The Gap Analysis and Measurement of Customer Satisfaction in the Delivery of Services in Isfahan Province Gas Company Based on Parasuraman Model

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Abstract

One of the indicators of efficiency of administrative system in developed countries is improving the quality of services offered to the citizens. One of the appreciable indices of public satisfaction is customer's satisfaction with the delivery of services by the same organizations. This research's design is to fulfil the intentions of the companies, which is to obtain the relative satisfaction and to receive valuable feedbacks of subscribers. The methodology of this study is survey and is conducted as an applied research. The population of this study consisted of all households covered by the gas company in Isfahan province, which is equal to 191152 households. Sampling in this study is random cluster sampling and questionnaire and library resources are two major methods which are used to gather information and data. Statistical methods and data analysis methods to measure customer satisfaction are CSM, descriptive and inferential statistics using SPSS, and performing adaptive comparisons of the results obtained from the homes and offices and results of honoring client. Some of the main questions raised in this research are: optimum level of service received from Isfahan Province Gas Company and the average satisfaction with the service received? Time span of receiving service of Isfahan Province Gas Company (in minutes or days) and consistence with the standard time to service delivery? After the necessary calculations results were as follows: The results showed that in the majority of cases, the provision of services by the gas company is proportional to the standard time. Due to the lack of familiarity with the standards of work time, in most cases it is possible that the services provided in standard time be realized, but the customer satisfaction with the service received is still not so high.

Keywords: Satisfaction, service recipients, Isfahan Province Gas Company, CSM.

Introduction

Organizations constitute one of the main pillars of contemporary human society which has a significant impact on the fate of humans. Most organizations in the world are in public and private spheres on the basis of specific goals and vision are established. For many nongovernmental organizations, retention and profitability and compete with foreign competitors on these routes has undergone very important and special events are ups and downs. Some of these organizations are likely to arise, grow, reach maturity and many of them reach perigee. Some of these organizations are experiencing very short-lived, but some of them hundreds of years live on. Some of them are a source of great changes and some just because of the creation of waves on competitive markets drown. The situation regarding to governmental organizations seems very sophisticated. These organizations often are targeted due to government mandates and specific policies and to provide public services to the community. What is most important for these organizations, is the Clients' satisfaction with the quality of service provided, the type of service and learning. In one definition, satisfaction is to feel good for
the person. In this regard Isfahan Province Gas Company as a government agency and leading gas company in the field of customer satisfaction has made valuable efforts to achieve organizational excellence and present research is implemented in order to measure to obtain the customer's satisfaction. Another concern of this study is the necessity of believing that in most studies about client’s satisfaction which is realized through the Interior Ministry, a sampling bias existed in some government agencies such as gas and telecommunications companies and so on. Office doors were questioned only, and opinions of clients using the services of these organizations are neglected. Hence the need for an integrated approach to the study of client feedback and subscribers houses is there and to overcome this bias, this research has taken positive steps and seeks to answer the question of what factors affect customer satisfaction in Isfahan. What is the effect of each in satisfaction of clients? Is there any difference between the levels of client satisfaction? And what guidelines for improving the level of satisfaction can be made? This study has tried for using scientific instruments to provide appropriate answers to the questions and concerns of the company.

A Review of Research Literature

Client satisfaction is an evaluation by clients receiving services. A complex set of factors affected satisfaction and knowing what it means for measuring service quality is necessary. Their satisfaction in relation to the different definitions have been proposed by theorists. Satisfaction flexibly is "adequate" or "more than enough". The client satisfaction can be regarded as providing clients requests. Organizational activities for providing high quality services must be steadfast in pursuing satisfaction [1,2] defined satisfaction as the degree to which actual performance to meet the expectations of the client. If performance does meet expectations of the clients, they feel the satisfaction and dissatisfaction they feel otherwise. Blanchard [3] defined satisfaction as feeling or attitude towards a product or service after using it. Studies show that sentiment, saying and attitudes of clients effect on other patients and staff. Therefore, if a client is dissatisfied with the performance of the staff, their dissatisfaction are to be transferred at least to some of others and such cases can undermine the credibility of the employee and the organization [4]. Therefore, satisfaction is the desirability for different qualities of services. Client satisfaction increases the reliability of organization. Client satisfaction is achieved when the true demand be satisfied and his/her needs be met on time and in a manner he/she wants [5]. According to some theorists, providing quality services requires a system that predicts the needs of clients truly. Meanwhile some believe that having accurate and timely information causes the organization be able to respond more quickly to complaints [6].In this regard, systems, models and various patterns have been proposed to improve the level of satisfaction. It seems that the growth of literature in this area has a development chain and continuous updating and learning of the findings and observations of previous models. In this section some of these models are referred.

