

## Investigation of Businessmen's Satisfaction with Electronic Customs (Case Study: Abadan Customs)

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### ABSTRACT

Many customs departments review e-commerce in order to support their operations. In fact, customs procedures are not efficient in global commerce without use of information and communications technology. The present research aims to investigate businessmen's satisfaction with e-customs. Research methodology was descriptive and research plan was correlation. Structural equations modeling technique was used for analysis. Statistical population of the research included all businessmen who were active in central customs department in Abadan city. They were 130 people in number. 100 businessmen were selected as sample. They responded to service quality and satisfaction questionnaires. Confirmatory factor analysis was used for investigation of validity of the questionnaires. The results of confirmatory factor analysis fit indices showed that the questionnaires had enough validity. Structural equations modeling technique and t test was used were used for analysis. The results of t test showed that the respondents were satisfied with e-customs positively and significantly and e-customs influenced respondents' satisfaction. The results of structural equations showed that impact coefficients of tangibles, assurance, reliability, empathy and responsiveness on satisfaction of businessmen were positive and significant. In general, the results showed that e-service quality plays an important role in satisfaction of the respondents.

**KEYWORDS:** e-customs, satisfaction, service quality, businessmen.

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### INTRODUCTION

The present era is the age of unpredictable changes and companies are confronted with harsh competitive conditions as a result of factors like unclear border of markets, fragmentation of markets, short lifecycle of products, rapid changes in customers' purchase models and awareness of customers (Tavanazadeh and Aligholi, 2014). For decades, a company's value was calculated based on its properties, tangible assets, factories and equipment. Now, companies have concluded that real value of a company is somewhere beyond the company, i.e. in potential purchasers' minds (Heidarzadeh et al, 2011). Customs services are very effective in development of products and services export. In fact, international commerce will be meaningless without customs services. Customs is one of the main elements of each country's foreign commerce and is the means for contacting and communicating with other regulatory units and instructions issued regarding import and export. Customs is so important that its efficiency and speed is sometimes regarded as a criterion for evaluation of foreign commerce activities of every country or macro-economy of countries (UNCTAD, 2006). Considering the high level of commerce and speed of commercial transactions, customs should be changed because people who refer to customs expect to clearance their products as soon as possible. Moreover, considering emergence of e-commerce, commercial community expects customs procedures to be clarified and become predictable and products should be clearance easily. Moreover, government wants to enforce regulations effectively and collect income. In order to satisfy these expectations, many customs departments have revised their procedures to use e-commerce in order to support their operations. In fact, customs procedures are great barriers against global commerce without using ICT. E-customs plays an important role in reduction of transaction costs, transfer speed, improvement of communications, and easier participation of commercial sides. E-customs also facilitates customs supervision and calculations. This research aims to investigate businessmen's satisfaction with Abadan e-customs. It is about 15 years since when the first mechanized program called ASIKODA was implemented in Iran's customs and facilitated customs procedures. This plan was proposed by UNCTAD to Iranian customs and was implemented by the experts of this institute. It lacked necessary comprehensiveness and had many problems and was not able to satisfy expectations and even the next stage of the project (i.e. global ASIKODA) did not also satisfy customs' expectations. Therefore, e-customs (new customs comprehensive program) emphasized on suggestions of global customs organization since about two years ago (IRI customs weekly, 2012). Considering the above discussion, this research tries to answer this question: "whether e-customs (new customs comprehensive plan) has increased satisfaction of businessmen with customs services? Further, actions which must be taken in order to increase efficiency of this system are also investigated."

