Exploring the Effective Factors on the Process of Customer E-loyalty Formation in Online Shops in Iran

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ABSTRACT:

The present study is focused on the role of three dimensions of ERQ (electronic relationship quality) to facilitate the process of e-customers' loyalty formation. To this end, a model is proposed based on previous studies in Iran which specifically concentrates on individual and organizational factors. For data collection and testing of the model electronic questionnaire was designed and distributed among the customers who experienced shopping from online shops. At last, 358 acceptable questionnaires were used for analysis. Results of data analysis using structural equation modeling reveal that the selected individual and organizational factors are led to e-satisfaction, e-trust and e-commitment in customers. E-satisfaction is effective on e-trust and e-commitment. E-trust is effective on e-commitment. Besides, three dimensions of ERQ are effective on e-loyalty of customers.

1. Introduction

Rapid developments in information and communication technology (ICT) have influenced different scopes of human life and have been led to basic changes in behavioral models and business practices. Rapid growth of the internet and increased online transactions are some evidences of popularity of this technology (Low, Qi, & Buhalis, 2010). E-commerce has increasingly been extended and has influenced into more areas of the global economy through creation of e-money and the possibility to perform financial transactions via online and electronic tools (Ghalandari, 2013). Along with the appearance of e-commerce and internet technologies in recent years, opportunities have been provided to create advanced and modern strategies of e-

commerce such as B2B, B2C and e-government. The internet and networks which are referred to as the backbone of modern communications have converted the world into ubiquitous connections that always exist anytime and anywhere for connecting to the digital network and digital services (Al-Gahtani, 2011). Specially, some opportunities have been provided to perform B2C e-commerce.

Electronic services in the field of B2C that are related to the use of modern ICT technologies are for offering services among the firm and consumers that include transactions through e-tools. These services are offered through online shops (Puto & Koscielniak, 2015). Rapid development of such services has overthrown the traditional business models and has changed shopping habits of consumers (Chuang, Chen, Lin, &Yu, 2016). Hence, the current world is a place for continuous changes.

The advantages of internet have attracted millions of sellers to e-markets and have been resulted in severe competition among them. Given that competition in e-markets is just done by a click of mouse in a far distant (Wang & Chen, 2012) and also there are relatively low switching costs in this platform for buyers (Wu, Chen, Chen, & Cheng, 2014), how to retain consumers has become a critical and basic problem. Kotian and Meshram (2017) illustrates that it is essential for e-commerce firms to create new tactics to increase profitability, remain in competition, attract new customers and retain the current customers. However, as it was mentioned, retention of the current customers' is emphasized. Indeed, customer retention is more important than gaining it (Arya and Srivastava, 2015; Shafiee, Haghighizade, & Rahimzadeh, 2016). Customer retention is an indispensable principle of e-commerce. Customer orientation approach, therefore, is one of the most important factors to achieve this. Maintenance and reinforcement of customer loyalty in a firm that worries about maintaining and developing its competitive status in the market is always regarded as a strategic challenge and is an index that can be led to growth and development of business in e-commerce environment. Many researchers have accepted this issue (Jafarpour, Mahmoudabadi, & Andalib, 2017).

Research shows that customer loyalty is important both economically and competitively in electronic field. From economic viewpoint, cost of attracting new customers is more than retention of the current customers and is an effective element in achieving long-term profit (Carter, Wright, Thatcher, & Klein, 2014; Ghalandari, 2013; Richheld and Schefter, 2000; Shafiee et al., 2016; Valvi and Fragkos, 2012). From competitive viewpoint, customer loyalty guarantees survival of the e-tailer, because lack of customer orientation attitude and loyalty absorption will be led to omission from the competition. Undoubtedly, attendance in highly competitive markets necessitates proposing loyalty as a necessity for sellers and service providers. When e-loyalty is proposed as an instruction for profitability, various methods are presented for loyalty formation.

The result of marketing research shows that RQ is a strong and key predictor for customer loyalty (Rafiq, Fulford, & Lu, 2013) that has a main role in prediction of future interaction of the customer with the seller (Crosby, Evans, & Cowles, 1990). In online environment, ERQ is defined as a three-dimensional structure (including satisfaction with online relations, online trust and online commitment) (Rafiq et al., 2013). These elements have been recognized as relational intermediaries that are focused on the customer (Verma, Sharma, & Sheth, 2016). Despite customer satisfaction is supposed as a precondition for e-loyalty, it cannot predict it automatically and maintains the customer with another factor (Ghazali, Nguyen, Mutum, & Mohd-Any, 2016). In other words, it is not adequate to ensure customer loyalty and retention (Vuuren, Robberts-Lombard, & Tonder, 2012). Even if customers are satisfied with the presented services and products by an electronic website but they do not trust it, they will not be loyal. Gaining customers' trust in this environment due to innovation for customers and lack of physical transactions has become a critical factor for success (Shafiee et al., 2016). On the other hand, lack of trust decreases commitment between the two parties and directs a relationship towards short-term transactions (McDonald, 1981). Thus, satisfaction, trust and commitment are significant variables for online shopping (Nisar and Prabhakar, 2017; Pratminingsih, Lipuringtyas, & Rimenta, 2013; Rafiq et

al., 2013). Understanding the factors which reinforce these three variables and are effective on building them to achieve e-loyalty is vital.

Certainly, B2C e-commerce has experienced a huge growth. Through the increased population of online buyers, Iran has become one of the competitive markets in electronic world. However, in spite of presented advantages for service providers and customers, all expectations and needs of customers have not been satisfied yet. On the other hand, customers' retention is regarded as an essential challenge for e-tailers in Iran via the increased accessible options for them under circumstances where the possibility of offering internet services is increased day by day. This shows there is the necessity of deeper research about e-loyalty and its driving factors. Therefore, the research problem is to identify the effective factors on e-loyalty process. The present study is focused on the role of relationship quality as a central structure to develop e-loyalty. Exploring and explaining the problem via identification of the effective factors on relationship quality and proposing suitable strategies to enhance e-satisfaction, e-trust and e-commitment have a special status. Thus, the aim of this study is to:

