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DETECTION AND DETERMINATION OF KEY INDICES OF CUSTOMERS' SATISFACTION IN BUSHEHR PORT BASED ON KANO MODEL

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ABSTRACT
Without doubt, satisfaction has been regarded as one of critical issues in the recent decade. Managers in the organizations cannot remain indifferent to the customers' expectations and demands. They should arrange all their activities and competencies in favor of customers because customers have been assumed as the only source for return of capital. Therefore, customer retention and loyalty are considered critical to sustain on business. This also goes true in ports. Nowadays, over 90% of the world trade is made through marine transport. Therefore, ports play a key role in the world trade and act in a totally competitive environment, mentioned that significance of customer orientation has been recognized through supply of high quality services in most of commercial ports throughout the world. The present research has been conducted aiming at detecting and determining key indices of customers' satisfaction in Bushehr based on Kano model. To achieve the aims of research, Kano model has been used. This research is an applied research in sake of aim and a descriptive survey in sake of data collection method. Several questions have been raised about fundamental requirements, functional requirements and motivational requirements and then several hypotheses have been elaborated about effect of these requirements on customers' satisfaction to supply port services in Bushehr. Results of research indicate that lack of fundamental, functional and motivational requirements in port services affect level of customers' satisfaction in Bushehr based on Kano model. Fundamental requirements have the least effect and functional and motivational requirements have the highest effect on customers' satisfaction. Fundamental requirements and functional and motivational requirements have the highest effect on customers' satisfaction.

Keywords: *Bushehr Port, Customers' Satisfaction, Port Services, Kano Model, Fundamental Requirements, Functional Requirements, Motivational Requirements*

INTRODUCTION
In today's world in which the competition has been witnessed top of all the things at all areas, the organizations have perceived that constant success at market can come to realize through two ways: the first is acquisition of new customers and the second is retention of customers' loyalty. Some have deduced in their studies that acquisition of a new customer costs five times retention of a customer. Therefore, building customer loyalty has been recognized more important than acquisition of a customer (Zhang and Dran, 2001). The key point in building customer loyalty lies on customer satisfaction, but satisfying customer is of greater importance than his satisfaction. Satisfied customers have more effective advertising effect than any advertisement in media. Customers have been regarded as the largest capitals of an organization (Hapson *et al.,* 2003), under which it can perceive that customers and traders as the most fundamental capitals in ports can play a major role in acquisition of trade ships to the ports. If a port does not enable to meet customers' and clients' needs, it would lose a large share of market, under which the ports will be forced to improve infrastructures, technology and advanced information system of providing services to provide standard services to the customers. Therefore, the ports must seek high level of customer satisfaction so as to transform to competitive port (Chow, 2011), because increasing productivity in a port has been mentioned as an important factor for a country to achieve competitive advantages at international level (Tongzon, 2004). Bushehr port due to adjacency with industrial

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provinces of country and numerous oil and gas resources is of great importance, thus this port requires supplying suitable services so as to supply them to the customers at high speed and excellent quality. Hence, the present research intends to detect and prioritize the indices of customer satisfaction for increasing use of port facilities by detecting customers' expectations and receiving their views. In general, with regard to advantages of Bushehr, a particular attention must be paid to indices of customers' satisfaction in Bushehr to increase competitive power of this port, increase export and import and use the port and market at Persian Gulf countries. For this, the necessity to detect and determine key indices of customers' satisfaction and quality of port services in Bushehr port in increasing customers' satisfaction to maintain and increase market share and increase competitiveness of this port has revealed.

