

# Examining the evolutionary process and the components affecting the improvement of customers' online shopping experience in e-commerce startups

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## Abstract

Given the role and importance of the customer in online shopping, addressing the customer experience in order to improve online shopping in electronic startups in the field of health, safety, and environment is important, so this study aims to identify and evaluate factors to improve online shopping. Based on customer experience in electronic startups in the field of health, safety, and environment. This research is applied research in terms of purpose and is a descriptive survey in terms of data collection. The method of data collection in this study was a questionnaire. The results showed that these dimensions have a positive effect on improving online shopping based on the customer's empirical process and encourage customers to repurchase. Utilizing the introduced model helps e-startups to identify these dimensions and increase the performance of their startups by eliminating their weaknesses and strengths in the relevant field, and also while retaining current customers, and more users by purchasing Attract online.

Keywords: online shopping, customer experience, startup  
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## 1 Introduction

Identifying the variables that affect customer behavior is vital for many organizations and companies because it provides an opportunity to reduce costs and increase profits. It also affects various performance areas in organizations. Customers are the lifeblood of organizations. Nowadays, only the organizations that attract and retain a sufficient number of customers can survive and be successful [12]. Since consumers are the milestones of all marketing activities, a successful marketing should involve understanding and examining the consumer behavior [32]. According to a report published by Forrester, a market research company, 30% of companies will face significant reductions in the quality of the customer experience in 2018, which will consequently hinder the growth of those businesses. Over time, customer expectations have outpaced companies' ability to develop innovative experiences, and this delay and inability to meet the changing needs of the customer indicates that companies fail to adapt to environmental changes quickly [19].

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Despite the positive aspects, startups have their own problems and limitations. Due to their vulnerability in terms of resources and capabilities, their emergence and existence are highly dependent on the environmental factors and on their structures and institutions. Even after development, many of these companies either do not grow fast enough or do not grow at all [19]. Start-up businesses have attracted considerable attention in the new approach in modern economy [21]. Hundreds of thousands of new businesses are created every year around the world, and it is estimated that about half a billion people worldwide are actively attempting to start a new business [22]. The aim of these companies is to pay attention to research achievements from a knowledge based and technological standpoint, taken from the production process to the market, responding to social needs and designation of technology to the owners of ideas in socio-economic environments. By definition, a startup is a temporary organization which is formed in search of a scalable and repeatable business model [6]. There are several definitions for a startup. In the Marriam-Webster Dictionary, startup is defined as a fledgling business enterprise [27]. Starting a new business involves a great deal of risk. The considerable number of the failures of entrepreneurs around the world demonstrates that only 20% of the businesses have lasted for more than three years and some businesses have to leave the market due to poor performance or not reaching the operational stage. According to a study conducted at Harvard Business School 75% of startups fail. Integration of startups with knowledge creation and development of the country leads to the transference and localization of knowledge and technology in the country; diversification of income sources; a surge in investment in the country; a rapid growth of startups compared to other sectors; innovation; and transformation of knowledge into products with high economic values. This trend also reduces unemployment among young people, contributes to solving the problem of employment, and creates job opportunities in the country. Strategic issues in the medical health sector include: citizens' unhealthy lifestyle (insufficient physical activity, malnutrition, poor sleep and so on); not having fair access to healthcare services with good quality and reasonable prices; the need for improving the health literacy of citizens; inefficiency of health education system and the use of traditional educational methods; lack of integrated, up-to-date, valid and accurate information in healthcare system at the national level; weakness in knowledge management of the healthcare system; and the need for improvement of medical equipment and medication. All of these issues can increase employment in the country. Given the current situation, introducing the development models of leading countries into the realm of startups and integrating them with the existing conditions can help the development of startups and successful implementation of an electronic startup in various sectors such as healthcare and medicine. In this study, the researcher seeks to answer the following question: what is the online shopping improvement model of customers' shopping experience in the startup business in healthcare sector? According to the referred literature hypotheses were made as follow;