(1) explore the effective individual factors on ERQ

(2) explore the effective organizational factors on ERQ

(3) explore effectiveness of ERQ dimensions on each other

(4) explore effectiveness of ERQ dimensions on e-loyalty

2. Research Background

2-1. Literature Review

Several studies have already explored main and potential driving factors of loyalty in various fields of e-commerce such as e-satisfaction (see: Arya and Srivastava, 2015; Gracia, Arino, & Blasco, 2015; Pereira, de Fátima Salgueiro, & Rita, 2016; Sugiharto, 2017; Tjhin, Tavakoli, & Atmojo, 2016), e-trust (e.g.,Bilghan and Bujisic, 2015; Bilghan, 2016; Carter et al., 2014; Nadeem, Andreini, Salo, & Laukkanen, 2015; Toufaily and Pons, 2017; Xiao, Guo, D′Ambra, & Fu, 2016)

and e-commitment (Bilghan and Bujisic, 2015; Chen, 2012). However, all these factors have been explored in few studies. Besides the effect of these three factors on e-loyalty, exploring the effective factors on them to create e-loyalty is important. Rafiq et al. (2013) investigated the relationship between investment in perceived e-relation, trust, satisfaction, and e-loyalty in a study. Lee and Wong (2016) explored the effect of e-service quality (efficiency, accessibility, maintenance of privacy, execution) and dimensions of relationship quality (satisfaction, trust, commitment) on customer loyalty in mobile phone business in Malaysia. In a case study on online hotel reservation, Bilghan and Bujisic (2015) found that characteristics of pleasure and benefit are effective on computational commitment and affective commitment and finally trust and loyalty. Given the importance of RQ in e-loyalty development as well as lack of the research related to this topic especially organizational factors in online shops in Iran, this study explores individual and organizational factors in RQ from a different viewpoint. Considering lack of studies on organizational factors and topics in the field of e-loyalty and because acceptance and success of e-commerce in all scopes is a suitable ground to create and maintain long-term relations with the customer, the present background considers those studies that are related to concepts such as e-commerce acceptance and development. This is because it finally helps identification and selection of individual and organizational factors which can be effective on what managers should know about reaching to high levels of satisfaction, trust, commitment and loyalty. Previous studies about the research variables are presented below in Table 1.

Table 1. Previous studies on research variables in different electronic fields

Auther(s), Year	Variables discussed
Krell & Gale (2005)	E-business migration: Technology, business processes, strategy and organizational change
Tarafdar & Vaidya (2006)	Organizational drivers of EC adoption from four firms in the financial services industry in India: top management, organization culture, characteristics of Information System and organization structure
Al-Qirim (2007)	EC technologies adoption model in SMEs: technological, organizational, environmental and entrepreneurial (individual) factors
Jinghua, Chunjun, & Jingting (2007)	Critical success factors for EC: leadership, strategy, organization, management, IT, customers, comprehensive functions of website and customeroriented functions. In addition, customers, strategy, IT and comprehensive functions of website
Zeng, Chen, & Huang (2008)	Five critical organization dimensions of e-business transformation: corporate strategy and vision transformation, organizational structure, product and market transformation, business process transformation and corporate culture transformation
Ha & Stoel (2009)	Consumer e-shopping acceptance: e-shopping quality, enjoyment, trust and TAM model
Carlson & O'Cass (2010)	E-service quality, satisfaction, attitudes towards the web site and behavioural intentions
Haghighi, Divandari & Keimasi (2010)	Two-layer hierarchical structure of factors for e-banking development: Organizational readin, industry e-readiness and macro environmental e-readiness
Sohrabi Safa & Ismail (2013)	E-loyalty formation based on e-trust and e-satisfaction: organizational, technological and customer factors
Pratminingsih et al. (2013)	Customer loyalty in online shopping: satisfaction, trust and commitment
Chen, Yen, Pornpriphet, & Widjaja (2015)	E-commerce web site loyalty: quality (information, system, service), trust and satisfaction
Rahayu & Day (2015)	EC adoption model in SMEs: technological, organizational, environmental and individual factors
Chi, Liou, & Hsu (2015)	E-shoppers' real purchase behavior: Perceived risk, perceived value, trust (affective, cognitive), commitment (calculative, affective), satisfaction, behavioral intention,
Tseng (2015)	Intention to continue using web-based self-service: perceived usage characteristics (usefulness and ease of use), quality characteristics (information, system, service), satisfaction
Wang, Wang, & Liu (2016)	Integration of the commitment–trust theory and e-commerce success model: quality (information, system, service), perceived value, satisfaction, relationship commitment, trust and stickiness intention
Sinha & Mukherjee (2016)	Perceived ease of use, perceived usefulness, complexity, trust on technology, trust on bank and use off branch e-banking in India
Verma et al. (2016)	Relationship marketing in online retailing: relationship between the four mediators (trust, commitment, relationship quality, and relationship satisfaction) and antecedents (customer, seller and dyadic) and consequences of relationship marketing (expectation of Continuity, Word of Mouth, Loyalty)
Groß (2018)	Multidimensional framework of mobile shopping acceptance: attitude, intention, and behaviour with additional constructs (perceived enjoyment, perceived usefulness, perceived ease of use, vendor trust, social influences, and satisfaction)

3. ERQ Dimensions

Given previous studies, the present study is focused on main dimensions of relationship quality in online environment including e-satisfaction, e-trust and e-commitment.

3-1. E-satisfaction

Ease of access to competitive firms in case of customers' dissatisfaction has converted satisfaction into a very important concept (Jafarpour et al., 2017). Structure of satisfaction is undoubtedly the basis of long-term relationship with customers (Zhu, Kuo, & Munkhbold, 2016). Expectation confirmation theory that is used extensively to explore re-purchase decisions conceives satisfaction as a vital variable for the intention to track customers (Fang, Shao, & Wen, 2016). According to Jafarpour et al. (2017), customer orientation must be considered in all businesses since customer satisfaction is the key for profitability. Satisfied customers develop stronger structural and emotional relations with the current firm (Iyer & Bejou, 2004). Consumer's satisfaction or dissatisfaction is a response to evaluation of difference or lack of understanding among previous expectations and real performance of the product that is felt after use (Afifah & Asnan, 2015). In fact, this concept is customer's purchase perception from the difference between expected value and received value from a transaction (Wang & Head, 2007).

In online environment, customer's satisfaction is defined as the result of consumer's perceptions from online facilities, business, web design and financial security (Anand, 2007; Szymansk & Hise, 2000). E-satisfaction can be interpreted as a summary of a total structure that reflects satisfaction after purchase through experiencing e-services (Gera, 2011). Thus, it is an important tool to measure customer's opinions in e-commerce system that should cover the whole circle of customer experience via purchase information marketing, payment, receipt and service (Delone & McLean, 2003).

