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THE RELATIONSHIP BETWEEN SOFT FACTORS OF TOTAL QUALITY MANAGEMENT, QUALITY IMPROVEMENT, AND PERFORMANCE IN THE IRANIAN ELECTRONIC INDUSTRY: A THEORETICAL APPROACH

Abstract: *This paper presents a model to conduct an empirical study in Iranian Electronic industry in order to improve their performance. There are many factors which are effective factors in improving performance of Iranian Electronic industry namely, leadership, customer focus, training and education, employee involvement, supplier quality management, reward and recognition, and communication. The communication plays a fundamental role in determining the performance in Iranian manufacturing industries. Communication is another critical soft factor that can improve the performance of the Electronic firm in Iran. In this research, a model has been developed that includes the critical soft factors of Total Quality Management and quality improvement to study their effect on the performance of Iranian Electronic industry. It is hoped that this study can provide an academic source for both academicians and managers due to investigate the relationship between critical soft factor of Total Quality Management, Quality Improvement, and Performance in a systematic manner to increase successful rate of Total Quality Management implementation.*

Keywords: *Critical Soft Factors of Total Quality Management; TQM; Quality Improvement; Performance Improvement, Iran, Electronic industry*

1. INTRODUCTION

Demirbag et al., (2006) pointed out that TQM is a factor that can improve quality and a holistic approach in continuous improvement in all organizations. TQM, as a management philosophy, is necessary tool for each organization to survive in a competitive environment. Total quality management is identified as an origin of innovation,

competitive advantage, and organizational culture (Irani, Beskese, & Love, 2004). Therefore, if each company served poor quality in organization the customer will be dissatisfied. (Demirbag et al, 2006)

Dayton (2003) aimed to determine the role of many factors of total quality management in USA industrial firms namely people and customer management, customer satisfaction, strategic quality management, communication, teamwork,

quality improvement, supplier quality management. The result showed that strategic quality management and communication are most important factor of total quality management.

Total Quality Management was identified as a factor that improves performance by organizations many years ago. Total quality management is a comprehensive approach for improving quality, productivity, market share, and profitability. Unfortunately, this factor is unknown to Iranian Electronic Industry. The previous study investigated the TQM in Iranian SMEs as a powerful factor in improving performance but they didn't probe this factor in the Electronic industry. We also have problems for implementing TQM in the Iranian Electronic industry. TQM is important in Iranian Electronic industry because if we consider this factor in Electronic industry the company will improve its performance. This research has selected communication as an important factor to help total quality management. Furthermore, this factor can help TQM in implementing its goals and assist total quality management in discovering its problems. Communication is a significant factor in implementing TQM in the Iranian Electronic industry. The concepts of TQM are relatively new to the Iranian Electronic Industry. (As cited by Haeri, 2005)

2. PROBLEMS FACED BY ELECTRONIC INDUSTRY

One of the major problems in Iranian Electronic Industry is low quality of supplier products. In Electronic Industry, we lack good suppliers to solve this problem. A qualified supplier must increase the quality of products produced. Supplier quality management has been recognized as a comprehensive management paradigm for enhancing organizations and creating competitiveness. Supplier quality

management is an important factor that influences quality improvement and it has been widely mentioned that suppliers can have a significant role in determining the success of TQM in the Iranian Industry (Forouzan et al, 2009).

Haeri (2005) addressed lack of strong and capable leaders as the main problem faced by Iranian industry. The leadership is a key issue because leadership is one of the most important factors of total quality management (Haeri, 2005). Leaders who really want to commit to making fundamental changes. One of the important roles of management leadership is increasing quality and but leadership can also improve profit; satisfy customers, and promote market share through organizations.

Haeri (2005) also mentioned that training is another critical success factor in TQM implementation of the Iranian Industry. Furthermore, lack of training is another critical success factor in Iranian electronic industry and also training is not suitable among organizations. One of the most important roles of training is increasing the efficiency of employees. Training plays a crucial role because people who are working in this industry must be able to work in many sections and they must be familiar with new systems.

