

Quality Approaches and Practices and Their Impact on Companies' Organizational Performance

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Abstract

Purpose: The aim of this research is to develop and propose a conceptual framework that reflects the relationship between the implementation of quality management practices (QMPs) and their impact on the organizational performance of the Portuguese organizations.

Design/Methodology/Approach: Based on the literature review carried out, we have identified the most common and used quality management practices. In the next phase we conducted semi-structured interviews with the Portuguese Quality Leaders in order to validate the work developed in the previous phase. In the third phase we conducted case studies in several types of companies with the aim of validating the theoretical work that had been developed in the previous phases. Currently we are in the phase four of the project that consists in the development of the conceptual model that will try to explain the relationship between the adoption of quality practices and approaches and the companies' quality performance. This model will be statistically validated based on a survey that will be sent to the Portuguese companies. The statistical methodology that will be used is the structural equation modeling technique (SEM).

Findings: It is expected that the results show a positive relationship between the implementation of quality management practices and the Portuguese organizations quality performance.

Implications: This model could be used by the quality professionals as an approach for an efficient quality management implementation. Furthermore, the conceptual model proposed and tested in this study may also be used by researchers to develop the quality management theory.

Originality/value: As far as we were able to find out in the literature review phase, the proposed model is a innovative approach to characterize the direct results and effects of quality management practices (QMPs) in the companies' quality performance.

Keywords: Quality management practices, Performance measurement (quality), Modelling.

Paper type: Research paper

Introduction

Over the past two decades, total quality management (TQM) has become most widely used management acronym and is considered as the buzz word in the management practices. It has been well accepted by managers and quality practitioners as a change management quality approach (Arumugam *et al.*, 2009). It plays a vital role in the development of management practices (Prajogo and Sohal, 2003; Hoang *et al.*, 2006). Many researchers asserted TQM as an approach to improve effectiveness, flexibility, and competitiveness of a business to meet customers' requirements (Oakland, 1993), as the source of sustainable competitive advantage for business organizations (Terziovski, 2006), as a source of attaining excellence, creating a right first-time attitude, acquiring efficient business solutions, delighting customers and suppliers etc. (Mohanty and Behera, 1996) and above all as a source of enhancing organizational performance through continuous improvement in organization's activities (Claver-Cortes *et al.*, 2008; Teh *et al.*, 2009).

The concept of total quality management (TQM) has been developed as a result of intense global competition. Organizations with international trade and global competition have paid considerable attention to TQM philosophies, procedures, tools and techniques (Zakuan *et al.*, 2010).

According to Juran, international competition requires higher levels of quality achievement by organizations (Blackiston, 1996).

Actually, many companies are implementing TQM approach and quality initiatives for achieving sustainable competitive advantage and enhanced company performance (Talib *et al.*, 2010).

Quality approaches and practices and their impact on companies' organizational performance

The idea of change is attractive and it is recommended to accept quality principles and procedures. Thus, quality management is often related with a model of organizational change (Borotat and Canard, 1995), the implementation of which largely relies on the organization's ability to adapt itself to these principles.

This problem of adaptation and change is even more prominent for SMEs. It is common to show that SMEs adopt quality approaches under constraint to retain a market and satisfy the intrinsic requirements. This options retained under constraint lead SMEs to adopt varied quality strategies and consequently change options (Guilhon, 1993). In this study, (Guilhon, 1993), examines how SMEs approach quality. It is based on a survey of 42 companies. Almost all companies embark on a quality program based on an ISO 9001 certification process, most often under constraint. Such a quality approach is of a reactive type and brings about organizational changes, the use of new techniques and an improved management of human resources. However results in terms of sales, profits or market shares are very limited. This drive towards quality is often short-lived and very few firms use certification as a springboard towards total quality (Guilhon *et al.*, 1998).

Quazi *et al.* (2002) examined the relationship between ISO 9001 certification and quality management practices and quality results of firms in Singapore. The findings are compared with those reported by Rao *et al.* (1997) on firms in the USA, Mexico, China and India. The results reveal that ISO 9001 certification does not affect quality management practices and quality results of firms in Singapore. Furthermore, analyses indicate that some organizational characteristics, such as size and industry, have relationships with certain constructs of quality management practices.