3-2. E-trust

Despite too much similarities between online and offline trust, role of trust in online purchase has been perceived more important than offline purchase in many studies (e.g., Kim, Ferrin, & Rao, 2008; Rafiq et al., 2013; Richheld and Schefter, 2000; Xiao et al., 2016). Trust plays a major role in consumer's purchase behaviors in e-commerce (Bilghan, 2016). Unique features of the online environment are led to more uncertainty and increased risk in online purchase decision-making (Pavlou, 2003). Evidences show that consumers are often hesitant about the seller's behavior or possibility of stealing personal information by hackers (Sharma & Lijuan, 2014). Information misuse is one of the most important online dangers and breach of privacy will reduce trust in a website (Martin, 2018). According to Schaupp and Bélanger (2005), the customer should trust in ability of the seller and his/her system and this e-trust helps reduce concerns about e-purchase. Thus, trust is a consequence of moral principles of e-commerce (Sharma & Lijuan, 2014) and is a key and determining factor to create long-term relations (Bilghan, 2016; Chih et al., 2015; Verma et al., 2016). What can be stated is that the future of B2C e-commerce will remain insignificant without online trust (Kim & Peterson, 2017).

Trust is an abstract concept that is often understood with concepts such as validity, reliability or common certainty and on the other hand, it is multi-faceted and has different perceptional, sensational and behavioral dimensions (Lewis & Weigert, 1985). In e-commerce environment, trust refers to consumer's intention (trustor) to a website (trustee) in giving personal and financial information in lieu of products and services and promises that are stated following the policies and trends (Kaplan & Nieschwiet, 2003). In another definition, Ba and Pavlou (2002) points out that trust is mental evaluation of one party from another party that performs a specific transaction according to his/her expected certainty in an uncertain environment. Schaupp and Bélanger (2005) believes that this concept contains the customer's trust in the merchant and computer system, perceived reliability and rightfulness of the internet merchant as well as minimization of concerns of the customer.

3-3. E-commitment

From the viewpoint of Morgan and Hunt (1994) commitment occurs when the intended relation is important. In other words, one of the parties believes in the importance of relation and tries maximally to develop and maintain it. Commitment is a compulsory element in marketing (Chuang et al., 2016) since it has been recognized as a key factor for making long-term relations in online environment like satisfaction and trust (Agag & El-Masry, 2016; Chung & Shin, 2009; Fang et al., 2016). It is a strong symbol of longevity of a relation that predicts profitability and exploring its effect in buyer-seller relations is important due to difficulty of making online relations (Nusair, Hua, & Li, 2010).

In his study, Chung and Shin (2009) believes that e-commitment refers to nature of dependence, participation and sense of attachment in an online environment. (Luarn & Lin, 2003) believes that e-commitment is mental dependence of the consumer on e-services that is developed before the customer is able to recognize repurchase behavior. In other words, this concept is defined as the consumer's tendency to continue and ensure relationship with online retailer (Rafiq et al., 2013). Several studies have shown multi-dimensional structure of commitment (see: Allen & Meyer, 1990; Bilghan & Bujisic, 2015; Chih et al., 2015; Fullerton, 2003; Maheshwari, Lodorfos, & Jacobsen, 2014; Nusair et al., 2010; Nusair, Parsa, & Cobanoglu, 2011). Maheshwari et al. (2014) indicated that the most accepted components of commitment in marketing include affective commitment and continuous commitment that are arising from the three-component model (Allen & Meyer, 1990). These two dimensions have extensively been studied. Emotional commitment is a kind of emotional bond (Fullerton, 2003) that is based on tendency towards the partner, it refers to the situation where the customer shows emotional dependence on the relationship with e-tailer. Continuous commitment that is on the basis of economic structure of commitment refers to a situation where a customer recognizes the reward and benefits related to

the use of a website and retaining the relationship with the e-tailer. This dimension reflects tendency to remain due to costs of turnover (Nusair et al., 2011).

3-4. E-loyalty

Loyalty is one of the vital indexes to measure success of marketing strategies (Zehir & Narcıkara, 2016). Because of quick comparison of prices by customers and choosing a supplier who offers the lowest price in e-commerce (Gounaris, Dimitriadis, & Stathakopoulos, 2010) as well as the higher number of competitors, developing and fostering of loyalty is more difficult than in an offline environment (Chang, Changchein, & Huang, 2006). Thus, fostering customer loyalty is the main purpose of e-commerce (Carter et al., 2014). E-loyalty contains favorable attitude and repurchase behavior (Anderson & Srinivasan, 2003; Arya & Srivastava, 2015). Similarly, Sohrabi Safa and Ismail (2013) and Li, Aham-Anyanwu, Tevrizci and Luo (2015) believe that customer e-loyalty is favorable attitude and commitment to online retailer that is led to repurchase. E-loyalty is the customer's tendency to retain a sustainable relationship in future and commitment to revisit or repurchase the products/services, use the web as the first choice among other options that is supported by favorable beliefs and positive feelings toward an online firm that is led to transferring of behavior despite the situational effect and marketing attempt (Toufaily, Ricard, & Perrien, 2013). To put it differently, when a customer repeats online purchasing, it shows that he/she is loyal to a special e-business retailer (Nisar & Prabhakar, 2017) and not only performs repetitive purchases but retains a positive attitude towards service providers (Afifah & Asnan, 2015).

Generally speaking, marketing researchers and scholars have accepted an integrated approach of loyalty that is combination of two behavioral and attitudinal approaches (Valvi & Fragkos, 2012). Behavioral approach is focused on real behavior of loyalty like repetitive purchase, repetitive visit, and word of mouth behavior (Anderson & Srinivasan, 2003; Bilghan & Bujisic, 2015; Luarn & Lin, 2003; Toufaily et al., 2013;). Attitudinal approach shows the consumer's intention to participate in such real behaviors of loyalty (Bilghan & Bujisic, 2015). General belief is that the individual's behavior cannot explain different purchase conditions alone,

because there are personal motivations that are effective on the consumer's purchase from the same brand. Therefore, behavioral loyalty must be accompanied by an attitude which explains various purchase conditions. Hence, it is better to say loyalty is a combination of behavioral and attitudinal preferences (Arya & Srivastava, 2015).

4. Formulation of Hypotheses and Conceptual Model

4-1. Individual factors and ERQ dimensions

Individual factors (i.e. customer-related factors) have a main role in e-commerce acceptance and success (Jinghua et al., 2007; Rahayu & Day, 2015). Potential values of customer are key and essential factors for each firm that are involved in e-commerce (Kim, 2005). Analysis of the consumer behavior has considerable results for firm's strategies. Suitable and timely evaluation of factors which shape e-customers' behavior is a big challenge for managers and firms (Puto & Koscielniak, 2015). Thus, it is important to understand the consumer's behavior (Bilghan & Bujisic, 2015).