Significance of Detection and Classification of Customers' Needs
Since the 1970s when the idea of marketing was proposed after two decades of economic growth in west concurrent with recession due to oil shock and economic problems, name of Philip Kotler has been heard more than others at this area. From point of view of Philip Kotler, the most prominent scholar at this field, marketing refers to a human activity to meet needs and expectations through process of exchange. In other words, marketing has been defined as a managerial-social process through which the individuals and groups take action to meet their needs and expectations via production and exchange of goods with each other (Kotler and Keller, 2012). Marketing developments throughout their emergence have reached to an evolution from specialization at different industries. In the global market, competition of firms with each other has become more complicated and intensive. With advancement of information technology, customers enable to acquire wider information on quality of their considered services and products than the past. On the other hand, product markets at national and international level are increasingly becoming competitive (Jahangiri Hassan Abadi, 2006). Ports sustain on their activities in a totally competitive environment, thus marketing in port development and management has been recognized in most of the ports throughout the world. Anyhow, port marketing has been recognized as a relatively new concept and concept of marketing in organizational chart of ports has been revealed in the 1980s (Hamidi & Gheisari, 2006). Marketing in ports like other economic sectors includes the related activities with research in market. Research activities pave the way for analyzing market, determining strategy and setting goals of ports. Then, in the realization stage, marketing instruments are used to achieve aims (Hamidi & Gheisari, 2006). Increasing attention to port marketing relies closely on competitive environment in which the ports are operating. Increasing competition between different ports associates to globalizations of trade, transport and communications. Anyhow, changing and competitive environment at international level causes the limited hinterland which has existed in ports in the past is used by rest of ports. Port management must identify the tendencies which result in creation of new business in the port and adapt them with his conditions. The port which is administrated by the government and/or private sector is proposed as a successful port when it is a customer-oriented and market-oriented port and extends commercial strategy for acquisition of stable share in the market. This commercial strategy is possible only by implementation of management of service quality (Hamidi & Gheisari, 2006). Port marketing refers to a general concept, that is, all the port communities make a constant attempt for customer's satisfaction, relying on this fact that customers evaluate customers based on criteria of port services. Port customers seek a port which supplies the best quality and price for their required services and seek acquisition of benefits rather than purchase of products. Quality-oriented tendency and port marketing which are of great importance must be in charge a special sector. Customer satisfaction requires all the members of port community to step as a unique and coherent process and advocate a major aim "the right is with customer"(Hamidi & Gheisari, 2006). Marketing refers to the ability for seeing the organization from point of view of customers and consumers of the supplied services. Therefore, modern marketing in transport and port industry includes a series of beliefs, policies and viewpoints by management, operation, engineering and financial sectors of a port which requires making a good relationship together with supply of suitable services to consumers and customers of port services. In other words, taking essential steps is targeted in providing the best facilities with the most efficient administrative structure which the human resources (Omaraei, 2012). With the advent of the third millennium, most of concepts in leading

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organizations have found another concept and undertaken a new role in the communities. The term "customer" has not left behind in this development because the concept of this term does not merely call a commercial transaction to mind, but today human relationships find meaning in a mutual interaction, so that any person is a customer of other individuals on one hand and has also customers on the other hand. The comprehensiveness and universality of new use of the term " customer " on one hand and the historical context in Iran due to the Silk Road on the other hand, as well as severity of global approach and welcome to this holy word, an increasing importance for attention to customer is sought (Mohammadi, 2004).

Nowadays, service and manufacturing organizations consider level of customer satisfaction as an important criterion to measure quality of their work. Attention to customer and his/her satisfaction have been required as an important requirement for competition at any level of market including international markets. Further, customer satisfaction has been mentioned as one of the most fundamental dimensions of quality management systems and organizational excellence models (Leading developers of the solutions for lean thinking).

Hence, detection and prediction of customers' needs for service organizations including ports are of great importance, because it is clear that customer is the fundamental element for survival and growth of any organization. Overview and recognition of indices of customer satisfaction and measurement of customer satisfaction are of great importance as level of customer satisfaction determines success or failure of organizations. If performance of organization be lower than customers' expectations, customers will leave the organization and the organization will fail. Various studies have shown that high levels of customers satisfaction and high rate of customer retention are severely relied on each other and profitability is relied on both. These studies indicate that the cost for acquiring a new customer than maintaining the existing customer requires five times further money, resources and time. As customers' expectations increase and competition intensifies, reaching to high level of customer satisfaction necessitates for survival of firm. Any firm in which there is a low level of customer satisfaction has been witnessed with poorer customer orientation and loss of market share. Studies indicate that the firms which enjoy high levels of customer satisfaction are constantly stronger and more successful in a long term (Naumann & Giel, 1995). The major priority at any organization must lie on customer acquisition and retention. Failure in achieving this implies remaining without profit, growth job and losing business. In the existing competitive space, those institutions are successful which detect customer as their largest capital and pay for their benefits, but customer prefers to go an institution which pays a particular attention to his demands, so that the first selection must be customer in any business (Jalilian, 2013).

