

The Impact of Applying Quality Management System and Environment Standard on Organization Performance an Application on SME'S in Egypt

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Abstract

This paper presents a study that determines the relationship between applying quality management system (QMS) and environmental standard on organizational performance (OP). Data in the study was collected from sample of 150 management staff of small and medium enterprises (SME'S) in Egypt. The collected data were analyzed using SPSS (Statistical Package for Social Sciences) The study found that quality management and environmental standard aspects were related to organizational performance. The study also revealed that applying quality management system and environment standard contributed to organizational performance, it was found that quality management system had more effects on organizational performance than environmental standard, the findings of study provide empirical evidence that quality of management system significantly has an influence on the organizational performance more than the influence of environment standard findings, implications and recommendations for further research from this study are discussed.

Keywords: Organization Performance (OP), Quality Management System (QMS), Small and Medium Enterprises (SMES'S), Statistical Package for Social Sciences (SPSS).

1. Introduction

Quality management system has become the integral philosophy of management in many organizations; it influenced the business specially small and medium enterprises (SMEs) in order to be sustainable in their business SMEs think of ways to practice effective management system which will help them remain competitive, to achieve more profit, react quickly according to the market changes, able to offer high quality products and services at lower costs, the solution is to incorporate a quality system in their management to ensure their business implementation, to face economic turbulence firms need QMS to develop their business; it is one of the important strategies for the continuous improvement of product and service, a tool to meet customer satisfaction (Naumann and Giel 1995) Managers need to understand the influence of QM system on organizational performance; Effective management system relates to performance management system of organization which involves activities to ensure organization efficiency. Porter (1985), Rummmler and Brache (1995) a good system is required to ensure better organizational performance and quality of product and services. Our study will investigate the relationship between QMS, environmental standard and organizational performance.

2-Literature Review

2.1 Quality Management System:

Quality is one of the important factors in most organizations and global competition demands, in order to ensure high standard of quality. Ishikawa (1985) customer satisfaction is the main focus of quality. Naumann and Giel (1995) stated that employee satisfaction and customer satisfaction are among a firm's key performance measures and important factors of business effectiveness. Rategan (1992) research found that 90% of improvement rate in employee relations, operating procedures, customer satisfaction, quality of a product and financial performance were influenced by quality management system. According to Ho and Fung (1994) quality management is a way to improve the effectiveness and competitiveness of organization business. The certification of quality management doesn't stop on increasing market share but improvement in management control, efficiency, productivity, customer service, and staff retention (TSIM, yeung and Leung 2002), Gerry van Houten defined quality management as the measure of the overall management function in determining the organization's quality policy, its objectives and its responsibilities as well as the quality policy implementation (Houten and MLS 2000) Santos and Escanciano 2002 defined Quality management system as a set of managerial structures or planned systematic work methods. QMS considered by the organizations an effective way to be a bridge to customer satisfaction. (Aqili, 2001) Quality is known as production of commodity or services, which will meet customers' needs, expectations and satisfaction (Krajewski & Ritzman, 1990) Quality known as group of characteristics which distinguishes a product and service satisfies the needs of consumers either through product design or performance abilities. (Tawifk, 2003). Quality could be seen from three angles, the quality of the

design which are the qualities that are developed when designing the products and services, second the quality of production, and the third is the quality performance which is the last destination appears to the consumers when they using the product or the service (Grant 1980) In other words, quality management refers to the commitment of a given organization to improve quality, objectives and responsibilities. There were a several studies concerning testing the impact of QMS practices and market competition on organizational performance.

Chong, Rundus 2004 Study

Found that enterprises which work in high level of competition should produce and market high quality products to face wishes and expectations of consumers and competitive quality criteria

Senda & Youniss (2010) study

Findings proved that there is an indirect impact between using QMS and improving finance performance in the same time there is an impact to execute QMS on operational performance.

2.2 Environmental standards

Over the last few decades environmental concerns have been on the rise, the international organization of standardization developed an international environmental management system standard. ISO 14001, to complete ISO 9001 of quality management system (QMS), as a result companies now aim for certification in both standards .Gonzalez-Benito defined EMS as a tool that provides a framework where the environmental policy of the company is defined. The organization which it implements ISO 9001 decide to implement ISO 14001, it determines the advantages of the two certifications to integrate the two ISO in one single management system in order to create a synergistic effect. The environmental series are considered to be an extension to the quality series ISO 9000, as transforming products and processes to more environmentally friendly versions. (Gonzalez – Benito and Gonzalez –Benito 2005).An EMS consists of policymaking, implementation, review of environmental policies all of it intends to help companies to minimize their environmental impacts. The only thing that distinguishes an EMS from other management systems is its focus on environmental performance, small and medium sized firms have been implementing EMS s and they found that EMS serves several goals such as gaining a bigger market share (Zhang, et al.2008) (Cheremisinoff and Bendavid –Val) argue that EMS implementation reduced manufacturing cost, increase the product quality, and improve control over production process.ISO14001 (EMS) designed to introduce environmental improvement into every aspect of a company's operations. It assists companies in creation of structured mechanisms for Continuous improvement in environmental performance. There is a complex and dynamic relation between profitability and environmental concerns. The main purpose of the ISO 14001 is to promote effective and efficient environmental management gathering, interpreting, communicating environmental information, aiming at environmental performance improvement.

