

Case Study

Investigating Consumer's Perceived Value in B2C Model of Electronic Commerce: A Research Framework and an Empirical Case Study

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Abstract

This study builds upon previous research on the value propositions of electronic commerce for the consumer and proposes a research framework for investigating consumer's perceived value in the B2C model of electronic commerce. The proposed research model encompasses five main dimensions of consumers' value proposition: Economic (3 components), Functional (7 components), Emotional (6 components), Social-Symbolic (5 components), and Technical (11 components). The paper also presents an application of the model to an empirical case study of consumers' perceived value of online shopping in Iran. Required data was collected via a survey from customers of digikala, the biggest e-commerce firm of Iran. Structural equation modeling and path analysis were used to test the proposed research model. Findings show that the five dimensions are positively related to consumers' value proposition and the proposed research model is fitted to explain the research purpose and hypotheses.

Keywords: B2C model, consumer's perceived value, e-customer, electronic commerce.

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Introduction

Internet has become an important accelerator for the world trade (Gabrielsson & Gabrielsson, 2001; Petersen, et al, 2002). For example, every year Alibaba.com offers hundreds of millions wholesale products for buyers in more than 190 countries (Alibaba.com, 2015). Retailers can now deliver customers with products and services via a variety of channels, including online websites, smartphone apps, and social media, thanks to advances in digital technology (Aswani et al., 2018; Sun et al., 2020). To meet diverse needs, consumers expect to alternately use different channels and touchpoints to complete the whole decision-making process (Alexander & Cano, 2020), which promotes the evolution of the B2C e-commerce model (Verhoef et al., 2015). In recent years, Pundits (such as the Bakos, 1991; Deighton & Kornfeld, 2009; Kozinets, 1999; Shipman, 2001) has introduced the emergence of a new kind of consumer-business relationship as a result of the emergence of Internet, that is partly because of shifting power from producer to the consumer. Internet has enhanced Consumer's power of bargaining, greater transparency, lower transaction costs, and more options for buying (Kucuk & Krishnamurthy, 2007). The online channel advantages (such as convenience, information availability, and accessibility at any time) can effectively reduce consumers' search costs, evaluation efforts, time costs (Shakir Goraya et al., 2020), and risk uncertainty (Molinillo et al., 2021). As powering consumers on the Internet, the consumers' expectations of retailers have been raised. Today, consumers who are normally tend to complain directly to merchants, there are more opportunities to do so. Easy and accessible Internet acts as a community that allows consumers potentially send their compliant as a message to a worldwide recipient (Lee & Cude, 2012; Ward & Ostram, 2006). E-commerce can be defined as the interaction between a company and other companies or customers (Shamsafar & Sharbafazari, 2008). E-commerce is the process of buying, selling or exchanging goods, services and information via computer networks, including the Internet (Ma & Wei, 2012; Langron, Thulani & Tofara, 2010). Given to the extremely complex nature of the business, its highly competitive environment, and diversity of the clients (Lombardi & Gorgoglione, 2013); e-commerce has played a critical role in economic development in industrialized countries and do it well (Vahidi, Yaghoubi & Mohanna, 2011) so that it can result in more effective marketing process, more effectiveness in processes, higher levels of customer satisfaction, and higher returns on investment (Panniello, Gorgoglione & Lombardi, 2013). E-commerce is not limited to buying and selling goods through the Internet, but includes all activities during the business. E-commerce is considered as a resource which improves the economy and speed up globalization and developing available technologies (Sharma, Sheth 2005). Investment in e-commerce organization can increase productivity and reduce costs. Studies show that e-commerce will lead to 21 to 70 percent savings on the costs of different activities. Statistics released by the World top 500 enterprises show that 34% of the company in 1995, and about 80% in 1996, have used this method to promote his own products. In 2006, online transactions worth 12.8 trillion dollars (Khanzadeh & Khani, 2008) and in 2015 it has been estimated nearly 40 trillion dollars.

In such a context it is important to identify and develop the consumer's perceived value. Consumer's perceived value as a source of the core competitiveness provides a foundation for understanding consumer behavior and decision process in retailing (Janssens et al., 2020). Consumer value encompasses the perceived value through using

products and services in a shopping environment including all circumstances associated with his/her satisfaction. Consequently, the creation of consumer value is the highest value for her/him in order to succeed in business. This is more important in e-commerce. Little literature was found to explore the association between online channel advantages and consumer perceived value, some important channel attributes considered as channel advantages were found to have a positive impact on Consumer's perceived value. Search convenience in webrooming behavior (Shankar and Jain, 2021), portability in the e-commerce context (Yang et al., 2021), and greater information availability in the e-commerce (Noble et al, 2005) are found to be positively associated with Consumer's perceived value. Important implication and outcomes in achieving consumer value are satisfaction and loyalty of customers in the long term and also gaining competitive advantage and brand relationship performance (Zhao et al., 2022) which are the achievements for both consumer side and firm side. Accordingly, identifying and modeling of consumer's perceived value in the context of e-commerce is the main purpose of this research. Thus, the main research question is: what is the consumer's perceived value in the B2C model of electronic commerce in Iran? Especially with focus on the biggest firm of the field in Iran, Digikala. This research aimed to present a proposed research model to answer this question and to provide contributions to the theory and practice.

