) values indicate importance of the central mediating variable, Relationship Quality</i>				
C. Results of formative model. Higher Order Construct: Relationship Quality				
Lower Order Construct	Weight (T-Value)	Confidence Intervals		Support for Hypothesis
		Lower	Upper	
Satisfaction - > RQ	0.361 (36.025)***	0.342	0.380	Yes
Trust - > RQ	0.487 (43.495)***	0.466	0.510	Yes
Affective Commitment - > RQ	0.336 (22.070)***	0.307	0.366	Yes
***p < 0.001, **p < 0.01, *p < 0.10, ns - not significant				

exceeded 0.700. Convergent validity was established as AVE values of constructs exceeded 0.500 and composite reliabilities of constructs exceeded 0.800 (See Table A1.). Results of the initial analysis exceeded threshold values suggested by Fornell and Larcker (1981) thus confirming discriminant validity (See Table A2).

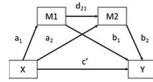
**7.2. Common method bias**

To investigate common method bias, we adopted the guidelines of Chin et al. (2013). The theoretically unrelated marker variable Self Efficacy (SE) was loaded to the endogenous variables RQ, self-brand connect and loyalty and no significant increase in the R<sup>2</sup> value was found, thus suggesting that CMB may not be a concern in our research. Further, we also used Lindell and Whitney’s (2001) method and correlation among SE and other constructs were less than 0.100, confirming no evidence of common method bias.

**7.3. Assessment of outer (structural) model**

Path Model was used to investigate the relationship between

**Table 4**  
Mediation Analysis.



M1:	RQ	M2:	SBC	Y:	Loyalty								
X		Direct Effect	Indirect Effect			Indirect/Total (%)		Mediation					
	a1	a2	b1	b2	d21	X-Y	X - M1 - Y	X - M2 - Y	X-M1-M2-Y	Total indirect effect	Total effect	Indir. To Total %	Mediation
						c'	l = a1-b1	m = a2-b2	n = a1-d21-b21	p = l + m + n	c' + p		
Util Val.	0.492 ***	0.031 (ns)	-0.029 (ns)	0.292 ***	0.528 ***	0.282 ***	-0.015 (ns)	0.009 (ns)	0.076 (sig)	0.070 (sig)	0.352***	19.89%	Partial
		<i>Bootstrap Confidence Interval</i>											
							[-0.059, 0.028]	[-0.014, 0.033]	[0.053, 0.107]	[0.033, 0.113]	[0.280, 0.425]		
Int	0.516 ***	0.060 (ns)	0.104 *	0.302 ***	0.512 ***	0.000 (ns)	0.054 (sig)	0.018 (ns)	0.080 (sig)	0.152 (sig)	0.152 (sig)	100.00%	Complete
		<i>Bootstrap Confidence Interval</i>											
							[0.005, 0.105]	[-0.006, 0.045]	[0.055, 0.111]	[0.098, 0.206]	[0.075, 0.228]		
Disc	0.553 ***	-0.020 (ns)	0.171 ***	0.299 ***	0.555 ***	-0.119 *	0.095 (sig)	-0.006 (ns)	0.092 (sig)	0.180 (sig)	0.061	60.00%	Partial
		<i>Bootstrap Confidence Interval</i>											
							[0.043, 0.153]	[-0.030, 0.018]	[0.065, 0.128]	[0.125, 0.244]	[-0.016, 0.139]		
ESQ	0.523 ***	0.008 (ns)	0.020 (ns)	0.300 ***	0.539 ***	0.161 ***	0.011 (ns)	0.003 (ns)	0.085 (sig)	0.098 (sig)	0.259 (sig)	37.83%	Partial
		<i>Bootstrap Confidence Interval</i>											
							[-0.042, 0.063]	[-0.021, 0.029]	[0.058, 0.117]	[0.050, 0.154]	[0.184, 0.334]		
Txn	0.552 ***	-0.072*	0.037 (ns)	0.310 ***	0.583 ***	0.114 **	0.020 (ns)	-0.022 (sig)	0.100 (sig)	0.098 (sig)	0.212 (sig)	46.22%	Partial
		<i>Bootstrap Confidence Interval</i>											
							[-0.032, 0.073]	[-0.046, -0.001]	[0.070, 0.134]	[0.046, 0.154]	[0.136, 0.288]		

\*\*\*p < 0.001; \*\*p < 0.01; \*p < 0.10.

