

The Effect of Quality Management Practices on Organizational Performance in Jordan: An Empirical Study

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Abstract

Quality management practices (QMPs) have been proposed to improve organizational performance and received substantial attention in recent researches. This study empirically examines the extent to which QMPs and Organizational performance are correlated and how QMPs impacts on organizational performance.

In this study, a QMPs framework is developed according to a comprehensive literature review and represents a relationship between QMPs and Organizational performance through examining the effects of the six QMPs constructs on Organizational performance. Questionnaire using for collected data from the banking sector in Jordan and tested proposed model. The results of this study supported a model proposed.

Keywords: Quality management, Organizational performance, Banking, Jordan

1. Introduction

In response to increase global pressures – customers' demanding superior quality of products and services, the global marketplace has become very competitive, many organizations have adopted practices such as total quality management (TQM), and benchmarking. Many scholars claim that managers can implement TQM in any organization in any sectors of the economy such as manufacturing, service, education, and government (Dean & Bowen, 1994), and that it generates improved products and services, more satisfied customers and employees, reduced costs, improved financial performance, enhanced competitive, and increased productivity (Zu, 2009; Kaynak, 2003; Deming, 1986).

Organizations that adopt a quality management strategy focus on achieving and sustaining a high quality outputs using management practices as the inputs and quality performance as the outputs (Flynn, Schroeder, & Sakakibara, 1994). The pioneers in TQM, such as Deming, Juran, Cosby and Feigenbaum, highlighted the importance of the quality philosophy as an essential competitive weapon for the transformation of an organization.

Researchers define Quality management (QM) is both a set of guiding principles and management style and that have been adopted by managers in organizations to improve competitiveness and organizational performance.

Many scholars study identifies relationships among QM practices and examines the effects of these practices on performance, but the finding inconsistencies and conflicting results among scholars. These findings suggest that a positive relationship exists between the QM practices or TQM and firm performance and between other variables such as product quality, product and process performance, perceived quality, quality drivers, reduced cost, more satisfied customer and improve financial performance. In general, A large body of literature highlights the positive impact of QM practices on performance (Zu, 2009; Kaynak, 2003; Ahire, Golhar, & Waller, 1996; Kaynak & Hartley, 2005; Sila & Ebrahimpour, 2005; Anderson, Rungtusanatham, Schroeder, & Devaraj, 1995; Flynn, Schroeder, & Sakakibara, 1995; Ho, Duffy, & Shih, 1999; Prajogo & Sohal, 2003; 2006; Terziovski & Samson, 1999; Choi & Eboch, 1998), but others have not found a relationship between QM practices –TQM- and performance (Nair, 2006; Agus, 2003).

Therefore, quality management (QM) plays an important role in the productivity and performance of an organization. Therefore, it appears that quality practices are important for continuous survival of Jordanian organizations. Today, TQM has, despite this debate, a widespread acceptance and the most significant research themes in both the academic and professional (Dean & Bowen, 1994; Choi & Eboch, 1998; Flynn et al., 1995). However, there is a lack of agreement on the findings and some results are contradictory with QM theories.

2. Research Objectives

Thus, based on the analysis of past research, This paper aims to investigate a relationship between quality management practices (QMPs) and organizational performance (OP) in the banking sector through the development of a conceptual framework, and recognizes the importance of critical success factors (CSFs) of QMPs to organizational performance, and to develop an instrument for measuring quality management practices for Jordanian banking and in general the Jordanian context. To reach such a goal, a set of items for measuring QMPs constructs had to be well developed. Developing a valid instrument for quality management practices which can be used in multiple countries will be helpful for practical and academic perspectives. In addition, the literature review promises to expose a lack of research with regard to some critical factors of QM practices. Therefore, the current research proposes a holistic framework for QM practices based on an extensive review of the factors that contribute to the success QM practices.