**H1:** Respect for the customer is effective in improving online shopping based on the customer experience process.

**H2:** Perceived Enjoyment is effective in improving online shopping based on the customer experience process.

**H3:** Time importance is effective in improving online shopping based on the customer experience process.

**H4:** Information security is effective in improving online shopping based on the customer experience process.

**H5:** Usefulness is effective in improving online shopping based on the customer experience process.

**H6:** Perceived Experience is effective in improving online shopping based on the customer experience process.

**H7:** Perceived value is effective in improving online shopping based on the customer experience process.

**H8:** Perceived mentality is effective in improving online shopping based on the customer experience process.

## 2 Methodology

This research is applied in terms of purpose and descriptive-survey method. In the quality section, the theme analysis method is used. The research community is startup experts, university professors, senior managers, startup founders, site designers, startup team members, site managers who work in the field of health, treatment and health. Data analysis in the qualitative part is performed using the Grand Theory method and with the help of MaxQDA software. The method of data collection in this study was a standard structured questionnaire. A questionnaire containing criteria for improving online shopping and customer experience that was developed using previous studies. In a small part of the research community, managers, customers, employees in the field of Health, treatment and wellness, site designers, founders, managers and team members of nine startups (Dr., Good Doctor, Health Cottage, Telemedicine, Dr. Saina, Healing Dock, Treatment Center, Super Health and Dr. One).

Vote to calculate Cronbach's alpha coefficient First, the variance of the scores of each subset of the questionnaire (or subtest) and the total variance must be calculated. Then he calculated the value of alpha coefficient using the following formula.

$$\alpha = (k/(k-1))(1 - (\sum \sigma^2 y_i / \sigma^2 x)) \quad i = 1 \text{ to } k$$

where:

- $k$  refers to the number of scale items
- $\sigma^2 y_i$  refers to the variance associated with item  $i$
- $\sigma^2 x$  refers to the variance associated with the observed total scores

Alternatively, Cronbach's alpha can also be defined as:

$$\alpha = (k \times \bar{c}) / (\bar{v} + (k-1)\bar{c})$$

where:

- $k$  refers to the number of scale items
- $\bar{c}$  refers to the average of all covariances between items
- $\bar{v}$  refers to the average variance of each item

Cronbach's alpha is thus a function of the number of items in a test, the average covariance between pairs of items, and the variance of the total score. The sample size here was 384 based on Morgan's table. Demographic information of the participants is given in Table 1.

Table 1: The number of questions and Cronbach's alpha coefficient for each construct

Components	Number of items	$AVE^2$	Composite Reliability	Cronbach's alpha
Customer respect	4	0.53	0.79	0.872
Customer enjoyment	4	0.56	0.75	0.823
The importance of time	3	0.43	0.71	0.762
Information security	3	0.60	0.80	0.793
convenience	3	0.52	0.76	0.722
perceived experience	4	0.48	0.89	0.897
Value experience	3	0.46	0.91	0.912
Perceived image	3	0.51	0.79	0.786

An important criterion that is determined by divergent validity is the degree of relationship between a construct and its indices in comparison with the relationship between that construct and other constructs; in other words, an acceptable divergent validity of a model indicates that a construct in a model has more interaction with its indices than with other construct. The observed variables are estimated based on the following formula:

$$F_j = \sum W_{ji} X_i = W_{j1} X_1 + W_{j2} X_2 + \dots + W_{jp} X_p$$

where  $W$  represents the coefficients of the factor score and  $P$  represents the number of variables. The results of divergent validity are shown in Table 2.

In Table 2, the square root of the extracted variance of the variables located in the main diameter of the matrix is greater than the correlation value between them located in the lower and left cells of the main diameter. Therefore, it can be concluded that the variables in the model have more interaction with their indices than with other constructs, and the divergent validity of the model is appropriate.

### 3 Results

Structural model fit: To examine the fit of the structural model  $R^2$  and  $Q^2$  criteria are used. The values of each of them are given in Table 3, which indicates the appropriate fit of the structural model.

