

*Full Length Research Paper*

# Study of factors affecting internet shopping of Iranian customers and their ranking

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Internet users have significantly increased worldwide in recent years. In the meantime, Iran, between 2000 and 2007, Iran had the highest users' growth rate in the world (internet world stats, 2009), which indicates the need for more attention to e-commerce in Iran. However, successful development of e-commerce, especially internet shopping, will be possible only if factors affecting customers' web-based shopping are properly identified and used. This research has its objective identifying and prioritizing factors affecting internet shopping by Iranian customers. To this end, based on the results of the study of previous researches conducted in different countries, and taking into account Iran's conditions, the operational model of the research was introduced. Having collected data using questionnaire, hypotheses were tested on a sample consisting of 400 Iranian customers using Spearman's correlation test. Findings suggest that among factors affecting internet shopping of Iranian customers, attitude towards internet shopping is the top priority.

**Key words:** Internet shopping, internet, online store, e-commerce.

## INTRODUCTION

Increased access of the general public to internet, web-based commerce has gained a special place. E-commerce brings many advantages to sellers, purchasers, and even environment through globalization of commerce, eliminating limitations of time and space, increasing sales, providing easy access to required information, creating new business opportunities for industries and commercial firms, improving stability of market access as a result of the use of uniform rules by all WTO's member states, eliminating intermediaries, and consequently cutting costs, contributing to environment preservation, and improved energy consumption, etc.

Changes in customers and companies' capabilities have resulted in fundamental changes in business activities. Companies have changed from product-oriented into customer-oriented ones. Today, customers' purchasing power is more than ever. Online stores

enable their customers to conveniently purchase their needed goods and services without waste of time and with more confidence at any time round the clock through collecting information about their intended goods, comparing goods, interacting with suppliers, customizing websites, connecting with other purchasers, etc., (Gummesson and Polese, 2009), and reducing risk at the same time as making a better shopping.

However, internet-based purchase of goods and services is rather based on such considerations as apparent specifications and qualitative information, and therefore, internet shopping largely depends on the manner of interaction of people with computer, attitude toward computer, web environment, the manner in which customers process information, purchase patterns and customers' preferences, attractiveness of websites (Rayport and Jaworski, 2002), provision of sufficient information and guidance, existence of required telecommunication infrastructures, existence of laws and regulations, etc. Also the possible reasons behind the failure projects in the web, include infrastructural issues, accessibility, usefulness, social and cultural issues, lack

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of understanding of citizen needs, lack of trust, lack of marketing and lack of confidentiality (Kanat and Ozkan, 2009).

This research tries to identify factors affecting internet shopping of Iranian customers and provide a conceptual framework for it by using well-known models in this field.

## RESEARCH BACKGROUND

Development of the Internet was funded by the US Federal Government for research and defense applications (Feher and Towell, 1997). Nowadays Internet has become a virtual world which though has affected many aspects of man's life, perhaps most of this effect can be seen in commerce field, which fundamentally affects business and in one hand has enabled the companies to internally or externally exchange information with other companies and in the other hand has affected the purchasing process of the customers and in addition to taking order from customers (Vijayarathy and Jones, 2000), develops value for them (Kotler et al., 2005). Hence, many countries have done so much investment to develop electronic services (Murali et al., 2010).

Unlike traditional commerce, in which all the control levers were in the hand of the seller, in the electronic commerce, customers are able to commercially control every kind of mutual relation (Korper and Ellis, 2001).

Though electronic commerce models was formed in the early 1970s, compared to electronic commerce, the presented models and researches on Internet purchase have very little record and some terms such as security and confidentiality of the information is the achievement of not very far ages (Westland and Clark, 2000), which some famous and applied models are introduced in the following.

### Combined model of online and classic sales

The internet has fostered the unprecedented growth of new forms of exchange between individual who operate in conjunction with one another, all outside the realm of traditional channels and the value chain (Plouffe, 2008) and provides more options with different specifications to customers.