It has passed several decades since the customer orientation and attention to customers' needs have become major concern for managers and authorities within organizations throughout the world; since customer orientation is enhancing in the world, today the number of firms which select customer satisfaction as the index of their performance evaluation keeps increasing (Hinterhuber & Matzler, 1998), so that, most of firms have selected rate of customer satisfaction as the indicator of their product or service performance or indicator of future status of firm (Witell & Lofgren, 2005).

In recent decade, strategy of firm has changed from market share to customer satisfaction in most of firm, because as mentioned earlier acquisition of new customer costs five times retention of a customer. This change of strategic thinking has grounded on this concept that customer satisfaction is the best indicator for future of organization, because access to high level of customer satisfaction results in rise of loyal customers for the organization, mentioned that access to high level of customer loyalty against the firms which seek new customers will be followed by lower costs (Witell & Lofgren, 2005).

The Advantages from Customer Satisfaction

Creation of competitive advantages, improvement and increase of reputation and positive expressions, acquisition of trust, sustainable development and growth, reduction of costs for acquisition of new customers, persuading repetition on transaction and customer loyalty, reduction of the costs due to mistake (Hassan Yousefi, 2006).

The reasons to increase significance of acquisition of customer satisfaction

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Three major changes in industrial economy have resulted in focus on access to this aim (Hassan Yousefi, 2006).

-Rapid technological changes

-Increasing competition throughout the world

-Changing the customers' needs

Customer Satisfaction Measurement Models

A variety of models have been introduced by the researchers at the field of quality management, economic sciences and marketing to measure customer satisfaction including Kano, SCAMPER, SERVQUAL and Fornell model (Maleki & Darabi, 2008).

Here it is asked what the way to achieve customer satisfaction is. It must stick this point on mind that customer satisfaction is an internal feeling which is difficult to be understood by many individuals, but if it can be transformed to quantitative data, it can simply understand degree and severity of customer satisfaction. Therefore, customer satisfaction must be transformed to measurable parameters that are associated to different aspects of product or service. Measurability of customer satisfaction provides the analyses for the firms so as to detect the opportunities for improvement and their weaknesses through detecting the lowest and highest level of their performance (Hinterhuber & Matzler, 1998).

Therefore, detection of the factors which raise customer satisfaction has been regarded as a clear and significant issue, but formulation of models and techniques which stratify these factors is more important, because it can formulate the most successful strategies in the light of perceiving the priorities. Kano model has been mentioned as one of these instruments through which it can stratify the factors affecting customer satisfaction in addition to their detection.

Research Model: Kano Model

Kano model has been taken from Professor Noriaki Kano, Tokyo University of Science. Kano model was proposed at the late of the 1970s by Professor Noriaki Kano in Rica faculty in Tokyo, used in most of customer satisfaction models, today.

With regard to Kano model, the products and services which can be supplied in manufacturing and service organizations can be classified based on level of customer satisfaction and significance of customer satisfaction from point of view of customers in three groups of fundamental requirements, functional requirements and motivational requirements (www.parsmodir.com).