Table 2: Assessment of divergent validity by Fornell and Larker method

	<b>Customer respect</b>	<b>Customer enjoyment</b>	<b>The importance of time</b>	<b>Information security</b>	<b>convenience</b>	<b>perceived experience</b>	<b>Value experience</b>	<b>Perceived image</b>
<b>Customer respect</b>	0.79							
<b>Customer enjoyment</b>	0.39	0.82						
<b>The importance of time</b>	0.10	0.39	0.73					
<b>Information security</b>	0.47	0.29	0.14	0.28				
<b>convenience</b>	0.39	0.47	0.16	0.32	0.20			
<b>perceived experience</b>	0.39	0.14	0.0.37	0.30	0.45	0.26		
<b>Value experience</b>	0.64	0.29	0.22	0.42	0.79	0.36	0.0.19	
<b>Perceived image</b>	0.73	0.28	0.0.20	0.17	0.30	0.33	0.0.26	0.52

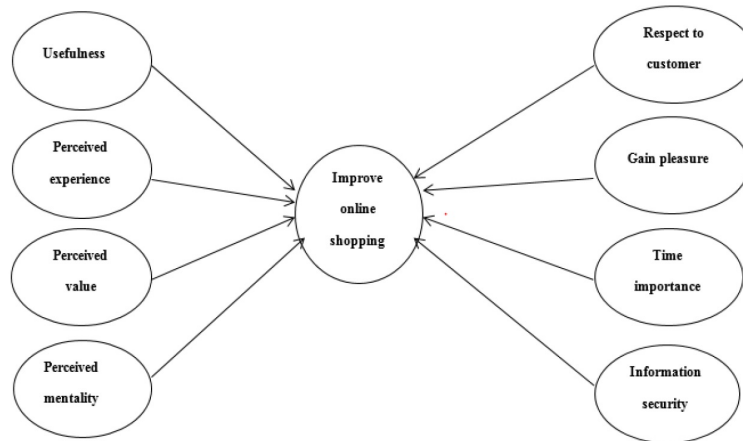


Figure 1: Research model

Table 3:  $R^2$  and  $Q^2$  criteria

<b>constructs</b>	$R^2$	$Q^2$
Customer respect	0.65	0.000
Costumer enjoyment	0.84	0.26
The importance of time	0.60	0.31
Information privacy	0.87	0.30
convenience	0.92	0.23
perceived experience	0.79	0.000
value experience	0.86	0.36
Perceived image	0.80	0.24

## 4 Discussion

Goodness of fit (GOF) is used to fit the overall model that controls both the measurement model and the structural model. It has three values as weak, medium and strong values.

According to Figures 2 and 3, it can be said that when the t-statistic for each of the path coefficients is higher than the significance threshold (1.96), it can be concluded that the hypothesis is confirmed at the 95% confidence level. Therefore, in the first research hypothesis, customer respect has a significant effect on improving customers' online shopping experience (0.637 and 6.352). In the second research hypothesis, customer enjoyment has a significant effect on improving customers' online shopping experience (0.728 and 4.295). In the third research hypothesis, the importance of time has a significant effect on improving customers' online shopping experience (0.613 and 7.250). In the fourth hypothesis, information security has a significant effect on improving customers' online shopping experience

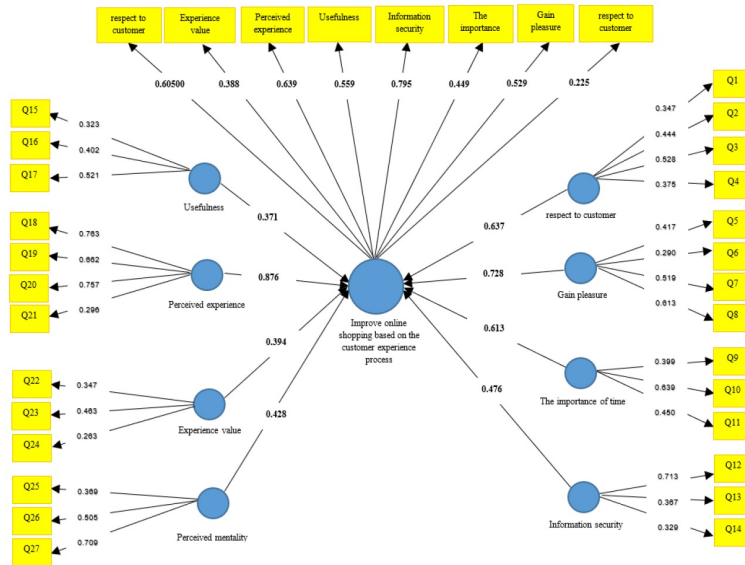


Figure 2: Measuring the overall model and results of the hypotheses in standard mode

