

The impact of Total Quality Management on organizational performance

Norah Dhafer Al-Qahtani, Sabah Sa'ad Alshehri, Dr. Azrilah Abd.Aziz

Faculty of Computing & Information Technology, King Abdul-Aziz University, Jeddah, KSA

Abstract:

This study came to investigate the impact of Total Quality management (TQM) practices and strategies on organisational performance. TQM is defined as a strategy that essentially aimed to establish and deliver high quality products and services that cover all customers' demands and achieve a high level of customer satisfaction. This paper discusses the implementation of total quality management in Pakistan and explores the relationship between the effective implementation and organisational performance. TQM in Pakistan was implemented in three categories of implementation methods which are; quality control, quality assurance and continuous improvement. The findings indicate that TQM has two organisational performances, either is TQM practices effect the organisational performance, or it hinders organisations to achieve their goals in which this will negatively affect the organizational performance.

Keywords: Total Quality management, organisational performance, high quality products and services, customer satisfaction.

1. Introduction:

Business environment has undergone tremendous changes and enhancement in quality and has become as one of the essential strategies that could be implemented in any organisation in order to achieve organisational competitive advantage. In addition, because of the continuous increase in global labor market, organisations must improve their product and services quality in order to survive within other competitors. In order to enhance organisational performance, and for the purposes of improving customer satisfaction; several total Quality management practices were implemented. Total Quality Management (TQM) is based on; that all organisation staff should collaborate with each other for the purposes of producing high quality products and services in order to meet customers' demands. One strategy that could be implemented in order to minimize errors is by controlling processes of manufacturing.

Total Quality management consists of several quality instruments and technique, in addition to various values and beliefs that all staff within the same organisation shares (Gharakhani et al., 2013). TQM can be defined as a strategy that aims to generate and transfer more efficient and superior services, through achieving cooperation between organisational members (Lakhali et al., 2006).

Although there are several researches that directly handled total quality management practices, but these practices are still considered vague and unclear (Dean & Bowen, 1994). This could be explained due to the fact that total quality management has different definitions according to the individual thought about TQM term. Various studies were conducted in order to distinguish the relationship between practices of total quality management and the performance of organisations which is the main aim of our research. The scope of the investigation includes various kinds of industries such as financial, operational and quality performance. Such studies indicated that there are positive relation between the effective implementation of TQM and the organisational performance, in which when one organisation applies total quality management practices in effective way then it's organisational and employees' performance will largely enhanced (Prajogo et al. 2004), its productivity will increase and its operational costs will decrease (Lam, 1995).

Terziovski (1999) clarified that there is an important influence of total quality management on operational performance especially at large companies that are specialized in manufacturing processes. Several categories of total quality management were considered as an essential performance predictors such as leadership, individual management and focus on customer. This paper discusses on total quality management practices and its influences on organisational performance.

2. Problem statement :

TQM is still considered new philosophy and its principles and tools are still unfamiliar for a large number of organizations managers and employees. The existed theoretical research that focused on TQM are still insufficient to create an in-depth understanding for the term of total quality management (Thiagarajan et al., 2001).

Different strategic reasons such as globalization directly enhance the interest of developing countries in quality,

so focus is on TQM to gain economic benefits at these developing countries. Moreover, customers in different countries were demanding services and products with high quality characteristics more than ever. All of these reasons generate the new wave of quality interest at different business organisations all over the world. Although there are several studies about TQM and its relation with performance (Baidoun and Zairi, 2003), however this paper will define TQM practices and techniques and its impact on organisational performance specifically.

3. Research aims and objectives:

This research paper came to find out the following key objectives which are;

1. To explore the TQM practices and technologies
2. To identify the impact of TQM implementation on the organisational performance.
3. To generate a guidelines for effective implementation of TQM practices at organisations.