Model of Customer Satisfaction

The initial version of the theory consists of two primary drivers include satisfaction and customer expectations

![Figure 1. Model of customer satisfaction](image)

Swedish model of customer satisfaction in 1992 as a satisfaction index model was introduced for products and services at the national level. Swedish first model consists of two primary drivers of satisfaction: perceived value and customer expectations. More
precisely, perceived value is perceived level of quality relative to the paid price. Quality compared to the price paid by the consumer is an index that the customer using it compares the two.

![Figure 2 Model of customer satisfaction in Sweden](image)

Customer Satisfaction Index in the US in 1994 in collaboration with the American Society for Quality and the University of Michigan Business School was presented. The model is derived from the American Customer Satisfaction Sweden Index, a model structured and involves a number of variables and relationships between them. As seen in Figure 2-3 expectations, perceived value and perceived quality as factors affecting customer satisfaction are introduced. On the other hand customer loyalty and customer complaints are the model outputs.

![Figure 2.3 The model of customer satisfaction in the US](image)

European Customer Satisfaction Index examines the customer satisfaction index along with the loyalty. In this model, customer satisfaction stimuli are perceived image of the company, customer expectations, perceived quality and perceived value. Relationships among the variables are shown in Figure 2-4.

![Figure 2.4 The model of customer satisfaction in Europe](image)

In this model, the quality of services are in Ellipses and the arrows are showing that the resources effect the customer. According to this model, the resources provided by customers can affect the quality of services. The quality of services affect the results of the two approaches.
Quality of Services Features Model

In this model, to the point that if a service organization is always up to the expectations and preferences of their customers, they will be high quality. Therefore, the first step to improve the quality of services is divided into groups of different characteristics. Based on Heywood-Farmer, generally the three characteristics essential services are: physical facilities and processes, behavior and professional judgment. Every feature of each feature is made up of several factors. In this model, the authors tried a variety of services depending on the degree of interaction, intensity and temperature delineate in customization service.

The Combined Service Quality Model

Service quality gap, may be established without prior experience serving customers by word of mouth communication, advertising and other media of communication. Therefore, the potential customer perceptions of service quality, as well as according to customers' actual perceptions of service quality experienced, it seems necessary. This model tries to traditional management framework, design services and how to deliver it and marketing activities combined. The aim is to identify the dimensions associated with the quality of services in the framework of traditional management, the planning, implementation, and control. The model considers the combination of three factors: Corporate Image, traditional marketing activities and external factors that are affecting service quality expectations.

Methodology

The study was conducted as a descriptive and applied research. The population in this study consisted of all households covered by the gas company in Isfahan province, which is equal to 191,152 households. Sampling in this study is based on a random cluster sampling and questionnaire library resources are two major methods which are used to gather information and data. Statistical methods and data analysis methods to measure customer satisfaction are through CSM, descriptive and inferential statistics using SPSS, and performing adaptive comparisons of the results obtained from the homes and offices and results of honoring client. Sample size formula:

\[ n = \frac{Nz^2 p(1-p)}{(N - 1)e^2 + z^2 p(1-p)} \]

N = population size (191,152).

n = number of samples (2190 = n).

e = relative error in the estimate (0.05/0 = e).

p = ratio of the variance estimation (5/0 = p).

z = confidence intervals (95% CI: 96/1 = z).

260 people were surveyed from client offices in the doors and the number of 1964 people were questioned in the door. A total of 2224 patients were evaluated for the number 34 is more than the number obtained by Cochran. Sampling in this study, based on a random cluster sampling. In this case, each of the cities in the area into five regions (North, South, East, West, and Central), and in proportion to the population of each area (Statistics documentary gas company) was determined in each area. Moreover in some cities due to its small size and low total city area for a single code and the name of the city was considered. After clustering randomly sampled from each region was conducted. In the whole province, about 22 percent of the cities studied areas in the north and the south accounted for 18.9 and 21.7 East and West 21.7 and 15.6 percent sampling center. Customer satisfaction is measured based on two questionnaires. A questionnaire was used to measure the satisfaction of the customer's door and the second questionnaire to measure customer satisfaction of the office door. The method used to measure customer satisfaction, was CSM. In this method, the basis of the customer and respect for him. Therefore, the first step in implementing this method, knowledge of customer comments about the organization. Comments are based on a scale of 1 to 5, which is quite conventional, is examined. In addition, CSM method for measuring customer satisfaction, research data using SPSS software based on the concepts of descriptive statistics (such as mean and standard deviation) were analyzed.
For more scrutiny in data analysis, the results of the doors of offices and homes in each city studied, analyzed, and comparisons were necessary. While the results with the results of honoring client during the years 2005 to 2010 were analyzed.