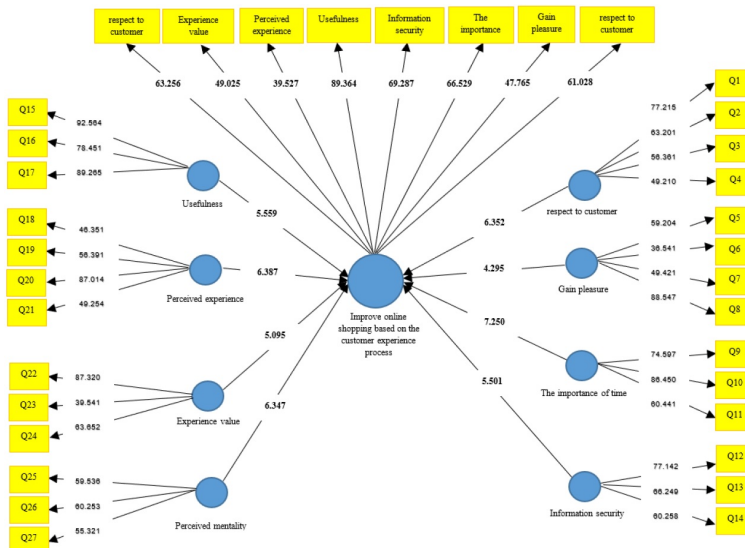


Figure 3: Measuring the overall model and results of the hypotheses in meaningful mode

(0.476 and 5.501). In the fifth research hypothesis, convenience has a significant effect on improving customers’ online shopping experience (0.371 and 5.559). In the sixth hypothesis, the perceived experience has a significant effect on improving customers’ online shopping experience (0.876 and 6.387). In the seventh hypothesis, the value experience has a significant effect on the improvement of customers’ online shopping experience (0.394 and 5.095). In the eighth hypothesis, the perceived image has a significant effect on improving customers’ online shopping experience (0.428 and 6.347).

### 5 Conclusions

As mentioned, this study was conducted to identify and evaluate the factors of improving online shopping based on customer experience in electronic startups in the field of health, safety, and environment. It can be said that this research is the first research that has examined the components affecting the improvement of online shopping based on customer experience. In examining the first hypothesis of the research, it was found that customer respect has a significant effect on improving online shopping based on customer experience and this hypothesis was confirmed. Sheikh et al. [2] in their research found the role of customer respect in online shopping. They pointed out that customer

