

**EXAMINING THE EFFECT OF USING TOTAL QUALITY MANAGEMENT ON
INCREASING PRODUCTIVITY IN ORGANIZATION
(THE CASE OF URMIA ZONE 2 INDUSTRIAL AREA FACTORIES)**

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ABSTRACT

The aim of the present study is to examine the effect of using total quality management on increasing efficiency in organization (the case of Urmia Zone 2 Industrial Area Factories). The study is applied, descriptive and survey in terms of goal, quality of data collection and quality of implementation. The statistical population comprises of all employers working at Urmia Zone 2 Industrial Area Factories and 91 people were chosen as sample size using stratified sampling method. To collect the data was made by questionnaire involving 49 items and the reliabilities for total management and efficiency were obtained as 0.806 and 0.813, respectively. To make analysis on data, SPSS software was employed. Also, Kolmogorov-Smirnov and regression tests were used in the analysis. Results indicated that total quality management had an impact on increasing productivity.

KEYWORDS: productivity, total quality management, Urmia Zone 2 Industrial Area

INTRODUCTION

Humankind has experienced his affairs with quality. As an example in case, this notion has been considered when it comes to building houses or identifying guns and defensive weapon. Quality management is a management-philosophical perspective which has opened up new horizons. The main purposes of this term are providing the needs of customers, offering appropriate services and improving quality. Also, it considers the quality and effort to improve the role of quality development. In recent years, systems of improving quality management have been changed rapidly. Simple supervising activities have been substituted for quality control methods, leading to quality guarantee. Presently, improving quality using total quality management has bridged the gap. Providing paradigms and theories related to improving process quality and services are the slogan of organizations. Significant pioneering of Japanese during the past few decades and the potentials of fundamental productive changes along with providing excellent quality of products and services have been taken into account as the main motifs with regard to management trends to achieve better quality and methods that are capable of responding to complex issues of the present conditions. Quality management a new attitude toward improving efficiency and flexibility in organization. Primary goals are involving all employers and all organizational sections to group works so as to exclude error and possible detriments. In fact, organizational culture guarantees that tasks are accomplished in an appropriate and intricate way.

Total quality management terms be defined as follows:

Management: managers' commitment in relation to all organizational activities

Quality: providing implicit and explicit expectations of executive branches

Total: involvement of all people within organization with regard to the issues and operation of continuous improvement

Total quality management is a physiological concept, the aim of which is employing all human resources such as employers as the most effective attaining factor to organizational goals, the main focus of total management system is on increasing customer satisfaction. However, it is optimum that originations consider all of their employers as committed and responsible. As studies of Deming (1986) showed, almost 94% of issues having to with quality of products and provided services are due to lack of management and system which produce them. Total quality management model offers a different method and attitude toward management. Thus, it provides a cooperative culture in which employers can directly cooperate in the relate fields of work and decision-making (Dadras, 2007).

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Active cooperation:

One can easily declare that total quality manager is the involvement of all people in all affairs of organization so that they are positive and with targets and efforts that lead to improvement in performance in all levels. Total quality management model bring about a distinguished method to view management style (Barandost & Rahmani, 2003).

Empowering the staff

Total quality management perspective makes fundamental changes in relations of worker and employer and that it considers economic development. History shows that striving to attract cooperative sense among staff is a hard task. Total quality management takes into account the rights and needs of employers as follows: redesigning to use total resources, collective decision-making, problem-solving, and integrated attitude in order to make fundamental changes. Total quality management is based on synergy of all workers and not merely on the elected representatives (Farsijani & Samiei Nsitani, 2010).

Quality

It sheds light on the nature which is beyond the expectation when it comes to producing goods or offering services which involves different dimensions such as conformity, confidentiality, consistency, aesthesis and beauty.

Quality control

It is known as using techniques and guidelines to attain quality improvement in the field of producing goods or providing services. In this regard, identifying and detection, analysis and investigation as well as embarking on excluding the problem of products and services will be crucial. Hence, this was not capable of responding to humankind's needs considering continuous interest in producing goods or services with higher qualities. It was not late that it was changed to total quality management (Daniel & Sohal, 2006).

Goals of total quality management

Total quality management is after reaching numerous goals and perspectives which are out of the discussion of the present paper, this, a number of determined goals are listed as follows:

Providing customers' satisfaction

Involving all employers aiming to excluding errors and preventing possible detriments

Preserving quality and continuous improvement

Planning and choosing appropriate technologies for production

Objective training of quality

Measuring work

Considering optimum point of life cycle expenses

Productivity and more added value

Higher-level standards

Improved and enhanced systems (Jafari *et al.*, 2003).

Productivity in organization

The issue of productivity in public organization and its improvement has been regarded as a total challenge for public management and executive leaders' researchers. The researchers have been trying to find out solutions for improving productivity indexes in organization. A number of suggestions have been provided and factors have been identified through conducting scientific studies. As will be mentioned subsequently, compared to other contributive factors to productivity, the human factor role is very important in service-providing organization. Such perspectives have been supported in literature and some of the organization as well as researchers have found evidences in this regard although understanding the rational of this issue and developing applied mechanism in line with organizing services is a hard and complicated task (Al Deft, 2008). In general, the literature suggests justification on why employers have a role in improving performance of organization directly and indirectly, such reasons can be categorized as follows:

The form and content of decision-making in line with activities in all levels of organization

Relations, structures, and processes that have impact on these decisions

Attitudes, beliefs and perception of employers

The focus of the first group is to improve the quality of decisions and conformity of organization and environment. In case one views the definition of workplace, it is understood that it is a way for assigning decision-making to the levels

and it ascertains one that integrity of decision has been preserved by a set of achievements and organizational priorities. As discussed by Choraki (2003), workplace integrates social and political dimensions of decisions and techniques of activities with decision-making process which implies that nothing has been ignored (Ojagi, 2001).