The present study attempts to make a contribution, as following: (1) Towards filling a gap in the literature on the relationship between QMPs and organizational performance, a conceptual framework is devised as shown in figure (1) In addition, researchers provide empirical evidence for the fact that QMPs' contribution to banks' performance is greater in service firms, which partly reflects the actual situation in Jordan and other similar developing countries. The contribution of this research consequently, lies in the development of the link between quality management and organizational performance through the complementation of the empirical results about these issues in the banking sector in Jordan. (2) Many scholars have developed valid scales for quality management practices (e.g., Saraph, Benson, & Schroeder, 1989; Flynn et al, 1994; Ahire et al., 1996). However, none of these scales were empirically tested and validated in the Jordan context. To overcome this limitation, this paper provided a set of a valid and reliable operational measurement stream of quality management in Jordan.

3. Research Framework and Hypotheses

The objective of this study is to examine the relationship between QM practices elements and organizational performance. Based on the above literature review, a research framework was developed. Figure 1 Research framework illustrated this relationship. In this framework, QM practice elements are independent variables, and organizational performance is a dependent variable correspondingly.

These relationships deal with main hypotheses:

H 1: there is significant, positive relationship between Quality management and organization performance

H 1-1: there is significant, positive relationship between Top management (leadership) and organization performance

H1-2: there is significant, positive relationship between Strategic planning and organization performance.

H1-3: there is significant, positive relationship between Customer focus and organization performance.

H1-4: there is significant, positive relationship between Process management and organizational performance

H1-5: there is significant, positive relationship between Supplier quality and organization performance.

H1-6: there is significant, positive relationship between Employee relation and organization performance.

This paper is organized as follows. The related literature is reviewed to identify key latent variables as well as observed variables. The relevant literature is reviewed to describe the relationship among variables in the model. These variables include QM practices, and organizational performance; Next, Empirical validation and refinement of the scales follow. Finally, the paper concludes with recommendations for future research.

4. Review of Literature

Researchers have reported that one of the problems with QM implementation is the lack of a universally accepted definition of quality (Eng & Yusof, 2003).

Deming defined quality as "multidimensional to produce a product and/or deliver a service that meets the customer's expectations to ensure customer satisfaction" (Deming, 1986, P.54). Juran defined quality based on a multiple meaning, namely (1) "Quality consists of those product features which meet the needs of customers and thereby provide product satisfaction," and (2) quality is apparently associated with customers' requirements, and fitness suggests conformance

to measurable product characteristics” (Juran, 1988, P.22). Crosby’s definition of quality is “conformance to requirements” (Crosby, 1979, P.7). Another definition of TQM: "an integrated approach to achieving and sustaining high quality output, focusing on the maintenance and continuous improvement of processes and defect prevention at all levels and in all functions of the organization, in order to meet or exceed customer expectations" (Flynn et al., 1994, p. 342).

4.1 Quality Management Theories, Models, and Frameworks

Several QM practices have been developed based on three approaches: contributions from quality leaders, Formal evaluation models (Quality Award models); and finally, the Measurement studies. The second and third concerned by the formal evaluation models and measurement studies.

The researchers reviewed contributions by quality leaders such as Deming (1986), Juran (Juran & Gryna, 1993), Crosby (1979), Feigenbaum (1991), and Ishikawa (1985). In addition to the work of study measurement (Zu, 2009; Flynn et al., 1994; Saraph et al., 1989; Black & Porter, 1995; Ahire et al., 1996; Kaynak & Hartley, 2005; Sila & Ebrahimpour, 2005; Prajogo & shoal, 2006; Powell, 1995; Tari, Molina, & Castejon, 2007; Sila, 2007; Agus, Ahmad & Muhammad, 2009), and Quality Awards frameworks reviewed such as the Malcolm Baldrige Quality award Framework (MBQA), the European Business Excellence Model (EFQM), & King Abdullah II Award (KAAPS).

The contributions from quality leaders have had an influence upon later studies about TQM, in such a way that the literature on TQM has gradually developed, identifying various practices for effective quality management. Quality leaders believe that management and the system are the cause of poor quality rather than the workers (Juran & Gryna, 1993). However, a brief overview of their contribution to the quality journey is given, supported by several references.