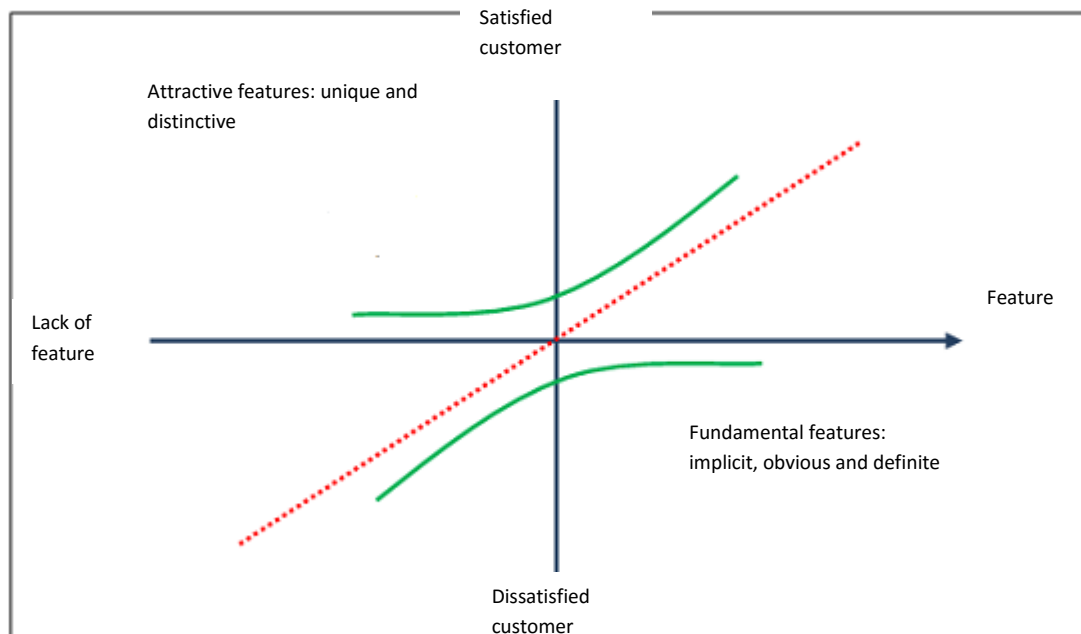**Figure 1: Kano Model (Berger, 1993)**

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Fundamental Requirements of Kano Model

Fundamental requirements have been mentioned as the first category of features which can avoid customer dissatisfaction in case of considering them in the product, not providing satisfaction and prosperity in the customer. In other words, satisfying fundamental requirements of product provides the preparations for involvement of product in the market and does not help for victory over rivals and seizing the product market (Kondo, 2001).

Functional Requirements of Kano Model

Functional requirements of product is the second category of qualitative features that not meeting it causes customer dissatisfaction and meeting it causes rise of customer satisfaction. Significance of functional requirements lies on this fact that detecting and considering it in the product is the least effort which raises maintenance of commercial position of organization in competitive market (Kondo, 2001).

Motivational Requirements of Kano Model

Motivational requirements have been mentioned as the third category of qualitative features in Kano model, not considered as a need and requirement in view of customer when using product; as a result, lack of meeting this group of qualitative requirements does not raise customer satisfaction, but supply of them in the product raises high satisfaction and emotion in the customer. Tangible feature of motivational requirements lies on this fact that it is not mentioned by the customer, but the considered product will be replaced with rest of similar products of the competitors in the market in case of detecting and considering it in the design, whereby it will raise suitable position for the supplier firm (Noriaki, 1984).

Research Method

Since the main purpose of this research is to examine an issue via field method, it can say that the present research is an applied research in sake of aim. On the other hand, since library and field methods such as questionnaire have been used in the present research, it can say that the present research is a descriptive survey in sake of nature and method of data collection. In this research, statistical population consists of all the customers in Bushehr port, to whom port services are proposed. In the present research, due to uncertain population size, Cochran formula has been used to determine sample size. The sample size has been selected via simple random sampling method. With regard to the calculations, 53 individuals have been considered as the sample group.

To collect early information, questionnaire and open interview with experts, managers, experts at the customer-related entities in Bushehr port and potential and loyal customers in Bushehr port have been considered.

To collection information associated to theoretical background, library studies, documents, books, articles, research plan, theses, reports and internet search were used. In this research, point of view of 20 experts, scholars and port and marine specialists in Bushehr port were asked to determine extent of validity of questionnaire via a preliminary sample. Cronbach's Coefficient Alpha has been used to determine reliability of questionnaire. Software SPSS was used for calculations. Cronbach's Coefficient Alpha above 0.70 indicates acceptable reliability which equals to 0.79 for functional part of the questionnaire and equals to 0.88 for non-functional part of the questionnaire, indicating that the considered questionnaire has reliability.

Stages of Research Based on Kano Model

Stages of process of Kano model are as follows; the stages below have been considered to fulfill Kano model.

The First Stage: Overview of Research Literature
Studying research literature using library studies, internet, theses, articles and journals
The Second Stage: Determination of Research Variables
With regard to the studies on indices of customer satisfaction with port services regarding review of features of port services, the research variables were examined as follows:
a-*Independent variables:* fundamental requirements, functional requirements and motivational requirements
B-*Dependent variables:* customer satisfaction with port services

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The Third Stage: Detection of Requirements of Product "Assume Yourself as your Customers"
The starting point to design Kano questionnaire refers to the requirements of the product which have been determined in an exploratory research.