Util Val. – Utilitarian value; Int – Interaction; Disc – Discount; ESQ – E-Service Quality; Txn – Transaction Enabling Factors. Highlighted cells indicate the serial mediation effect and higher effect sizes when compared to other mediation paths.

hypothesized constructs and bootstrap resample procedure was used to analyze the significance of the path models.

Repeated indicator approach with latent variable scores was used for the nomological model as recommended by Hair et al., (2014). The results provided support for hypotheses H<sub>1</sub> to H<sub>8</sub> (p < 0.001) with the exception of H<sub>1b</sub>. Path coefficients and significant levels are summarized in Table 3. Discount has the strongest effect on RQ, confirming the role of discounts and promotions in experiencing RQ. Transaction enabling factors and interactivity show positive effects on RQ. Results also supported the consequences of RQ. RQ shows a strong direct effect on SBC. RQ shows a positive direct effect on loyalty and indirectly through self-brand connect. A post-hoc analysis was completed with the direct effect from each antecedent to satisfaction, trust and affective commitment. All antecedents had a direct positive effect on satisfaction and trust. The control variables, relationship proneness and product category involvement were not significant, i.e., did not moderate the effect of antecedents on RQ or RQ's effect on SBC.

Estimation of predictive accuracy (R<sup>2</sup>) provided a large effect size for RQ (>0.500). Blindfolding procedure was followed to measure the predictive validity (Q<sup>2</sup>) and values greater than zero were observed for all the endogenous constructs indicating satisfactory predictive ability of the model (Hair et al., 2014 p.178–179). Similarly, f<sup>2</sup> and q<sup>2</sup> values show large effect sizes and this confirms the importance of RQ in engendering brand connect and loyalty.

We also estimated the relative importance of lower order constructs of relationship quality. Analysis reveal that all lower order constructs of RQ are important and significant. The effect of trust on RQ is stronger

than that of satisfaction and commitment. This is consistent with the results reported by Verma et al., (2016) and Rafiq et al., (2013) as trust is important in online settings vis-a-vis offline ones since it acts as a surrogate for the experiential cues and mitigates risk associated with online retailing. Results of the lower order constructs are provided in Table 3.

#### 7.4. Mediation and moderation

To test the mediation effect of RQ, the bootstrapping approach suggested by Hayes and Scharkow (2013) used in Penz and Hogg (2011) and Wu et al., (2014) was followed. The path coefficients show a direct relationship between RQ and loyalty. RQ shows a stronger effect on self-brand connect. This suggests that RQ affects loyalty intention indirectly through SBC. The Indirect to Total effect was found to be 59% suggesting partial mediation. Using PROCESS macro, serial mediation of the path: predictor variable – RQ – self-brand connect – loyalty was tested. Serial mediation was established with RQ as a proximal mediator and self-brand connect as a distal mediator for the predictors ESQ, convenience value and transaction enabling factors. Interaction and discounts result in loyalty and the paths are not mediated through RQ & self-brand connect (See Table 4).