4. Literature Review:

4.1 Total Quality management:

The quality management concept was recognised since ancient times in Japan in the late 1930s specifically after the World War II. After that, several firms in the manufacturing sector were focused on enhancing quality and utilising tools that directly aim to control quality at these firms (Demirbag et al., 2006; Talib et al., 2010). Furthermore, both USA and UK accepted the idea of quality management (QM) especially in manufacturing sector in those countries. Subsequently, QM has been recognised widely in several international standards such as in the ISO 9000 and the idea of QM was largely accepted these standards (Sachdeva et al., 2007). Several principles were recognised at each TQM practices and the principles are clarified in figure (1);

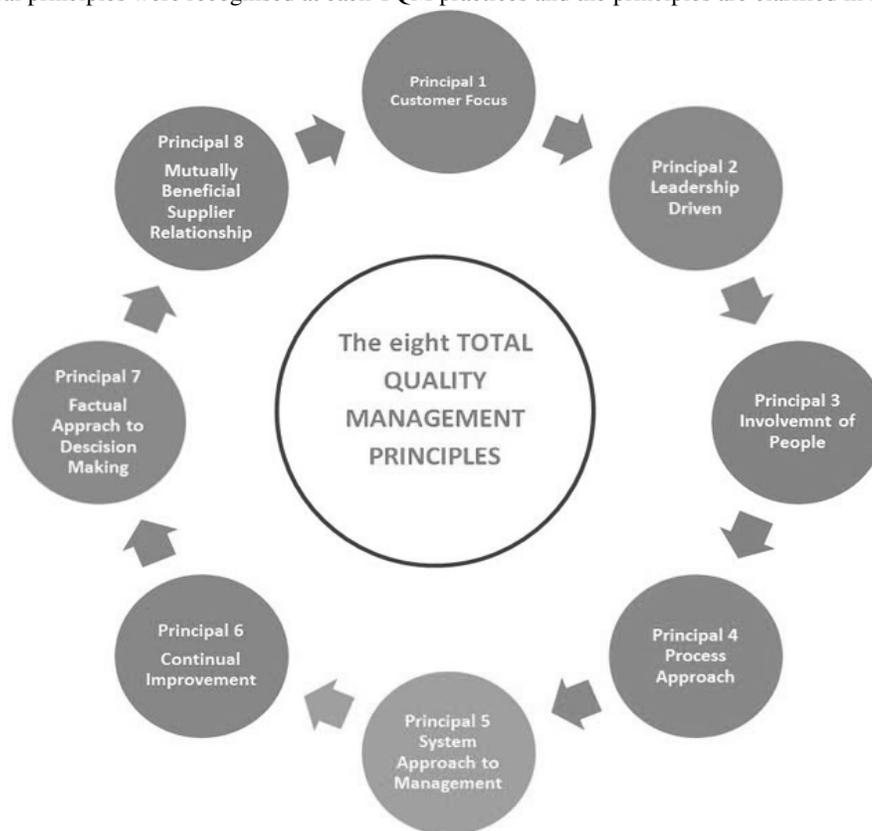


Figure 1. Principles of TQM practices (source: Northlink College, 2015)

Various techniques were also proposed for QM practices, in which it is considered as a method to enhance quality and efficiency of different industries services and products. One of the main internationally accepted approaches is total quality management (TQM) in which this approach essentially attempts to create a comprehensive cooperation between all organisation functions in order to fulfill customers' demands in an efficient way and to achieve all organisational goals.

Total quality management also engages all organisation staff members in the process of covering customers' expectation through utilising problem solving methods to enhance the quality of all organisational products and services. The main focus of total quality management philosophy is to achieve a comprehensive integration among organisational staff and their functions in order to gain better enhancement, progress and preservation of products and services quality to achieve customer satisfaction (Talib, 2013).

This managerial philosophy is directly focuses on improving business quality and satisfaction of managers through enhancing the employee's involvement in decision making processes by utilising teams of quality improvements and quality circle strategies (Yusuf et al., 2007).

Many literature ((Talib et al., 2012) provide various concept on TQM; however all of them share similar basic elements. One example is that all TQM considered customer as the key focus in this managerial strategy. Furthermore, one of the most important elements that ensure the success of TQM practices is the management commitment. Other essential organisational situations to achieve TQM success are organisational culture and alterations. Therefore, total quality management is a managerial strategy that aims to enhance organisational performance and efficiency through enhancing the quality of services and products in the organizations (Arumugam et al., 2008).

