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# Key mixes service quality in online purchases on Raja company

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Nowadays in competitive markets, marketing strategies, trading and development platforms for building and improvement of online trading in customer, and oriented organizations are important for managers located in strategic companies. Developed countries compared with developing ones have made remarkable growth of from to create beds business to customer (B2C) e-commerce. Therefore, appropriate and targeted research, the implementation process will be facilitated in organizations. In this research, Raja Company, as the largest online ticket sales service in the field of B2C transactions in Iran is selected. In the first step, key mixed service quality in online shopping with regular reviews and interviews were identified and then tested. The validity, reliability and customer attitudes to online shopping were analyzed by 100 reliable questionnaires. The results show that, quality of website services, prior internet purchases, system security and computer self efficiency, are considered in motivating customers B2C service quality factors. Ranking service quality indicators showed that customer attitudes to online purchases is the most important quality in the company and identifying priorities can also create a suitable vision to change the company competitiveness with joining the World Trade Organization (WTO), market share and competitive advantage also maintain on online purchases.

**Key words:** Website quality, computer self efficiency, customer perspective to online purchases, business to customer (B2C).

## INTRODUCTION

Competition in the global arena requires the implementation of competitive strategic plannings. These strategies, considering the type of customer attitudes in the world, are changing and the traditional forms are altered. Nowadays, the Companies providing products and services are trying to combine their strategies with competition and they make efforts to offer customers electronic services which are of high quality, same to the traditional model. Therefore, in this type of businesses, considering the cost advantage and access time to electronic services in customer's opinion, is of special significance. In this type of transaction, website, as one of the important elements of communication, is

distinguished. Scientific study of sites, considering the customer attitude and identifying their significant indicators could be important in the success of this type of business, with respect to customers' satisfaction and loyalty. The goal of most Iranian companies to create a website is to expand their export affairs, so, many companies in Iran with sufficient personnel and investment develop professional database on export and commercial sales. Due to weak performance of these companies, they are not able to survive for a long time. Thus, the government should change the purchasing culture of contemporary Iranian society by providing a national blueprint and developing needed beds for growth and prosperity of online business. In this, paper it is tried to study the key service quality mixes form customers who have an experience of online purchasing from Raja Company.

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## RESEARCH LITERATURE

E-commerce is the most important innovation of current era which has started in 1970 with online money transfer. E-commerce is most used by people, organizations, governments, and depending on different circumstances, have peculiar structure. One of the general forms of e-commerce which is taken among customers and companies is called business to customer (B2C). It means that a company can sell their services and products online. Amazon, Dell and Raja, are some examples of these types of companies.

## BACKGROUND RESEARCH

New infrastructure of e-commerce in Iran and studies of the past two decades show considerable growth in this field. Therefore, the study of qualitative aspects of encouraging customers to e-commerce aspects is the innovation of current paper.

There are some major factors in electronic commerce such as quality of websites' content. Customer attitude to uncertainty of online purchasing, affects customer's opinion. Zang and Tarafdar (2005) assumed that "content" and "design" of website are the main factors in the quality of B2C Company's website. Other experts and specialists such as Ranaganathan and Ganaouthy (2002) with respect to the quality and design stated that website should contain relative information of company services. In customer's attitude, it seems that the impression of website's design is more significant than its content. Therefore, unsuited design will cause less motivation for customers to find the product or services through websites.

Aside from these researchers, Spillerhs and Iohs (1997) showed website quality as the main factor among mentioned indicators of encouragement of purchasing form B2C Company. Another significant factor is human-commerce interaction approach. This approach will study the quality of online commerce and interaction among seller and buyer. Huizingh stated that in general, suitable quality of website in terms of customer psychology is the main factor on developing positive customer attitude toward the quality of transaction. In these researches, the hypothesis of positive relation between website quality and types of customer attitude is approved (Huizingh, 2000). Heijen showed that visual attractiveness influences online customers' expectation (Heijen, 2003).

In terms of customer behavior, Lepkowska-White (2004) pointed out that customer assessment of B2C sites showed that download speed, information richness, content correlation and easy money exchange by internet, are the most important factors. In another research which was conducted by Ganapathy, privacy policy and security of online stores are the main concerns of online customers (Ganapathy and Ranganathan, 2002).

In another important study about usefulness and user impression in computer systems, there is a statistical relation between expansion of IT skills and motivation of online transactions. Therefore, attention to the aspects of modern business is more important to develop and flourish. In these businesses, websites has a main role like 24 h - access stores which provide customer with products and services. The result of studies hopes to develop website quality infrastructure by identifying critical factors and implementing appropriate management style in website.

## The quality of the websites providing services

In today's world website, quality always has the significant role on absorption of customers. In B2C companies, the initial point of purchasing is the website of organization (Cotlier, 2001). The concept related to the features of customer-oriented website is called SITQUAL (an abbreviation) in the field of quality of website.