The moderation effect of relationship duration was tested. We simultaneously tested the effect of the moderator between antecedents and RQ and the path between RQ and self-brand connect simultaneously. Relationship duration emerged as a significant moderator (See Table 5), while the other two constructs did not show any moderation effect. An interesting finding of the moderation analysis is that



**Table 5**  
Moderation effect of Relation Duration on RQ and SBC.

W = RD (REL. DURATION), M = RQ (REL. QUALITY), Y = SBC (SELF BRAND CONNECT)

V = RD (REL. DURATION), M = RQ (REL. QUALITY), Y = SBC (SELF BRAND CONNECT)

X	X- > M			M- > Y			X	X- > M			M- > Y		
UV	UV - RQ	0.662	p < 0.001	RQ - SBC	0.528	p < 0.001	UV	UV - RQ	0.492	p < 0.001	RQ - SBC	0.464	p < 0.001
	RD - RQ	0.135	p < 0.10	UV-SBC	0.031	NS		UV-SBC	0.034	NS	RD - SBC	-0.036	NS
	UVxRD - RQ	-0.284	p < 0.001					RQxRD - SBC	0.125	p < 0.10			
CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION						CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION							
Mediator		CAT	P.C.	S.E.	LLCI	ULCI	Mediator		CAT	P.C.	S.E.	LLCI	ULCI
RQ		0	0.350	0.048	0.260	0.446	RQ		0	0.228	0.035	0.166	0.303
		1	0.199	0.036	0.133	0.276			1	0.290	0.038	0.225	0.372
INT	INT - RQ	0.578	p < 0.001	RQ - SBC	0.512	p < 0.001	INT	INT - RQ	0.516	p < 0.001	RQ - SBC	0.455	p < 0.001
	RD - RQ	0.105	NS	INT - SBC	0.060	NS		INT - SBC	0.057	NS	RD - SBC	-0.038	NS
	INTxRD - RQ	-0.109	NS					RQxRD - SBC	0.119	p < 0.10			
CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION						CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION							
Mediator		CAT	P.C.	S.E.	LLCI	ULCI	Mediator		CAT	P.C.	S.E.	LLCI	ULCI
RQ		0	0.296	0.041	0.223	0.384	RQ		0	0.235	0.031	0.176	0.297
		1	0.241	0.034	0.177	0.312			1	0.296	0.035	0.232	0.370
DISC	DISC - RQ	0.677	p < 0.001	RQ - SBC	0.555	p < 0.001	DISC	DISC - RQ	0.553	p < 0.001	RQ - SBC	0.493	p < 0.001
	RD - RQ	0.094	NS	DISC - SBC	-0.020	NS		DISC - SBC	-0.018	NS	RD - SBC	-0.037	NS
	DISCxRD - RQ	-0.217	p < 0.001					RQxRD - SBC	0.121	p < 0.10			
CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION						CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION							
Mediator		CAT	P.C.	S.E.	LLCI	ULCI	Mediator		CAT	P.C.	S.E.	LLCI	ULCI
RQ		0	0.376	0.044	0.292	0.466	RQ		0	0.273	0.035	0.206	0.342
		1	0.255	0.032	0.195	0.321			1	0.340	0.037	0.270	0.416
ESQ	ESQ - RQ	0.618	p < 0.001	RQ - SBC	0.539	p < 0.001	ESQ	ESQ - RQ	0.523	p < 0.001	RQ - SBC	0.477	p < 0.001
	RD - RQ	0.156	p < 0.05	ESQ - SBC	0.008	NS		ESQ - SBC	0.010	NS	RD - SBC	-0.037	NS
	ESQxRD - RQ	-0.169	p < 0.05					RQxRD - SBC	0.123	p < 0.10			
CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION						CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION							
Mediator		CAT	P.C.	S.E.	LLCI	ULCI	Mediator		CAT	P.C.	S.E.	LLCI	ULCI
RQ		0	0.333	0.045	0.248	0.422	RQ		0	0.250	0.035	0.184	0.321
		1	0.242	0.039	0.166	0.319			1	0.314	0.038	0.246	0.397
TXN	TXN - RQ	0.699	p < 0.001	RQ - SBC	0.583	p < 0.001	TXN	TXN - RQ	0.552	p < 0.001	RQ - SBC	0.522	p < 0.001
	RD - RQ	0.102	NS	TXN - SBC	-0.072	p < 0.10		TXN - SBC	-0.073	p < 0.10	RD - SBC	-0.038	NS
	TXNxRD - RQ	-0.240	p < 0.001					RQxRD - SBC	0.124	p < 0.10			
CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION						CONDITIONAL INDIRECT EFFECT OF X ON Y AT VALUES OF MODERATION							
Mediator		CAT	P.C.	S.E.	LLCI	ULCI	Mediator		CAT	P.C.	S.E.	LLCI	ULCI
RQ		0	0.408	0.046	0.323	0.506	RQ		0	0.288	0.035	0.220	0.359
		1	0.268	0.038	0.198	0.347			1	0.356	0.041	0.282	0.442