The interest in total quality management practices was largely enhanced in the last two decades and it is considered as an essential field to study for many scholars (Yusof and Aspinwall, 1999; Arumugam et al., 2008). Gharakhani et al. (2013) indicated that TQM was largely accepted at different services sectors as a managerial strategy that essentially aims to enhance performance of organisations. Moreover, TQM is considered as a comprehensive integration between several models, procedures, individuals and communication processes to cover all customer demands (Van Ho, 2011).

Talib and Rahman(2010a) proposed a TQM model which recognised as "Components of TQM" model. They clarified the main practices that could enhance the performance of organisations as shown in figure (2).TQM practices include commitment of top-management, focus on customers, training and education, continuous improvement, supplier management, involvement and encouragement of employees, benchmarking, and quality information and performance. The outputs are the enhanced productivity and quality, the achievement of high level customer satisfaction, the improved customer loyalty and on-time delivery. Generally, all TQM models indicated that each managerial action is consist of planning, implementing And evaluating processes.

4.2 Organizational performance:

One of the main elements to achieve an effective organisational management processes is the performance measurement. The performance of one organisation can be directly related to its ability to achieve their strategic and financial objectives (Li et al., 2006). The performance of organisations was largely neglected in past research, whereas some other (Katou, 2008) who were discussing the organisational performance with reference to the financial performance only. Stock et al. (2000) were also discussing the organisational performance through measuring both financial and market harmonic performance which includes the return on investment measures (ROI), sales profit and growth and market share progress.

One fact must be also mentioned here is that the organisational performance could be measured either depending on operational performance which is referring to the whole performance of one organisation that includes financial performance, customer satisfaction and effectiveness of product quality(Brah et al.,2000).Whereas the operational performance of one organisation is directly handled with the enhanced delivery performance, flexibility, minimizing costs and errors and enhancing process productivity(Nunnally, 1978).

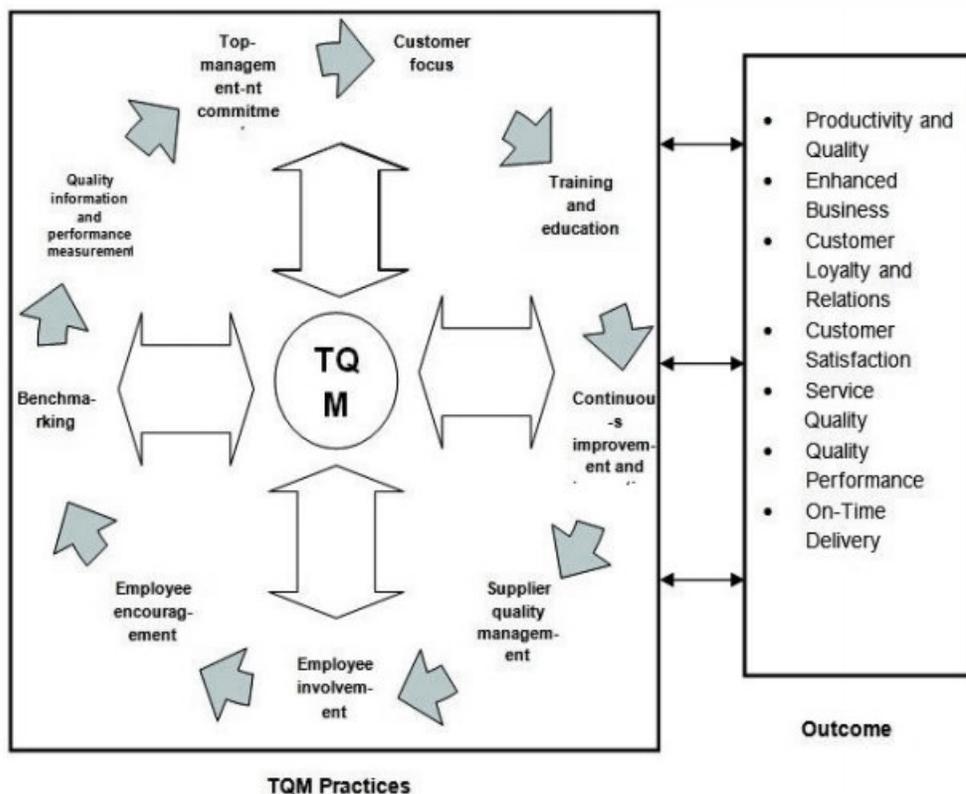


Figure 2. Components of TQM model (source: Talib and Rahman, 2010a)