## The content of website providing services

By visiting of websites providing product and service, customer would be definitely absorbed by the information, and even the electronic advertisement of the site. These messages are often used to remind the product to the customers, or to develop a need in them. Customers' attention to the design of the website could be studied in two aspects: a) Functional tools or subsidiary and facilitating tools, such as speed and safety in use of electronic network; b) Information which is provided by site (Lee and Lin, 2005).

Customers will assume the sites as pragmatic or tool-oriented which are rich in content, easy access, economic and time saving, with sufficient security. So, to create the desired website for customers, the following items will be important:

- i. Focus on the nature of the site providing goods and services;
- ii. Develop an approach to show the use of accepted model of technology in the websites; such as models of information quality improvement and the quality of systems and services.
- iii. The emphasis on basic services in developing the infrastructure of B2C site which provides goods and services.
- iv. Approach of site quality from opinion of customer, other people and applying the convenient feedback in future planning.

If the website quality is studied in terms of being informatory, items such as enrichment of site content by hyperlinks could be understood, (Huizingh, 2000) the

time of appropriate response to customer and the existence of search engines will increase the site quality (Bauer and Scharl, 2000).

Wan believes that providing information and development in a friendly and customer-oriented relationship with purchaser are important in website quality (Wan, 2000). Therefore, user-friendly facilities, easy-to-understand issues, related information of the services in the website, multiplicity of appropriate communication channels with service or product (link Tab), suitable time response by site, competitive position compared with similar sites, innovation and adaptation of relevant images to the relevant services and products are main items in website quality which form customer's opinion, and because of its virtual procedure, it is called SITQUAL in the short form (Loiacono et al., 2002).

### **Customer attitude to online purchasing**

There are lots of mechanisms for improvement of customer attitude to the online purchasing. The design of these mechanisms has the main role in customer trust to the use of these services. There are some limitations for companies in their business because of legal obstacle which was exerted by their government. Nonetheless, many sites run illegal business due to lack of government monitoring, or lack of appropriate rules and regulation. This matter hurts customer's peace of mind, which will cause customer disappointment from online purchasing. There are three main factors which form customer concerns. These factors are financial security, privacy policy (Bort et al., 2005) and being confident of receiving goods after purchase (Belanger et al., 2002).

Therefore, government should handle the security of credit cards and networks, and install secured electrical transactions which are obligatory in Europe and America. Each website should be audited by standard organization and should commence the B2C after getting that certificate (Straits Times, 1995).

### **Benefit and impression on users of computer systems**

Researchers believe that customer use e-commerce when they have enough confidence in IT skills. The impression of computer users depends on the attitude of users to the IT science. Internet can motivate purchaser to buy online (Bellman et al., 1999; Liao and Cheung, 2001). Researchers show that prior good experiences of customers of online purchase has a great role in encouraging online purchasing (Yoh et al., 2003) so, internet could play a main role on e-commerce (B2C) if customer is interested (Pavlou, 2003).

### **Customer perceptions of prior purchases**

The 21<sup>st</sup> century is called communication age because

online market is formed instead of offline one (traditional market). Online service, more security, speed and quick time of service delivery are achieved, which cause more customer loyalty (Akerlof, 1970). E-Shop lessons customer risk and if customer pays attention to the benefits of e-commerce, it leads to reinforcement of customer perception in this kind of transactions. Many companies have to start B2C to take opportunity as an advantage to increase their share market (Pavlou, 2003).

### **RAJA COMPANY PROFILE**

Considering the traditional context and the old railway extent of organization, one absolute state environment, and bottlenecks of fundamental affairs, etc., the possibility of major developments or mutation in service quality did not exist for this company. Therefore, developing a company with peculiar attitude, staff, systems and special techniques which value the efficiency and regularity is essential. With this attitude, Raja' Passenger Trains, Co, in the form of an independent public company whose ownership belongs to the Islamic Republic of Iran Railways, started its activities from early November 1996, with the aim of quality and quantity growth in passenger transportation. Policies of Raja (Islamic Republic Railways) are optimum use of facilities, continuous improvement, and increasing efficiency, providing service in line with the desired organizational excellence and improving quality and quantity of passenger transportation. Today, this company makes an effort to utilize expertise and experience of 2300 effective forces in different fields of management, designing, engineering, planning and researching in order to provide a better condition of traveling for passengers. The main policies of Raja are customer orientation, respect for passenger rights, and improvement of the level of travel services. In order to achieve these goals, it has taken extensive efforts. Continuous monitoring of satisfaction measurement of services provided by Raja Company is done through the online system and its website.