relationship duration dampens the effect of antecedents on RQ, while it strengthens the relationship between RQ and SBC, loyalty. This points to the role of relationship duration in moderating self-brand connect, loyalty after RQ is experienced. RQ's effect on SBC is hastened for longer duration customer relationships compared to new customers.

**8. Discussion and managerial implications**

**8.1. General discussion**

This paper, using data collected in India identified a set of antecedents that enhanced RQ, and in turn, RQ positively influenced self-brand connect and loyalty. Additionally, this research showed that relationship duration positively moderated the relationship between RQ and self-

brand connect. Our results are broadly in line with extant research. For instance antecedents like value (Moliner et al., 2007), service quality (Wong and Sohal, 2002a), interaction (Labrecque, 2014) and website characteristics (Braun et al., 2009) were significant. While our research is consistent in some respects with prior research, it also differs in certain other important ones. We outline them below in the theoretical implications, and follow these with suggestions for practitioners.

**8.2. Theoretical implications**

This research makes a number of theoretical contributions. First, it develops a comprehensive model of RQ with antecedents and consequences. Prior research has tested the effect of a few aforementioned antecedents like value, service quality, interaction and website

characteristics on RQ; other research has uncovered some consequences like repurchase intention (Storbacka et al., 1994; De Wulf et al., 2001; Eastlick et al., 2006) and loyalty (Hennig-Thurau et al., 2002; Lin and Ding, 2005). However, to the best of the authors' knowledge, there is no research that has come out with a comprehensive model of RQ; hence, from a theoretical angle, this is a major contribution. Second, this paper models relationship quality as a formative construct since it is possibly more apt; Jarvis et al., (2003) state that if the causality flows from the lower order items/constructs, it is preferable to treat a construct as a formative one. In this case, it is more logical to expect the causality to flow from satisfaction, trust and commitment to RQ, rather than the other way around. Prior research has treated it as a reflective construct (Rafiq et al., 2013) or as a general specific model (Kim et al., 2011a); we find empirical support for our notion that RQ is a formative construct. Third, we show the moderating role of relationship duration on the RQ-self-brand connect relationship. Hitherto, research has not tested relationship duration extensively and virtually no research exists on the effect of relationship duration in online settings. While research has tested product category involvement (De Wulf et al., 2001) and relationship proneness (De Wulf et al., 2001) as moderators in RQ research, it has not tested relationship duration. This paper adds to the body of work that identifies moderators for RQ. Thus, our work extends extant literature in several ways.

### 8.3. Managerial implications

This research, apart from extending prior work, also gives several practical tips to managers. These are outlined below. Since customer perceived value (utilitarian), transaction related factors, discounts, interaction, and e-service quality drove relationship quality (RQ) and RQ in turn positively affected self-brand connect and loyalty, e-tailers may invest in the antecedents of RQ. E-tailers already give heavy discounts both in India and globally. E-tailers may invest in ensuring utilitarian value by providing wide range of quality products, ensuring availability, and enhancing overall value. Likewise, e-tailers may make the interaction with shoppers better including quick response to queries, encouraging voice of customer (providing communication, feedback) and providing control over the content (access information and feedback about products). E-tailers may enable transaction related factors and work on the drivers of e-service quality including system availability, efficiency, fulfilment and protecting privacy concerns.