Findings
Evaluation of Demographic
The researchers refer to homes, the number of cities surveyed in this study included Abhar, Ijrud, Khodabande, Khoramdeh, Isfahan and Mahneshan, and also in some subsets of these cities such as Hidj, Soltanieh, asd Saein Ghaleh (associated to Abhar) Sohrevard and Sejas (Khodabande), and Dandy (Mahneshan) the opinions of the customers were collected.

Obtaining Information
Obtaining information about the workflow at each service in Isfahan Province Gas Company interviewers The results obtained in this research with regard to the way of surveying the information related to the workflow of each of the Gas Company of Isfahan, when interviewers visit to homes suggests that, Obtaining the highest percentage of turnover is related to the: 1. Friends and acquaintances (about 37.1 percent); 2. Signpost (23.8 percent), 3. IVR 4146333 (by 22.2%), 4. Previous experience due to percent), 6- radio, television and newspapers (14.5%) and 7.

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Determine the Status of the Current and Preferred Methods to Pay Bills
The results also suggest that subscribers pay bills by: 1. Post Bank or post office and telecommunications (by 32.1%), 2. ATM (31.1 percent), 3. In the Bank (with 22.4 percent), 4. Telephone banking (10.7%) and 5. Internet access (2.7%). To determine the effect of different colors bills to encourage customers to optimize gas consumption The results of Table 4-6 show that Isfahan Province Gas Company subscribers in 60 percent of cases know the effects of colors on different bills to encourage consumers, high and very high and only 13 percent have seen an impact so low and very low. In addition, they consider an average impact of 3.66 out of 5 (about 73.2 percent).

Assessment of service received from gas companies from the perspective of a customer's home The state of receive or not receive services from gas company Isfahan Province Because of outsourcing to receive services from post offices in recent years has been realized, the percentage of subscribers who have received this sharing method, is less than subscribers who previously had to refer Gas Company (36% vs. 60.1%), while 3.9 percent have been in the field disavow. In other words, respondents were not aware that their family was going to get the feed gas to the post office or the gas company. On the other hand, received the largest percentage of service from a variety of services received from Isfahan Province Gas Company, related to the 1. Installing the gas installations (with 89.3 percent), 2 meter installation (with 88%), 3. received inquiry response (by 34.3%) and other services were ranked lower.

The number of visits to receive services from the province Gas Company (out of service recipients who were aware of the issue) More than 85 percent of the subscribers to get gas services company Isfahan province, had only one visit. But about 15 percent of the rest to get their services, had to refer to the company 2 or 3 times. The visit post office to receive the Subscribe get the most repeated (with 25.6% of patients more than once). Duration of service of Isfahan Province Gas Company (in minutes or days) and consistent with the standard time for serving Among the 12 services investigated in this section, an average of 92% of services provided is consistent with the intended standard of the Gas Company, and receiving the subscribe through post offices are at a percent of 73.9 and 88.1, the lowest rate of compliance with standards. Therefore, eliminating these two services from other services, standard time average compliance time is equal to about 94%, that in turn is significant and needs to be officials of the company for 100 compliance, to carry out training and the necessary actions. The desirable level of service received from the gas company and the average satisfaction. Due to lack of familiarity with the standards of work time, in most cases it is possible that the services be realized during a standard time, but again the high level of customer satisfaction.
services not be received. As is observed in Table 4-8, the average customer satisfaction of service received is equal to 80.2%. While compliance with the standard of service received duration of service was equal to 92%.

Conclusions and Suggestions

To provide the necessary solutions to achieve and determine the appropriate scientific tools that can be extracted from the text data and results appropriate solutions, is very important. In other words, in providing the ways it is essential that the proposals be in line with and drawn from the results.

On the other hand, solutions based on latest research results should not be considered as an over-simplification. According to many scholars, the pain locations is not necessarily the treatment of pain.