4.3 Total Quality management and organisational performance:

Measurement of performance is considered as an essential element at all managerial approaches. Cost and quality are the two main measurements of organisational performance which directly affected by the total quality management practices. Sadikoglu (2009) and Brun (2010), both agreed that applying various TQM practices such as training, process management, customer management, etc. influence employees performance which then directly affect the whole organisation performance. Gharakhani also indicated that TQM greatly influence the organisational performance especially in their financial performance (Gharakhani et al., 2013).

According to the increasing demands to achieve a high quality products and services, organisations have realized the importance of applying total quality management practices to the production processes in order to minimize costs and to create products with high quality characteristics. TQM is recognised as a strategy that considered customers as the main concern, in which it directly aims to provide them with a high quality services and products through adding continuous improvements in the production processes (Harmon & Peterson, 1990).

Another research who directly aimed to define the conflict that existed between the thoughts of senior managers on TQM and middle level manager's visions. Soltani and Wilkinson (2010) found that there exist four main TQM propositions which are affirmation of quality, individual, firm and the senior managers' functions. The main conclusions that were driven from Soltani and Wilkinson research that TQM is still considered as a new strategy, and the main utilised approach to implement TQM is the quality control approach (Soltani and Wilkinson, 2010).

Wen et al. (2009) and Leticia (2007) also clarified the impact of TQM practices on the level of customer satisfaction especially in the sector of public services and from the managers' perspective. The focus were planning in strategic way, management of processes and employees, leadership, customer concern, and measuring on both internal and external customers' satisfaction level for the quality of perceived products and services. This study has indicated that there is a positive relationship between TQM practices, employees focus with satisfaction levels of customers. The research findings also clarified that there is a strong relation between manager commitment and satisfaction of customers. On the other hand, some TQM practices such as planning in a strategic way and management of processes has less effect on satisfaction levels of customers.

Lord & Lawrence (2001) clarified that the management of quality process must start at the beginning of the project (the organization founding), and ends after achieving the quality standards. Each organisational member

is also responsible to some extent on the organisational improvements. Quality can be defined as the ability of products and services to cover customers' demands and achieve high level of customer satisfaction (Waldman and Gopalakrishnan, 1996).

Lakhal et al.(2002);and Talha(2004)indicated that the practices of TQM is directly contributing in enhancing the performance of organisations by minimizing costs , enhancing the performance of staff members , and increasing the degree of customer satisfaction .

Although Saizarbitoria (2006) clarified that TQM directly impact the performance of organisations in positive way, but Dooyoung et al. (1998) indicated that in some cases the implementation of TQM cannot achieve the desired organisational goals.

5. Implementation and practices of TQM in Pakistan:

Several methods were utilised to implement total quality management at organisations, and while discussing these implementation methods we will take Pakistan as an example as Pakistan is one of the main countries that utilised total quality management practices and implement such practices at a huge number of their organisations through utilising different implementation methods as discussed below (Raja et al., 2011). The main five categories of implementing total quality Management strategies are as follow;

5.1 Zero Level: No control/no customer focus:

Such organizations do not concentrate on achieving customer satisfaction as much their focus on their products and services characteristics especially their quality characteristics. In some countries such as Pakistan, there is no charge for poor performance of organisations, in which in some cases, this will lead to customers' misery (Kamran Moosa, 1998).