One of the main managerial contributions from our research emanates from the moderating effects. To wit, results revealed that relationship duration negatively moderated the effect of certain antecedents of RQ on RQ. This is a key finding from this research. E-tailers are caught in a seemingly endless discount war in India (Mishra and Manna, 2016) and elsewhere (Dennis, 2017); however, this finding offers hope to e-tailers – to wean customers off discounts. E-tailers may target only those shoppers who are recent with these discounts aggressively using targeted promotions; they may not target their more established shoppers with these discounts. This is because if the relationship duration is high, the effect of antecedents on RQ is lower. This suggestion comes with a caveat though: there may be ethical issues in targeting only recent customers and not shoppers who have been around with the site for longer. Managers may weigh the pros and cons of this and act accordingly.

Results also showed that relationship duration positively moderates the effect of RQ on self-brand connect. This means that for shoppers who have been with the e-tail site for longer, the effect of RQ is greater

compared to shoppers who have been with the site only since recently. Hence, e-tailers may focus their efforts on making shoppers stay with the site longer. This is a key implication from our research. E-tailers must make shoppers satisfied and happy, so they stick on. Further, research from related domains points to other ways of making relationship duration longer. E-tailers may personalize web sites and offer personalized suggestions using Artificial Intelligence and Machine Learning; this is because personalization increases the tendency of the shopper to stay with the site for longer (Ball et al., 2006; Coelho and Henseler, 2012)). In behavioral economics, there is a much-discussed phenomenon – the sunk cost effect (Garland, 1990). If a consumer is asked to pay even a small token amount as annual fee (like Costco, Amazon Prime), she now would have the tendency to continue using the site. E-tailers may do this. The unfortunate Covid pandemic has made our results even more important. Even pre-Covid, e-commerce and e-tail were growing very fast. Post Covid, this growth is set to accelerate even further (Sheth, 2020; Kim, 2020). Therefore, in the face of severe competition, e-tailers need to work harder to maintain relationships and our results and recommendations would help them in this endeavor.

In sum, our research has significant substantive and managerial implications.

### 9. Limitation and scope for future research

While this research extends extant work in this area and offers tips to practitioners, it also suffers from a few limitations. First, the setting of this work is India, an emerging market. Future research may not just replicate this model in Western countries, but also check for cross-cultural differences in the relationships that we report. For instance, would relationship duration and resulting loyalty intentions be less important in Western countries since typically they have lower long-term orientation (Zhang et al., 2014)? This would be interesting to explore. Second, we collected data from general e-tailers – firms that sell all kinds of merchandise online. There are some e-tailers who sell only 1–2 product categories online (e.g. [carwale.com](http://carwale.com) deals only with automobiles). Would the observed relationships hold good even for such e-tailers? Future research could investigate this. Third, consumers exhibit different consumer behaviors for products and services (e.g. Sharma et al., 2014). Would the relationships that this paper uncovered be true even for e-tailers of services alone (e.g. banks, sites like [policybazaar.com](http://policybazaar.com) – this sells insurance policies in India)? Fourth, while we modeled several antecedents of RQ, we did not dwell on some emerging themes like gamification. Research can include this as well. Fourth, this research included relationship duration as a moderator. There may be other moderators (apart from culture, product vs service that we allude to above) such as type of product (e.g. utilitarian vs hedonic) and personality variables (e.g. deal proneness). Future research may include this. Finally, the sampling method should ideally have been random sampling. However, this requires a sampling frame of all Internet users in India. This is all but impossible to procure. In future, companies like Amazon and Flipkart may procure this from commercial sources or at least consider their own customer base as the universe and do a random sampling exercise from this and attempt to replicate our model.