But based on shopping habits, customers are interested in going to real markets and make real shopping and internet shopping ignores their market window-shopping habit and the confidence they would gain through personally seeing the seller, and do shopping in person (Delavi and Ebdel baghe, 2006).

To solve this problem, the managing director of Wal-Mart Company propose a plan, in which the Company designed a beautiful, simple and functional website on the one hand, and used new services such as permanent

control of inventory in physical stores on the other hand, so allowing customers to decide whether they purchase from a physical store of the Company or from the Company's website.

### Wired life style

Among many factors which affect Internet purchase, demographic factors, characteristics and personality of the individual and the type and life style of the individual are some of the important factors on this issue (Phau and Poon, 2000; Sorce et al., 2005). Bellman believes that people who spend more time on internet surfing, and more often use internet for any purpose whatsoever, or in other words, have a wired life style are more willing to change their shopping style, and to save time, and believe that internet can be helpful in this regard and result in increased efficiency (Grunert and Ramus, 2006).

### University of Ohio

In a research conducted in University of Ohio, the US, the following were listed as factors which can be used by retailers to influence attitude of students toward internet shopping: product price, convenience, suitability of product, security of information on credit cards, quality of product, and company's refund policy regarding defective goods (Yingjiao and Ann, 2005), also the results obtained show that the perceived ease of use of the internet has a significant positive influence in future shopping intention (Alcaniz et al., 2008).

### Theory of planned behavior (TPB) and internet shopping

In 2004, Professor George proposed a model on factors affecting internet shopping on the basis of Ajzen's TPB model.

Professor George states that following relations that exist between the aforementioned variables: individual's normative structures have a positive effect on his subjective norms, which in turn have positively affect internet shopping practice.

While confidence in internet has a direct positive effect on attitude toward internet shopping (Sambasivan et al., 2010), if the individual believe that internet-based companies make unauthorized use of the user's personal information, or share them without permission, such unauthorized use of personal information of the individual will have a negative effect on the individual's attitude toward internet shopping (Jalili and Taherian, 2008), which in turn has a significant impact on internet shopping (Figure 1).

Efficacy also positively affects the perceived behavioral

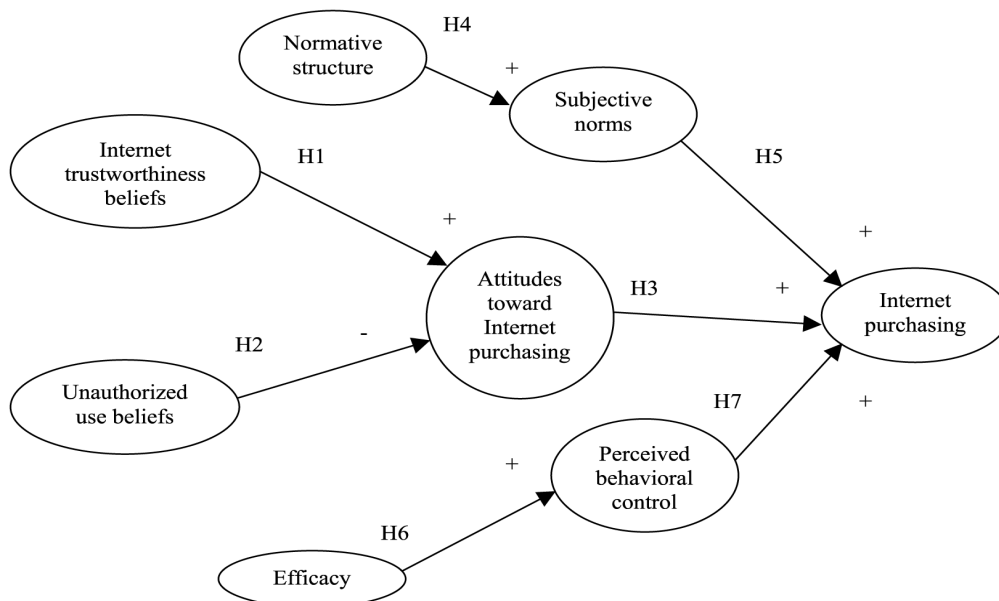


Figure 1. Professor George's internet shopping model (George, 2004).

control of the individual in making internet shopping.