Numerous studies have examined the positive and negative (or non-significant) relationships

or correlations between TQM practices and various performance measures. An extent review of previous TQM studies on organizational performance suggests that there are various performance measures indicators (Sadikoglu and Zehir, 2010; Monge *et al.*, 2006; Zakuan *et al.*, 2010). Different indicators used for measuring organizational performance have been identified from the literature and summarized in Table I.

Arumugam *et al.* (2008) measured organizational performance from quality performance (example quality of product and service, customer relations, customer satisfaction with products quality, and level of quality performance relative to industry norms).

Zakuan *et al.* (2010) in their study measured organizational performance through two categories which are satisfaction level (example employee satisfaction and customer satisfaction) and business results (example productivity, number of successful new products, cost performance and profitability).

Table I: Performance measures proposed by different authors.

Author(s)	Measure	Indicators
Prajogo and Sohal (2004)	Organization performance	<ul style="list-style-type: none"> Quality performance Innovation performance
Lin <i>et al.</i> (2005)	Organization performance	<ul style="list-style-type: none"> Satisfaction level Business results
Fuentes <i>et al.</i> (2006)	Organization performance	<ul style="list-style-type: none"> Operational performance Market and financial performance Employee performance
Sit <i>et al.</i> (2009)	Organization performance	<ul style="list-style-type: none"> Customer satisfaction
Shieh and Wu (2002)	Organization performance	<ul style="list-style-type: none"> Project performance
Feng <i>et al.</i> (2006)	Organization performance	<ul style="list-style-type: none"> Quality performance Innovation performance
Ooi <i>et al.</i> (2008)	Organization performance	<ul style="list-style-type: none"> Job satisfaction
Zakuan <i>et al.</i> (2010)	Organization performance	<ul style="list-style-type: none"> Employee performance Customer satisfaction Business results

A recent empirical study conducted by Arumugam *et al.* (2008) explored the relationship between TQM practices and quality performance on ISO 9001 certified manufacturing organizations in Malaysia. The main finding revealed that TQM practices were found to be partially correlated with quality performance. They further found that customer focus and continuous improvement were perceived as dominant TQM practices in quality performance. Additionally, the authors found evidence that customer focus and continuous improvement were perceived as dominant TQM practices in quality performance. Summary of different studies using quality performance as a measure for evaluating company performance is presented in Table II.

Table II: Quality performance measure by different authors.

Author(s)	Measure	Indicators
Zhang (2000)	Organizational performance	<ul style="list-style-type: none"> Quality performance
Ahire <i>et al.</i> (1996)	Organizational performance	<ul style="list-style-type: none"> Quality performance
Lakhal <i>et al.</i> (2006)	Organizational performance	<ul style="list-style-type: none"> Financial performance Operational performance Product quality performance
Hermann <i>et al.</i> (2006)	Company performance	<ul style="list-style-type: none"> Product quality performance Reduction in costs Shorter R & D time
Samson and Terziovski (1999)	Organizational performance	<ul style="list-style-type: none"> Quality performance Operational performance Business performance
Dow <i>et al.</i> (1999)	Company performance	<ul style="list-style-type: none"> Quality performance
Prajogo and Sohal (2003)	Organizational performance	<ul style="list-style-type: none"> Quality performance Innovation performance
Flynn <i>et al.</i> (1994)	Organizational performance	<ul style="list-style-type: none"> Quality performance
Arumugam <i>et al.</i> (2008)	Company performance	<ul style="list-style-type: none"> Quality performance
Yang (2006)	Quality performance	<ul style="list-style-type: none"> Employee satisfaction Employee quality awareness Customer satisfaction Company's image
Su <i>et al.</i> (2001)	Quality performance	<ul style="list-style-type: none"> Defect rate Rework rate Delay rate of delivery Quality performance
Prajogo and Sohal (2006)	Organizational performance	<ul style="list-style-type: none"> Quality performance Innovation performance
Cua <i>et al.</i> (2001)	Organizational performance	<ul style="list-style-type: none"> Quality performance Operational performance
Sadikoglu (2008)	Organizational performance	<ul style="list-style-type: none"> Employee satisfaction Innovation performance Operation performance Quality performance
Saravanan and Rao (2007)	Organizational performance	<ul style="list-style-type: none"> Customer satisfaction Financial performance Quality performance Operational performance
Prajogo and Hong (2008)	R and D performance	<ul style="list-style-type: none"> Product quality performance Product innovation performance