Griffin and Hauser (1993) perceived that interviewing with 20 to 30 individuals of a homogenous class is sufficient to perceive all the probable requirements of product with approximation (90%-95%). To detect product requirements, firstly it requires analyzing their problems rather than examining customers' preferences (Zhang & Vondran, 2001). Most of research institutions in which a market uses interview to perceive requirements of product have expressed that interview with customers will be beneficial to adapt the product requirements with customers' needs, but it will not be beneficial in considering new and latent requirements of product. Particularly, attractive requirements are not expressed by the customer, because these are the features that are not expected by the customer. In the present research, using need assessment questionnaire, port and marine experts and specialists were asked to mention the factors that can be the key indices for customer satisfaction in supply of port services in priority in addition to the indices taken from library studies, internet, theses, articles and journals. After collecting questionnaires, similar factors were removed or integrated and the obtained results were considered as the infrastructure in Kano questionnaire with 29 indices as the key indices for customer satisfaction with supply of port services in Bushehr port.

The Fourth Stage: Design and Distribution of Kano Questionnaire
These instruments are particularly used to collect information in Kano model. To prepare questionnaire, features of products (port services) were considered in the Kano questionnaire (Noriaki, 1984).

-with regard to Kano model, a functional question was designed for each feature, that is, the addressee was asked to which extent the feature of product affects increasing your satisfaction if it existed in supply of port services in Bushehr port?

-with regard to Kano model, a non-functional question was designed for each feature, that is, the addressee was asked to which extent the feature of product affects increasing your satisfaction if it existed in supply of port services in Bushehr port?

In the questionnaire, with regard to Kano model, a paired question has been proposed for each feature that the customer can select one of the five items (very high, high, neutral, low, very low). The first and second categories include functional and non-functional ways, respectively. To design this section, five-point Likert scale has been used which is one of the common measurement scales. This scale has been scored via 1, 2, 3, 4 and 5.

The Fifth Stage: Evaluation and Analysis of Results
In this research, Kano model has been used to analyze data and information. After collecting data, data were analyzed via software SPSS.

Analysis of Questionnaire Based on the Highest Frequency
After collecting the questionnaire distributed among the customers, it is turn to evaluate and analyze the questionnaire. For this, firstly the customers' responses to different questions are collected in matrix of results. The questionnaire is evaluated in three stages. After integrating the response to functional and non-functional questions in evaluation table, results of each of features are listed in table of results, indicating frequency distribution of each feature of products (Kondo, 2001). To transform the customers' views to the information used in matrix of results, Kano table is used. In this method, a new column has been added at the end of matrix of results in which the response with the highest frequency is selected among the responses to each feature.

Kano Analysis by Means of Determination of Coefficient Degree for Customer Satisfaction (the Best and Worst State for each Feature)
With regard to algorithm of this method, it can use the results from final Kano table so as to determine to which extent the considered feature in product increases customer satisfaction if it exists in the product and to which extent it decreases customer satisfaction if it does not exist in the product. After passing the existing steps in Kano model and specifying type of each of factors from fundamental, functional and motivational perspective, now the coefficient of customer satisfaction must be calculated. Coefficient of

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customer satisfaction says whether supply of a specific feature of services causes customer satisfaction or avoids customer dissatisfaction. As a result, coefficient of customer satisfaction indicates to which extent feature of product can affect customer satisfaction and to which extent lack of feature of product can affect customer dissatisfaction.

Positive coefficient of customer satisfaction ranges from 0 to 1, that is, the more this value is close to 1, it will have more effect on customer satisfaction, and the more this value is close to 0, it will have less effect on customer satisfaction. In this way, in negative coefficient of customer satisfaction, the more values are close to -1, it will have more effect on customer dissatisfaction in case of lack of feature. Value (0) indicates that lack of feature will not cause customer dissatisfaction, that the coefficient of customer dissatisfaction has been calculated via the formula below (Taheri kia *et al.,* 2011).

Satisfaction level=O+A/A+O+M+I

Dissatisfaction level=O+M/(A+O+M+I)*(+1)

Further, in this research, descriptive statistics have been used to describe the collected data and inferential statistics including parametric statistical methods have been used to test hypotheses based on type of data distribution.