**Jane Chen and Zong Chang online shopping process model**

In some researches, fundamental (for example, low speed and quality of the relation) and technical problems (for example, low level of security) have been considered as determining factors in tendency and non-tendency in using Internet and following it Internet purchase (Salmasizadh and Sohyzadhabyaneh, 2006).

Among these problems, speed is a determining factor in using Internet (Sarmadsaedi and Mirabi, 2004; Cho et al., 2003). Security is also a determining factor in using Internet as seen in studies which show that the security association of computer began in 1996 (Sanayei, 2002), entered a new phase and the importance of the issue by the announcement of the indicating research results that 86% of people who use Internet to purchase goods look for the sites which use trusting and security developers of security (Hosseinei ghoncheh, 2011), became more outstanding.

Two researchers mention these two factors (speed and security) accompanying with other factors such as perceived transactional experience and etc.

This model states that a number of customers are not confident in internet shopping, which is explained by the fact that they think for different reasons like problems that may be caused by their computers or internet service providers (ISPs), they may lose connection and complain about the low speed at which they can surf online stores' web pages. These factors together with other factors

such as security of information, etc., affect internet shopping of customers (Karakaya, 2001). Although, online stores cannot control those factors, but factors such as design of website, protecting security of information and privacy, etc., affect internet shopping and cover up the defects which are out of the control of online stores (Alzola and Robaina, 2007).

The relation between the three key elements mentioned in Figure 2, that is, interactivity, transaction and fulfillment are depicted in Figure 3.

**OPERATIONAL MODEL OF THE RESEARCH**

Professor George's model is rather concerned with behavioral and mental aspects affecting internet shopping, while Jane Chen and Zong Chang considers physical and tangible aspects of it. Therefore, using these two models, and considering Iranian community, one can obtain a comprehensive model for internet shopping in Iran, which will constitute operational model of this research.

In this model, variables of goods' delivery, design and appearance of website, pricing policies, and availability of after-sales services are controlled by the online seller and store.

Attitude toward internet shopping, internet skills, and security of personal information are among the most important factors affecting internet shopping from customers' perspective. Internet access speed and the manner in which laws and regulations of internet shopping are notified, and subsequently, customers' awareness of existing laws and regulations are