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## THEORETICAL LITERATURE

### E-customs

Customs has a long background. It has been developed like any other small or large society as a result of some needs and new requirements have been emerged as time goes by. Therefore, new organizations have been established nationally or internationally according to what we see now (Gray, 2013). In its smallest scale, customs developed as a guarding force for a small population of governments like a tribe. However, the fact that what the name of this force was and how was its administrative features is not documented but evidence show that customs had been present wherever commercial transactions have been present (Jahangiri, 2011). Customs is a necessary institute for all countries because it provides income, facilitates business and safeguards society. This organization manages product and travellers affairs in international level. Governments require efficient and effective customs in order to implement financial, economic and social programs appropriately. Today, IRI customs organization has many important duties beyond income provision and supporting internal production and industries and it embraces a wide range of national and international requirements. IRI customs provides services by understanding right expectation of beneficiaries like government, consumers, producers and businessmen in order to facilitate and develop commerce, bring predicted incomes, implement external business policies and supporting consumers and producers (Memarnejad, Shiri, Kakhaki, 2013). An important feature of customs work is high level of work load and impossibility to investigate all itemsexactly and in detail. Therefore, customs departments are challenged by facilitation of legitimate products and passengers transport such that they use customs procedures in order to identify fraud and discover crimes. On one hand, customs is under pressure by governments and national and international organizations in order to facilitate business and on the other hand, it is responsible for possible offences and crimes and also danger of terrorists' threats. In 1980s, customs tried to use risk management techniques. After September eleventh event and increase in terrorism risks and fraud and development of smuggling, risk management use ranked first in importance level (Salarzayee, Jamshidi, 2014).

### Customer satisfaction

One who receives output of a process or makes use of it is called customer (Ghahramani, 1996; Kotler, Kartajaya and Setiawan, 2010). In this definition, intra-organizational and extra-organizational customers have their own special places. In total quality management culture, every individual has two roles in his working unit. In the first role, he or she provides service or product for his or her colleague in a working process or for an external customer in an independent activity. In the second role, it receives services or products from another person (Dixon, Freeman, and Toman, 2010). Therefore, organizations should recognize their customers to estimate the level of service quality they need. Then, they specify the type of services which must be provided in future and now, such that future services are better than the present services. In order to do this, customers should be specified and estimation of their needs should be optimized (Pichler, 2010). Organizations rely on their customers. Therefore, they should understand their present and future needs. Organizations need to have a tendency to act beyond customers' needs. If employees listen to their customers' needs, they will have appropriate opportunities for investigation and correction of services. Researchers' findings on some customers reveal that half of unsatisfied customers won't return anymore. Therefore, customerorientation is also necessary in order to follow quality requirements. Therefore, different individuals are responsible for their tasks quality in their own areas (Milne, McDonald, 1999; Han, Lu and Leung, 2012).

### Customer satisfaction concept

Today, production or service organizations consider customer satisfaction as an important criterion for measurement of the service or product quality. Customer satisfaction deals with competition in global level. Customer satisfaction can be defined as: a welcome state which is created in a customer after receiving a product or services. Every customer has some expectations. If the quality of products or services he or she receives is below expected quality, he or she will be dissatisfied (Yen, 2012).

### Relationship between product/service qualities with customer satisfaction

As it was mentioned, customer satisfaction is measured by the level of needs satisfaction. Customer need satisfaction depends highly on products and services quality. In other words, quality is the very features which must exist in a particular product or service so that the needs are satisfied (Bansal, Taylor, 2015). Noriaki Kano presented a model which explains relationship between quality and customer satisfaction well. In this model, quality or the very features of a product or service are classified into three categories and relationship between each category and customer satisfaction and their impacts on this satisfaction are explained.

### First type quality: stated quality

Stated quality includes features which are asked by customers from providers and explains that the intended product or service should be replaced by those features. Relationship between this kind of quality and

customer satisfaction is satisfied and customer's satisfaction level increases and vice versa. Therefore, if organizations (providers of customers' needs) want to increase customer satisfaction they should provide a larger number (or possibly all) needs expected by customers (Tontini, Soilen and Silveira, 2013).

**Second type quality: expected quality**

Expected quality refers to features which form customer's expectations. A customer does not state these features because he or she thinks that it is obvious and axiomatic for the product or service to have those features. Customers understand absence of these features easily while their presence is not so tangible for customers (Weinstein, 2012).