Theoretical Background

Electronic commerce models

E-commerce is one of the sectors impacted mainly by the evolution of digital platforms. For instance, Amazon Marketplace, which connects manufacturers with end consumers, has continued to grow by an average of 35% every quarter since 2017 (Amazon, 2022), and the software-as-a-service platform Shopify has increased its turnover in the last five years more than tenfold, reaching almost 3 billion dollars in 2020 (Shopify, 2021). The evolution of these platforms has favored the emergence of newer approaches to online sales as opposed to the traditional indirect selling approach in which a SME manufacturer sells to an e-commerce reseller (whether a pure player or an omnichannel retailer), who then resells to the end consumer in a conventional business-to-business-to-consumer (B2B2C) dynamic (Chen et al., 2021). In particular, third-party e-commerce platforms such as Amazon Marketplace, eBay or Alibaba are increasingly gaining consideration within the online commerce marketplace, prompting SME manufacturers to adopt the so-called agency selling approach, in which the manufacturer relies on these third-party multi-sided platforms and sells directly to its end consumers via its platform account (Pu et al., 2020). A business model describes the intention of a company to create and capture value to relate new IT environments with business strategies (Hawkins, 2003). It is estimated that there are about 50 models for electronic business. There are several ways to describe these models (Long, Harrison-Walker 2003). The researchers use marketing trends, products, prices, places and promotion describe electronic business models (Strauss & Frost 2001, Shin 2001). Models of e-commerce express structural features across the value chain of suppliers and buyers (Gordijn & Akkermans, 2001) IT systems and architecture (Afuah & Tucci, 2001), technical platforms (Lynda & Applegate, 2001) and security (Toraby et al, 2002). But since a very few companies use online method for selling their products, this model is limited

application in developing countries. Many service providers in developing countries have created practical business models. Some argue that e-commerce is a key competitive advantage, if being used effectively in market (Bui & Jones, 2006). The term “Electronic business model” (business model or business model of e-commerce) or first introduced by IBM in 1990 as the transmitter key business processes through the use of Internet-based technologies (Li, 2007). An electronic business model is a vital basis for developing e-commerce system applications (Gordijn & Akkermans, 2011). A business model is defined as architecture for software and information services, include descriptions of various business elements and their roles, the potential benefits for various factors, and different revenue sources (Timmers, 1999). Business models have developed by entrepreneurs or managers to form and design the organization's activities as a connection between different activities and a system. Such a purposeful design across company boundaries is the essence of business model (Amit & Zott, 2009).

Consumer's perceived value

In recent years, the consumer's perceived value has received widespread attention (Hou and Sarigöllü, 2021). It plays an important role in predicting purchasing behaviour, achieving sustainable competitive advantage, and influencing relationship management (Chang and Wang, 2011). Consumer perceived value was the strategic priority of producers and retailers in the 1990s, and continues to be of great significance in the 21st century. It refers to the consumer's evaluation of product (or service) utility, which is based on consumers' perception of the “gain” and “give” of products (Sweeney & Soutar, 2001). Consumers' perceived value is not unilateral: it is a multi-dimensional concept. Therefore, most scholars use multi-dimensional methods to divide it (Lin et al., 2005). Sheth et al. (1991) put forward a theory to explain why consumers make choices (Sheth et al., 1991), and divided consumer perceived value into five dimensions, including social value, emotional value, functional value, cognitive value and conditional value. Wan et al. examined the perceived value of online customisation experience from the perspective of customer experience (Wan et al., 2017), and believe that perceived value includes service value, product quality, currency price and time cost. Petrick (2002) established a multi-dimensional service perceived value measurement scale (Petrick, 2002). According to its structure and dimensions, perceived value includes emotional value, quality value, price value and social value.

Creating consumer's perceived value in electronic commerce

Affordance theory has been applied to creating consumer's perceived value in electronic commerce in recent literature (Bayer et al., 2021), especially from a consumer perspective. For instance, Bayer et al. (2021) has reviewed online shopping studies and reinterpreted them from an affordance perspective, identifying seven key consumer-related e-commerce affordances: electronic transactions, temporal interdependence, online platforms, information transparency, and social interactions, as well as tailored and proactive services. Among these, one of the most studied affordances is social interaction. Works on online social platforms like WeChat or e-commerce platforms like Taobao identify interactive or dynamic shopping-experience characteristics, including metavoicing, social networking, and parasocial information (Wang et al., 2022). According to Shao and Pan (2019), media richness and interactivity promote social

interaction affordance and, thus, online social platform user participation. Information transparency also relates to Bayer et al.'s (2021) analysis of social interaction affordance. Specifically, e-commerce platforms encourage visibility, direction, and bullet information affordances (Sun et al., 2019, Wang et al., 2022). The visibility affordance arises from product information and photographs. Therefore, it may fall under information transparency, while guiding information and bullet information, which allude to other users' reviews of the product or the streamer's explanations, overlap with social interaction affordance. Lehrer et al. (2018) take a different stance, focusing on the affordances that organizations might actualize by employing big data analytics. Specifically, using business e-commerce platform functionalities helps promote service innovation. De Luca et al. (2021) also conclude that big data affordances drive service innovation. Another concrete example of service innovation is virtual reality, which affords online shoppers to virtually try on garments, leading to a greater intention to buy (Tawira & Ivanov, 2022). However, firm-focused affordance research on e-commerce platforms is scarce. Few managerial e-commerce affordances have been identified in the literature, and assessing what corporate decisions and processes contribute to affordance actualization remains an unresolved challenge (De Luca et al., 2021).