Kolmogorov–Smirnov test was used to test normality of data that the results of Kolmogorov–Smirnov test indicated that dispersion distribution is normal in fundamental, functional and motivational requirements. Significance level of test is greater than 0.05 indicating that data enjoy normal distribution. One-sample t-test was used to examine effect of fundamental, functional and motivational requirements governing customer satisfaction.

For this, cut-point 3 was used based on Likert scale. In questions presented in the questionnaire, negative and positive aspects have been described in hypotheses H_0 and H_1, respectively.

Table 1: Overview of Effect of Fundamental, Functional and Motivational Requirements on Level of Customer Satisfaction

Statistics	No	Mean	Standard Deviation	=3 Test value			
				Difference of Means	T-Value	df	Sig
Fundamental Requirements	53	3/64	0/44	0/64	10/52	52	0/001
Functional Requirements	53	4/48	0/22	1/48	48/71	52	0/001
Motivational Requirements	53	4/67	0/30	1/66	4/29	52	0/001

H_0: $\mu \leq 3$
H_1: $\mu > 3$

Results of table above indicated that there is a significant difference between real and assumed mean, such that real mean of fundamental (3.64), functional (4.48) and motivational (4.67) requirements is greater than assumed mean.

With regard to the obtained t-value, it can say that respondents'' view on effect of fundamental, functional and motivational requirements on customer satisfaction is positive. Therefore, H_0 concerning lack of difference of two means has been rejected and instead H_1 concerning difference of two means has been confirmed. Results of this research are consistent with the results of research by Nour Bakhsh *et al.,* (2010) and Kano model.

Findings of Research

Results from frequency of data, characterization of factors based on frequency as well as satisfaction and dissatisfaction coefficients for each of indices have been integrated in table 2.

In this table, variables have been prioritized per requirements (fundamental, functional and motivational requirements).

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Table 2: Ranking Effective Factors in Customer Satisfaction in Bushehr Port

Frequency of Data							Ranking Factors	Satisfaction and Dissatisfaction Coefficients	
Row	Index	R	I	Fundamental	Functional	Motivational		Satisfaction	Dissatisfaction
1	Creating a Port Single Window	0	8	2	16	27	motivational requirements	0/81	-0/34
2	Multimodal Transportation Infrastructure	0	8	3	14	28	motivational requirements	0/79	-0/32
3	Applying Discounts on Tariffs Based on Customer Performance	0	8	3	11	31	motivational requirements	0/79	-0/26
4	Provide Ancillary Services to Vessles	0	12	1	12	28	motivational requirements	0/75	-0/25
5	Providing Value-Added Services	0	15	0	9	29	motivational requirements	0/72	-0/17
6	Possibility of Online Interaction between Port and Customers	0	13	3	8	29	motivational requirements	0/70	-0/21
7	Documentary e-Services without the Customer's Presence in Port	0	10	7	9	27	motivational requirements	0/68	-0/30
8	Provide Ancillary Services to Clients	0	10	7	9	27	motivational requirements	0/68	-0/30
9	Provide Special Services for Customers with Respect to their Performance	0	15	3	14	21	motivational requirements	0/66	-0/32
10	Clear and Appropriate Rules and Regulations	0	10	10	21	12	functional requirements	0/62	-0/58
11	Welfare Facilities for Customers at On-Site Service	0	10	10	21	12	functional requirements	0/62	-0/58
12	Reduction of Waiting Time of Vessles in Port	0	8	15	16	14	functional requirements	0/57	-0/58
13	Modern Port Equipment	0	17	7	22	7	functional	0/55	-0/54

