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DETERMINANTS OF TOTAL QUALITY MANAGEMENT IN THE IRANIAN AUTOMOTIVE INDUSTRY

Abstract: *This paper presents a model to conduct an empirical study in Iranian automotive industry in order to improve their performance. The quality culture plays a vital role in determining the performance in Iranian manufacturing industries. In this research, a model has been developed that includes the factors of Total Quality Management and quality culture to study their effect on the performance of Iranian automotive industry. It is hoped that this study can provide an academic source for both academicians and managers due to investigate the relationship between Total Quality Management, Quality Culture, and Performance in a systematic manner to increase successful rate of Total Quality Management implementation.*

Keywords: *Total Quality Management; TQM; TQM Determinants; Quality Culture; Performance Improvement*

1. INTRODUCTION

Global competition has increased during the past few decades. According to Nkechi Eugenia (2010), since the quality of goods is determined by customers thus customers are the only factor that can create competition among organizations. Further, this makes factories to focus more on quality. Nowadays, gaining competition has become a matter of knowing customers' needs and wants. In fact, customers have become the starting point rather than the end point in any successful business. Nkechi Eugenia (2010) mentions that organizations in order to survive need to create new management based on total quality management.

Demirbag, Tatoglu, Tekinkus, and Zaim (2006) stated quality management is one of the most important factors in every organization. Successful enterprises understand the dominant influence

customer-defined quality can have on business (Reid & Sanders, 2007). Hence, many competitive companies constantly enhance their quality standards (Reid & Sanders, 2007). If the company does not consider the quality, the customer will be dissatisfied. The outcomes of such an approach are lost customers and opportunities for rivals to catch benefit of the market need (Reid & Sanders, 2007). Therefore, paying serious attention to customers' needs made quality a priority. As Reid and Sanders (2007) stated "*It means meeting and exceeding customer expectations by involving everyone in the organization through an integrated effort*". This integrated effort is named Total Quality Management.

According to Demirbag et al., (2006) 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).

According to Kumar, Choisne, Grosbois, and Kumar (2009), Improvement in quality decreases waste, reduces costs, and raises productivity. Further, companies that have good quality they can improve their market share, and profitability. Kumar et al., (2009) pointed out that since global trade in manufacturing sector is growing; therefore it is essential that a viable manufacturing base to be developed and maintained by implementing proper quality practices. In the same way, Saizarbitoria (2005) stated that firms which have high quality will achieve greater customer satisfaction, improve profitability, and increase market share.

One of the fundamental building blocks of TQM is performance measurement. Performance measurement is recognized as an important factor by some researchers many years ago (Phusavat, Anussornnitisarn, Helo, & Dwight, 2009). This factor includes financial and non-financial indicators (Wilson, Hagarty, & Gauthier, 2003). According to Phusavat et al. (2009), performance measurement can be considered as a significant factor in failure and success of each quality effort of the organization. All in all, based on the above, this study attempts to improve the performance through TQM perspective.

2. RELATIONSHIP BETWEEN QUALITY CULTURE AND TQM

According to Hansson and Klefsjo (2003), the components of total quality

management consist of supplier management, leadership, customer focus, service design, HRM. These components shaped the TQM. However, TQM can be successfully implemented through quality of culture (Zadry, 2005). Similar to Zadry (2005), Ally & Schloss, 2003 stated that quality culture can have positive influence on TQM implementation. In contrast, Kanapathy (2008) claimed that top management commitment or leadership is the most important factor in implementing TQM. However, many researchers stated that leadership not only applied as a supporting factor for quality culture but also was very effective in improving performance of such organization. Hence, it can be stated that quality culture has positive impact on performance improvement. Lai (2003) conducted a study about TQM implementation in manufacturing industries in Spain. As Lai (2003) stated, education and training as one of the TQM dimensions can be efficient in changing and developing quality culture during TQM implementation. According to Lai (2003), in order to succeed in TQM implementation, Spain's manufacturing industries need to pay serious attention to quality culture as mediate success factor. However, quality culture does not change in a short time because for changing this factor, the company needs a long-term process.