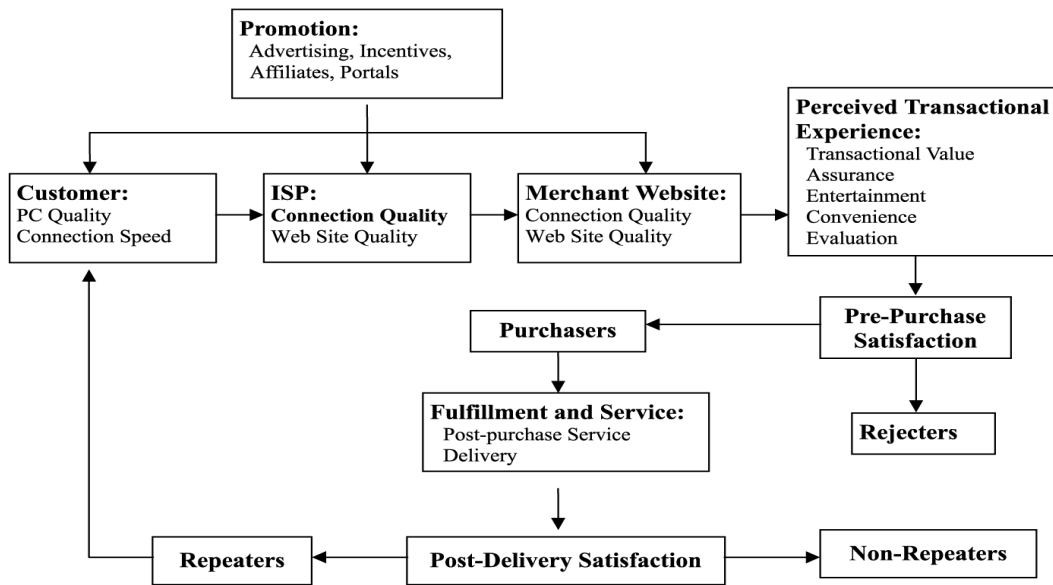


Figure 2. The descriptive model of online shopping process (Jane and Zong, 2003).

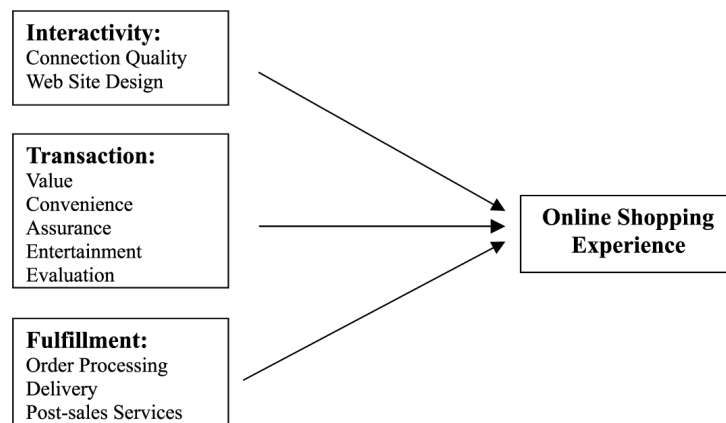


Figure 3. Determinants of online shopping experience (Jane and Zong, 2003: 562).

among important environmental factors in internet shopping process (Figure 4).

**RESEARCH HYPOTHESES**

- First hypothesis: There is a positive direct relation between costumer’s attitude toward internet shopping and internet shopping.
- Second hypothesis: Internet skills of customers have a positive direct effect on internet shopping.
- Third hypothesis: There is a positive direct relation between security of personal information and internet shopping.

- Fourth hypothesis: There is a positive direct relation between design and appearance of website and internet shopping.
- Fifth hypothesis: Awareness of binding laws and regulations of internet shopping have a positive direct effect on internet shopping.
- Sixth hypothesis: Internet access speed has a positive direct effect on internet shopping.
- Seventh hypothesis: There is a positive direct relation between the manner in which seller deliver goods to customers and internet shopping.
- Eighth hypothesis: There is a positive direct relation between pricing policies of seller and internet shopping.