Method and measures

This paper in terms of its purpose is applied research. The current research was conducted with a mixed approach and in two main phases. In the first phase of this research, using the qualitative research method of the systematic review of the research background of Okoli & Schabram (2015), the components and sub-components influencing the consumer's perceived value in electronic commerce in the four stages of planning, selection, extraction and execution, were identified. In the planning stage, by determining the goal and subject area of the research, related articles from 1988 to 2022 using the keywords "electronic commerce" and "consumer's perceived value" in the Web of Science, Scopus and Google Scholar databases were found. Then, in the selection stage, these articles were examined from the point of view of non-repetition, appropriateness of the title, abstract and conclusion in the screening process, and finally 33 articles were selected as selected articles. In the extraction phase by studying the selected articles, the components affecting the consumer's perceived value in electronic commerce were identified, and in the execution phase, using qualitative content analysis and open and central coding, the initial conceptual framework was developed. Figure 1 showed a systematic guide to literature review development.

The second phase of the research with a quantitative research method of the survey type includes determining the statistical population, preparing the questionnaire, checking the validity of the questionnaire, distributing the questionnaire, checking the reliability of the questionnaire and evaluating the conceptual framework presented using statistical tests. At this stage, with using a self-administered questionnaire based on the findings of the previous phase of research required data was gathered. Likert scale in this research include: strongly agree=1, agree=2, neutral=3, disagree=4, and strongly disagree=5. By means of the Likert scale required data was gathered among statistical population was include customers of Digkala. Digkala is the main electronic company in the B2C model of ecommerce in Iran. This company is the largest online shop in Iran and the average daily more than 850 thousand visitors (Iran's digital start-ups signal changing times)

which is based in Tehran. In the survey phase among the research statistical population a sample consist of 300 online customers using probabilistic method were chosen. Then using convenient statistical software includes SPSS and LISREL, both analyses encompass measuring and structural analyses were implemented. Accordance with the findings arisen from the appropriate analyses, final research model will be presented and explained.

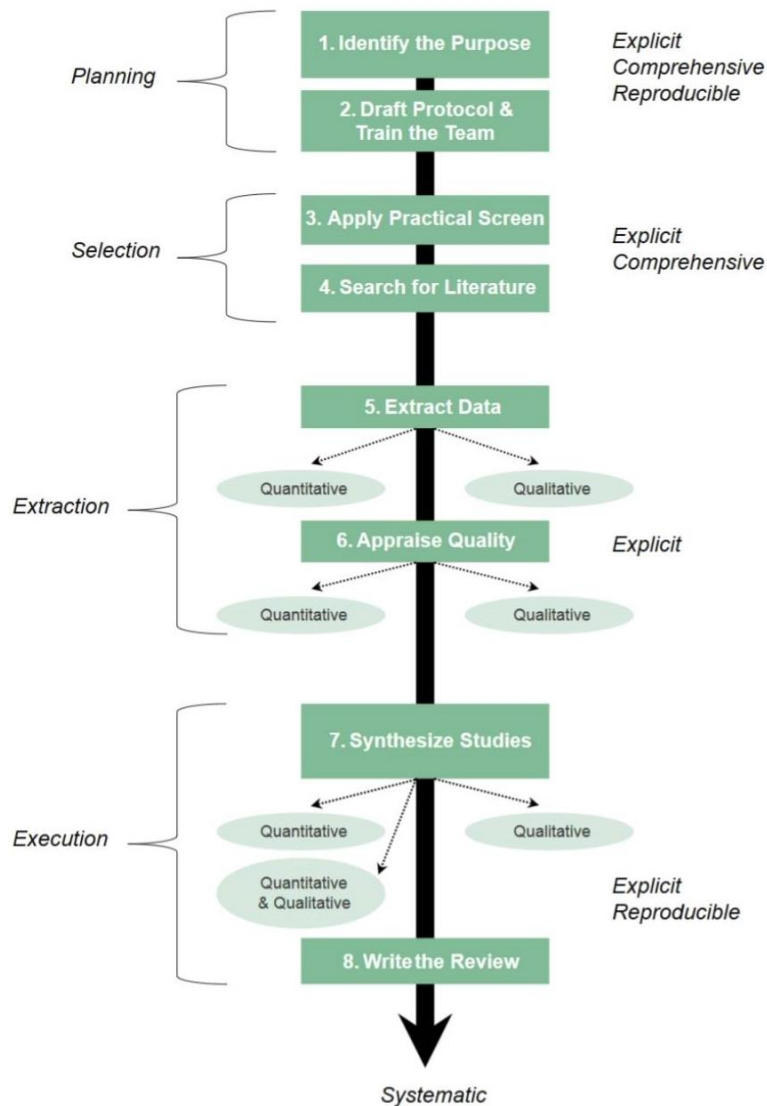


Figure 1: A systematic guide to literature review development

Development of a conceptual framework for components affecting consumer's perceived value in the B2C model of electronic commerce

In order to achieve the research model and then formulate hypotheses, we first explain and describe detected different consumer's perceived value. Then, we provide relevant hypotheses following each of the identified consumer's perceived value. Finally, according to the proposed hypotheses conceptual model will be extracted, introduced and presented.

