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Effectiveness Measured in Quality of Service Firms

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ABSTRACT

Have you ever thought that how to determine the deficiency and ensure continuing suitability in quality system of service firms? It is simply impossible to measure the effectiveness of manufacturing plants. However, in the service and advice is a bit difficult. In this article, we study How to measure the effectiveness of the quality of service in Foolad Technic International Engineering *company*[1]
KEYWORDS: The theoretical aspects of the subject, increase productivity, evaluation method, value ensuremen

1. INTRODUCTION

A. Case study

1-Refering to Iran's standard "ISO 9001"

Commemoration: In section 3-1-4 of Iran standard **ISO**9001 it is dictated that:
The organization management must periodically and sufficiently review the quality system in order to ensure continuous efficiency of the system, providing the stated requirements, goals and objectives of the organization. Establishment of this task is not as easy in services section as manufacturing – industries sections.
The requirement of this standard is to determine three main factors in organizational activities:

- System efficiency
- Continuous efficiency
- Sufficiently obtaining quality objectives

On the other hand, the standard in section 1-1-4 dictated that:
The presenter organizations management, who has the responsibility of performing the task, must determine and compile its policy in quality, in particular. Establish its quality objectives and engagements. In other words, establishing any of above mentioned factors requires considering standard bodies in section 1-1-4.
But as is clear for the reader, stages of determining and modifying policies and goals include:

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1- Determining and compiling of organization goals.
2- Determining and compiling organization duties
3- Defining the quality in organizational point of view
4- Preparing and modifying quality policy
5- Preparing and modifying quality objectives

The author believes that there are two main differences between quality policy and quality objectives, considering for following these two differences, will help to laying foundation of efficiency determining and creating continuous efficiency.
These differences include the following:
1-In quality policy, time and quantity is not usually considered.
For example, declaring that the organization wishes to increase beneficial aspects in every working field is considered a policy. But when it is said that organizations goal is to increase the beneficial aspects by 20% in 1999 is not considered a policy.
That can be said that quantity and time are parameters not considered in quality policy.

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2-Policy is modified in whole organization (or any level considered as a unit) and is declared by the highest position of management, but quality objectives are defined and declared for organizational units that must finally cover quality policy.

Now, regarding what is said, determining system efficiency and ensuring its sufficiency requires that preliminary and basic remarks in goal and duty modification be considered. In this paper, it is assume that accuracy, correctness and quality, speed and up datedness are factors modified and declared in goal and duty statement of organization.

2-Quantifying and assessment methods.

Because of special importance of quantitative methods in scientific-managerial studies, efforts to determine the effectiveness of quality management systems of service organizations by developing such methods, is of highest preference.

Of course, it is clear cut that this important case, depending on type of activity, organization size and efficacy is different among each organization and no unit and same method can be specialized for this area. Thus, the optimum method must be chosen based upon time and location factors. In an example that will be presented later, the organization. I am in change of, is considered and an assessment system is developed for it.

Doubtlessly, the readers can design and perform their preferred models regarding the common sense among service firms.

Note, that in these section three simple quantitative methods for assessment and effectiveness determination is used.

1.2- Relative average method

In this method, in order to determining the efficiency of performed quality system, following two categories are considered:

- Determining organization efficiency
- Determining efficiency of each above cases

Assessment list according to consistent samples (tables 1 and 2) are prepared and five indicators are used to according the following table for, assessing the degree factors that their score according to Licots method is as follows:

Evaluation	Very good	Good	Middle	Bad	Very bad
ısidered marks	-+	-	)	-	-
ıgned scores	100	75	50	25	0

Determination method for any of the mentioned factors in tables 1 and 2 is as follows:

$$score\ of\ individual\ members\ \ E_i = \frac{assigned\ scores}{maximum\ determined\ score} = \frac{assigned\ scores}{100} \quad (1.1.2)$$

The organizations score based on the factors mentioned in table 1 is as follows:

$$sum\ of\ the\ scores\ of\ first\ group\ of\ organization\ efficiency\ evaluations\ \ A = \frac{\sum_{i=1}^{8} E_i}{8} \quad (2.1.2)$$

$$sum\ of\ the\ scores\ of\ second\ group\ of\ organization\ efficiency\ evaluations\ A = \frac{\sum_{i=9}^{13} E_i}{5} \quad (3.1.2)$$

First name (employer): The date that form is filled:

Name of the form filler:

Evaluation elements Score	++	+	0	-	--	Reqirments
A)Project performing						
1- Availability of project responsible						
2- Availability of firm vise manager						
3- Performing the engagement in time						
4- Overall evaluation about the professional knowledge of experts						
5- Satisfaction level of the programming						
6- On time sending of documents						
7- Accuracy level of documents						
8- Usefulness of documents						
B)Organizational and supporting tasks						
1- Availability of organizational stuff						
2- Telephoned present meeting ways						
3- Meeting with stuffs						
4- Sending scientific and profacsionalinformations to firm						
5- Employers satisfaction level						
Employers overall evaluation of firm						

Signature of the filler: First and last name:

Table 1-List of evaluations of services presented by the firm

Commemoration: When saying the firm, it is meant the firm under evaluation

The name person under evaluation: The evaluation date:

Evaluation elements Score	++	+	0	-	--	Reqirments
1-Good behavior						
2-Job performing based on program						
3-On time arriving						
4-Well arrangement						
5-Performing the job engagement and follows						
6-Good order and verse						
7-Availability						
8-Availing interference with others						
9-Accepting firm demands						
10-Preserving secret information of firm						
11-Politeness						
12- Sharing and coworking in tasks						
13-Being interested in job						
14-Job / duty performing quality						
15- Presenting new information for coworker						
16-Good behavior with client						
Over all evaluation				0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10		

Name and Signature of the filler:

Table 2- Evaluation form for staff / experts

Commemoration: The evaluated person must be assigned a number from 0 to 10 and circle the score given

Based on above measurements, Organizational efficiency is measured as follows:

$$Company\ performance \quad E_1 = \frac{8(A)+5(B)}{13} \qquad (4.1.2)$$

On the other hand, the score of organization experts, according to factors mentioned in table 2 is measured as follows :

$$Sum\ of\ the\ first\ group\ of\ expert\ agents\ scores \quad C = \frac{\sum_{i=1}^{4} E_i}{4} \qquad (5.1.2)$$

$$Sum\ of\ the\ second\ group\ of\ expert\ agents\ scores \quad D = \frac{\sum_{i=5}^{9} E_i}{5} \qquad (6.1.2)$$

$$Sum\ of\ the\ Third\ group\ of\ expert\ agents\ scores \quad E = \frac{\sum_{i=10}^{12} E_i}{3} \qquad (7.1.2)$$

$$Sum\ of\ the\ fourth\ group\ of\ expert\ agents\ scores \quad F = \frac{\sum_{i=13}^{17} E_i}{5} \qquad (8.1.2)$$

And for measuring the sum of organization efficiency we have:

$$T_e = \frac{13E_1 + 17E_2}{30}$$

In the above equation,T_e is the overall efficiency and numbers 13 and 17, stand for introduced factors in table 2, respectively and the number 30 is sum of 13 and 17.

2-2. Measuring the proportions relative to sells and growing values.

In order to determine the continuous sufficiency of quality system, perhaps using financial conventions, which is by itself a verification of activities performed by the firm in order to provide client satisfaction, must be perfect. In this case, two categories of equation can be used:

- Continuity efficiency measurements based on sells; in this manner, the following equation can be implied:

$$proportion\ of\ sell\ to\ overall\ number\ of\ employees = \frac{cash\ earned\ by\ sell}{overall\ number\ of\ employees} \qquad (1.2.2)$$

$$proportion\ of\ number\ of\ contracts\ to\ number\ of\ employees = \frac{number\ of\ firms\ having\ contracted}{overall\ number\ of\ employees} \qquad (2.2.2)$$

Row	Properties assigned to quality policy	Relative proportion
1	Accuracy, correctness and quality	• Percentage and amount of error decreases relative to last year • Number of complaints by clients divided to overall number of projects and comparing with basis
2	Speed	• Overall percentage of delays relative to prepared program for performing project /contracts • Number of errors made in assigning objectives relative to objectives for new performing system
3	Up datedness	

Table 3- Some measurement proportions for sufficiency determination

Note: The above proportions can be used for performing agents (but not organizational-managerial units)
Thus, doing above measurements and comparing the with indicator numbers such as year indicator, one can determine the amount (percent) of continuous sufficiency of quality system.

- Growing value measurement: It is one of the most common ways used for measuring and determining performance accuracy.

In this regard, the author believes that this method can be considered as one of the indicators in measuring the continuous sufficiency of quality system. For performing the measurements, the following methods can be used:

$$measuring\ the\ growing\ value\ for\ each\ of\ employees = \frac{sales\ totals\ card - The\ total\ costs}{Number\ of\ employees} \qquad (3.2.2)$$

$$measuring\ growing\ value\ based\ upon\ personal\ costs = \frac{sales\ totals\ card - The\ total\ costs}{Total\ personnal\ costs} \qquad (4.2.2)$$

3.2. Determining the system sufficiency through measuring mathematical

In this case, the author believes, that basis and principals mentions in organizational quality objectives, duties and policy must be taken as criterion.

In this regard, based on what is said above, proportions introduced in table 3 can be used.

B) Conclusions and recommendations

As the author believes, providing Iran-standard Iso-9001 qualification for determining the effectiveness and efficiency of quality system is a topic that, unfortunately, is not considered so serious in most of Iranian companies having this standard. On the other hand, performing this task without defining and modifying the quality objectives, which is compiled based on the declared policy by the firm, is not possible. For this purpose, quantitative methods must be used, because these methods (besides including definitive alternatives) are useful tools for determining and creating basis and indicators for quality system effectiveness / sufficiency evaluation. In this regard, some simple methods are mentioned, but I believe, it is also possible to go even further and use some novel method such as PCD, FMEA, Phasal logics, AHP, Bench markings and putative quality models like Deming and Malkolem Baldriteh rewards to create a basis for these quantitative evaluations .

This may be one of the main duties of management presentations that is obtainable by senior manager's supports.

To perform this task it must not be forgotten that:

Nothing is good or bad, but whom comparing

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