Deming is well-known for his 14 points of management and the Plan-Do-Check-Act (PDCA) Cycle that is still used today. Deming believed management is responsible for 94% of quality problems, and quality must be built into the product to achieve a high level of excellence (Deming, 1986). Deming philosophy begins with top management but maintains that a company must adopt the fourteen points of this system at all levels. Deming fourteen point plan, each of which can be derived from one or more of his SPK parts, is a complete philosophy of management, that can be applied to small or large organizations in the public, private sectors, which according to Deming (1986, p. 23) "Are a signal that management intend to stay in business and aim to protect investors and jobs".

Juran developed the quality trilogy - quality planning, quality control and quality improvement-, and ten steps to quality improvement (Juran, 1988). Crosby is well-known for his "Quality is free" concept and his zero defects concepts. Crosby’s philosophy can be described best by his four absolutes of quality improvement process (Crosby, 1989).

Feigenbaum (1991) is known as the originator of total quality control, a concept he introduced in the 1950s. Feigenbaum saw it as a business method and proposed three steps to quality as Quality leadership; Modern quality technology; and Organizational commitment. TQM requires a high degree of effective functional integration among people, machines, and information, stressing a systematic approach to quality. Clearly defined total quality system is a powerful foundation for TQM, and Quality is the responsibility of everybody in the company (Feigenbaum, 1991).

Ishikawa developed the Japanese style of Total Quality control (TQC), Company Wide Quality Control (CWQC) means that “Quality control consists of developing, designing, producing, marketing and servicing products and services with optimum cost-effectiveness and usefulness, which customers will purchase with satisfaction. To achieve these aims, all the separate parts of a company must work together” (Ishikawa, 1989). Ishikawa made many contributions to quality, the Ishikawa diagram and the assembly and use of the “seven basic tools of quality” such as Pareto analysis, Cause and effect diagrams, Histograms etc. (Ishikawa, 1985).

There are standardized quality models or formal evaluation models used by firms as a guide for their implementation, or in order to carry out self-assessments of their quality practices. There are several Quality Awards in the world, but the most accepted domains and demonstrate worldwide activities in this field such as the Deming Prize in Japan, the European Quality Award (EFQM) in Europe, the Malcolm Baldrige National Quality Award in the United States of America, and other similar awards in other countries was the official recognition of the importance of TQM.

Each award model is based on a perceived model of TQM. The award models do not focus solely on either product or service perfection or traditional quality management methods, but consider a wide range of management activities, behavior and processes that influence the quality of the final offering. These models provide a useful framework which firms can evaluate their TQM implementation practices, seek improvement opportunities, and the end results.

These quality award models provide a worldwide framework for evaluating aspects of TQM practices in a firm. Although each award has its own unique categories and emphasis, there are some common areas. (1) Each model has two parts: One is TQM enablers; the two is overall business results. (2) Most of these award models emphasize the importance of leadership, supplier quality management, employee relations, strategy and policy, information, customer focus, and process management.

The most criticized shortcomings of quality award models are lack of a unified theory that explains how organizational outcomes are achieved, lack of strategic focus, and lack of credibility, which is not surprising because business excellence models have been developed and promoted by practitioners (Anderson, Rungtusanatham, & Schroeder, 1994).

Researchers summarized the award models that the most known in the world (the Deming Prize, EFQM Award, MBNQA frameworks, ISO, & King Abdullah II Award -Jordanian quality award-) as The following the award's criteria and objectives and Fundamental Quality principles as shown in Table 1 below to explore objectives, Fundamental principles, and Criteria for Award models.

The measurement studies of the Saraph et al. (1989), Ahire et al. (1996), and Flynn et al. (1994) help both researchers and managers faced with decisions related to quality management and identified QM practices. These study developing an instrument for measuring quality management and assessing its reliability and validity, applicable to both industrial and service sectors (Saraph et al., 1989; Ahire et al., 1996; Flynn et al., 1994). In addition to the work of other scholars (e.g., Black & Porter, 1995; Powell, 1995; Kaynak & Hartley, 2005; Sila & ebrahimpour, 2005; Prajogo & shoal, 2006; Tari et al., 2007; Sila, 2007; Agus et al., 2009 ; Zu, 2009).