In sum, our research not only offers significant theoretical and managerial implications, it also opens up new avenues for research in this important domain. Already, e-tail is a dominant channel in countries like China and South Korea. It is up to firms in other countries to deepen relationships with customers to make e-tail a dominant channel for selling products and services.

**Table A1**  
 Constructs, items, factor loading and convergent validity measures

Construct/Scale Reference	Item	Mean	SD	Factor Loading	C. Alpha	C.R.	AVE
Affective Commitment (AFFCOM) Rafiq et al., (2013); Giovannis et al., (2015)	I identify with this service provider very much	4.03	0.67	0.851	0.872	0.922	0.769
	I feel emotionally attached to my e-tailer	3.78	1.06	0.909			
	I feel a strong sense of belonging to my e-tailer	3.10	1.22	0.917			
Utilitarian Value (UV) Wu et al., (2014)	The online retailer that I frequently purchase from, offers good economic value	3.92	1.24	0.797	0.716	0.840	0.637
	I feel that the products that I buy from my e-tailer is always a good buy	4.28	0.79	0.853			
	Compared to others, the e-tailer that I frequently from provides attractive products and offers	4.15	0.93	0.741			
Convenience Value (CV) Wu et al., (2014)	When I purchase from the e-tailer that I frequently purchase from, I save time	4.26	0.87	0.851	0.794	0.878	0.707
	It is easy to shop for products and service from my e-tailer	4.44	0.73	0.877			
	The efforts that I make to purchase from my e-tailer is low	4.15	0.93	0.793			
Discount (DISC) Alford and Biswas (2002); Yoo et al., (2000)	My e-tailer provides special benefits (e.g., sales preview, additional services) based on my past purchase	4.09	0.96	0.795	0.872	0.833	0.625
	Discounts offered by my e-tailer is an important reason for me to continue buying from them	3.82	1.15	0.717			
	I enjoy special benefits and privileges by virtue of being a frequent customer	3.81	1.11	0.854			
Efficiency (EFF) Parasuraman et al., (2005)	My e-tailer's website or "mobile app" makes it easy to find what I need	4.19	0.60	0.842	0.799	0.882	0.713
	The website or "mobile app" of the e-tailer enables me to complete a transaction quickly	4.34	0.82	0.853			
	Information provided in my e-tailer's website or "mobile app" is well organized	4.48	0.76	0.837			
System Availability (SYSAVL) Parasuraman et al., (2005)	The website or "mobile app" of my e-tailer loads fast whenever I access them	4.32	0.81	0.825	0.793	0.879	0.707
	Pages or screens in the website or "mobile app" of my e-tailer do not freeze after entering information	4.21	0.82	0.874			
	My e-tailer's website or "mobile app" does not crash	4.06	0.92	0.823			
Privacy (PRIV) Parasuraman et al., (2005)	The e-tailer's website or "mobile app" protects information regarding my service usage behavior	3.91	0.99	0.899	0.769	0.897	0.812
	The e-tailer's website or "mobile app" protects my personal information and does not share it with others	3.46	1.13	0.903			
	The e-tailer that I frequently purchase from always delivers orders within the promised time frame	3.39	1.13	0.858			
Fulfilment (FULFILL) Parasuraman et al., (2005)	The "app" or website makes accurate promises about delivery of products/ services	4.17	0.97	0.887	0.794	0.880	0.710
	My e-tailer always sends out the items ordered	4.13	0.91	0.781			
	I am able to communicate easily with the e-tailer company, if I have specific queries	4.07	0.56	0.778			
Interaction (INT) Ballantine (2005)	The e-tailer responds quickly and efficiently to my specific request for information	3.97	1.02	0.820	0.679	0.823	0.609
	Overall, I find the company's "app", website and its customer service highly interactive	4.12	0.92	0.741			
	I will continue purchasing or using the service offered by e-tailer	5.55	1.53	0.882			
Loyalty (LOY) Yang and Peterson (2004)	I will purchase other services offered by e-tailer in future	5.23	1.41	0.836	0.940	0.954	0.805
	I will encourage friends and relatives to use the services offered by the e-tailer	5.34	1.42	0.922			
	I say positive things about e-tailer to others	5.25	1.41	0.920			
Transaction Enabling Factors (TXN) Song and Zahedi (2005)	I recommend the e-tailer to others	5.22	1.43	0.923	0.814	0.870	0.573
	I find that the website and "mobile app" visually rich and attractive	4.05	0.61	0.762			
	My e-tailer's website and "mobile app" is always up to date in terms of information	4.20	0.83	0.777			
	My favorite e-tailer's website/"mobile app" is designed well and is easy to navigate	4.19	0.80	0.759			
	I find that the product range in the frequently used website/"mobile app" comprehensive	4.35	0.74	0.730			
Relationship Satisfaction (SAT) Rafiq et al., (2013); Giovannis et al., (2015)	The website/"mobile app" provides complete information about the products and services	3.96	1.02	0.758	0.790	0.877	0.704
	I am pleased with the services provided by my favorite e-tailer	3.87	0.80	0.834			
	My experiences with my e-tailer exceeds my expectation	4.15	0.76	0.823			
Self-Brand Connect (SBC) Escalas and Bettman (2003)	Based on all my experience, I am very satisfied with the service provide	3.68	0.89	0.860	0.897	0.924	0.708
	My favorite e-tail reflects who I am	5.32	1.30	0.857			
	I feel a personal connection to my e-tail brand	4.00	1.43	0.835			
Trust (TRUST) Rafiq et al., (2013) and Giovannis et al., (2015)	My e-tail brand helps me to communicate to others who I am	4.27	1.47	0.888	0.849	0.899	0.689
	I can identify with my favorite e-tail brand	3.79	1.43	0.831			
	My e-tail brand could help me become the type of person I want to be	4.19	1.48	0.793			
	My favorite e-tailer is reliable in fulfilling my needs	3.96	0.68	0.776			
	My e-tailer is trustworthy because they are concerned with customer interest	4.14	0.76	0.743			
	My e-tailer serves customers with honesty	4.05	0.82	0.737			
I trust and am willing to depend on this e-tailer	3.93	0.80	0.791				