### **QUESTIONS AND HYPOTHESES**

Today, following the increase of service organizations and expanding monetary and financial institutions for online payment to save cost, time and energy of the customers, Islamic Republic of Iran Railways Company (Raja., Co) as the sole provider of these services, should invest in the necessary infrastructure for this business. So, researchers have tried to answer the following three questions:

1. What are the key success factors for an organization providing services, such as Raja?
2. How do these factors encourage customers to purchase tickets in the Internet and how has it been successful?

### 3. To what extent are these factors important?

#### Hypotheses

According to the literature, interviews, and research model, researchers attempt to test the following hypothesis:

1. Quality of service provider website has an effective role in encouraging customers to buy online.
2. Customer attitudes to buying online have an effective role in encouraging customers to buy online.
3. Impression on the users of computer systems has an effective role in encouraging customers to buy online.
4. Customer perceptions of prior purchases have an effective role on motivating customers to buy online.

#### METHODOLOGY

According to research studies, published articles and models of (B2C) organizations which were stated earlier by interviews with experts, and studying of Raja Company, key factors and indicators related to research are classified in Table 1 and try to mention the exact recourses.

#### The research process

This research has the descriptive-case methodology, and in terms of target, is applicable, and in the research process, researcher utilized data library, scientific articles, field study, and interview with experts. Therefore, the research process is stated thus:

- i. By referring to the Raja site and receiving initial information from company, similar sites and previous research of scholars, all key factors and indicators are identified and classified.
- ii. In the second stage, the issue was discussed with 5 faculty members and academic experts. The factors and indicators are finalized. The validity of questionnaire was confirmed and then they are adjusted into three segments. Open question, Likert scale question and personal information section are different segments of questionnaire. The reliability of questionnaire was approved by Cronbach's Alpha
- iii. With use of Kolmogorov Smirnov (K-S) test, we approved that data follow the normal distribution. With  $X^2_{0/95}$  test, hypothesis are approved. To answer the third question we use Friedman test.

#### Statistical universe and sample

Considering the online and offline ticket purchase, we can't estimate the statistical universe of online purchasing. Thirty customers are selected to have a pre-test to estimate the variance for the number of sample calculation (Formula 1). To guarantee the conclusion, we have distributed 100 questionnaires.

$$s^2 = \frac{1}{189} d = 0.04 \quad z_{\alpha/2} = 1.96$$

$$\text{Formula 1: } n = \frac{z^2 \alpha/2 S^2}{d^2} = \frac{1.96^2 \times 189^2}{.04^2} = 85.6 \approx 86$$

#### Validity and reliability

In this paper, we use Delphi method to identify validity of questionnaire which was approved by 5 academic professors and Raja CO experts. Then, for survey's reliability, Cronbach's alpha by spss 16 (0.887) was calculated, which is virtually the best for quality surveys.

#### RESEARCH FINDINGS

Spss 16 and Excel are applied to analyze the data which are shown in descriptive and prescriptive statistics to test the hypothesis. The descriptive statistics are collected from 100 online customers in Raja's site (Table 2). As it is shown, men are the most customers of online purchase, the age range of 20 to 30 is a dominate age and most of the customers are highly educated.

Annual purchase report shows that there is a positive correlation between type of train and times of purchases. More customers would prefer Mellat Card due to fewer problems in network transaction. Kolmogorov-Smirnov (K-S) test is applied to analyze findings for prescriptive statistics. Data are followed by normal distribution (P-value ;  $P > 0/05$  SIG). We applied  $X^2_{0/95}$  to approve hypothesis (Table 3).

**H<sub>0</sub>:** not encouraging customer to online purchase by related factor in each hypothesis.

**H<sub>1</sub>:** encouraging customer to online purchase by related factor in each hypothesis.

Tests are done based on p value ;  $p < 0/05$ ; SIG. All hypotheses are approved, which means encouraging customer to online purchase by related factor in each hypothesis.

We applied Friedman test (p value;  $p < 0/05$  ;SIG) to rank the key mixes service quality in satisfaction of online purchase (B2C) (Table 4). Ranking shows that customer attitudes to online shopping is a high priority factor and is followed in website quality of services provider; customer perceptions of prior purchases and benefits and impression of users of computer systems. Among indicators, the most significant one is 24 h- access for purchase, and is followed by the indicator of low cost of online purchase compared with traditional types.