The other most important quality aspect in Iranian industry is lack of customer focus because the relationship between customers and employees are not suitable. As cited by Haeri, (2005) products and services are not suitable in Iranian industry and for improving products companies need to consider customer focus. The main aim of customer focus is satisfying customers and providing their requirements. Some of the companies are very successful because they have established a strong relationship with the customers by conforming to customer suggestions in the process of making decision. Consequently, customers can have a close relationship with other

sections of the organization. As Haeri (2005) stated customers' feedback can be applied in the manufacturing line. Satisfying customers is an essential task for pursuing customer focus efforts (Haeri, 2005 & Rad, 2006).

Mather, (2007), Shahbazipour, (2008) & Haeri, (2005) pointed out the other setback in Iranian Industry is employee involvement because this critical issue is one of the most manageable problems that help achieve goals and provide motivation to the employees and increase employee satisfaction and also this factor increases participation between employees. Otherwise, Iranian industry is suffering the lack of employee involvement and together decision making. Employee involvement is the most important asset of an organization and their effective management is the key to success of the organization. The tight relationship between employee involvement and quality improvement made it a viable discussion on TQM practices for Iran SMEs. Employee involvement is considered an important factor focusing on policies, practices and systems of behavior and, attitude of employees. This factor has a positive effect on quality improvement and poses a necessary factor for entire discussion of TQM practices.

The other lack in Iranian Electronic industry is lack of communication between employees. As cited by Soheilipour (2010) Iranian Electronic industry is facing the setback of communication between employees and managers. According to this study, this factor has a fundamental role in improving performance of Iranian electronic industry.

3. LITERATURE REVIEW

3.1 Previous Research (supporting communication)

According to Abdullah et al (2009), this research was about the relationship of

performance with quality management and quality improvement. This study was done in 255 Electrical and Electronics firms in Malaysia. The author identified quality improvement as lacking in Malaysian industry because the quality of products was comparatively low. The researchers identified quality improvement as a vital factor in improving performance of Malaysian industries. Based on total quality management, they found many factors namely; management leadership, supplier quality management, customer focus, reward & recognition, employee involvement, and training. They used quality improvement as an intervening variable between total quality management and performance. Then the researchers tried to answer these questions:

- What is the effect of critical soft and hard factors on quality improvement and performance?
- What is the relation between soft and hard factors and quality improvement?
- What is the relation between quality improvement and performance?
- What are the direct and indirect impacts of critical soft factors on performance?

This study used structural equation modeling (SEM) and identified the causal relationship between different constructs of the suggested model. This model also used the statistical software AMOS. The respondents of the questionnaire are managers of 255 Malaysian companies. This study discovered which quality improvement was the mediating variable between critical soft and hard factors and performance. According to Abdullah, Independent variable of this study had positive effect on performance. For instance:

- Leadership has positive influence on performance
- Customer focus has positive influence on performance
- training has positive influence on performance

- Supplier quality management has positive influence on performance
- Reward & recognition has positive influence on performance
- Employee involvement has positive influence on performance

This author also emphasized that the other most important factor in improving performance is communication. The researcher said, the role of communication is similar to quality improvement and communication can help organizations improve quality improvement and performance (market share, profit, and customer satisfaction). As cited by Abdullah, (2009) communication is shown to have an important influence on company's performance.