5.2 Level One: Quality Control:

At this level, organisations often own several laboratories and measurement departments in order to continuously enhance the quality of their products and services through testing them and developing their managerial systems .the statistical process control is the most often utilised approach to conduct such measurements at companies (Prakash et al., 2010).Quality control methods were largely utilised in Pakistan manufacturing companies in order to implement TQM practices and strategies as mentioned by Kamran Moosa(1998).

5.3 Level Two: Quality Assurance:

Companies that are governed by this method is directly believe that products is an output for several processes and quality of these products cannot be achieved without controlling ach process separately. Quality assurance is largely conducted in several companies through implementing some programs that focused on quality (such as ISO 9000, ISO 9000-2000, etc), in addition o some managerial tools that are utilised to assure quality (such as affinity diagrams, Pareto charts, etc.)(Brun, 2010). Hayat Awan (2003) also mentioned that a major part of Pakistan organisations were used ISO 9000 firstly to achieve effective quality control processes and after that to assure quality in its organisation, in which the implementation process of this program differ according to the kind of organisations businesses.

5.4 Level Three: Continues Quality improvements:

The companies that are located under this level believed that the improvement of quality of businesses is directly connected to the employee's efficiency, commitment and the existence of team work spirit within the staff members. Several campaigns were planned in these companies in order to enhance quality management capabilities of functional team members by conducting some practices such as providing them with weekly or monthly assignments. Several techniques were utilized in manufacturing companies in Australia in order to achieve continuous improvements of quality such as quality circles, mentality of zero defects and just in time techniques (Sadikoglu,2010).But Pakistani companies that fall into this category are very few as mentioned by (Jamshed,2000).

5.5 Level Four: Quality Award Models:

The companies which come under this category are considered as firms dominant on the market and as a universal champion with their products and services. These companies aim to provide others with a benchmark for the effective quality performance, and organisations that followed this category are defining quality as the process of achieving the overall satisfaction of customers. Kaluarachchi (2010) conducted studies on the influences of models of quality award on services institutions and they clarified that such firms utilised different tool such as process reengineering, and packages of computer software's in order to enhance their organisational performance with reference to their quality characteristics . Companies that implement TQM through quality

award models do not exist in Pakistan as mentioned by Jamshed (2003).

6. Conclusions:

This study is directly focusing on examining the relation between the total quality management and organisational performance. Several past researches have clarified the relation between TQM and the organisational performance especially the financial performance. Such researches indicated that when one organisation implements TQM in an effective way, then its performance will be largely enhanced from several aspects (Hendricks & Singhal, 1999; Ittner & Larcker, 1996). In a review of the literature covering the impact of total quality management on organisational performance, Saizarbitoria (2006) indicated that there is a positive direct relation between TQM and organisational performance. However, Dooyoung et al. (1998) indicated that TQM practices could hinder organisations to achieve their goals. Nevertheless, the main conclusions that can be taken from this research are that customer satisfaction and quality performance of products and services can be enhanced by implementing different quality initiatives at organisations. The strategy of TQM that concentrates on enhancing the customer satisfaction levels will directly improve the organisational performances and that Leadership commitment is considered a key element for guaranteeing a successful implementation of TQM practices at organisations. Although this research is directly focusing on distinguishing the relation between TQM and organisational performance, but several factors directly affected organisational performance were neglected such as organisation size, culture and level of innovation. Therefore, future researches could study the impact of TQM on organisational performance in a wider scope by investigating the influences of the above mentioned factors on performance. Another research focus should be carried out to study the implementation of TQM in the business sector to provide a better understanding of TQM implementation.

Acknowledgement:

We would like to express my sincere thanks to Allah to express my gratitude to my supervisor who has helped us on this paper.