#### Conclusions

Raja Company as one of the greatest organizations in providing online services among B2C companies could be seen as a pattern for other retailer companies with respect to best practices in local market. In recent years, despite the improvements in infrastructure of electronic sale systems in Raja Company, lack of updated development strategy and bureaucratic procedure in research project, caused the great gap between this company

**Table1.** Key motive mixes in online purchasing B2C in Raja Co. with a reliability coefficient of each factor.

<b>Reliability coefficient</b>	<b>Key factor</b>	<b>indicator</b>	<b>References</b>
811/0	Website quality services provider	<p><b>Site content:</b></p> <ol style="list-style-type: none"> <li>1. Multilingual website</li> <li>2. Calendar and charts For more help in purchasing</li> <li>3. Provide updated information</li> <li>4. Information about company and its services</li> <li>5 Search engines and ability to search information from sites</li> </ol> <p><b>Site design</b></p> <ol style="list-style-type: none"> <li>1. Designing appropriate position for the content of site to access the information in less time</li> <li>2. Color Scheme and stylish site design</li> </ol>	Cotlier (2001); Bauer and Schar (2000); Huizingh (2000).  Huizingh (2000); Loiacono et al. (2002).
847/0	Customer attitudes to online shopping	<p><b>General security site:</b></p> <ol style="list-style-type: none"> <li>1.Communication- link tab to other online shopping sites</li> <li>2. Aspects of information security against any kind of network penetration</li> <li>3. Security of personal information privacy</li> </ol> <p><b>Delivery and return of goods and services</b></p> <ol style="list-style-type: none"> <li>1. Concern from no receiving the ticket purchasing online</li> <li>2. Response time (speed) to complete the buying process by site</li> </ol> <p><b>Incentives to buy</b></p> <ol style="list-style-type: none"> <li>1. Low cost of online purchasing compared with traditional types</li> <li>2. Bystanders suggestion in online shopping and change ofthe traditional attitude of people</li> <li>3. Increasing credit card providers</li> <li>4. 24-hour access</li> <li>5. Repute of provider company of goods and services</li> <li>7 Correspondence and having a relationship with the customer after purchase</li> </ol>	Torkzade (2002); Ranganathan (2002).  Bort et al., 2005; Pechtl, 2003.  Yoh et al. 2003; Pavlo, 2003.
700/0	Benefit and impressionable on users of computer systems	<p><b>IT skills to use by users</b></p> <ol style="list-style-type: none"> <li>1. Access to internet and computers</li> <li>2. Access and convenience to the internet for purchasing</li> <li>3. Centers for providing such services (Internet cafés)</li> </ol>	Yoh et al. (2003); Bellman et al., 1999; Liao and Cheung, 2001.
766/0	Customer perceptions of previous purchases	<ol style="list-style-type: none"> <li>1. Safety of similar purchases from other companies</li> <li>2. Satisfaction of previous online purchases</li> <li>3. Speed and short-time purchases of prior online buying</li> <li>4. Decreased risk of customers buying</li> </ol>	Akerlof (1970); Bort et al., 2005 Pavlou, 2003

**Table 2.** The findings of descriptive statistics from 100 samples collected from the questionnaire.

The findings of descriptive statistics of the samples (% rounded)		Number	Percentage	Cumulative (%)
age	>20	3	3	3
	25-20	53	53	56
	30-26	25	25	81
	35-31	10	10	91
	<40	9	9	100
sex	male	94	94	94
	female	6	6	100
education	Diploma and lower	4	4	4
	Bs and Association of science	20	20	24
	High graduated	76	76	100
Annual purchase (hundred USD)	>15	14	14	14
	30-15	21	21	35
	45-30	11	11	47
	60-45	20	20	67
	<60	31	31	100
Annual Times of purchase	>5	41	41	41
	10-5	28	28	70
	15-10	12	12	81
	<15	17	17	100
Card type used in electronic shopping	Mellat bank	54	54	54
	Parsian bank	13	13	68
	Saman bank	29	29	98
Type of train	Grade 1	16	16	16
	Grade 2	38	38	55
	Deluxe	12	12	68
	All of types	30	30	100

**Table 3.** Hypothesis testing with Chi-square test at 95% confidence level.

Test result	Sig.	Degree of freedom	$X^2_{,0/95}$ (Chi-square)	Hypothesis
H <sub>1</sub> Has been approved	0/049	28	39/780	1
H <sub>1</sub> Has been approved	0/0499	60	35/420	2
H <sub>1</sub> Has been approved	0/00	12	53/140	3
H <sub>1</sub> Has been approved	0/00	17	47/600	4

and other world class competitors. Thus, previous research of scholars and the hypothesis test show that the website quality (SITQUAL), customer attitude to online purchase form that company, customer perception form previous purchase and impression on the users of computer systems are four significant factors on motivating customers to use online purchase from Raja's website. Therefore, with expansion of computer uses , it

seems many customers' access electronic transactions, but customer expected major factors such as, website quality, less cost and time, 24 h- access, website security and easy access to requested information. However, there are other indicators which are mentioned in Table 3. In fact, from buyer opinion, these factors are main indicators of customer satisfaction for quality of online services (SITQUAL-SATISFACTION).

In this regard, it seems that current research conclusion can develop competitive and strategic vision of this company towards the sustainable future success.

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