Individual factors in this study are adopted from the technology acceptance model proposed by Davis, Bagozzi and Warshaw (1989). A high number of previous studies have accepted the technology acceptance factors as a scale for customers' tendency towards online consumption (Lin & Sun, 2009). This model shows when a user deals with a new technology, a number of factors are effective on their decision about the manner and time of use (Tsai, Cheng, & chen, 2011) and assumes that perceived usefulness and perceived ease of use are two behavioral practices for the use of technology which are effective on real use behavior (Tseng, 2015). Likewise, attitude toward use is employed to determine behavioral intention that is led to real behavior (Lin, Wu, & Tran, 2015). This behavioral intention and real use behavior can be explained by three variables of ERQ (e-satisfaction, e-trust and e-commitment) and e-loyalty respectively.

Technologies and functions that are provided by the web operator must consider consumers' welfare and convenience due to their positive effect on online purchase (Lin & Sun, 2009). Customers have just tendency to perform e-transactions and e-purchase when they enhance their e-purchase effectiveness and help them complete the transactions (perceived usefulness) (Shih, 2004), can be learned easily (Lin et al., 2015) and also there is a positive attitude towards the website and e-purchase (Limbu, Wolf, & Lunsford, 2012). Given what has been proposed about the constructs of technology acceptance model, it is expected that individual factors are effective on developing behaviors such as e-satisfaction, e-trust and e-commitment. Thus, the research hypotheses are formulated as below:

H1: Individual factors are effective on customers' e-trust in online shops.

H2: Individual factors are effective on customers' e-commitment in online shops.

H3: Individual factors are effective on customers' e-satisfaction in online shops.

4-2. Organizational Factors and ERQ Dimensions

Now, firms have found that their ability to respond to unpredicted changes in the market is a vital factor for survival and the ability to match the processes of e-commerce with the customer's preferences is a necessity for online systems (Phillips & Wright, 2009). In this regard, organizational factors are very important in success and failure of modern technologies. They are internal factors that are effective on e-commerce acceptance (Molla & Licker, 2005; Rahayu & Day, 2015). Zeng et al. (2008) illustrate that management of traditional business and operational models cannot be employed easily in the economic environment and firms need to implement organizational changes to completely use e-commerce opportunities; otherwise, they have to leave that business. E-commerce immigration is a complex process including technology, work processes, strategy and organizational changes. Each firm should re-evaluate the created changes in existing technologies, competitive market, internal structure and organizational culture to obtain effective results (Krell & Gale, 2005).

Core activities of the firm are included in five dimensions of strategies of firms and change of viewpoints, organizational structure, product and market transformation, business processes and transformation of organizational culture. Firms have to develop these dimensions to enhance the capability of their transformations to obtain more sustainable competitive advantage (Zeng et al., 2008). The factors which constitute organizational factors in this study are technology, organizational structure, organizational strategy, organizational culture and business processes.

Given the above issues, it is expected that organizational factors are effective in each electronic platform such as online shops in achieving the purposes and survival. Undoubtedly, achieving these purposes depends on customers' retention and making e-customers more loyal which requires high levels of e-satisfaction, e-trust and e-commitment. Hence, the research hypotheses are proposed as below:

H4: Organizational factors are effective on customers' e-trust in online shops.

H5: Organizational factors are effective on customers' e-commitment in online shops.

H6: Organizational factors are effective on customers' e-satisfaction in online shops.

5. E-satisfaction as a Prerequisite for E-trust and E-commitment

Role of satisfaction in trust and commitment in online environment has been shown via various studies (see: Fang et al., 2016; Ghane, Fathian, & Gholamian, 2011; Mosavi and Ghaedi, 2012; Nusair et al., 2011; Shin, Chung, Oh, & Lee, 2013; Urueña and Hidalgo, 2016; Yoon, 2002). Yoon (2002) argues that performance assessment versus expectations determines satisfaction levels and it is expected that it has a positive effect on trust in a website. Moreover, dissatisfaction with the website decreases trust in it. Satisfactory experiences of the customer with a special e-tailer increase the customer's tendency for online purchase from the e-tailer (loyalty) as well as their trust in online media. Satisfaction with a special e-tailer system increases trust in the system (Ghane et al., 2011).

Satisfaction reinforces customer's decision-making to maintain trade relationship with an e-tailer. Relationship between satisfaction and commitment in online purchase is prominent in an online environment because of uncertainty (Fang et al., 2016). According to Pratminingsih et al. (2013), if the customer is satisfied and feels that he/she has adopted a correct decision in choosing the service provider, he/she will remain committed to him/her. Thus, a high level of customers' satisfaction with online purchase helps increase their trust and commitment to the online environment (e-tailer/e-service provider) (Pratminingsih et al., 2013; Shin et al., 2013). Given the above issues, the research hypotheses are proposed as below:

H7: E-satisfaction is effective on e-trust of customers in online shops.

H8: E-satisfaction is effective on e-commitment of customers in online shops.

6. E-trust as a Prerequisite for E-commitment

Trust has been recognized as a pioneer for commitment in relationship marketing literature (Morgan & Hunt, 1994). Results of the survey by Mosavi and Ghaedi (2012) shows a positive relationship between trust and commitment. They state that trustable providers play an important role in creating customers' commitment. In other words, when customers believe in honesty of service providers, their trust in the provider is enhanced. Hence, commitment becomes stronger when trust is increased (Pratminingsih et al., 2013). Commitment is the vital supplement of trust in trade relationships (Shin et al., 2013). So, trust is essential in creating commitment and this has been reported in several studies (e.g. Fang et al., 2016; Mukherjee & Nath, 2007; Wang & Chen, 2012;). Given the above issues, the research hypothesis is proposed as below:

H9: E-trust is effective on e-commitment of customers in online shops.

7. E-satisfaction, E-trust and E-commitment as Prerequisites for E-loyalty

Satisfaction with an electronic environment convinces the user to use a website repetitively. Therefore, it is essential to create e-loyalty (Arya & Srivastava, 2015). High satisfaction of customers is positively and directly effective on emotions, preferences and positive attitudes (Leung, 2016) and is led to re-purchase or repetitive purchases (Arya & Srivastava, 2015; Ghazali et al., 2016; Nisar & Prabhakar, 2017). High satisfied customers avoid suffering additional expenditures to look for the proposed substitutions by competitors and use the provided products and services by the same firm repeatedly and show loyalty (Iyer & Bejou, 2004). These people have tendency towards higher use of services, have stronger repurchase intention, and are eager to suggest those products and services to their relatives and friends than dissatisfied people (Ghane et al., 2011).