Economic consumer's perceived value

Price is among the strongest factors for customer value (Smith & Nagle, 2005). By definition economic value is “to adjust monetary value of the product to the customer for the availability of competitive alternative products”. In other words, the economic value will be the lowest price or the best tradeoff between quality and price definition (Gale, 1994; Zeithaml, 1988). A value proposition economics usually requires resources and competence in an economic scale. Wal-Mart is a common example of a company that its competitive advantage based on purchasing volume, efficient distribution systems, and using information technology to simplify the supply chain (Tong and Tong, 2006). Using these sources, Wal-Mart is able to promise customers “always low prices”, and a providing a clear economic value for customers. Economic value to the customer is a framework based on a simple observation that focuses on McKinney’s strategy: determining the economic value, the value that the customer receives from the goods. The economic value of customers is the purchase price that customers are simply willing to pay for goods and services (Globe and Hindi, 1981).

H₁. The economic consumer's perceived value and its identified components are among the influencing factors in B2C business model of e-commerce in Iran.

Functional consumer's perceived value

Customers, whose initial motives are the appropriate options, seek for functional value. Sheth, Newman and Gross (1991) defined the functional value as “experienced current understanding of a potential alternative to applied, practical or physical function of product or service”. For a retail buyer, the applied value can be as finding the right products with minimal time and effort that can be physical or cognitive. Perceived time value minimizes sacrifice against benefit (Babin, Darden and Griffin, 1994). Applied value creation is often achieved by producing products needed by customers, and processes that enhance the shopping experience at different stages (for example, Seiders, Berry, and Gresham, 2000). Tesco is a British retailer which won its competitive advantage by generating super functional value for clients. For example: mechanized buying production, personnel training, and designing convenient shopping experience. Tesco's commitment is to focus on deliver functional value to the customer. Tesco’s summarized value proposition is “any little helps” that is successfully communicated to customers as well as employees. Any little help is the abstract of five promises: the path is clear; I can get whatever I want; price is good; I'm not in the queue, and the staff is perfect (Sheth & Randall, 2005).

H₂. The functional consumer's perceived value and its identified components are among the influencing factors in B2C business model of e-commerce in Iran.

Emotional consumer's perceived value

Customers gain emotional value by experimental aspects of buying and appreciated by our motivated retailers that receive emotional value. Emotional value can be defined as “the desirability of alternative capacity to arouse emotions or emotional desire” (Sheth et al., 1991; Arnold and Reynolds, 2003). There are different concepts of experimental

needs and demands of retailers, or “fun shopping incentives”. It contains enjoy shopping with friends and family, hunting bargain, and adventure or relaxation. In addition to being a tool to get the required products, the shopping experience is done for its own sake (Babin et al, 1994; Holbrook and Hirschman, 1982). And this is an approval for the effectiveness of store experience and personalized service environment (Turley and Milliman, 2000). The senses of sight, hearing, smell, feel, and even taste clue can be an effective way to create emotional value customer. Carbone (2004,) stated that “careful strategic planning provides a creative discipline of experiences that enable system stability and experience as connection controller in customer value”. In many recent examples of retails, there is a high spirit for using this opportunity (eg. the shop NikeTown). For additional services (eg. Wi-Fi, in-store cafe's, etc.), Customers are encouraged to spend their time in shopping and enjoy it. Barnes & Noble, the largest bookseller in the world and a 500 Fortunes company, is a classic example of a company that provides a different emotional value proposition. It is the first book retailer which provides a comfortable environment. By introducing in-store cafes, Buyers are encouraged to relax and spend leisure time browsing books. Emotional value proposition can be known as a combination of economic value and functionality. “Trader Joe’s” for example, is a grocery store which combined economic and emotional value in its value proposition. This is a place that many customers go there with the logic of emotional motivation: to save money, looking for news and enjoy the thrill of bargain hunting. The company finds its economic value in the direct purchase and using its brands.

H₃. The emotional consumer's perceived value and its identified components are among the influencing factors in B2C business model of e-commerce in Iran.

Social-symbolic consumer's perceived value

Customers are motivated by their experience of appreciating retailers; we can call this social value. The symbolic value of a product or customer experience can be expressed as positive use by customer itself or the others (for example, Belk, 1988; Smith and Colgate, 2007; Solomon, 1983). According to Flint (2006) “Symbols are certain types of social issues that are being used for something”; they have a special meaning and are used when a common meaning is transported to a recipient or the person (for example communication itself). The symbolic is presentation something other for the intent other than obvious use of a product. For example, Sheth et al (1991) states: “Even generic products, which are generally thought to be elected based on the functional value and benefits often are elected based on social values” (Sirgy et al, 2000). Dedication related to the symbolic value includes the risk of selecting a brand or retailers that is negative in connotations of use. As a value proposition, the symbolic value is detected based on personal experience of social interpretation code in use. For example, the value proposition of Body Shop is “made by passion” that is based on five corporate values: “In favor of animal rights, global trade protectionism, boost confidence, defend human rights, protect our planet” (Body Shop, 2007). These symbolic meanings are important, and are themselves represent personal experience of Body Shop’s customers. Symbolic value can be combined with other value propositions. Fourth (in terms of revenue) United States retailer giant, introduced its cause different from mere success in the competition via the profile as “luxury discount” (Berman and Evans, 2007). The purpose is to create

economic and symbolic value by offering branded products with designed attractive prices in a certain retail environment.