References:

- Arumugam V., et al. (2008). TQM Practices and Quality Management Performance- An Investigation of their Relationship Using Data from ISO 9001:2000 Firms in Malaysia. *The TQM Magazine*, 20 (6) 636-650
- Baidoun, S. and Zairi, M. (2003). A Proposed Model of TQM Implementation in the Palestinian Context'. *Total Quality Management and Business Excellence*, 14:1193-1211.
- Brah, S.,A., Wong ,J.,L. , and Rao ,B.M. , (2000). TQM and business performance in the service sector: a Singapore study. *International Journal of Operations & Production Management*, 20(11): 1293-1312.
- Brun , A.(2010). "Critical success factors of six sigma implementation in Italian companies" *International Journal of Production Economics*, pp 1-7.
- Davood, G. , Hossein, R. , Farrokhi, M. R , Farahmandian, A., (2013).
Total Quality Management and Organizational Performance,
American Journal of Industrial Engineering, 2013, Vol. 1, No. 3, 46-50, DOI:10.12691/ajie-1-3-2
- Dean, J.W. , & Bowen, D.E.(1994). Management theory and total quality: Improving research and practice through theory development, *Academy of Management Review* 19 (3) 392-418.
- Demirbag M., et al.(2006). An Analysis of the Relationship between TQM Implementation and Organizational Performance. *Journal of Manufacturing Technology and Management*. 17 (6) 829-847.
- Dooyoung, S., J.G. Kalinowski and G. El-Enein, (1998). Critical implementation issues in total quality management. *SAM Advanced Management Journal*, 63(1): 10-14.

Gharakhani, D., Rahmati ,H., Farrokhi, M. , Farahmandian, A. (2013). Total Quality Management and Organizational Performance, *American Journal of Industrial Engineering*, Vol. 1, No. 3, 46-50. DOI: 10.12691/ajie-1-3-2

Harmon, R. L. and Peterson, L. D., (1990). *Reinventing the Factory: Productivity Breakthroughs in Manufacturing Today*, New York, the Free Press.

Hayat M. Awan. (2003). “ An Evaluation of ISO 9000 Registration Practices” A case study of sports goods industry, *Journal of operations managements*, Vol 29, No 7 , pp 109-134.

Hendricks, K.B., Singhal, V.R., (1999). The long-term stock price performance of firms with effective TQM programs. Working Paper, Georgia Institute of Technology, Atlanta, GA

Ittner, C.D., Larcker, D.F., 1996. Measuring the impact of quality initiatives on firm financial performance. In: Fedor, D.F., Ghosh, S. (Eds.), *Advances in Management of Organization Quality*, Vol. 1. JAI Press, Greenwich, CT, pp. 1-37.

Jamshed H. K. (2003). “TQM implementation in Pakistan” Revolutionary V/S Evolutionary approach, *Journal of TQM*, vol 15, no 6 , pp 374-380.

K.A.S.P Kaluarachchi. (2010). “Organizational culture and total quality management practices” A Sri Lankan Case, *The TQM Journal*, Vol 22, no 1, pp 41-55.

Kamran Moosa .(1998). “Designing organizational infrastructure for world class quality” Pakistan institute of quality control, (ICQI).

Katou Anastasia. (2008). "Measuring the impact of HRM on organisational performance", *Journal of industrial engineering and management*, doi:10.3926/jiem.2008.v1n2.p119-142, ISSN: 2013-0953

Lakhal, L, Pasin, F. and Liman M. (2006). Quality management practices and their impact on performance. *International Journal of Quality & Reliability Management*, 23(6): 625-646.

Lam, S.S.K. (1995). Quality management and job satisfaction: an empirical study. *International Journal of Quality & Reliability Management*, 12(4): 72-78.

Letica, M., S.V .(2007). “TQM and Firms performance: An EFQM excellence model research based survey” *Journal of Business Science & Applied management*, Vol 2, issue 2, pp 11-31 .

Li, S., Ragu-Nathan, B., Ragu-Nathan, T., & Subba Rao, S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. *Omega*. 34(2), 107-124. DOI=<http://dx.doi.org/10.1016/j.omega.2004.08.002>.

Lord, B.R., Lawrence, S., (2001). TQM implementation: a case of MQT (Management’s Questionable Technology), Paper presented at the Third Asian Pacific Interdisciplinary Research in Accounting, University of Adelaide.

Northlink College, (2015). " QUALITY ASSURANCE", [Adobe Digital Editions version]. Retrieved from <http://www.northlink.co.za/Qms.aspx>.