**Third type quality: exciting quality**

a. classification of products and services features in three groups is not always the same. Expectations and needs change as time goes by. At first, a feature might lie in exciting quality group but after a while, this feature may be categorized as stated quality. Then, it turns into an expected quality and customer may expect it as a necessary feature in the product or service (Weinstein, 2012).

b. KANO model forgets the relationship between these three types of quality. What we understand from KANO model is that the three types of quality are independent from each other while the opposite is true. For instance, if a product or service has exciting quality but it lacks expected quality or stated quality, the influence of exciting quality will not be the way stated in the model.

products and service quality are classified into three categories (Kotler, 2001):

- a) search quality: features which might be investigated by customer before purchase like color, price, compound and appearance.
- b. experience qualities: these are specifications which are discovered only after purchase or when using them. Experience qualities include features like taste and ability to be covered.
- c) credence qualities: these are specifications which might be recognized as impossible by consumers after purchase and use. For instance, these include medical services for some consumers which have enough information about medical affairs for evaluation of the fact that whether service has been transferred effectively or not.

**Research conceptual model**

Figure 1 indicates research conceptual model. In this figure, dimensions of service quality of e-customs system have been considered as independent variable and satisfaction of businessmen has been considered as dependent variable. The used model is used for measurement of service quality in SERVQUAL model.

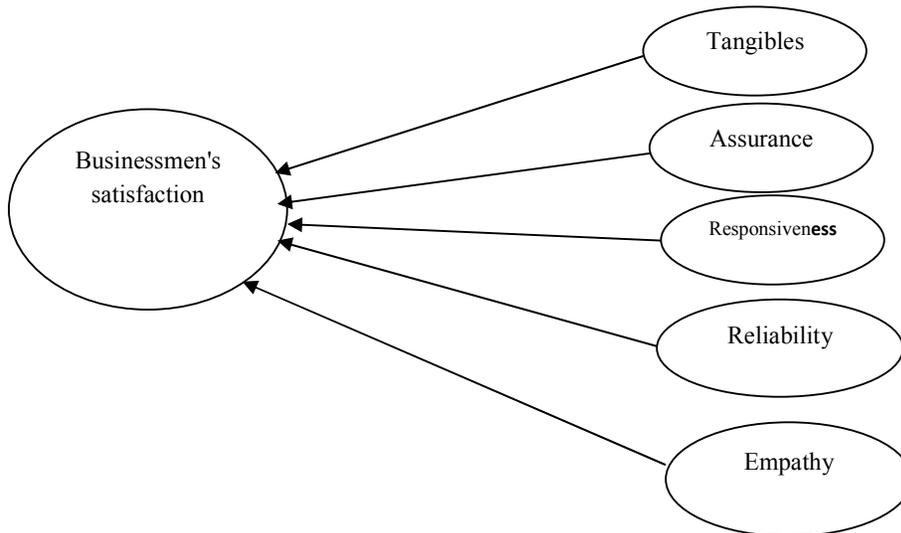


Figure 1. research conceptual model (PARASURAMAN, ZEITHAML & MALHOTRA, 2005)

**Main hypothesis**

Electronic customs influences satisfaction of businessmen.

**Subsidiary hypotheses**

1. Tangible quality (appearance of physical instruments and equipment at working environment and appearance of employees) has a positive impact on businessmen satisfaction.
2. assurance( customs ability to abide by its commitments regarding paperless commerce) has a positive impact on businessmen satisfaction.
3. Responsiveness (acceleration of clearance of products in customs) has a positive impact on businessmen satisfaction.
4. reliability (trust in application of risk management) has appositive impact on satisfaction of businessmen.
5. Empathy has apositive impact on businessmen satisfaction.

**RESEARCH METHODOLOGY**

The present research is an applied study. In terms of data gathering, it is a descriptive study. Further, in terms of data analysis, it is a correlation study which makes use of structural equations modeling technique.

**Statistical population and sample**

Statistical population of the present research included all businessmen who were active in main department of Abadan Customs. They were 130 people in number. Morgan Table was used for determination of sample size. Therefore, 100 businessmen were selected as sample size by means of simple random sampling.

**Data gathering instrument**

Questionnaire was used for gathering data. 5-point likert scale was used from "completely agree" to "completely disagree" as a scale for measurement of questions. After preparation of questionnaire, 30 questionnaires were distributed among customers of Mellat Bank as pretest. In order to investigate reliability, Cronbach's alpha was used. The results showed that Cronbach's alpha coefficient for all variables and total questionnaire was above 0.7 (Cronbach's alpha coefficients have been presented in table 2). Moreover, content validity of the questionnaire was verified by experts. Therefore, the questionnaire had enough validity and reliability to be distributed among respondents.