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							requirements		
14	Personnel's Good Dealing	0	17	6	22	7	functional requirements	0/55	-0/52
15	Provide Ancillary Services by Port	0	9	17	20	7	functional requirements	0/51	-0/70
16	Accelerate the Loading and Unloads of Goods	0	20	6	24	3	functional requirements	0/51	-0/57
17	Providing services to Customers in the Shortest Possible Time	0	15	12	19	7	functional requirements	0/49	-0/58
18	Secure Loading and Unloading	0	16	11	19	7	functional requirements	0/49	-0/57
19	Mechanized Port Operations	0	21	8	22	2	functional requirements	0/45	-0/57
20	Conventional Port Costs (Legal)	0	13	18	12	10	Fundamental requirements	0/41	-0/57
21	Proper Infrastructure to Protect the Goods	0	13	24	8	8	Fundamental requirements	0/30	-0/60
22	Security of Goods at the Port	0	13	24	8	8	Fundamental requirements	0/30	-0/60
23	Safe Entry of Vessels to Port	0	19	25	8	1	Fundamental requirements	0/17	-0/62
24	Suitable Software Infrastructures	0	21	23	6	3	Fundamental requirements	0/17	-0/55
25	Welfare Facilities in the Port	0	19	25	8	1	Fundamental requirements	0/17	-0/62
26	Suitable Port Infrastructures	0	16	29	4	4	Fundamental requirements	0/15	-0/62
27	Sufficient Equipment to Provide Port Services	0	18	28	3	4	Fundamental requirements	0/13	-0/58
28	24 Hour Services during 7 Days Per Week	0	22	24	7	0	Fundamental requirements	0/13	-0/59
29	Specialists	0	19	30	2	2	Fundamental requirements	0/08	-0/60

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Results from table above indicate priority of fundamental, functional and motivational requirements based on Kano model.

Conclusion

Overview of Results

As mentioned, factors affecting customer satisfaction with port services in Bushehr port have been characterized in table 2 in three groups represented with fundamental, functional and motivational requirements. Yet, since different Kano categories differ in terms of extent of satisfaction and dissatisfaction, each factor has resulted in special implications, mentioned as follow.

Fundamental Requirements

Analysis of the results from research questions has been made based on the given responses and results in table 2. According to row 20-29, the features of port services have been categorized in group of fundamental requirements, that is, supply of such services avoids customer dissatisfaction and does not provide customer satisfaction; further these features are definite from point of view of customer and lack of them causes customer dissatisfaction.

Functional Requirements

Analysis of the results from research questions has been made based on the given responses and results in table 2. According to row 10-19, the features of port services have been categorized in group of functional requirements, that is, meeting these requirements will be followed by customer satisfaction. More specifically, customer has expectation for better supply so that customer dissatisfaction will come to realize in case these requirements are not met.

Motivational Requirements

Analysis of the results from research questions has been made based on the given responses and results in table 2. According to row 1-9, the features of port services have been categorized in group of motivational requirements, that is, supply of such services avoids customer dissatisfaction and does not provide customer satisfaction.

Prioritization of Indices Per Requirements

The results from table 2 indicate the prioritization of indices per requirements as follows:

Priorities in Fundamental Requirements

The first priority: Conventional port costs with satisfaction coefficient (0.41)

The second priority: Proper infrastructure to protect the goods with satisfaction coefficient (0.30)

The third priority: Safe entry of vessels to port, suitable software infrastructures and welfare facilities in the port with satisfaction coefficient (0.17)

The fourth priority: Suitable port infrastructures in the port with satisfaction coefficient (0.15)

The fifth priority: Sufficient equipment to provide port services in the port with satisfaction coefficient (0.13)

The sixth priority: Specialists in the port with satisfaction coefficient (0.08)

Priorities in Functional Requirements

The first priority: clear and appropriate rules and regulations and Welfare Facilities for customers at on-site service
with satisfaction coefficient (0.62)

The second priority: Reduction of waiting time of vessels in port with satisfaction coefficient (0.57)

The third priority: Personnel's good dealing in the port with satisfaction coefficient (0.55)

The fourth priority: Provide ancillary services by port with satisfaction coefficient (0.51)

The fifth priority: Providing services to customers in the shortest possible time and secure loading and unloading in the port with satisfaction coefficient (0.49)

The sixth priority: Mechanized port operations in the port with satisfaction coefficient (0.45)

Priorities in Motivational Requirements

The first priority: creating a Port Single Window with satisfaction coefficient (0.81)

The second priority: multimodal transportation infrastructure, Applying discounts on tariffs based on customer performance in port with satisfaction coefficient (0.79)

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The third priority: provide ancillary services to vessels with satisfaction coefficient (0.75)
The fourth priority: Providing value-added services with satisfaction coefficient (0.72)
The fifth priority: Possibility of online interaction between port and customers in the port with satisfaction coefficient (0.70)
The sixth priority: documentary e-services without the customer's presence in port, Provide ancillary services to clients in the port with satisfaction coefficient(0.68)
The seventh priority: provide special services for customers with respect to their performance in the port with satisfaction coefficient (0.68)

Priority of Fundamental, Functional and Motivational Requirements Based on Mean

Results of table 1 indicate priority of fundamental, functional and motivational requirements based on mean as follows:

The first priority: motivational requirements are ranked the first with mean (4.67), i.e. customer satisfaction is top of all other factors.