According to theory of planned behavior, beliefs are a considerable predictor of intents and next actions. Thus, customer's trust is effective on trust in a firm and its purposes for using the website. Whatever there is more trust in a service provider, the possibility to continue the relationship in future will be higher (Bilghan & Bujisic, 2015). Singh and Sirdeshmukh (2000) believe that trust is a mediator among the processes before and after purchase that is led to long-term loyalty of the customer. It is important to create trust to ensure customer's loyalty behavior especially in online purchase where customers can change their online shop easily (Xiao et al., 2016). Li et al. (2015) explored the importance of trust and satisfaction in loyalty from behavioral and attitudinal dimensions. From behavioral viewpoint, loyalty will be led to repetitive purchase in a reliable environment that is supported by trust in a product or service. From attitudinal viewpoint, loyalty is led to emotional dependence towards products and services that is presented by e-satisfaction. Numerous evidences have shown positive and direct relationship between satisfaction and trust and e-loyalty (Chen et al., 2015; Ghane et al., 2011; Leung et al., 2016; Shafiee et al., 2016; Sohrabi Safa & Ismail, 2013; Valvi & Fragkos, 2012). Following previous studies, the research hypotheses are proposed as below:

H10: E-satisfaction is effective on e-loyalty of customers in online shops.

H11: E-trust is effective on e-loyalty of customers in online shops.

8. E-commitment as a Prerequisite for E-loyalty

Despite the fact that some believe that commitment is part of loyalty (Liu, Guo, & Lee, 2011) some other conceive that commitment is distinctive from loyalty (Čater & Čater, 2010). They indicate that understanding of commitment is as an attitude and motivation to continue the relationship while loyalty is a combination of attitude and behavior. Commitment is created even before a customer thinks about loyalty (Izogo, 2015). It is one level lower than the customer's loyalty and is a proper method to understand the relationship between final loyalty and the customer (Al-Hawari, 2011). When a customer visits one website more than other websites and is committed to that website, loyalty is developed. Even if new substitutes are presented, he/she will remain his/her relation with that special website and if someone criticizes it, he/she will emphasize positive characteristics of the website (Pratminingsih et al., 2013). In other words, he/she tries maximally to maintain relation with the service provider and this helps loyalty (Vuuren et al., 2012). Given the above issues, the research hypothesis is proposed as below:

H12: E-commitment is effective on e-loyalty of customers in online shops.

To facilitate the research process with regard to the research purpose and responding to the research problem, the hypotheses are shown in the framework of the conceptual model in Figure 1.
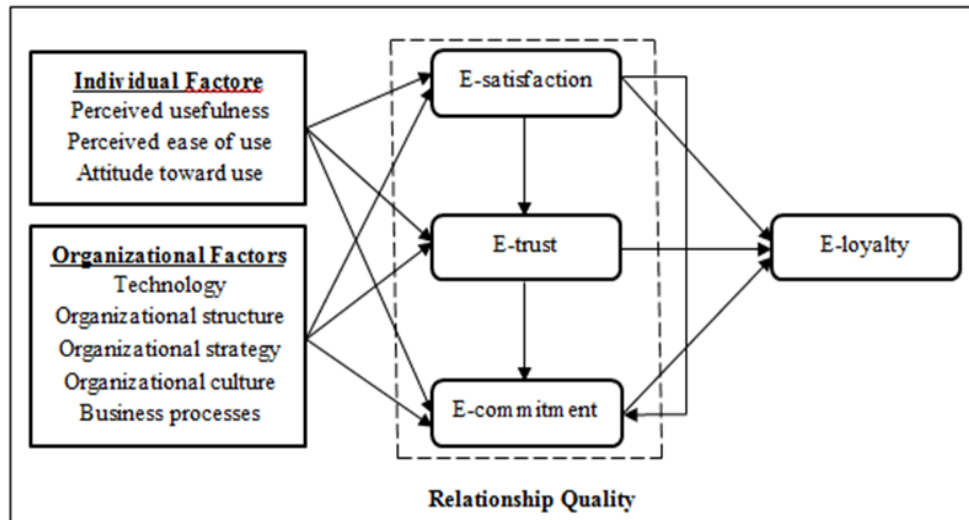
Figure 1. Conceptual Model

9. Methodology

This study is applicable from objective aspect since it explores the effect of individual and organizational factors on ERQ dimensions (satisfaction, trust and commitment) and intends to achieve customers' e-loyalty. It is descriptive-field from methodological aspect. Given the research purpose, the statistical population included all people who have the experience of purchasing from online shops in Iran at least one time. The sample size was determined equal to 384 via Morgan's Table.

Theoretical principles were collected through historical study and researcher self-made questionnaire was used to confirm or reject the hypotheses. First, literature on the research topic was formulated by reviewing the previous studies and the conceptual model was developed. Then, given the similar conducted studies and using the experts' opinions, a questionnaire containing 36 questions (the number of questions related to each variable is shown in the table) was developed based on the Likert five-option scale and was edited in pilot stage. Afterwards, the electronic version of the questionnaire was sent to sample members including different internet groups randomly via e-mail. Those who experienced e-Purchase responded to the questionnaire. Finally, the research model was tested using 358 acceptable questionnaires which were collected in a three-month period.

10. Result

10-1.Reliability and Validity

In order to measure reliability of variables, Cronbach's alpha was employed. According to the calculations of SPSS software, Cronbach's alpha coefficient of the whole questionnaire was estimated equal to 0.92. As minimum acceptable value is 0.7, tool of data collection has an acceptable reliability. To explore validity of the questionnaire, construct validity was examined using confirmatory factor analysis in the framework of structural equation modeling and via AMOS software besides content validity. To test the hypotheses by means of structural equation modeling, first, it is essential to analyze goodness of each measurement model separately. The findings of confirmatory factor analysis show that test statistics are significant and the measurement models are acceptable (Tables 2 & 3). According to the calculations in Table 2, it can be claimed that the questionnaire has the required reliability and validity. Given Hoelter index that should minimally be between 350 (0.05) and 365 (0.01), the number of intended data is appropriate and considering that Bartlett test statistic is significant (at confidence level 0.95), factor analysis is desirable to recognize the factor model. In Table 3, goodness indexes of measurement models are shown. Comparing values of each index with its appropriate goodness, it can be concluded that all indexes have acceptable values.