Aksorn et al., (2008) pointed out that there are many factors that have a wide impact on the achievement of safety program in Thailand namely, take part of employees, continuous improvement, and good communication. Statistical data collected from Thailand manufacturers by means of e-mail and phone calls and ultimately 80 questionnaires were received. Further, factor analysis was important method for implementing this study. In the same way, Fryer et al., (2007) identified many factors of total quality management such as leadership, supplier quality management, teamwork, training, product design, process management, quality data and reporting (quality measurement), and communication. The result showed process management, training, and communication are most important factors of total quality management in the public sector of the United Kingdom industries. In another study, Najeh et al., (2007) stated the critical success factors of total quality management in Middle Eastern Countries were leadership and clear communication. These factors were very effective in implementing of total quality management. (As cited by Awan et al, 2008)

Black et al., (1996) aimed to

determine the role of critical factors of total quality management in New York by using Malcolm Baldrige Award. Further, validity and reliability were two important methods for implementing this study. According to this study, the factors of total quality management include quality improvement, teamwork, customer satisfaction, quality culture, people and customer management, supplier quality management, and communication. There are many studies that investigated the validity of MBQA namely, (Wilson et al., 2000; Powel, 1995; Flynn et al., 2001).

3.2 Effective Communication

As demonstrated by Dielber et al., (2005) when total quality management is implemented correctly which this factor produces a variety of advantages namely understanding customer's requirements, developed customer satisfaction, developed internal communication, fewer mistakes, and decreases problem among organization. According to previous research such as (Flynn et al., 1994; Sila, 2005; Yusof et al., 2000; Ahire et al., 1996; Rahman et al., 2005; Lewis et al., (2006), and Rad (2006). Communication is a contributing factor in improving quality and performance and this factor is positively related to quality improvement and performance. Effective communication has been seen as a means for keeping momentum and morale for quality improvement process. It is significant in directing employees towards the corporate expectations (Thiagarajan et al., 2001). Many organizations use a variety of communication techniques.

Effective communication is significant for the success of any quality initiative (Martinez-Lorente et al., 1998; Sureshchandar et al., 2001). Smith (1994) points out the significance of communication across the organization to provide continuous customer satisfaction. Communication about total quality management can cover a broad range of

activities, including face-to face conversation, group or site visits, videotapes, company newsletter and etc. TQM will significantly change the way many organizations operate and “do business”. This change will need direct and clear communication from the top management to all staff and employees, to explain the need to focus on processes. Everyone will need to know roles in understanding processes and improving their performance (Oakland, 2000). The key medium for motivating the employees and gaining their commitment to TQM is face-to-face communication and visible management commitment (Oakland, 2000). (As cited by Mahmood et al, 2006)

Based on the research problems the current study will come up with the following research questions and objectives.

4. RESEARCH QUESTIONS

The main research question of this study is as below:

- What is the effect of critical success factors of total quality management on quality improvement and performance in Iranian Electronic Industry?

5. RESEARCH OBJECTIVES

The general objective of this research is to describe the influence of critical success factors of total quality management on quality improvement and performance in Iranian Electronic Industry. The specific objective of this research study is as below:

- To evaluate the effect of critical success factors of total quality management on quality improvement and performance.

6. RESEARCH METHODOLOGY

This research tries to employ quantitative survey in order to fulfill research hypotheses for Iranian Electronic Industry. However, in this paper we only focused on theoretical aspect of the research topic. The Population size consists of all managers and employees of Electronic industry. The Electronic industry is selected because it is second manufacturers in Iran. A surveyed questionnaire is used to collect respondents' answers. In order to examine research hypotheses Structural Equation Modeling is used through SPSS AMOS. The sampling frame of this research has improved by using many resources namely direct communicate with managers from related electronic industries by using telephone, email, and formal websites of connected electronic industries. Unit of analysis of the study is Electronic industry during the time period of 2009. This industry is situated in capital of Iran (Tehran). Electronic industry has been in the process of total quality management project for 1 year.

7. THEORETICAL MODEL

Black and Porter, (1995) divided many factors of TQM in two different groups and studied the effect of these groups on quality improvement and performance. The results showed there is a positive connection between TQM and quality improvement. On the other hand, there is a positive link between quality improvement and performance measurement. Communication is also added as an independent factor which makes this framework unique on its own. According to Abdullah, et al, (2009) the fundamental element in the future studies for each organization is Communication. Communication practices is a way to improve firm performance and also for

continuous survival of the Iranian Electronic Industry. The gap of this paper is going to be as an independent variable of TQM and its impact on performance of the Iranian Electronic industry.