The second priority: functional requirements are ranked the second with mean (4.48).

The third priority: fundamental requirements are ranked the third with mean (3.64), i.e. customers have the least satisfaction with fundamental factors.

Suggestions

With regard to trend of globalization, if an organization tends to success and seeks to achieve a major share of markets and abundant profit, it will consider customer orientation top of all the things. Indeed, organizations and firms which have focused on consumers' needs and paid attention to quality of product and supply of service to customer are more successful at competition area. The first and last criterion of customer satisfaction lies on this fact whether the customer's expectations are met or not, thus firstly it must specify what the customer's expectations are. Then, the aims must be determined and focused on the areas which are important to the customers. This model specifies customers' expectations about quality factors.

Suggestions for the Managers in Bushehr Port

With regard to what conducted in the present research, significant results have been acquired. The organizations including port and marine organizations which can use the results from this research will enable to acquire numerous competitive advantages in the complicated business world and sustain on their activity. Thus, with regard to the results from this research for the customer satisfaction in line with supply of port services in Bushehr port, the suggestions below are proposed.

With regard to indices of fundamental requirements and their prioritization mentioned in the present research, it can consider fundamental requirements as the most important factor affecting customer satisfaction, because if these factors are not met by Bushehr port, customer dissatisfaction will come to realize and customers will not definitely tend to use services in Bushehr port and will take action to use services of other ports without expression of dissatisfaction. Therefore, the managers in Bushehr port are suggested to train and justify their staffs to perform the variables which have been categorized in group of fundamental requirements as much as possible.

Since Bushehr port as a commercial port faces several fundamental problems such as being enclosed by city, lack of private container terminal and shortage of dock, due to lack of development in current space of Bushehr port regarding the variables mentioned in paragraph 1, several suggestions considering infrastructures and equipment as well as plan and development of Bushehr port are suggested to managers in Bushehr port.

To provide customers' more satisfaction, suitable investment for performing the variables such as suitable infrastructures to protect from good, security of goods in port, safe entry of vessels to port, suitable infrastructures of port, suitable software infrastructures and sufficient equipment for providing port services with high quality, and substantial actions are taken into consideration.

With regard to indices of functional requirements and their prioritization mentioned in the present research, it can consider functional factors as the factors affecting increase in customer satisfaction. Therefore, the managers in Bushehr port are suggested to take essential actions for performing and

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improving the variables which have been classified in the requirements by allocation of suitable budgets regarding significance of variables of functional requirements.

 With regard to indices of motivational requirements and their prioritization mentioned in the present research, it can consider motivational factors as the factors affecting increase in customer satisfaction. The more attention is paid to these factors, customer satisfaction will increase more. Since this group of requirements has outperformed than rest of requirements from point of view of customer, this group has paved the way for more customer satisfaction in this port. Nowadays, in case successful organizations constantly intend to improve their services, this has also gone true in Bushehr port as well as rest of ports, required for taking essential steps. Therefore, the managers in Bushehr port are suggested to provide the preparations to perform the variables which have been classified in the group of motivational requirements so as to differentiate Bushehr port with rest of ports in terms of customer satisfaction and customer loyalty.

With regard to competitiveness of ports, managers in Bushehr port are suggested to take actions for improvement of factors in a short-term plan, classified in functional and fundamental factors in the present research.

Bushehr port should have taken action for improvement of all the indices which have been detected as effective indices in customer satisfaction in a long-term plan in order to compete with domestic and regional competitors during the next years; yet with regard to results of this research, managers in Bushehr port are suggested to focus on the factors which are in the group of motivational and functional requirements regarding capital considerations and possibility for priority of investment.

The managers in Bushehr port are suggested to take action to create constant assessment system for customer satisfaction so as to be informed of customers' needs and perceive their new needs and conduct research for constant improvement during one year.

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