H4. The Social-symbolic consumer's perceived value and its identified components are among the influencing factors in B2C business model of e-commerce in Iran.

Technical consumer's perceived value

Technical value refers to technical function of a service provider. Technical consultants or executive personnel of services should provide technically good business services. They often intensely adhere to the standardization of tangible products (Desarbo, 1998). The concept of technical value relates to functional factor, which requires comparing technical, career, procedural etc. aspects to the industrial standard.

H5. The Technical consumer's perceived value and its identified components are among the influencing factors in B2C business model of e-commerce in Iran.

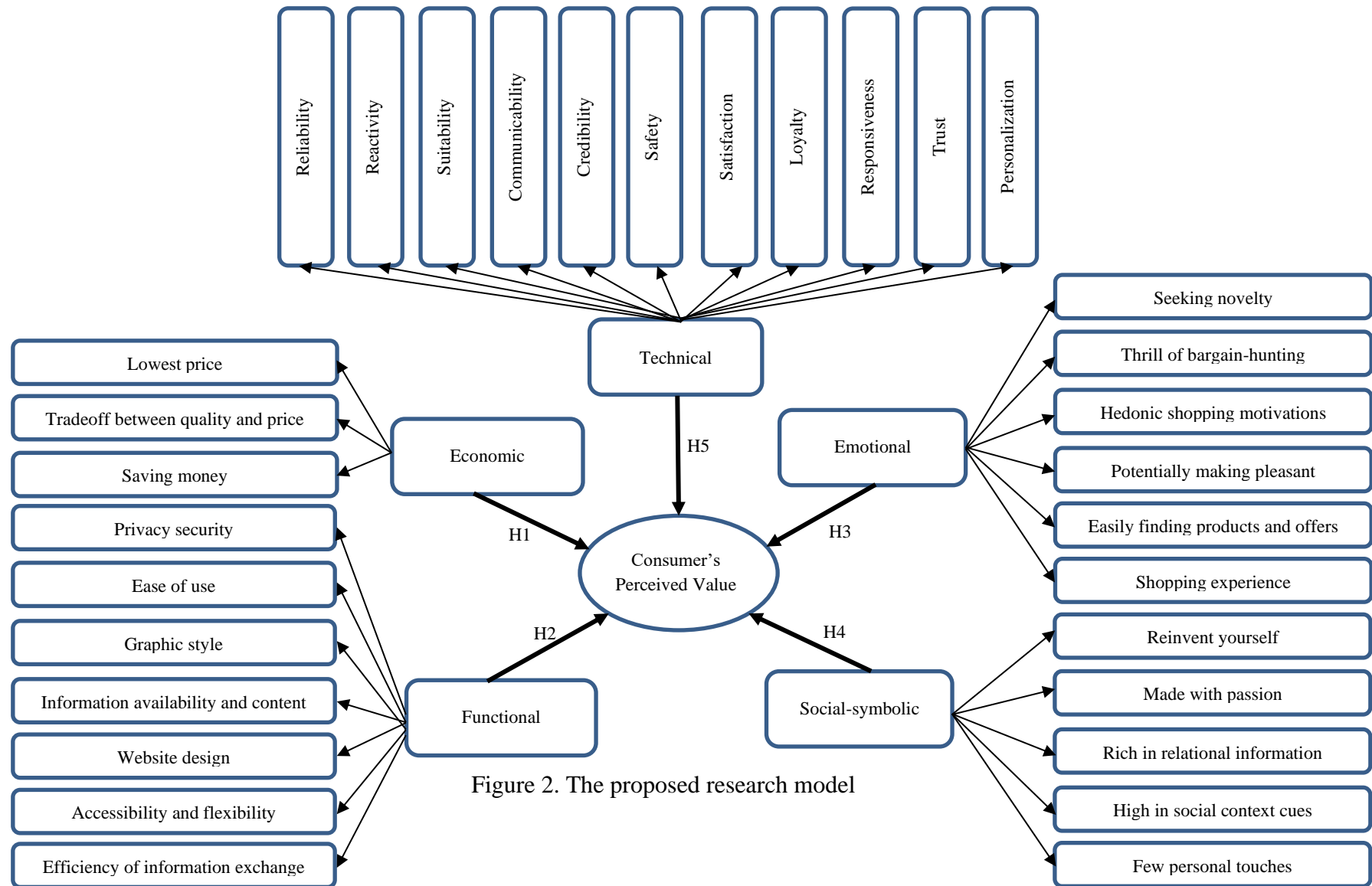


Table 3. The detailed research model's dimensions and related factors

Dimensions	Factors	Authors/Year
Economic	Lowest price	Bayer et al. (2021); Gale (1994) Zeithaml (1988)
	Tradeoff between quality and price	Gale (1994); Zeithaml (1988)
	Saving money	De Luca et al. (2021); Wan et al.(2017); Byrne (2004)
Functional	Privacy security	Zeithaml et al (2002)
	Ease of use	Yang et al (2001); Lohse and Spiller (1998)
	Graphic style	Lwarren et al (2004)
	Information availability and content	Sun et al. (2019); Wang et al., (2022); Yang et al (2001); Delone and McLean (1992)
	Website design	Bayer et al. (2021); Kim & Lee (2002); Parasuraman et al. (1988)
	Accessibility and flexibility	Wallace et al. (2004)
	efficiency of information exchange promote service innovation	Choudhury & Karahanna (2008) Lehrer et al. (2018); De Luca et al. (2021); Tawira & Ivanov (2022)
Emotional	Seeking novelty	Byrne (2004)
	Enjoying the thrill of bargain-hunting	Byrne (2004)
	Hedonic shopping motivations	Arnold & Reynolds (2003)
	Potentially making pleasant	Duff, (2006)
	Easily finding products and offers	Duff, (2006)
	Update and differentiate the shopping experience	Wan et al.(2017); Duff, (2006)
Social-symbolic	Reinvent yourself	Baar, (2000)
	Made with passion	Body Shop, (2007)
	Rich in relational information	Cyr et al. (2007)
	High in social context cues	Wang et al. (2022); Shao and Pan (2019); Petrick (2002); Cyr et al. (2007)
	Few personal touches or social cues	Bayer et al. (2021); Cyr et al. (2007); Davis et al. (2011)
Technical	reliability	Bayer et al. (2021); Parasuraman et al, (1988); Zhu et al (2002); Kim & Lee (2002)
	reactivity	Parasuraman et al, (1988)

Dimensions	Factors	Authors/Year
	suitability	Parasuraman et al, (1988)
	communicability	Parasuraman et al, (1988)
	credibility	Parasuraman et al, (1988)
	safety	Parasuraman et al, (1988)
	satisfaction	Wan et al.(2017); Lin et al, (2005); Zhu et al, (2002); Kim & Lee, (2002); Anderson & Sullivan (1993); Yang et al, (2005)
	loyalty	Lin et al, (2005)
	responsiveness	Parasuraman et al, (1988); Kim & Lee, (2002); Wallace et al, (2004)
	trust	Mcknight et al (2002); Kimery & McCard, (2002)
	personalization	Parasuraman et al, (1988); Yang et al, (2005)

Data analyses