Importance of productivity

Presently, productivity is concerned with a concept and attitude toward work and life. In fact, it is viewed as a culture. It can have association with individual and social life which is a determining index of annual income of every country. To increase national productivity if each country, it is essential that annual income of that increases (Shahalizade, 2008).

Methods of improving productivity in organization

It is claimed that productive community is dependent on productive government. The question is whether the public sector has provided efficient solutions to improve productivity. The answer is positive, solutions such as lowering the size of government and privatization are the ones not be likened by policy makers, people, critics, and media. Studies in the field of improving productivity have emphasized on methods such as targeting, evaluating the plan, an employing methods for improving productivity of public sector within the public sector, these studies have developed valuable views for more product of the employers; however, critics have been raised in relation to inefficient services, resources wasting, and lack of responding on the part of employers (Jafari Goshchi, 2002).

Related studies

Mirzaei (2013) investigated the affective factors of improving productivity in Industry, Mine, and Commerce Origination of Tehran. The results indicated that regression line equations of productivity and independent variables of the study implied a direct linear relationship between productivity components and these variables in organizational decision-makings. Also, positive relationship was found between productivity and these components. This loaded the fact that increase and development of these variables could result in increasing efficiency and effectiveness.

The effect of organizational culture on total quality management was studied by Changiz and Almohamadi. This was carried out using structure-based equation modeling. Cameron and Queen Model was employed to identify organizational culture and Malkom Beldrich quality award was utilized to measure the involvement of total quality management. Data were collected using 60-item questionnaire developed on Likert-5 points scale. Findings of the study manifested that organization culture had an impact on total quality management among medicine-producing manufactures of Tehran. Also, it was found that leadership dimensions was more developed in relation to other aspects of total quality management. Sadegi (2007) examined affective factors on human resource productivity of Central Social Affairs. The results depicted that training human resource had the most contribution to increasing organizational productivity.

MATERIALS AND METHODS

The study is survey, applied and correlational in terms of examining, goal, and data collection, respectively. The statistical population comprises of all employers working at Urmia Zone 2 Industrial Area. Urmia Zone 2 Industrial factories were divided by 73 strata and questionnaire was distributed among 91 subjects.

Statistical analysis

In order to show normal or non-normal status of variables distribution Kolmogorov-Smirnov is used. In case the level of significance is greater than 0.05, distribution is normal; otherwise, it is non-normal.

RESULTS

Results are shown in Table 1 to 3 and Graph-1.

Table 1. Results of Kolmogorov-Smirnov test to study normal distribution of data

	Number	Kolmogorov-Smirnov	Level of significance
Ethics science	91	1.135	0.152
Totally and integrity	91	1.198	0.113
Ensuring	91	1.133	0.153
Teamwork	91	1.034	0.236

The above table shows that all variables are distributed normally. Total quality management has an effect on increasing productivity in Urmia Industrial Zone 2 Factories. Based on the results of K-S test, regression model is used to study the hypothesis.

Table 2. Variance analysis of the main hypothesis related to regression model of total quality management and increasing productivity

Standard error	Balanced identification coefficient		R2 identification coefficient		R	
0.57819	0.338		0.345		0.588	
Level of significance	Level of confidence	F	Mean of square	Total square	Degree of freedom	Changes resources
0.000	0.95	46.917	15.684	15.684	1	regression
Result of the test: rejecting null hypothesis			0.334	29.753	89	residual
			----	45.437	90	total

As it is seen in the above table, where the level of significance is less than 0.05, one can say null hypothesis is rejected. According to R2 identification coefficient (0.345), which is the ratio of described changes by variable x to total changes, one can say that 34.5% of the changes of productivity increase changes in Urmia Zone 2 Industrial Area Factories is determined by total quality management.

Table 3. Parameter coefficient of first hypothesis related to total quality management variable and productivity increase

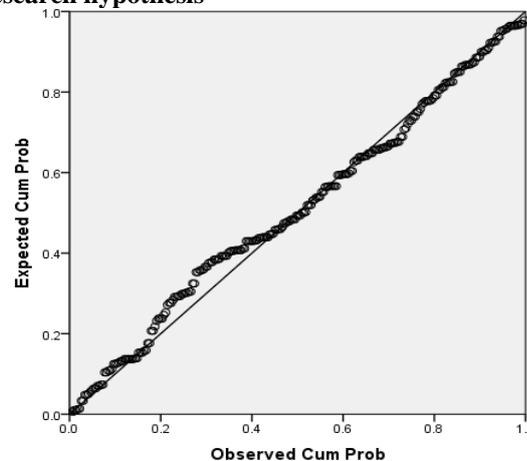
Variable	β slope	Calculated t	Level significance	of	Test result
Intercept		0.000	4.595	2.200	Rejecting H_0
Total quality management		0.001	3.368	0.439	Rejecting H_0

The statistical formula regarding the effect of total quality management on decision increasing productivity in Urmia Zone 2 Industrial Area Factories is as follows:

$$Y = 2.200 + 0.439 X_1$$

One can say that one unit increase in total quality management increases 0.439 units in productivity increase. So, one can concluded that the regression model of the test is significant.

Graph- 1: Linear regression of research hypothesis



SUGGESTIONS

Ethics are suggested o be prosecuted in organization to increase the productivity and organizational ethics is defined in organization, individual risk-taking is suggested to be increased in an attempt to develop the organization gradually.

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