<div align="center">**Table 2. Reliability and validity coefficient of research variables**</div>

Variables	N of items	Factor loading*	Sig.	Cronbach's alpha
Individual factors-T	1	0.76	0.001	0.75
	2	0.6	0.002	
	3	0.8	0.000	
Organizational factors-T	1	0.86	***	0.85
	2	0.78	***	
	3	0.72	***	
	4	0.76	***	
	5	0.58	***	
Individual factors-C	1	0.53	***	0.76
	2	0.7	***	
	3	0.78	***	
Organizational factors-C	1	0.53	***	0.84
	2	0.9	***	
	3	0.5	***	
	4	0.69	***	
	5	0.78	***	
Individual factors-S	1	0.53	***	0.78
	2	0.96	0.002	
	3	0.57	***	
Organizational factors-S	1	0.053	0.006	0.93
	2	0.8	***	
	3	0.84	***	
	4	0.93	0.000	
	5	0.94	***	
E-trust	1	0.53	***	0.87
	2	0.85	***	
	3	0.85	***	
E-commitment	1	0.53	***	0.83
	2	0.95	***	
	3	0.61	***	
E-satisfaction	1	0.53	***	0.85
	2	0.87	0.005	
	3	0.9	0.001	
E-loyalty	1	0.53	***	0.79
	2	0.87	***	
	3	0.5	***	

Note*: *all factor loading > 0.5*

<div align="center">**Table 3. Goodness indexes of measurement models**</div>

Model / Fit indices	Individual factors-T	Organizational factors-T	Individual factors-C	Organizational factors-C	Individual factors-S	Organizational factors-S	E-trust	E-commitment	E-satisfaction	E-loyalty	Recommended value
CMIN/DF	1.88	1.98	2.56	2.25	2.54	2.12	1.41	2.23	2.45	1.69	< 5
GFI	0.96	0.97	0.91	0.94	0.93	0.94	0.91	0.95	0.96	0.94	> 0.9
CFI	0.92	0.98	0.94	0.95	0.94	0.91	0.95	0.98	0.92	0.95	> 0.9
RMSEA	0.05	0.072	0.063	0.07	0.055	0.056	0.062	0.054	0.074	0.068	< 0.008

10-2. Exploring the Mean of Variables

To explore the status of variables, or mean of variables, one-sample t-test was used. Table 4 shows the results of analysis of research variables. Given that the low limit and high limit are positive, it can be concluded that all variables are higher than the mean from the viewpoint of respondents. As a result, desirability of all variables was reported suitable.

Table 4. One-sample t-test

Variables	T	df	Sig.	Mean Difference	95% Confidence interval of the difference	
					Lower	Upper
Individual factors-T	17.08	358	0.000	1.31	1.57	1.46
Organizational factors-T	14.32	358	0.000	1.26	1.08	1.43
Individual factors-C	2.113	358	0.039	0.233	0.012	0.453
Organizational factors-C	3.24	358	0.002	0.366	0.1407	0.592
Individual factors-S	7.41	358	0.000	0.827	0.6044	1.051
Organizational factors-S	13.01	358	0.000	1.3	1.1	1.499
E-trust	12.7	358	0.000	1.27	1.07	1.47
E-commitment	14.24	358	0.000	1.28	1.10	1.47
E-satisfaction	13.35	358	0.000	1.32	1.12	1.52
E-loyalty	8.31	358	0.000	0.955	0.725	1.18

The TEST value = 3 spans across the header above the column labels.

10-3. Normality of Distribution of Variables

To test the research hypotheses, first, normality of variables should be examined. Thus, this condition was examined for the variables by means of KS (Kolmogorov-smirnov) test. Given the table, significance level of KS test for all variables is more than 0.05. Hence, distribution of variables does not have a significant difference from normal distribution and the research variables follow normal distribution. So, non-parametric statistical tests can be used for testing of hypotheses.

Table 5. KS test

Variables	Mean	Std.Diviation	K-S Z	Sig.
Individual factors-T	4.31	0.594	0.165	0.351
Organizational factors-T	4.26	0.681	0.153	0.232
Individual factors-C	3.23	0.855	0.109	0.072
Organizational factors-C	3.36	0.874	0.092	0.200
Individual factors-S	3.82	0.864	0.143	0.098
Organizational factors-S	4.3	0.773	0.183	0.412
E-trust	4.32	0.77	0.209	0.084
E-commitment	4.27	0.779	0.177	0.125
E-satisfaction	4.28	0.701	0.178	0.092
E-loyalty	3.95	0.89	0.153	0.235

10-4. Testing the Model and Research Hypotheses

In order to examine the proposed model and relations among model variables, structural equation modeling via Amos software was used. According to output of this software, the tested model is shown in Figure 2. The hypotheses were tested using two partial indexes of critical value CR and P. Based on the significance level 0.05, critical value should be greater than 1.96. By values less than it, the parameter is not considered important. Also values less than 0.05 for P-value show significant difference of the calculated value for regression weights equal to zero at confidence level 0.95.
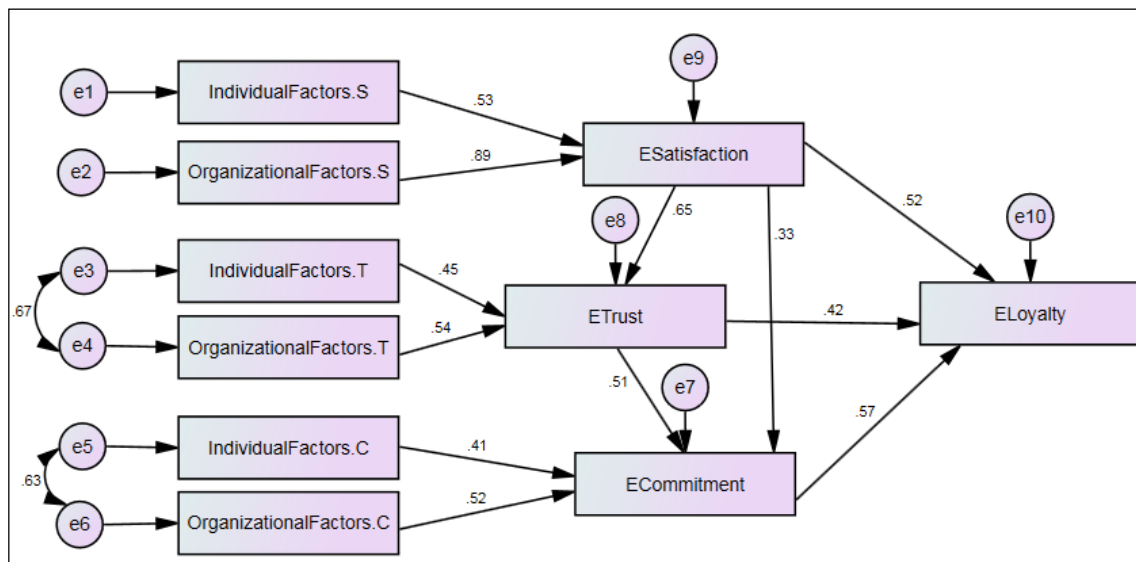

Figure 2. Structural equation modeling of research hypotheses

Goodness indexes of this model based on three groups of absolute, comparative and parsimonious

indexes are presented in Table 6. Values of indexes confirm the model. Given this table, structural

equation modeling related to the hypotheses and all goodness indexes are at a favorable status.