2.3 Organizational Performance

Organizational Performance has been defined as the ability of an organization to fulfill its mission through sound management, strong governance and a persistent rededication to achieving results. Organizational performance involves the recurring activities to establish organizational goals, monitor progress toward the goals, and make adjustments to achieve those goals more effectively and efficiently. The organization performance is measured by its competitive advantage and its brand differentiation both are the result of working hard focusing on developing to deliver high quality services to increase efficiency through management changes techniques through applying quality management system and environmental standard to decrease product cost and increase product quality .

2.4Small and Medium Enterprises

Small and medium enterprises are the most important sector of a nation's economy. These types of enterprises provide and create jobs especially during times of recession; they are source of innovation and they create competition. In Egypt SME S compromise 99.7% of the non agriculture private sector and 75% of the private sector in Egypt at large. According to law no 141 of 2004 the small enterprise its capital between 50000 LE to 1 million, its employee 5a or less, on the other hand medium enterprises its capital between 1 million and 5 million, its employees between 51 to 99 .According to federation of Egyptian industry small enterprise its labor between 10-100, its capital between 50000to 5 million, and its annual sales 5-50 million. On the other hand medium enterprise its Will be improved significantly as the labor between 100 to 1000, its capital between 5 to 50 million EGP, and its annual sales between 50 to 250 million EGP. Actually Egypt doesn't have official recognized definition of SMEs and even among the governmental institutions different definitions are adopted.

3. Research Objective:

This research will accomplish the main objective with studying the relationships of QMS and EMS on organizational performance. This objective will be accomplished through some sub objectives as follows:

1. Studying the relationship of QMS and EMS on the improvement of customer satisfaction
2. Studying the relationship of QMS and EMS on the improvement of employee satisfaction

3. Studying the relationship of QMS and EMS on the improvement of market share

3.1 Hypotheses of the Study

The main purpose of this study is to examine the implementations of QMS and environmental standard on organizational performance of Egyptian SME's.

H0: There is a statistically significant relation between applying QMS and EMS on organizational performance.

H2: There is no statistically significant relation between applying QMS and EMS on organizational performance.

3.2 Research Model

<u>Independent variable</u>	<u>Dependent variable</u>
Application of QMS Application of EMS	Organizational performance of SME S <ul style="list-style-type: none"> • improve customer satisfaction • improve employee satisfaction • improve market share

4. Research Methodology:

4.1 Sample

Participants in the study were managerial staff of SMEs, in the Egyptian food industry, questionnaires were distributed to 150 managerial staff of the selected companies, 100 useable questionnaires were used in the statistical analysis representing response rate of 66.6% from the sample, and the selection of the respondents was based on the random sampling.

4.2 Research Tools

Questionnaire was used as a tool to collect the data for this study. It was composed of three parts. The first part was designed to collect information about the demographic characteristics of respondents, while the second part was designed to collect information about the application of QM on organizational performance and the third part was designed to collect information about the application of environmental standard on organizational performance.

5. The Results and Hypotheses Testing

5.1 Demographic Variables

Participants in the study were 150 managerial staff of SMEs, in the food industry, questionnaires were distributed to them, and 100 useable questionnaires were selected using random sample methods, the results showed that most of the sample are male with percentage 85% and the most dominant of the sample are middle managers with percentage 87% the experience of the sample concentrated on three experienced categories less 6 yrs to 10 yrs with percentage about 87% of the sample.

5.2 Attitudes of Sample Concerning QMS & EMS and its Effect on Customer Satisfaction, Employee Satisfaction and Market Share

The result showed that the application of QMS and EMS are complete on organization performance of SME' S, the means of application of QMS and EMS in different field was less than 4, which mean the extent of application did reach the optimal application of the system (table 1).

Table 1: Means and Standard Deviation of Sample Attitude for the Application of QMS and EMS on Organizational Performance of SME'S.