Especially in topics such as customer satisfaction, many factors are intertwined and may cause dissatisfaction in other factors, it seems that only due to the high dissatisfaction from an issue, the way to increase the satisfaction of that, is not only its elimination or modification. Because, with modifying the other factors, we may can rise the satisfaction level of the customers. So, in finding better ways, it is good to, while evaluation of satisfaction with the status quo, the expectations of customers be measured, so we can due to the limitations select and suggest suitable solutions.

Therefore, in this study to provide guidelines drawn from the results, the question was answered that, what is the relationship between customer satisfaction with the services they received and their expectations for improvement in Isfahan Province Gas Company?

In order to provide practical solutions based on the results of each item and variables in the model Parasvramn, two main indicators were considered:

Indicator (a) the difference between customer satisfaction with the status quo of average total customer satisfaction and expectations to improve the status quo:

\[ (A-1): S_i = \bar{E} \]

\[ S_i \text{ Satisfaction of customers served } \]

\[ \bar{E} \text{ Expectations of customers served to improve the current situation} \]

(A-2): The difference between satisfaction from mean total satisfaction

\[ S_i = \bar{S} \]

\[ \bar{S} \text{ In general, the average customer satisfaction rate} = 68.5 \]

Indicator B: Rank of each factor in comparison with other factors

Index (B) after applying the indexes (A) is used. Such that after the classification of the four vulnerable groups, primarily the result of the index (A.1) and (A.2) have been calculated on the basis of rank obtained ranked in the sub-items of vulnerable groups.

Given that the difference between the issue and the outcome can be positive or negative difference in any case the computational process and will come in 4 groups that make up the decision-making criteria.

The four groups are:

First vulnerable group) both indicators (A.1) and (A.2) being negative:

\[ (-E S_i) < 0 \text{ & } (-\bar{S} S_i) < 0 \]

The second vulnerable group) negative indicators (A.1) and positive index (A.2):

\[ (-E S_i) < 0 \text{ & } (-\bar{S} S_i) \geq 0 \]

The third vulnerable group) positivity index (A.1) and negative indicator (A.2):

\[ (-E S_i) \geq 0 \text{ & } (-\bar{S} S_i) < 0 \]

The fourth vulnerable group) positive both indicators (A.1) and (A.2):

\[ (-E S_i) \geq 0 \text{ & } (-\bar{S} S_i) \geq 0 \]

Summary of priorities and interpretations four of them are listed in Table 5-1 and detailed results of this section are as follows.

Table 1: Scenarios and interpretations to provide solutions resulting from the analysis of the data and findings
The difference of satisfaction from the whole satisfaction

<table>
<thead>
<tr>
<th>Index A-1</th>
<th>(-\bar{S} S_i) &lt; 0</th>
<th>(-\bar{S} S_i) ≥ 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>First vulnerable group) is negative both indicators (A.1) and (A.2)</td>
<td>First vulnerable group) is negative both indicators (A.1) and (A.2)</td>
<td>Third vulnerable group) positivity index (A.1) and negative indicators (A.2)</td>
</tr>
<tr>
<td>These items are very high importance on customer satisfaction. Despite high expectations to improve the items so that customers, customer satisfaction and customer expectations of the items below the level of satisfaction obtained, the mean percentage of total satisfaction was lower.</td>
<td>This statement has a high level of customer satisfaction mean total satisfaction, customer expectations to improve this statement, is more than customer satisfaction.</td>
<td>In this statement, despite the high level of customer satisfaction than expectations of subscribers, still lower than the average satisfaction level of satisfaction of subscribers and is competent to increase the level of satisfaction in general, the appropriate action to be taken.</td>
</tr>
<tr>
<td>The second vulnerable group) negative indicators (A.1) and positive index (A.2)</td>
<td>The fourth vulnerable group) positive both indicators (A.1) and (A.2)</td>
<td></td>
</tr>
<tr>
<td>This statement has a high level of customer satisfaction are very important. So that despite the high level of customer satisfaction mean total satisfaction, customer expectations to improve this statement, is more than customer satisfaction.</td>
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Suggestions for Future Research

- Actions to improve and implement the plan at least twice at different times to obtain factual information.

- The level of satisfaction of the staff is same as the research design be implemented, in order to comprise the results with each other and it will be determined if there is a logical connection between employee satisfaction and client satisfaction or not?

- Due to the cold of the province, recommended the project was transferred to the warmer months.

- Gas units participating of cities of Isfahan province to improve customer satisfaction, and measures to prepare and submit applications.

- In assessing the performance of gas companies in the province of Isfahan, the more points a customer's satisfaction to be allocated to units of the cities with the motivation to work.[7-12]

References