respect will lead to satisfaction and also to increase participation in online shopping, it is necessary to link customer satisfaction and various factors. To be determined. Therefore, it is in line with the present research. [7, 13, 20] This study is also in line with Quilch et al. [25] who found that customer respect is one of the pillars of customer satisfaction and loyalty in e-shopping. In examining the second hypothesis of the research, it was found that gaining pleasure has a significant effect on improving online shopping based on customer experience and this hypothesis was confirmed. [5, 10, 24, 29] Ali et al. [1] in their research found that a customer's enjoyment of online shopping in Indian retail can lead to satisfaction and loyalty and emotional states in the customer cause shopping behaviors in them, this is consistent with this research. [5, 10, 16, 17, 29] Ausillar and Ozsui [4] also explored the role of shopping experience pleasure in customer repayment goals and gender impact in the UK. They found that experiential shopping pleasure could be effective in meeting these customer goals, in line with this research. [11, 26] In examining the third hypothesis of the research, it was found that the importance of time has a significant effect on improving online shopping based on customer experience and this hypothesis was confirmed. In their research, Wasich et al. [31] found that the role of time in the Quaid 19 period is important in customers' online shopping. Also, showing attention to time and its importance can lead to customer satisfaction and satisfaction when buying and receiving goods. The result is consistent with this research. In examining the fourth hypothesis of the research, it was found that information security has a significant effect on improving online shopping based on customer experience and this hypothesis was confirmed. [15, 26, 30] Citrin et al. [8] found in their research that website features positively affect the risk of understanding information security and privacy and therefore affect the intention to buy. Therefore, website management should be strengthened, firstly, by promoting e-commerce technology network security and, secondly, by developing e-commerce security management systems. In addition, a website platform should be created to improve consumer information security awareness and ensure a secure online shopping environment. These results are consistent with the present study. In their study, they found that information security and privacy are more important to consumers than female consumers in online shopping, so this study is in line with the present study. In the fifth hypothesis of the research, it was found that usefulness has a significant effect on improving online shopping based on customer experience and this hypothesis was confirmed. [9, 15, 26, 30] Chen et al. [7] in their research found that in Quidditch 19 perceived benefits and ease of use (usefulness) have a significant impact on the attitude of using social media and online shopping of interest. However, when viewed indirectly, through the attitude of using social media, perceived benefits and ease of use (usefulness) do not have a significant impact on online shopping interest. Therefore, this research is consistent. In the sixth hypothesis of the research, it was found that the perceived experience has a significant effect on improving online shopping based on customer experience, and this hypothesis was confirmed. [9, 15, 30] Lemon and Verhoff [18] in their research found that there is a relationship between perceived experience with their satisfaction, loyalty and trust. In fact, the relationship between customer experience with the shopping environment, product experience and customer satisfaction is Customer experience rarely affects personnel services, so it is in line with the present research. [14, 23, 28] Arif et al. [3] found in their research that risk perception affects online shopping goals and also online shopping experience is negatively related to product perception and financial risks and customer experience is associated with the risk of privacy associated with it. Reduces, therefore is in line with research. In the seventh hypothesis, it was found that the value experience has a significant effect on improving online shopping based on customer experience, and this hypothesis was confirmed. [10, 11, 16, 17, 26, 29] Lemon and Verhoeff [18] found in their research that the amount of value that the customer receives has the same effect on his satisfaction with online shopping and leads to an increase in customer visits to the website, so The reason is consistent with the present study. Arif et al. [3] found that value experience has a direct role in satisfaction but no positive relationship was observed with loyalty. In the eighth hypothesis, it was found that the experience of perceived mentality has a significant effect on improving online shopping based on customer experience, and this hypothesis was confirmed. [5, 10, 24, 29] Chen et al. [7] conducted a similar study and found that the experience of perceived mentality has an effect on the relationship between a) performance expectation and satisfaction and b) satisfaction and repurchase intention. [14, 23, 28] is in line with the present study.

## Acknowledgment

The aim of this study was to identify and evaluate the factors of improving online shopping based on customer experience in electronic startups in the field of health, safety, and environment. The results of this study show that all components (customer respect, enjoyment, importance of time, information security, usefulness, perceived experience, value experience, perceived mindset experience) are effective in improving online shopping based on customer experience in e-startups. Given the effectiveness of all dimensions that we addressed in this study. Every study faces limitations that will make research work challenging. These challenges are limited. Sometimes the lack of sufficient time and sufficient costs to conduct this study makes it impossible to include all the factors affecting the improvement



of online shopping based on the process of customer experience of startups in the conceptual model. This research has been done cross-sectionally. Because of this, it makes it difficult to draw conclusions about causality. Difficulty in getting the cooperation of people who have bought. Limit the size of the company, which could be done in a larger range of elites. Therefore, suggestions are made, in order to maintain respect for the customer, it is better to be informed in all stages of the purchase and to know at what stage the purchase of his product is. Establish a correct response system in online shopping and keep employees calm in order to maintain respect and esteem for the customer and respond correctly to the customer. Create different facilities and better discounts in order to create customer enjoyment of shopping. Different time dimensions are created in order to send the goods and to be informed through the website in order for the time importance of the customers. The privacy and information entered on the website when shopping in order to maintain the information security of customers when shopping online. Create a sense of usefulness in customers in order to increase the sense of satisfaction and turn that customer into more loyalty and repurchases. Facilitate the purchase and creation of a management counter for customers in order to have a better understood experience in the minds of customers. Creating value from the purchase and maintaining the necessary discounts in order to better offer the product as well as the customer's understanding of the value that the product creates for him.

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