Individual loading significant at  $p < 0.001$

**Table A2**  
Discriminant validity results

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. AFKOM	<b>0.893</b>													
2. Expval	0.167	<b>0.841</b>												
3. DISC	0.471	0.254	<b>0.791</b>											
4. EFF	0.110	0.521	0.191	<b>0.844</b>										
5. FULFIL	0.218	0.282	0.233	0.441	<b>0.843</b>									
6. INT	0.317	0.319	0.293	0.412	0.444	<b>0.780</b>								
7. LOY	-0.096	0.234	0.061	0.296	0.150	0.152	<b>0.897</b>							
8. PRIV	0.320	0.198	0.241	0.252	0.300	0.321	0.113	<b>0.901</b>						
9. RSAT	0.412	0.320	0.468	0.330	0.457	0.458	0.404	0.267	<b>0.839</b>					
10. SBC	0.524	0.182	0.287	0.202	0.218	0.324	0.358	0.310	0.430	<b>0.842</b>				
11. SYSAVL	0.189	0.414	0.215	0.434	0.395	0.415	0.174	0.317	0.378	0.160	<b>0.841</b>			
12. TRUST	0.502	0.332	0.465	0.345	0.456	0.503	0.316	0.324	0.729	0.435	0.353	<b>0.830</b>		
13. TXN	0.341	0.402	0.339	0.534	0.409	0.491	0.212	0.300	0.484	0.250	0.481	0.539	<b>0.757</b>	
14. Utilval	0.223	0.514	0.310	0.513	0.391	0.387	0.352	0.240	0.485	0.291	0.342	0.497	0.469	<b>0.798</b>

Note: Diagonal entries in bold are square roots of AVE.

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