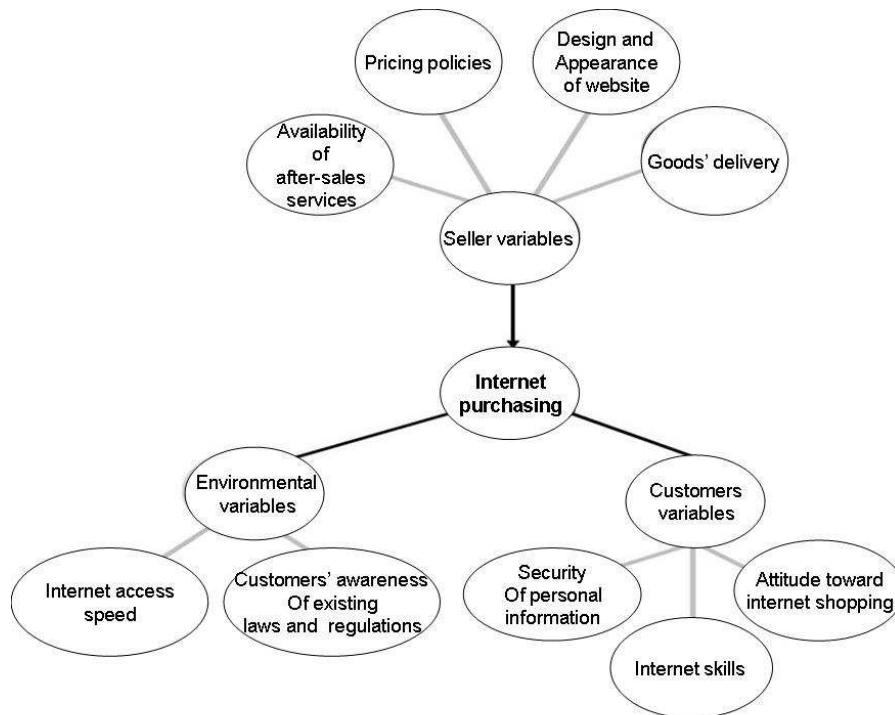


Figure 4. Operational model of the research.

Ninth hypothesis: There is a positive direct relation between availability of after-sales service provided by seller and internet shopping.

## STATISTICAL POPULATION

For the purpose of the research, sample size was determined to 384 persons on the basis of Morgan's Table, and in order to increase coefficient of confidence, 16 questionnaires were also added to it, and therefore, the total sample size was 400 persons. In data collection stage, printed and electronic questionnaires were used. Printed questionnaires were distributed in Tehran and Hamedan. Electronic questionnaires were provided to respondents in two ways: a number of questionnaires were emailed to respondents in form of a webpage, while questionnaire was also placed in the web so that questionnaires could be accessible from any point in Iran.

## VALIDITY AND RELIABILITY OF RESEARCH

For validation, "face validity" method was used, and the questionnaires were given to a number of scholars and specialist who were acquainted with internet shopping method, and their opinions were used to correct and improve the questionnaire. Then, the questionnaire was

given to 40 persons who had a record of online shopping, and "Cronbach's alpha" technique was used to measure reliability of the questionnaire. Cronbach's alpha coefficient of about 90% was obtained in this research, which well confirms the reliability of the questionnaires.

## DATA ANALYSIS METHOD

In behavioral and human sciences' researches, most variables are measured by qualitative measures. These variables are free of distribution, so their test is conducted using nonparametric techniques only, as a result of which it is not necessary for the observation to have normal distribution (Azar and Momeny, 2001).

Because the variables of this research's hypotheses are rank variables, and are measured by qualitative measures, their test is conducted by nonparametric techniques only. Considering the aforementioned, to determine whether or not there is a relation between studied variables, correlation tests must be used (Momeny, 2008). Here, based on the features of the research's variables, Spearman's correlation test is the most proper method to test hypotheses, and to determine whether or not there is a relation between studied variable.

## FINDINGS

The results show that 70% of respondents are 18 to 30 years old, and the rest are above 30; in other words, most of internet shoppers are young people. Also, the results show that most of respondents are males

**Table 1.** Demographic characteristics of respondents.

Parameter		Frequency (%)
Age	18-30 years old	70
	Above 30 years old	30
Sex	Male	38.25
	Female	61.75
Education	High school diploma	6
	Associate's degree	2.5
	Bachelor's degree	67
	Master's degree	19.75
	Doctoral degree	4.75
Monthly income	Rls. Less than 2 million	7.8
	Rls. 2-5 million	18.3
	Rls. 5-7 million	49.8
	Rls. 7-10 million	15.8
	Rls. 10-15 million	3.8
	More than Rls. 15 million	4.8
Years of using internet	Less than one years	7
	1-3 years	39
	4-6 years	31
	7 years or more	23

(61.75%) and the rest are females.

Most of internet shoppers (94%) have a university degree, and about half of them have a monthly income of Rls. 5,000,000 to 7,000,000. Further, more than half of researched population (54%) have used internet for more than 4 years (Table 1).

Null hypothesis in Spearman's test (two-tailed) assumes that no correlation exists.

$n_0$ :  $\rho = 0$  No correlation exists.