Table 2.Cronbach's alpha coefficient

variable	Cronbach's alpha
tangibles	0.83
Guarantee of services	0.75
reliability	0.86
responsiveness	0.81
empathy	0.82
Businessmen satisfaction	0.94

Table 3.demographic information of respondents

variable	dimensions	Freq.	Freq. percentage
gender	male	92	0.92
	female	8	0.08
education	High school degree	20	0.20
	bachelor	75	0.75
	master	5	0.05
age	Below 30	32	0.32
	30-40 years	40	0.40
	Above 40 years	28	0.28

**Research hypotheses test**

Structural equations modeling technique was used for investigation of research hypotheses. It is a statistical modeling technique which embraces other techniques like multivariate regression, factor analysis, and path analysis and its main concentration is on latent variables which are defined by measurable indices and observable variables.

In a structural model, we try to specify whether relationships extracted from theory between latent variables are verified by data or not? LISREL software (version 8.8) was used for doing calculations on structural equations modeling. Fitness of the model is very important in structural equations modeling. This can be investigated via fit indices which are provided in final output of LISREL. Table 4 presents fit indices for the present research model.

Table 4. Model fit indices

X <sup>2</sup> /df	RMSEA	CFI	GFI	NFI	AGFI
1.31	0.066	1	0.95	0.99	0.92

Indices presented in table 4 show that RMSEA index is equal to 0.056 which is an acceptable value and other indices including CFI, GFI, NFI, and AGFI are equal to 1, 0.95, 0.99 and 0.92 and all are in acceptable level. These goodness of fit indices show that data have good fit with factor structure of this model. In order to test the research hypotheses, the results of LISREL software calculations in were used in two states: standard state (figure 2) and significance state (figure 3).

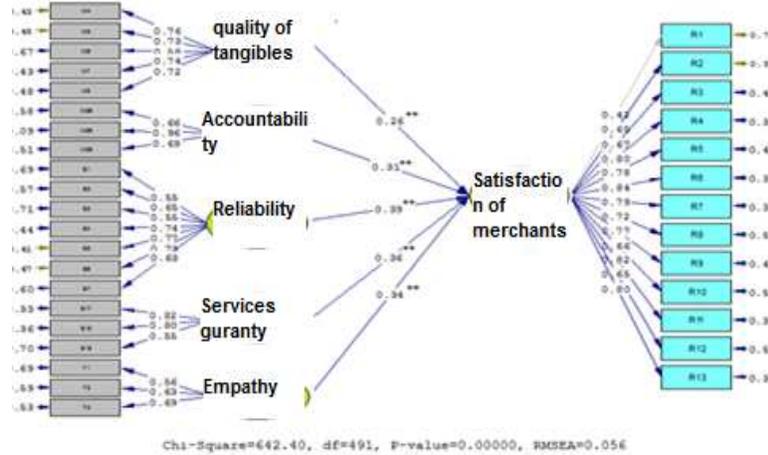


Figure 2. research model in standard factor loadings state

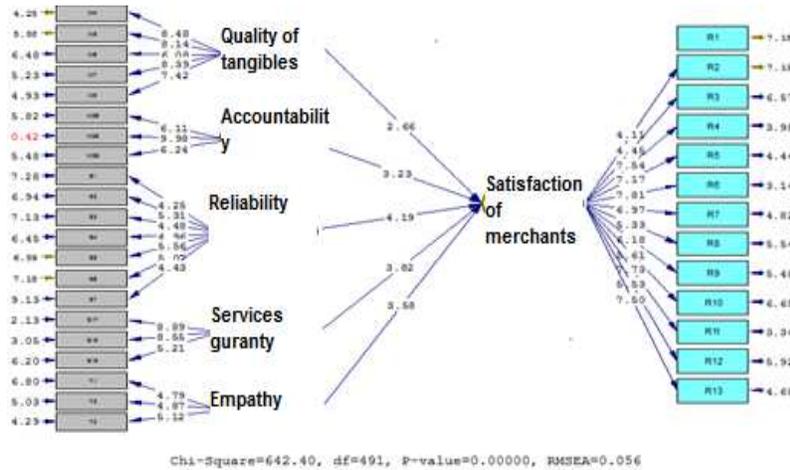


Figure 3. research model in significance state

Considering research model in standard and significance states, the results of investigation of research hypotheses can be presented in table 6.