At the first part of the data analysis, the descriptive statistics, mainly demographic characteristics, of the sample of research are assessed. In terms of gender, the distribution of the sample was 57.3% for male and 42.7% for female; According to the age, the under 20 and 20-35 are the lowest and highest respectively; and also based on the education bachelor degree and then Master degree (graduate) have the most frequencies among all categories in this parameter.

Table 4. The demographic characteristics of the sample

Demographic variables	Frequency	cumulative frequency	Percentage	Cumulative percentage
Gender				
Male	172	172	57.3	57.3
Female	128	300	42.7	1
Age				
< 20	14	14	4.7	4.7
20-35	149	163	49.6	54.3
35-50	110	273	36.7	91
> 50	27	300	9	1
Education				
Diploma	42	42	14	14
BS	125	167	41.7	55.7
MSc	103	270	34.3	90
PhD and higher	30	300	10	1
Total	300	-	1	-

To measure the validity of this research both qualitative and quantitative approaches, namely experts and statistical analyses, were used. After applying experts' views in

modifying research tool, using the Exploratory Factor Analysis (EFA) the validity of the research was determined. By implementing factor analysis, the extracted shared value amounts of all factors in questionnaire were above than 0.5 and were remained in the analysis. The value amounts of factor loadings of all dimensions and factors of research were calculated between 0.745 and 0.895 which illustrated the high influences of dimensions and factors identified in order to explain the research model in this research. Also, the KMO criterion for this research was 0.792 (above 0.60) which was demonstrated sampling adequacy.

Table 5. Results of sampling adequacy and Bartlett's test

Test	Results
KMO of Sampling Adequacy	0.792
Bartlett's Test of Sphericity	12052.054
df	1225
Sig.	0.000

Finally, to meet the reliability using cronbach's α all parts of the research separately were tested. The Cronbach's Alpha of total research was calculated as 0.895 which demonstrated the high reliability of this study. The calculated cronbach's α for all parts were above 0.70 (Nunnally, 1978); these calculated amounts were between minimum 0.855 and maximum 0.911.

Table 6. Results of reliability test for research tool

Dimensions	N of factors	N of questions	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Economic	3	5	8.8068	3.925	0.617	0.436	0.911
Emotional	7	10	8.8969	4.031	0.776	0.612	0.864
Functional	6	10	9.0429	4.205	0.788	0.730	0.877
Social-Symbolic	5	8	8.8975	4.059	0.760	0.649	0.858
Technical	11	17	9.0791	4.180	0.840	0.782	0.855

In order to assess the situation of each dimension and also explore the effects of these dimensions on the research proposed model the one sample t test is implemented. The result of this test is presented at the table 7. Based on the measured Mean and Sig value of this test at 99% confidence level, all dimensions of research have been confirmed. This indicates that all the dimensions identified in this study are affecting the value propositions of consumers in the research and hence this test demonstrates the affectability of related dimensions and factors on the proposed research model.