$n_1$ :  $\rho \neq 0$  correlation exists.

Given  $r$  value in different cases, we will have different interpretations of the relation between  $X$  and  $Y$ .

1)  $r = 1$ : In this case, the correlation is perfect and direct. As  $x$  increases,  $y$  increases absolutely.

2)  $r = -1$ : In this case, the correlation is perfect and inverse. As  $x$  increases,  $y$  decreases.

3)  $-1 < r < 0$ : The correlation is partial and inverse. As  $x$  increases,  $y$  relatively decreases.

4)  $0 < r < 1$ : The correlation is partial and direct. As  $x$  increases,  $y$  relatively increases.

5)  $r = 0$ ; a) Linear relation does not exist (for example, the relation may be a quadratic one.

b) Line's gradient is null.

Having conducted the calculations, of 9 hypotheses presented, fifth and seventh hypotheses were rejected, and the rest were approved.

In hypotheses 1, 2, 3, 4, 7, and 9,  $\text{sig} < 0.05^1$ , thus, null hypotheses are rejected, and consequently, there is a correlation between respective variables and internet shopping.

Because  $0 < r < 1$  in hypotheses, the correlation is partial and direct, that is, as  $x$  increases,  $y$  relatively increases.

In eighth hypothesis, because  $-1 < r < 0$ , the correlation is partial and inverse, that is, as  $x$  increases,  $y$  relatively decreases.

In fifth and seventh hypotheses, because  $\text{sig} > 0.05$ , the null hypothesis is not rejected, and therefore, there is no significant correlation between awareness of laws and regulations for internet shopping and the internet shopping, as well as between manner in which goods are delivered by the seller and the internet shopping (Tables 2 and 3).

## Conclusion

This applied research assesses factors affecting internet shopping of Iranian customers and ranking them by their priority.

Whether or not a community is willing to make internet shopping is determined by shopping behavior and patterns of that community on the one hand, and its

<sup>1</sup> Significance is the degree of error in which we are when rejecting the null hypothesis. Sig is also known as p-value. The less the sig, the simpler it is for the null hypothesis to be rejected. Alpha is the degree of error which the researcher considers, and is usually equal to 5%

**Table 2.** Results of test of hypotheses.

Hypothesis	Test result	Significance	Correlation coefficient	Type of correlation
First	Rejection of null hypothesis	0.000	0.377	Direct and partial
Second	Rejection of null hypothesis	0.000	0.368	Direct and partial
Third	Rejection of null hypothesis	0.000	0.214	Direct and partial
Fourth	Rejection of null hypothesis	0.000	0.020	Direct and partial
Fifth	Non-rejection of null hypothesis	0.795	0.346	-
Sixth	Rejection of null hypothesis	0.000	0.028	Direct and partial
Seventh	Non-rejection of null hypothesis	0.573		-
Eighth	Rejection of null hypothesis	0.000	-0.204	Inverse and partial
Ninth	Rejection of null hypothesis	0.718	0.193	Direct and partial

**Table 3.** Ranking of factors affecting internet shopping by their priority.

Variable
Attitude toward internet shopping
Availability of after-sale services
Pricing policies
Internet skills
Internet speed
Design and appearance of website
Security of personal information

electronic infrastructures and facilities on other hand.

In this research, having studied researches and models used by leading countries in this area, especially two models of Jane Chen and Zong Chang and Professor George, and having considered conditions of Iran, the operational model of the research, comprising 9 hypotheses, was prepared.

Of factors affecting internet shopping of Iranian customers, the factor of the attitude toward internet shopping from Professor George's model has the highest priority, followed by availability of after-sales service from Jane Chen and Zong Chang model, pricing policies, and internet skills from Professor George's model, internet speed, and design and appearance of websites from Jane Chen and Zong Chang model, and security of personal information from Professor George's model. Findings suggest that although internet shopping behavior of Iranian customers has many apparent and actual differences with internet shopping behavior in other parts of the world, there exist similarities between all customers at different points in the world.

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