Research on the link between quality management practices and organization performance, however, often finds contradictory outcomes. That is, quality procedures may not consistently result in a positive or favorable organizational outcome (Foster 2007; Kaynak 2003; Montes, Jover, and Fernandez 2003; Zu 2009). Jabnoun *et al.* (2003) concluded that although quality

management practices have been implemented by many organizations all over the world, such implementations have often failed. Taking a more extreme view, Naor *et al.* (2008) recognize the need for further testing, observing that recent studies argue that it is important to retest the relationship between quality and performance because past studies have obtained mixed results.

Researchers have postulated various reasons for this perplexing outcome, with several researchers suggesting the need to develop more comprehensive models to explain the process by which quality management links to organization performance (Montes, Jover, and Fernandez 2003; Naor *et al.* 2008; Pinho 2008).

Carter *et al.* (2010) concur with the prior research, which indicates that ongoing quality management oriented research needs to evaluate conceptual models that describe the causal process in more detail than many current approaches.

Quality management practices (QMPs)

The identification of the quality management practices (QMPs) that are proposed was based on extent literature review. It is believed that this QMPs are comprehensive because they:

- Have been used frequently (highest frequency of occurrences) by different researchers in the service industries and identified as the key practices in TQM implementation in both manufacturing and service industries (example Saraph *et al.*, 1989; Antony *et al.*, 2002; Zhang *et al.*, 2000; Khamalah and Lingaraj, 2007);
- Constitute practices that represent the hard and soft aspects of quality management;
- Encompass the most prestigious quality award and standards criteria widely accepted by quality management scholars and practitioners;
- Have been considered as critical practices in quality management (Sila and Ebrahim-pour, 2002).

Performance measures indicators

Numerous studies have examined the positive and negative (or non-significant) relationships or correlations between TQM practices and various performance measures.

An extent review of previous TQM studies on organizational performance suggests that there are various performance measures indicators (Sadikoglu and Zehir, 2010; Monge *et al.*, 2006; Zakuan *et al.*, 2010).

In this study, company performance will be measured through quality performance (example reliability, performance, durability, and conformance to specification). The reasons for choosing quality performance as an indicator for measuring company's performance are:

It can be measured and reflected into number of ways as articulated in past empirical studies on TQM (Ahire *et al.*, 1996; Flynn *et al.*, 1994; Su *et al.*, 2001; Yang, 2006; Arumugam *et al.*, 2008; Prajogo and Sohal, 2003; 2004).

- It has been used by Malcolm Baldrige National Quality Award (MBNQA) model under the 'quality results', the only criterion used for organizational performance measurement. MBNQA model that represent TQM practices is accepted by several researchers across the world (Ahire *et al.*, 1995; Dean and Bowen, 1994; Juran, 1995; Prajogo and Sohal, 2003; 2004).

- Several past research studies on TQM and organizational performance have taken quality performance as indicator for measuring the performance (Ahire *et al.*, 1996; Zhang *et al.*, 2000; Arumugam *et al.*, 2008; Dow *et al.*, 1999; Flynn *et al.*, 1994; Saravanan and Rao, 2007; Cua *et al.*, 2001; Prajogo and Brown, 2004) and the results were obtained. These studies investigated the relationships between TQM practices and quality performance in different sectors and countries.

Conceptual model

The aim of this research is to develop and propose a conceptual model that reflects the relationship between the implementation of quality management practices (QMPs) and their impact on quality performance in Portuguese organizations.

The first draft proposed of our conceptual model is illustrated below (figure 1).