Table 6. Goodness indexes of structural equation modelling of the hypotheses

Fit indices		Recommended value	Structural Model	Result
Absolute	CMIN	---	658.129	Good fit
	P- Value	> 0.05	0.056	Good fit
Comparative	TLI	0.9 >	0.917	Good fit
	CFI	0.9 >	0.906	Good fit
Parsimonious	RMSEA	<0.08	0.053	Good fit
	PNFI	0.5 >	0.716	Good fit
	PCFI	0.5 >	0.821	Good fit
	CMIN/DF	<5	2.125	Good fit

Results of testing the hypotheses via structural equation modeling are shown in Table 7.

Table 7. Results of testing the hypotheses using structural equation modeling

Path	Path coefficient	CR	P	Result
Individual factors → E-trust	0.45	5.334	***	Confirm (H_1)
Individual factors → E-commitment	0.41	2.324	***	Confirm (H_2)
Individual factors → E-satisfaction	0.53	2.302	***	Confirm (H_3)
Organizational factors → E-trust	0.54	2.875	0.002	Confirm (H_4)
Organizational factors → E-commitment	0.52	3.801	0.009	Confirm (H_5)
Organizational factors → E-satisfaction	0.89	3.354	0.000	Confirm (H_6)
E-satifaction → E-trust	0.65	3.001	0.007	Confirm (H_7)
E-satifaction → E-commitment	0.33	3.523	***	Confirm (H_8)
E-trust → E-commitment	0.51	4.12	***	Confirm (H_9)
E-satifaction → E-loyalty	0.52	2.634	***	Confirm (H_{10})
E-trust → E-loyalty	0.42	2.298	***	Confirm (H_{11})
E-commitment → E-loyalty	0.57	2.502	***	Confirm (H_{12})

According to Table 7, hypotheses H1, H2, and H3 are confirmed considering significance

level less than 0.001 and critical value greater than 1.96; hence, individual factors are effective on

e-trust (0.45), e-commitment (0.41) and e-satisfaction (0.53) of customers in online shops

(p<0.001). Hypotheses H4, H5 and H6 are confirmed considering significance level less than 0.05

and critical value greater than 1.96; hence, organizational factors are effective on e-trust (0.54), e-commitment (0.52) and e-satisfaction (0.89) of customers in online shops (p<0.05). Hypothesis H7 is confirmed considering significance level less than 0.05 and critical value greater than 1.96; hence, e-satisfaction is effective on e-trust (0.65) of customers in online shops (p<0.05). Hypotheses H8 and H10 are confirmed considering significance level less than 0.001 and critical value greater than 1.96; hence, e-satisfaction is effective on e-trust (0.33) and e-loyalty (0.52) of customers in online shops (p<0.001). Hypotheses H9 and H11 are confirmed considering significance level less than 0.001 and critical value greater than 1.96; hence, e-trust is effective on e-commitment (0.5133) and e-loyalty (0.42) of customers in online shops (p<0.001). Finally, hypothesis H12 is confirmed considering significance level less than 0.001 and critical value greater than 1.96; hence, e-commitment is effective on e-loyalty (0.57) of customers in online shops (p<0.001).

Direct, indirect and total effects of all independent variables on dependent variables are shown in Table 8. As it is observed, the highest effectiveness among direct effects is related to organizational factors related to e-satisfaction on e-satisfaction. The highest effectiveness among indirect effects is related to organizational factors related to e-satisfaction on e-satisfaction and then e-satisfaction on e-loyalty.

Table 8. Direct, indirect and total effects of all independent variables on dependent variables

Variable independent	dependent variables	Direct effect	Indirect effect	Total effect
Individual factors-T	E-trust	0.45	----	0.45
	E-commitment	----	0.22	0.22
	E-loyalty	----	0.31	0.31
Organizational factors-T	E-trust	0.54	----	0.54
	E-commitment	----	0.27	0.27
	E-loyalty	----	0.37	0.37
Individual factors-C	E-commitment	0.41	----	0.41
	E-loyalty	----	0.23	0.23
Organizational factors-C	E-commitment	0.52	----	0.52
	E-loyalty	----	0.29	0.29
Individual factors-S	E-satisfaction	0.53	----	0.53
	E-trust	----	0.34	0.34
	E-commitment	----	0.35	0.35
	E-loyalty	----	0.6	0.6
Organizational factors-S	E-satisfaction	0.89	----	0.89
	E-trust	----	0.29	0.29
	E-commitment	----	0.29	0.29
	E-loyalty	----	0.96	0.96
E-satisfaction	E-trust	0.65	----	0.65
	E-commitment	0.33	0.33	0.66
	E-loyalty	0.52	0.46	0.98
E-trust	E-commitment	0.51	----	0.51
	E-loyalty	0.42	0.29	0.7
E-commitment	E-loyalty	0.57	----	0.57

11.Discussion

11-1. Individual Factors and ERQ Dimensions

The results of testing the hypotheses related to individual factors showed that they are effective on e-trust (H1), e-commitment (H2) and e-satisfaction (H3) of customers of online shops. This result is consistent with the findings in research Sohrabi Safa and Ismail (2013), regarding the effect of factors associated with customers group on e-trust and e-satisfaction. Lin and Sun (2009) pointed out that the individual factors in this survey referred to as technology acceptance factors are directly effective on satisfaction. Path coefficients indicate that with one unit change in individual factors, 0.53 units change are occurred in e-satisfaction, 0.45 units change in e-trust and 0.41 units change in e-commitment in direct direction. Thus, given this positive and significant effect, it can be stated that paying attention to individual factors and characteristics (the highest effectiveness respectively) will improve of e-satisfaction, e-trust and e-commitment of customers in online shops.