Nunnally, J.,(1978). *Psychometric methods. (2nd edn). New York: McGraw-Hill.*

Prajogo, D.I., Power, D.J. and Sohal, A.S. (2004). The role of trading partner relationships in determining innovation performance: an empirical examination. *European Journal of Innovation Management*, 7(3): 178-186.

Prakash J. S. (2010), Damien Power and Sum Chee Chuong. "A resource dependence theory perspective of ISO 9000 in managing organizational environment" *Journal of Operations Management*, Vol 14, pp 1-16.

Raja, M.W., Bodla, M.A., and Malik, S.A., (2011). Evaluating the Effect of Total Quality Management Practices on Business Performance: A Study of Manufacturing Firms of Pakistan, *International Journal of Business and Social Science*, Vol. 2 No. 9 [Special Issue - May 2011]

Sachdeva A., et al. Impact of ISO 9000 Certification on Performance of SMEs: A Study of Indian Industry, *International Journal of Management Practice*. 2007. 2 (3) 226-239.

Sadikoglu, E., Zehir, C. (2010). "Investigating the effect of innovation and employee performance on relationship between TQM practices and firm performance": An empirical study of Turkish firms, *International Journal of Production Economics*, pp 1-14.

Saizarbitoria, I.H., (2006). How quality management 68. Dooyoung, S., J.G. Kalinowski and G. El-Enein, models influence company results—conclusions of an empirical study based on the Delphi method. *Management, Total Quality Management & Business Excellence* 17(6): 775-794.

Soltani, E. and Wilkinson, A. (2010). "The effect of incongruency of senior and middle managers orientation on TQM programs" *International Journal of operations and Production Management*, Vol 30, no 4, pp 365-397.

Stock G.N, Greis N.P. and Kasarda J.D. (2000). Enterprise logistics and supply chain structure: The role of fit. *Journal of Operation Management*, 18, 531–547.

Talha, M., (2004). Total quality management (TQM): an overview. *Bottom Line: Managing Library Finances*, The, 17(1): 15-19.

Talib F., and Rahman Z. (2010a). *Critical Success Factors of TQM in Service Organizations: A Proposed Model*. *Services Marketing Quarterly*. 31 (3) 363-380.

Talib F., et al. (2012). Total Quality Management in Service Sector: A Literature Review. *International Journal of Business Innovation and Research*. 6 (3) 259-301.

Talib F., et al. (2010). The Relationship between Total Quality Management and Quality Performance in the Service Industry: A Theoretical Model. *International Journal of Business, Management and Social Sciences*. 1 (1) 113-128.

Talib, F. (2013). An overview of total quality management: understanding the fundamentals in service organization, *International Journal of Advanced Quality Management*, Volume 1, Issue 1, pp. 1-20, Article ID Mgmt-58.

Terziowski, M. and Samson, D. (1999). The link between total quality management practice and organizational performance. *International Journal of Quality & Reliability Management*, 16 (3), 201-210.

Thiagarajan, T., Zairi, M. and Dale, B. (2001). A Proposed Model of TQM Implementation Based on an

Empirical Study of Malaysia Industry. *International Journal of Quality and Reliability Management*, 18:289-306.

Van Ho,P. (2011). Total quality management approach to the information systems development processes: An empirical study,Dissertation submitted to the faculty of Virginia Polytechnic Institute and State University, Alexandria, Virginia.

Waldman, D.A., Gopalakrishnan, M., (1996). Operational, organizational, and human resource factors predictive of customer perceptions of service quality. *Journal of Quality Management* 1, 91-108.

Wen ,Y., S., Ken Boon, O., Binshan, L. and Alin ,Y., L. ,C. (2009). “TQM and customer satisfaction in Malaysia’s Service Sector” *Industrial Management and Data Systems*, Vol 109, no 7, pp 957-975.

Yusof S.M., et al.(1999). Critical Success Factors for Total Quality Management in Implementation in Small and Medium Enterprises. *Total Quality Management*. 10 (4&5) 803-809

Yusuf Y., et al.(2007). Implementation of TQM in China and Organizational Performance: An Empirical Investigation. *Total Quality Management*. 18 (5) 509-530.