Table 7. The results of one sample t test to measure the main dimensions

Dimensions	N	Mean	SD	t	df	Sig.	Mean Difference	95% Confidence Interval	
								Lower	Upper
Economic	300	2.3740	.72194	-15.019	299	.000	-.62600	-.7080	-.5440
Functional	300	2.2290	.55508	-24.058	299	.000	-.77100	-.8341	-.7079
Emotional	300	2.1260	.53821	-28.127	299	.000	-.87400	-.9352	-.8128
Social-Symbolic	300	2.0155	.57698	-29.553	299	.000	-.98446	-1.0500	-.9189
Technical	300	2.2984	.54617	-22.249	299	.000	-.70157	-.7636	-.6395

SEM model and results

In order to test the structural situation of the conceptual research model the SEM (Structural equation modeling) is used based on the LISREL approach. The output of SEM is including to basic modes: standardized solutions or coefficient and significance circumstances. Figure 3 shows the structural model according to standardized coefficients. Five main dimensions of the proposed research model including Economic, Emotional, Functional, Social-Symbolic, and Technical with their related standardized coefficients are illustrated in this figure. Results of SEM as standardized solutions mode show that five basic identified dimensions in this research are positively related to consumer's value propositions in the B2C model of e-commerce in Iran. Path coefficients are between 0.63 (as minimum amount for Economic dimension of consumer's value proposition) and 0.93 (for maximum amount for technical dimension of consumer's value proposition).

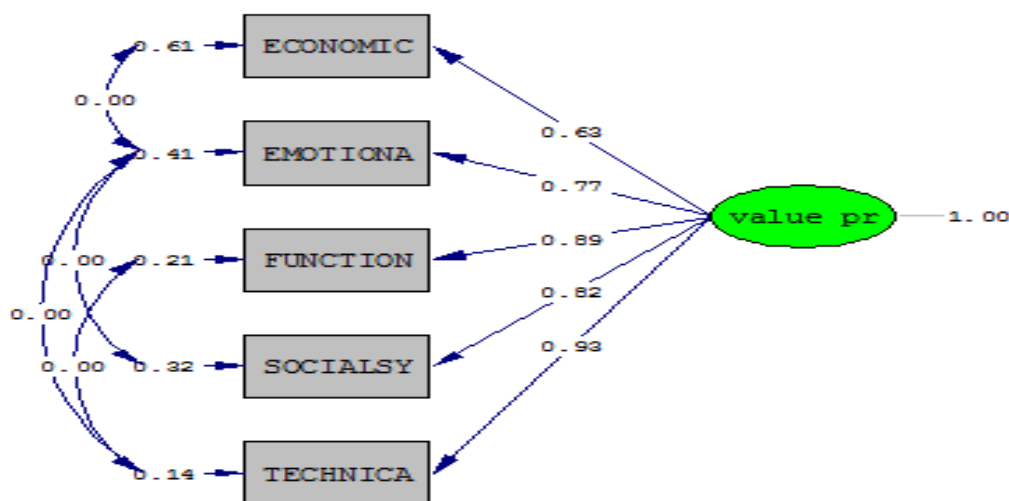


Figure 3. Structural equation modeling in the standardized solutions mode

Also, the proposed research model based on the t-values is presented in the figure 4. In order to achieve the significant relationships and meaningful structural model, with regard to this important issue that the acceptable confidence level is 0.95 and $\alpha=0.05$, all

calculated t-values, according to the significance mode of measured research model, are outside the range of ± 1.96 ; As figure 4 presents, all calculated amounts of paths between basic dimensions and consumer's value are significant and thereby are confirmed. Therefore, model is able to explain the significant-confirmed relationships among identified variables of research and could eventually provide a clear picture of consumer's value propositions.

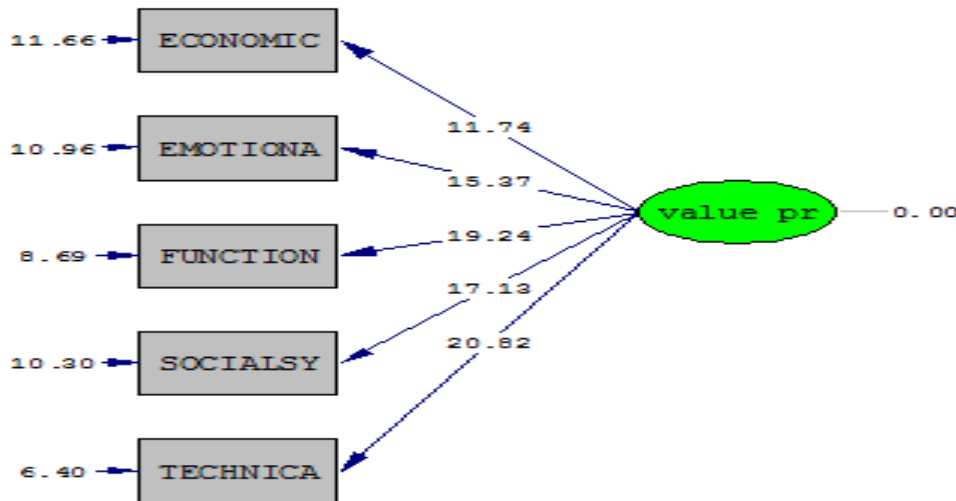


Figure 4. Structural equation modeling in the significance mode

To address the proposed research model according to goodness-of-fit indices, table 8 provides the most important fitness indices. In order to examine these indices and make a decision it is enough to compare the calculated amounts in this study with the recommended values (or standard amounts). As the table presents, fitness indices are in a good condition and able to investigate and measure the proposed research model.