Critical success factors (CSFs) are the factors that guarantee the successful implementation of QM. Many studies have attempted to synthesize different QM practices into a meaningful set of CSFs to help users conceptualize the QM concepts more easily. CSFs are management practices, actions or pre-conditions necessary for successful QM (Saraph et al., 1989). Quality management practices have been investigated extensively e.g., Saraph et al. (1989), Flynn et al. (1994), Powell(1995), Ahire et al. (1996), etc., And several studied adopted these scholar's studies. Each one of these studies determined dimensions of QM that applied by organizations to gain competitive advantage.

4.2 Selection and Analysis of QM Frameworks

An extensive literature survey has been carried out to select TQM/QM frameworks for this study. Research into quality management and TQM has identified many critical success factors that affect an organization's position. Most of the recent articles on QM CSFs utilized some of factors from Saraph et al. (1989), Flynn et al. (1994), Powell (1995), Ahire et al. (1996), etc., Or a set of factors from quality literature and very few authors empirically validated the QM CSFs. Based on the writings of Crosby, Deming, Feigenbaum, Juran, Ishikawa, and several QM implementation studies, and quality awards existing in different countries. However, most of quality awards in the world are basically derived from three basic: the Malcolm Baldrige National Quality Award (MBNQA), the European Quality Award (EFQM) and the Deming Prize. This study, therefore, includes only these three basic awards as TQM frameworks, in additional King Abdullah II Award (Jordan).

Researchers have been selected six QMPs for development framework for the banking sector in Jordan; Based on A detailed analysis of the frameworks with respect to CSFs is carried out and based on the frequency analysis, the CSFs QMPs are prioritized presented in Table 2 to the selection and Analysis of QM Framework

Therefore, the following six CSFs have emerged out of an above analysis and the most frequency in QM studies; these elements of QMPs are namely: the Leadership, Strategic Planning, Customer Focus, process management, employee relation, and supplier management. The other CSFs QMPs that are not presented in Table 2, because of its very few frameworks frequencies so that researchers omitted it.

The next section provides a brief description for each construct of QM practices.

4.2.1 Leadership (Top Management Support)

The critical factor 'top management support' is cited by most researchers. Strong commitment from the top management is vital in quality management and leading to higher quality performance. Most of the researchers consented to this notion (Saraph et al., 1989; Flynn et al., 1994; 1995; Ahire et al., 1996; Juran, 1988; Anderson et al., 1995).

Senior management acts a driver of TQM implementation, establishing values, goals, and systems to satisfy customers' needs and expectations and improve organizational performance (Ahire et al., 1996; EFQM Award, the Malcolm Baldrige Quality Award and King Abdullah II Award). Anderson et al. (1994) explained the concept of leadership as:

The ability of top management to establish a practice, and lead a long-term vision for the firm, driven by changing customer requirements. According to Juran & Gryna (1993), the roles of top management identified as: Establish quality policies, establish and deploy quality goals, provide resources, provide problem-oriented training, and improvement.

Therefore there is very strong evidence that the leadership factor is relevant in a quality management such as Top management accepts quality responsibility; evaluated on quality; participate in quality improvement efforts; makes strategies and goals for quality; alignment of IS strategy with business strategy; considering market demands and consumer needs; and organizational performance and profitability (Saraph et al., 1989; Flynn et al., 1994, 1995; Ahire et al., 1996; Anderson et al., 1995; Black & Porter, 1996; Crosby, 1979; Deming, 1986; Juran & Gryna, 1993; Kaynak, 2003; Powell, 1995; Prajogo & Sohal, 2003; Rao et al., 1999; Sila & Ebrahimpour, 2005; Wilson & Collier, 2000).

Leadership is important in influencing groups of people and mobilizing resources. Effective leadership promotes the strategic direction of the company to achieve customer satisfaction and business results.

4.2.2 Strategic Planning

Strategic quality planning is defined by Juran & Gryna (1993, p. 300) and indicates the main concepts: "Strategic Quality Planning is a structured process for establishing long-range quality goals, at the highest levels of the organization, and defining the means to be used to reach those goals". Krumwiede & Charles (2006) emphasized that "the strategic aspects of quality are recognized and embraced by top management in the strategic planning process" (p. 37).