11-2. Organizational factors and ERQ dimensions

The results of testing the hypotheses related to organizational factors showed that they are effective on e-trust (H4), e-commitment (H5) and e-satisfaction (H6) of customers of online shops. This result is consistent with the findings in research Sohrabi Safa and Ismail (2013), regarding the effect of organizational factors on e-trust and e-satisfaction. Path coefficients indicate that with one unit change in organizational factors, 0.89 units change are occurred in e-satisfaction, 0.54 units change in e-trust and 0.52 units change in e-commitment in direct direction. Thus, given this positive and significant effect, it can be stated that paying attention to organizational factors and characteristics (the highest effectiveness respectively) will improve e-satisfaction, e-trust and e-commitment of customers in online shops.

11-3. E-satisfaction as a Prerequisite for E-trust and E-commitment

The results of the model indicated that e-satisfaction is effective on e-trust (H2) and e-commitment (H8) of customers in online shops. This is consistent with the results in Wang et al. (2016), Pratminingsih et al. (2013) and Urueña and Hidalgo (2016). They believed that the relationship between e-trust and e-satisfaction is considerably positive. Path coefficients indicate that with one unit change in e-satisfaction, 0.65 units change are occurred in e-trust and 0.33 units change in e-commitment in direct direction. Thus, given this positive and significant effect, it can be stated that customers' satisfaction with online shops (the highest effectiveness respectively) will increase e-trust and e-commitment of customers.

11-4. E-trust as a Prerequisite for E-commitment

The results of the model indicated that e-trust is effective on e-commitment (H9) of customers in online shops. This is consistent with the results in Pratminingsih et al. (2013) and Agag and El-Masry (2016). Agag and El-Masry, (2016) indicated that consumers who trust in an online web will more probably committed to that relationship. Path coefficients show that one unit change in e-trust will be led to 0.51 units change in e-commitment in direct direction. Thus, given this

positive and significant effect, it can be stated that customers' trust in online shops will increase e-commitment of customers.

11-5. ERQ dimensions as a Prerequisite for E-loyalty

The results of the model indicated that e-satisfaction (H10), e-trust (H11) and e-commitment (H12) are effective on e-loyalty of customers in online shops. This is consistent with the results in Pratminingsih et al. (2013), Verma et al. (2016) and Fang et al. (2016). Valvi and Fragkos (2012) declared that satisfaction and trust are post-purchase factors including attitudes and perceptions which follow purchasing a special product from an e-tailer and are effective on e-loyalty. Commitment is also an important variable in segregation among loyal and disloyal customers (Rafiq et al., 2013). Path coefficients indicate that one unit change in e-commitment will be led to 0.57 units change in e-loyalty, one unit change in e-satisfaction will be led to 0.52 units change in e-loyalty and finally one unit change in e-trust will be led to 0.42 units change in e-loyalty in direct direction. Thus, given this positive and significant effect, it can be stated that customers' commitment, satisfaction and trust in online shops will increase e-loyalty levels of customers.

Given the above issues, it is necessary to pay attention to organizational factors in the first step and then individual factors to enhance e-satisfaction, e-trust and e-commitment and improve e-loyalty of customers in online shops in Iran. Considering the effect of individual and organizational factors, the below suggestions are proposed:

Concentration on organizational factors: to reinforce organizational factors through reduction of additional and inefficient organizational rules, delegation of authority and power of decision-making to employees, omission of excessive paperwork, it is possible to create a suitable organizational structure. In the next step, work processes can be focused through automation of processes and omission of unnecessary stages, increased speed of service offering, identification and omission of repetitive and parallel activities (activities which reduce the costs). Then, via increased technological power, levels of ERQ dimensions are improved such as paying attention to adequate security characteristics: customers want to preserve their personal information. In this regard, ensuring the users to explain privacy of the system and security processes will be helpful. Guaranteeing quality of the information: web designers of the shop shall pay special attention to accuracy and up to dating of the information in a website for any user. Also, doing affairs electronically should be designed so that following the instructions becomes possible easily. It is also possible to create an appropriate organizational culture by establishment of common job values among managers and employees, mutual trust among managers and employees of the bank, adaptable organizational culture with environmental changes and encouraging to work group

results. And finally, an effective step can be taken to create e-satisfaction, e-trust and e-commitment and enhance relationship with customers of online shops via preparing organizational strategies towards customer orientation and execution of plans based on it through proportionality between strategies of various levels, the ability to cope with important and immediate environmental changes and up to dating of the strategies.

Concentration on individual factors: to reinforce individual factors, levels of ERQ dimensions (customers' e-satisfaction, e-trust and e-commitment) can be enhanced by focusing on perceived usefulness, perceived ease of use and attitude towards use. Website of online shops should be designed so that customers can have a proper understanding of its advantages including easy usefulness and ease of use. As a result, the website and offered services can be used in the shortest time along with the increase of productivity and efficiency for customers. Likewise, the customer feels more comfortable to use the website by a positive attitude toward it (including enjoying while using, loveliness and rationality).

12. Conclusion

This survey aimed to identify the effective factors on process of e-loyalty formation in customers and emphasizes the role of ERQ as a central structure to facilitate the process of loyalty formation. Each identified index and factor in this survey is the most important effective factor on ERQ. One of the considerable points about structural relations in the research model is that the important role of ERQ dimensions is clearly understandable. Given the model coefficients, organizational and individual factors have the highest effect on ERQ dimensions respectively. The results reveal that the effect of organizational and individual factors on e-loyalty is indirect and through intermediary variables of e-satisfaction, e-trust and e-commitment.

As a result, ERQ power that is effective on e-loyalty of customers depends on the obtained e-satisfaction, e-trust and e-commitment from individual factors (attitude toward use, perceived usefulness) and organizational factors (organizational structure, work processes, technology and organizational culture). The effect of independent variables on e-loyalty is indirect and through ERQ dimensions. Generally, it can be concluded that role of e-satisfaction, e-trust and e-

commitment in online environment and increased levels of ERQ dimensions are highly important in creating and developing e-loyalty of customers.

As there are limitations in each study, the present survey had some limitations too and could not control all effective variables. Given the nature of sample, the results should be interpreted and generalized very carefully. Hence, it is suggested to repeat the research topic in different industries such as insurance and hotel industries via comparative approach and evaluate generalizability of the model in other spatial scopes. This survey was conduced cross-sectionally and exploring the relationship among the variables in longitudinal form will give a more extensive insight with regard to probable effects among the variables. Although the results show indirect effect of individual and organizational factors on three dimensions of ERQ, it should be considered that a more complete model will be obtained by exploring direct effectiveness of individual and organizational factors on e-loyalty and understanding the relationship between the above-mentioned factors and each dimension. Given the positive effect of ERQ dimensions on e-loyalty, future studies can identify and extract other effective factors and indexes, improve the identified factors, rank and prioritize them in shops and other e-markets.

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