As a matter of fact, communication is a factor that hasn't been considered very well and there is no study to investigate communication as an important factor in the Iranian Electronic Industry. Communication is significant for improving performance because if we use communication as an independent factor in our company, the company will increase quality, profitability, market share, and customer satisfaction. An organization will not commence to execute TQM until it assumes the importance of product or service quality. This awareness is not difficult to find; it happens when an organization starts to lose market shares or

receives demands for better quality. It also occurs in the body of decreasing production or even profitability.

Communication is not limited to the field of production, it involves the whole organization; focused on correcting actions instead of finding defects. The researcher wants to use communication as an independent variable and improve its impact on performance. The contribution made by (Abdullah et al, 2009) wants to improve the relationship between TQM and performance measurement in the Iranian Electronic industry. As demonstrated below (the theoretical framework of the study, see Figure 1), there is a connection between Total Quality Management on Quality Improvement and Performance.

Independent variable

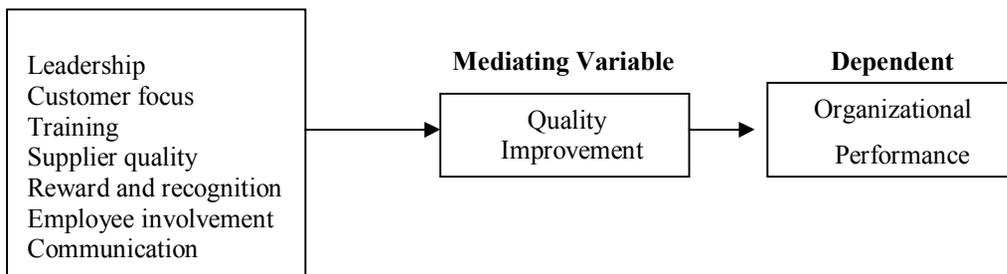


Figure 1: The Theoretical Model

1. Hypothesis Development:

The hypotheses of this study are developed as following:

- H1: Management leadership is positively related to quality improvement
- H2: Customer focus is positively related to quality improvement
- H3: Training & Education is positively related to quality improvement
- H4: Supplier quality management is positively related to quality improvement
- H5: Reward & Recognition is certainly connected to quality improvement

H6: Employee involvement is certainly connected to quality improvement

H7: Communication is positively related to quality improvement

H8: Leadership is positively related to performance measurement

H9: Customer focus is positively related to performance

H10: Training is positively connected to performance

H11: Supplier quality management is directly connected to performance measurement

- H12: Reward & Recognition is positively and directly connected to performance
- H13: Employee involvement is positively related to performance measurement
- H14: Communication is positively related to performance measurement
- H15: Quality improvement is positively related to performance

8. CONCLUSION

The aim of this paper was to carry out a theoretical study on soft factors of Total Quality Management, quality improvement, and performance in the Iranian Electronic Industry. The main contribution of this paper was to persuade managers to take a serious attention on the relationship among CSFs of TQM, quality improvement, and performance improvement in the Iranian Electronic Industry. Investigating the relationship led us to lucrative outcomes. Due to lack of studies on above addressed problem in the

country, attempts were made to investigate the critical factors of TQM in Iranian Electronic Industry. This study theoretically reviewed prior literatures on same problem in other countries. The aim was to shed some light on the research problem. A survey is designed in order to conduct an empirical research for examining survey's hypotheses. It is hoped that the important facts addressed in this paper will be a means whereby managers and researchers will be able to investigate the TQM problem in Iranian Electronic Industry with better awareness. Future studies could look into the possible inclusion of few other critical soft factors of total quality management such as teamwork (Yusof and Aspinwall, 1999), as an important factor in relation to quality improvement and firm performance.

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