Strategic Planning allows firms to set clear priorities and allocate resources for the most important things. The focus of a TQM practitioner includes a leader's vision of an organization's desired future state, translating vision into strategy, goals and policy, strategy development, and strategy into reality (Sila & Ebrahimpour, 2005). Within the TQM model stipulated by MBNQA, Strategic Planning "stresses that long-term organizational sustainability and a competitive environment are key strategic issues that need to be integral parts of an organization's overall planning" (NIST, 2010, p. 39). In the Malcolm Baldrige model, it has been stated that there is a positive link between strategic planning for quality and quality information and analysis (Wilson & Collier, 2000).

4.2.3 Customer Focus

Several studies have reported a strong link between the delivery of high quality goods and services and profitability through customer satisfaction (Sila & Ebrahimpour, 2005).

Anderson defined Customer satisfaction as the degree to which a firm's customers continually perceives that their needs are being met by the firm's products and services (Anderson et al., 1994). An organization must identify Customer relationship to Measure customer needs and expectations; involve customers in quality improvement; determine customer satisfaction (Prajogo & Sohal, 2003; Sila & Ebrahimpour, 2005; Flynn et al., 1994, 1995; Powell, 1995; Ahire et al., 1996; Black & Porter, 1996).

Many scholars mentioned to the importance of customer satisfaction; based Deming work as "The consumer is the most important part of the production line, Quality should be aimed at the needs of the consumer, present and future" (Deming, 1986, p. 32). The customer should be closely involved in the product design and development process, with input at every stage of the process; so that there is less likelihood of quality problems once full production begins (Flynn et al., 1994).

The availability of customer complaint information to managers and the degree of the use of customer feedback to improve product quality reveal the level of customer focus in an organization. As customer expectations are dynamic, an organization needs to survey customer expectations regularly and modify its operations accordingly (Ahire et al., 1996).

4.2.4 Employee Relations

An important factor to achieve goals in firms is Workforce management, Workforce management is emphasized on recognize employee performance on quality; encourage team working; provide training; involve employees in quality decisions (Saraph et al., 1989; Kaynak, 2003; Prajogo & Sohal, 2003; Anderson et al., 1995; Flynn et al., 1994, 1995; Powell, 1995; Ahire et al., 1996; Black & Porter, 1996; Wilson & Collier, 2000; Sila & Ebrahimpour, 2005).

The human resource indicated which includes employee training and employee relation was positively related to quality improvement. A TQM program will be successfully implemented depends on the collaboration and coordination among a firm's workforce (Ho et al., 1999). The employees can make timely and more responsive

decisions to customers can have a positive impact towards customer relations through increased access to information and resources (Ahire et al., 1996).

Empowering and involving all employees in making continuous improvement is essential; under such conditions (Flynn et al., 1995; Deming, 1986; Kaynak, 2003; Ho et al., 1999; Ishikawa, 1985; Ahire et al., 1996). The organization must ensure that an organization-wide training program is available in order to provide employees with the proper skills (Kaynak, 2003; Anderson et al., 1995; Flynn et al., 1995; Rao, Solis, & Raghu-Nathan, 1999).

4.2.5 Supplier Quality Management

The supplier quality is an important element of quality management in the organization because materials and purchased parts are a major source of quality problems (Kaynak, 2003; Flynn et al., 1994). Supplier relationship focus on: Rely on a small number of suppliers; involve suppliers in product development; evaluate suppliers based on quality; provide training and technical assistance to suppliers (Saraph et al., 1989; Kaynak, 2003; Sila & Ebrahimpour, 2005; Anderson et al., 1995; Powell, 1995; Ahire et al., 1996; Flynn et al., 1994, 1995; Black & Porter, 1996).

Scholars suggested the organizations selected their suppliers on the basis of quality, rather than only on price (Feigenbaum, 1991; Ishikawa, 1985). According to Deming (1986) the price has no meaning without a measure of the quality being purchased.