3. RELATIONSHIP BETWEEN QUALITY CULTURE AND PERFORMANCE

Deming (1982, 1986) and Juran (1982) believed that quality can have positive impact on improving performance. The linkage between quality and performance improvement was widely investigated by Prajogo and Sohal (2006), Hendricks and Singhal (1997, 2001), Kaynak (2003), Easton and Jarrell (1998),

Powell (1995), Samson and Terziovski (1999). The relationship between quality and performance improvement was addressed for manufacturing firms by Motwani, Mahmoud and Rice (1994) and Christiansen and Lee (1994), for service organizations by Kanji and Tambi (1999) and Brah, Wong and Rao (2000) or a combination of manufacturing and service firms by Powell (1995), Hendricks and Singhal (1997), and Easton and Jarrell (1998). According to these studies, effective quality implementation leads to performance improvement. In line with these studies, Terziovski, Power and Sohal (2003) carried out a research on 400 of Australian companies. According to this study, they found quality culture as a significant factor that had positive impact on performance. Similar to above researchers, Demirbag et al (2006) and Kaynak (2003) emphasized on positive impact of quality on performance improvement.

Abdullah et al. (2008, 2009) studied the relationship between TQM, quality, and performance measurement. Abdullah et al. (2008, 2009) identified six critical success factors that influenced performance improvement. Similar to Abdullah et al. (2008, 2009), Ahire and Golhar and Waller (1996) stated that quality culture can be used as a mediator between total quality management and performance. Lai (2003) represented the development process of a quality culture. According to Lai (2003), all components of an organization must be integrated within a quality culture. According to Abdullah et al. (2008), there is a positive connection between TQM and quality culture. On the other hand, there is a positive connection between quality culture and performance measurement. Hence, quality culture can be considered as intervening variable between TQM and performance measurement.

Rad (2006) indicated the influence of organizational culture on the success of

TQM in Iranian industries. This survey carried out among Iranian managers and employees. The survey's findings represented that the elements of TQM (customer focus, process management, leadership, and human resource management) had a positive impact on the performance of Iranian industry. This study also mentioned that total quality management needs a culture for supporting its factors. In fact, culture should be compatible with the values and the fundamental principles of TQM approach. TQM needs a new culture. According to Rad (2006), organizational culture is an important factor for successful TQM program among Iranian industries. Further, total quality management is successful when this factor is related to organizational culture (Rad, 2006).

4. TQM AND FIRM'S PERFORMANCE

Fotopoulos et al. (2009) stated that total quality management is a main factor for performance improvement. According to Fotopoulos et al. (2009), leadership, human resource management, customer focus, Education and Training, and supplier quality management are critical success factors in TQM implementation. Fotopoulos et al. (2009) stated that these CSFs are efficient in improving quality, profitability, customer satisfaction, market share, decreasing defects, and price reduction. The role of TQM in improving performance and increasing customer satisfaction also was addressed by Waldman (1994), Karuppusami and Gandhinathan (2006), and Kumar, Grosbois, Choisine and Kumar (2008). This is because TQM is a philosophy, which emphasizes on the key role of customers and suppliers. The TQM also involves employees to achieve continuous improvement (Kumar et al, 2008). In Addition, according to Kumar et al (2008),

performance measurement includes customer satisfaction, profit, and market share. In the same way, Kumar et al (2009) and Demirbag et al. (2006) pointed out that total quality management enables firms to improve their performance. The same result also referred in study of Awan, Bhatti and Bukhari (2007). According to Awan et al. (2007), some researchers discovered eight critical success factors of TQM that had positive impact on performance improvement. In another study, Anderson et al. (1994) through Deming management method examined the impact of seven factors of TQM such as management leadership, resource management, service design, quality management, customer focus, training, and process management on performance improvement. According to their study, there was a positive significant relationship between these seven factors and performance improvement.