Paragraph	QMS Mean	QMS SD	QM CV	EMS Mean	EMS SD	EMS CV
1. The organization applies QMS&EMS concerning customer satisfaction	3.8	1.0	0.263	3.3	1.0	0.303
2. The organization applies QMS&EMS concerning products quality	3.7	1.0	0.270	3.4	1.0	0.294
3. The organization applies QMS&EMS concerning market share	3.6	1.0	0.277	3.5	1.0	0.285
4. The organization applies QMS &EMS concerning employee satisfaction	3.5	1.0	0.285	3.2	1.0	0.312

The evaluation for the implementation of QMS and EMS on different fields of the research was less than 4 as the mean evaluation was less than 4 for all paragraphs in different fields. Table (2) indicates that customer satisfaction, employee satisfaction and market share are controlled through the application of QMS and EMS which indicate that the important of these fields are random and scheduled to accomplish organizational objectives.

Table (2) means, standard deviation and correlation variable of sample for the relation of QMS and EMS on organizational performance of SME's

Paragraph	QMS Mean	QMS SD	QM CV	EMS Mean	EMS SD	EMS CV
Customer Satisfaction						
1. Applying QMS and environmental standard is a way to meet customer needs.	3.5	1.2	0.342	3.3	1.0	0.303
2. Applying QMS and environmental standard is a way to improve products quality.	3.4	1.1	0.323	3.3	1.0	0.303
3. Applying QMS and environmental standard is a way to improve co image in the market.	3.4	1.0	0.294	3.3	1.0	0.303
4. Applying QMS and environmental standard is a way to improve customer loyalty	3.3	1.0	0.303	3.2	0.9	0.281
Employee Satisfaction						
1. Employee Satisfaction Applying QMS and EMS it's a way to improve employee working condition	3.4	1.2	0.352	3.3	1.0	0.303
2. Applying QMS and EMS it's a way to improve employee working performance	3.3	1.0	0.303	3.2	1.0	0.312
3. Applying QMS and EMS it's a way to improve employee loyalty	3.3	1.0	0.303	3.2	0.9	0.281
4. Applying QMS and EMS it's a way to improve employee payment	3.4	1.0	0.294	3.4	1.0	0.294
Market Share						
1. Applying QMS and EMS its away to differentiate co products from other competitor products in the market	3.5	1.2	0.342	3.4	1.1	0.323
2. Applying QMS and EMS it's a way to improve co image in the market	3.4	1.0	0.294	3.3	1.0	0.303
3. Applying QMS and EMS it's a way to increase co profit	3.5	1.0	0.285	3.4	1.0	0.294
4. Applying QMS and EMS it's a way to decrease product price	3.3	1.0	0.303	3.2	1.0	0.312

Correlation is significant at 0.05 levels- Correlation is highly significant at 0.01 levels

Simple linear regression for testing the effect of TQM and EMS on organizational performance

Field	R QMS	R1 QMS	R EMS	R2 EMS	T value QMS	T value EMS	Probability
Customer satisfaction	0.582	0.339	0.567	0.324	11.554	11.042	0.001
Employee satisfaction	0.685	0.429	0.655	0.249	13.984	8.116	0.001
Market share	0.593	0.352	0.544	0.303	11.871	10.218	0.001

5.3Hypotheses Testing

The above table shows that there is a significant relation between QMS and EMS on organization performance factors. The research approved that application of QMS would improve customer satisfaction by 33.9%, improve employee satisfaction by 42.9% and improve market share by 35.2%.

Application of EMS would improve customer satisfaction by 32.4%, employee satisfaction by 24.9% and market share by 30.3%

Customer Satisfaction

QMS and EMS improve product quality to meet the customer needs which improve co image in front of its customer and lead to customer satisfaction as well as customer loyalty.

Employee Satisfaction

Will be improved due to the application of QMS and EMS as the result of the open channel between co and employee as application of QMS and EMS criteria, which improve employee working conditions as a result the co gain the employee loyalty which end to improve employee performance.

Market Share

Will be improved due to the differentiation of the co products then the competitor products which impact the image of the co. in the market, taking into consideration that applying both certificates at first increase product cost but on the long term the cost decrease, product price decrease and profit increase which allow the co to expand its market share inside and outside country due to the no existence of environmental or quality barriers.

Conclusion and Suggestions.

Our results show that quality management system and environmental management standard are effective tools for developing and improving organization performance. In this context it is suggested to implement both quality management system and environmental standard in the organization to improve organization performance. Findings of this study serve as guidelines for Egyptian SMEs management to formulate the improvements on management planning specially that both quality management and environmental standard are new in Egypt.

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