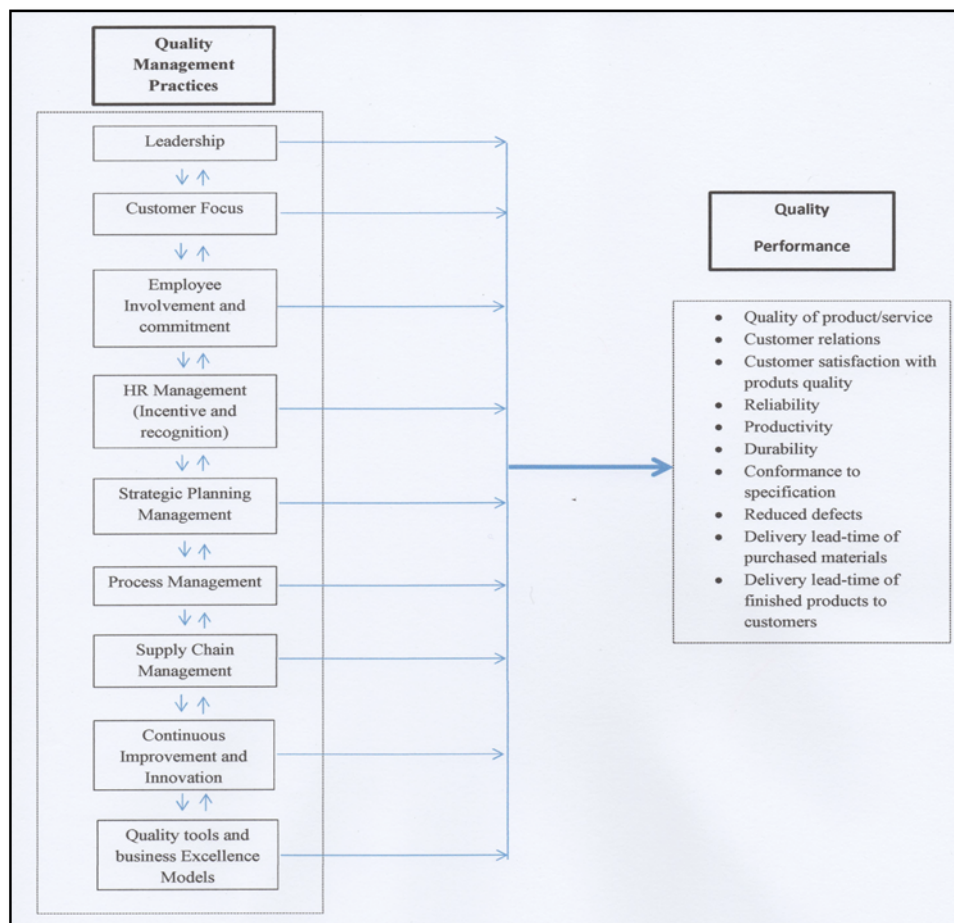


Figure I: Conceptual Model- Relationship between the quality management practices (QMPs) and their impact on quality performance.

Final remarks

Our next step will be to complete and improve the conceptual model proposed, by categorizing the quality management practices into quality management approaches and include performance indicators in the quality performance category related to the service sector companies. The final model will be statistical validated based on a survey that will be sent to the Portuguese companies. The statistical methodology that will be used is the structural equation modeling

technique (SEM).

As far as we were able to find out in the literature review phase, this conceptual model is an innovative approach to characterize the direct results and effects of quality management practices (QMPs) in the companies' quality performance.

The validated model might be used by the quality professionals as an approach for an efficient quality management implementation and may be also used by researchers to develop the quality management theory.

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15. Síría Barros, Paulo Sampaio, Pedro Saraiva
Quality Approaches and Practices and Their Impact on Companies' Organizational Performance

213

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15. Síría Barros, Paulo Sampaio, Pedro Saraiva
Quality Approaches and Practices and Their Impact on Companies' Organizational Performance

214

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15. Síría Barros, Paulo Sampaio, Pedro Saraiva
Quality Approaches and Practices and Their Impact on Companies' Organizational Performance

215

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