Table 8. Results of the model goodness-of-fit

Fit indices	Structural model	Recommended value
χ^2/df	2.663	< 3
GFI	0.940	> 0.8
AGFI	0.810	> 0.8
RMSEA	0.017	< 0.08
CFI	0.970	> 0.9
P-Value	0.000	< 0.05

Conclusion, limitations and directions for future research

The results of this study provide consumer's value propositions in terms of main identified dimensions and also their related identified components for the B2C model of e-commerce in Iran. This research has tried to design a proposed conceptual model to explain these identified dimensions and related components. For this purpose, according to figure 1, the hypothesized proposed research model, five hypotheses were presented. The results of analyses are provided in the table 9. To achieve convenient investigation

of the hypotheses table 9 presents basic parameters including path coefficients, critical ratios, p-values, along with the five basic hypothesized relationships in form of abbreviations. As table 9 shows all research's hypotheses not rejected and accordingly, all hypotheses which indicates the basic dimensions of consumer's value proposition are confirmed and then accepted.

Table 9. Results of hypothesis testing

Hypothesis	Hypothesized relationship	Path coefficient	Critical ratio	P-value	Decision
H1	Econ. → CVP**	0.63*	11.74	0.000	Not rejected
H2	Func. → CVP**	0.89*	19.24	0.000	Not rejected
H3	Emot. → CVP**	0.77*	15.37	0.000	Not rejected
H4	Soci. → CVP**	0.82*	17.13	0.000	Not rejected
H5	Tech. → CVP**	0.93*	20.82	0.000	Not rejected

Note: * $p < 0.05$., ** CVP: Consumer's Value Proposition

Competitive customer value proposition is more than a slogan. In fact, it is a concept of the strategy that helps customer relations and company approaches to create value and ultimately competitive advantage for the company. Customer value proposition represents a complete customer experience and reduces customer risk by ensuring the provided services (Kandampully and Butler, 2001). By providing values in the electronic businesses, we attempt in this article to lead the company's strategies focus on customer needs and desires in order to organize companies to gain competitive advantage in the industry. Based on this framework, the following results were obtained:

- Identifying customer value proposition by understanding the key aspects that motivate the target customers;
- Developing customer value proposition with respect to implemented evaluation hierarchy and combination of economic, functional, technical, personal and social propositions; and
- Assessing the competitive value proposition based on the compatibility with the resources and competencies required in delivering value.

In this study, we examine the consumer value proposition with focus on the Digikala Company as a case study which is active in the field of e-commerce in the country. The proposed value is a distinct combination of elements that met the needs of a part of customers, and through which create value. According to the Economist Journal report, in 2014 this website with a capital size of 150 million \$ has the first rank in e-commerce companies in Iran. By collecting data through questionnaires and analyzing and prioritizing them, we identified provided five values for the Digikala Company in the developing country, Iran, in order of economic, emotional, social, functional and infrastructural values, so all hypotheses were effectively confirmed. Compared to the Amazon Company in the United States where the order and importance of values are infrastructure, economic, social, functional, and support (Amazon, 2012).

Since communications infrastructure is considered one of the necessities and requirements of e-commerce, and also one of the threats for the development of e-commerce in Iran and other countries, this entailed providing prerequisite for the realization of the investment in information and communication infrastructure. In addition, there are some obstacles on the way of using e-commerce in some countries, caused by restrictions in the investment that need more attention. It is clear that studies of this kind should continue. Therefore, it is recommended that interested researchers with the problem, to add its richness.

Suggestions for future research

Researchers in their future studies can further focus on the field of successful Iranian companies in e-commerce, and to develop and explain more values considered by customers of this business model and identify more values. In this study we didn't focus on support value proposition for customer which has a great importance for customer and for the continuation of the relationship in the organizations. This can be further considered in future studies.

Limitations

Lack of familiarity with the Digikala site in using it, especially in elderlies is considered as one of limitations in this study. Among other restrictions we can point to unfamiliarity of the audience with value and similar topics and lack of people understanding from their needs and their selves.

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Appendix

A: Abbreviations Table

Table 10. The commonly used abbreviations and terms in the paper

Abbreviations	State
CRM	Customer Relationship Management
B2C	Business to Customer
LISREL	Linear Structural Relationships
SEM	Structural equation modeling
EC	Electronic Commerce
SD	Standard Deviation
df	Degree of freedom
Sig	Significance
EFA	Exploratory Factor Analysis
KMO	Kaiser-Meyer-Olkin
BSc	Bachelor of Science
MSc	Master of Science
GFI	Goodness of Fit Index
AGFI	Adjusted Goodness of Fit Index
RMSEA	Root Mean Square Error of Approximation
CFI	Comparative Fit Index
χ^2	Chi-Square

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