Table 5. the hypotheses results

hypotheses	Path coefficient (standard)	Significance number (T)	result
Tangibles quality has a positive impact on businessmen's satisfaction.	0.26	2.66	supported
assurance has a positive impact on businessmen's satisfaction.	0.36	3.23	supported
responsiveness has a positive impact on businessmen's satisfaction.	0.31	4.19	supported
reliability quality has a positive impact on businessmen's satisfaction.	0.39	3.82	supported
empathy has a positive impact on businessmen's satisfaction.	<b>0.34</b>	3.59	supported

Considering the fact that certainty level is 0.95 for hypotheses tests, all hypotheses which have significance numbers outside -1.96 and +1.96 are supported. According to our analysis and based on table 5, all coefficients related to relationships between variables are significant. In other words, all research hypotheses are supported. Of dimensions of service quality, reliability dimension was the most effective (factor loading equal to 0.39) and tangibles dimension was the least effective dimension (standard factor loading equal to 0.26) in customers' satisfaction.

### Conclusion

The present research aimed to investigate businessmen satisfaction with e-customs in Abadan customs. Structural equations modeling technique was used for data analysis. Data analysis showed that all research hypotheses are supported. The results showed that impact coefficient of tangibles on businessmen satisfaction ( $\beta=0.26$ ) is positive and significant in  $p<0.01$ . Therefore, first hypothesis is supported and quality of tangibles has a direct, positive and significant influence on businessmen satisfaction. This finding is consistent with the results of studies conducted by Nabati Shoghl and Imani (2014), Karbasian (2004), UNCTAD (2006), Jang (2003), Manigo (1999) and Jamal and Naser (2002). Impact coefficient of assurance on satisfaction of businessmen ( $\beta=0.36$ ) is positive and significant in  $p<0.01$  level. Therefore, the second hypothesis is supported and assurance has a direct impact on satisfaction of businessmen. This result is consistent with the results of studies conducted by Nabati Shoghl and Imani (2014), Karbasian (2004), UNCTAD (2006), Jang (2003), Manigo (1999) and Jamal and Naser (2002). Impact coefficient of responsiveness on satisfaction of businessmen ( $\beta=0.31$ ) is positive and significant in  $p<0.01$ . Therefore, the third hypothesis is supported and responsiveness has a positive and significant influence on satisfaction of businessmen. This result is consistent with the results of studies conducted by Nabati Shoghl and Imani (2014), Karbasian (2004), UNCTAD (2006), Jang (2003), Manigo (1999) and Jamal and Naser (2002). Impact coefficient of reliability on satisfaction of businessmen ( $\beta=0.39$ ) is positive and significant in  $p<0.01$ . Therefore, the fourth hypothesis is supported and reliability has a positive and significant influence on satisfaction of businessmen. This result is consistent with the results of studies conducted by Nabati Shoghl and Imani (2014), Karbasian (2004), UNCTAD (2006), Jang (2003), Manigo (1999) and Jamal and Naser (2002). Impact coefficient of empathy on satisfaction of businessmen ( $\beta=0.34$ ) is positive and significant in  $p<0.01$ . Therefore, the fifth hypothesis is supported and empathy has a positive and significant influence on satisfaction of businessmen. This result is consistent with the results of studies conducted by Nabati Shoghl and Imani (2014), Karbasian (2004), UNCTAD (2006), Jang (2003), Manigo (1999) and Jamal and Naser (2002). The results in general show that as the quality of website and e-services increases, businessmen will be more satisfied. Considering the results, managers of Abadan Customs Department are advised to use an up-to-date and attractive appearance, graphical shapes, and appropriate fonts and colors and guides and signposts in customs website for increasing businessmen satisfaction. They should also provide reliable services in the website. Furthermore, they should be quick at removing website problems. They should announce the exact timing of services and deal with businessmen problems in order to increase businessmen satisfaction. Exact, up-to-date and reliable services can also improve satisfaction.

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