As reviewed above, some problems faced by Iranian Automotive Industry were addressed. These problems were crucial for successful implementation of TQM. Hence, according to the above addressed problems, which will be important for automobile industry in Iran, the current study proposed the following theoretical model.

5. THEORETICAL MODEL

This model was shaped from three comprehensive variables including TQM, quality culture, and performance. The TQM is represented by many observed variables including customer focus, leadership, HRM, training, service design, process management, supplier management. Performance measurement is shown by three variables including customer satisfaction, market share, and profit. However, quality culture is not determined by any variable and this factor is represented as a single variable and will

be measured using a set of question. These variables extracted from review of academic literatures. Furthermore, the linkages between variables are developed based on the theoretical framework.

Various authors were empirically tested some variables of Total Quality Management. According to reviewing literatures, these authors including Ou et al (2007) (customer focus, HRM, Leadership, Supplier quality management, and process management); Sila (2007) (Leadership, customer focus, HRM, process management, Supplier quality management); Macinat (2008) (leadership, supplier quality management, process management); Ya'acob (2008) (leadership, customer focus, HRM, quality management, service design); Al-khalifa et al. (2008) (leadership, customer focus, education and training, process management, HRM); Karuppusami et al. (2006) (leadership, customer focus, Supplier quality management, HRM, process management, education and training, service design); Demirbag (2006) (leadership, quality management, education and training, process management); Salaheldin (2009) (leadership, education and training, service design, quality management); Fryer, Antony and Douglas (2007) (leadership, quality management, process management, education and training); Sila (2005) (leadership, customer focus, HRM, process management, quality management); Tari, Molina and Castejon (2006) (leadership, HRM, customer focus, quality management, process management) and Brah and Lim (2006) (customer focus, HRM, process management, leadership).

On the other hand, there were many authors that were empirically examined variables of company's performance. The authors included Demirbag et al. (2006) (market share); Liao (2005) (market share, profit); Ou et al. (2007) (Customer satisfaction, and profit); Kumar, Smart, Maddern and Maull (2008) (profit, Market

share, and customer satisfaction); Chi, Kilduff and Gargeya (2009) (profit, Market share); Brah and Lim (2006) (customer satisfaction, market share); Awan et al. (2007) (profit); Willson et al. (2000) (customer satisfaction, market share, and profit); Sila (2007) (market share, profit); Kayank (2003) (profit, market share); Ya’acob (2008) (customer satisfaction and profit); Arawati (2005) (market share, profit); Rahman and Bullock (2005) (customer satisfaction); Fuentes-Fuentes, Albacete-Saez and Liorens and Verdu (2004) (profit, customer satisfaction, and market share); Zehir and Sadikoglu (2010) (customer satisfaction, market share); Zhang (2000) (customer satisfaction, profit).

It can be seen that all variables of this

theoretical model is strongly supported by different research studies. The theoretical model of this study is unique when quality culture is added as mediating factor. As Abdullah et al. (2009) stated the quality culture is a fundamental element in such research model. According to review of earlier studies, there was no sufficient study to investigate the role of quality culture as a mediate variable between TQM and Companies’ performance in Iranian Automobile Industry. Hence, the current study attempts to use quality culture as an intervening variable in order to investigate its pivotal role between TQM and Performance. The Figure 1 portrayed the theoretical model of the current study.

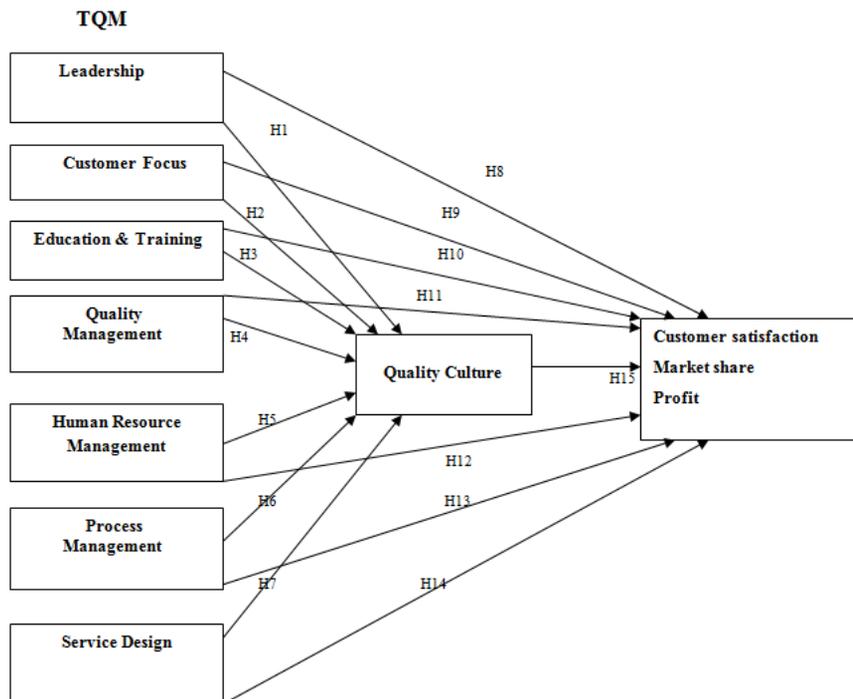


Figure 1: The Theoretical Model

Kanapathy (2008) addressed the positive relationship between leadership and quality culture. Furthermore,

management leadership plays an important role in encouraging companies to achieve quality culture. Hence, Leadership is a

fundamental factor in creating a quality culture within the organization. On the other hand, Ahire et al., (1996) represented the relationship between customer focus and quality culture. According to Ahire et al., (1996), customer focus is one of the most important factors that include tools and techniques for quality culture. In the same way, education and training is a factor that can improve skills in an organizations and this factor is very effective in changing the culture of a company Rad (2006). Supplier quality management is described as a comprehensive paradigm for enhancing organizations and competitiveness. Flynn et al (1994) cited quality management as an important factor that influences quality culture. A qualified supplier can increase the quality of manufactured products. Flynn et al (1994) also addressed the relationship among human resource management, process management, and service design with quality culture.

6. HYPOTHESES DEVELOPMENT

The hypotheses of this study are developed as following:

- H1: Management leadership is positively related to quality culture
- H2: Customer focus is positively related to quality culture
- H3: Education & training is positively related to quality culture
- H4: SQM is positively related to quality culture
- H5: HRM is certainly connected to quality culture
- H6: Process management is certainly connected to quality culture
- H7: Service design is positively related to quality culture
- H8: Leadership is positively related to performance measurement
- H9: Customer focus is positively related to performance

- H10: Education & training is positively connected to performance
- H11: SQM is directly connected to performance measurement
- H12: HRM is positively and directly connected to performance
- H13: Process management is positively related to performance measurement
- H14: Service design is positively related to performance measurement
- H15: Quality culture is positively related to performance

7. CONCLUSION

The aim of this paper was to carry out a theoretical study in order to propose a theoretical model for discovering the determinants of Total Quality Management in the Iranian Automotive Industry. The main contribution of this paper was to persuade managers to take a serious attention on the relationship among TQM determinants, quality culture, and performance improvement in the Iranian Automotive Industry. Investigating the relationship led us to lucrative outcomes. Iranian automobile industry has particularly been chosen for several reasons. First, automotive industry is the second most active industry in Iran after oil and gas sector. Second, it has a major contribution to the country's GDP growth. Third, the sector directly employs 2.3% of country's workforce. Fourth, the industry is looking forward to export its products to global markets. Due to cutthroat competition, turbulent business environment, increasing customers' expectation, and increasing demands Iranian Automotive Industry must consider TQM, which is a serious problem faced by the sector.

Due to lack of studies on above addressed problem in the country, attempts were made to investigate the determinants of TQM in Iranian Automotive 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 Automotive Industry with better awareness.

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