Supplier quality management enhances the cooperation between suppliers and firms by permitting suppliers' involvement and participation in the design process and in the production process, and suppliers' management helps the procurements of materials meet the firm's requirements and be efficiently utilized (Flynn et al., 1995; Kaynak, 2003). Suppliers' management used to facilitate tasks such as following cooperating with suppliers to ensure meeting the customers' expectations, managing supplier relationship, involving suppliers in the product development process, developing strategic alliances with suppliers, and enhancing the process management (Flynn et al., 1995; Anderson et al., 1995).

4.2.6 Process Management Quality

The effectiveness of process management implementation has been cited as one of the major dimensions of integrated quality efforts (Anderson et al., 1995). Process refers to combinations of machines, methods, materials, tools, and people employed in production.

TQM works on the belief that the overall quality of products can be enhanced by improving the quality of the processes directly or indirectly related to their creation (Ahire et al., 1996).

The objective of process management is to reduce process variation by building quality into the production process (Flynn et al., 1995; Anderson et al., 1994). That led to increase the quality of outputs as well as decreasing the costs such as rework costs and waste costs (Anderson et al., 1994; Forza & Flippini, 1998). The maintenance of process capability to meet production requirements is the important matter in process control and improvement (Feigenbaum, 1991; Juran & Gryna, 1993). Deming confirmed that improving product quality should not be dependent on mass inspection. Quality comes not from inspection, but from improvement of the production process (Deming, 1986).

MBNQA criteria classify the process management category in "the central requirements for identification and management of core competencies to achieve efficient and effective process management" (NIST, 2010). In the EFQM Excellence Model and King Abdullah II Award, the process management is defined as "how the organization designs, manages and improves its processes in order to support its policy and strategy and fully satisfy, and generate increasing value for, its customers and other stakeholders" (KAAPS, 2010; EFQM, 2010).

4.3 Organizational Performance

TQM is often used as a multidimensional approach to measuring organizational performance, where both financial and non-financial measures assume equal importance (Sila, 2007). A Literature on TQM suggests various measures of performance, for instance, Performance was also conceptualized differently across studies.

Key Performance Results, in the EFQM Excellence Model (2010) are defined as "What the organization is achieving in relation to its planned performance." Essentially, "the results document the relationship between what organizations do in terms of quality management practices and the results they achieve in several types of outcomes" (NIST, 2010). The business results' category in all quality award models looks at key measures of organizational performance as multiple dimensions, including product and service outcomes, financial and market outcomes, customer-focused outcomes, process effectiveness outcomes, workforce-focused outcomes, and leadership outcomes.

The results dimension in these models used sub-criteria and identifies many possible measures, including some of popular measures like user satisfaction and service quality and from a stakeholder perspective. Based on quality management awards the Results as outcomes which we target measure and achieve. The Results criteria cover what an organization achieves. So that researchers consider the Business results as outcome so they included the result as dimension in part of organizational performance in this study. MBNQA criteria classify performance in five major categories: customer evaluation of product and services, financial and market results, human resource result, supplier and partner performance, and organizational effectiveness results (NIST, 2010).

For measurement performance, many scholars used financial as well as non-financial performance (Powell, 1995; Choi & Eboch, 1998; Flynn et al., 1995; Forza & Filippini, 1998). And others have considered customer satisfaction measures to capture performance benefits accrued from QM practices (Choi & Eboch, 1998; Forza & Flippini, 1998; Anderson et al., 1995; Wilson & Collier, 2000; Terziovski & Samson, 1999).

Based on a pervious review researchers adopted the measurement of organizational performance in term of customer satisfaction, where this Support by Deming (1986) confirmed the focus on quality will lead to outcomes such as employee and customer satisfaction, efficiency, and profitability.

The measurement of organizational performance adopted as follows : Customer retention (Improved satisfaction of our clients) (NIST, 2010; Sila, 2007); Reliability and timely delivery of products/services reaches the customer faster (Wilson & Collier, 2000, Sila, 2007); Personalized service (Flynn et al., 1995; Sila, 2007); Value for the money spent (A reduction in the number of customer complaints and grievances) (Dean & Bowen, 1994; NIST, 2010; Sila, 2007).

Based on prescriptions of Deming, Juran, Crosby, and Ishikawa; Saraph et al. Conducted one of a first empirical effort to validate an instrument for integrated quality management. This study produced 8 different factors, which measure the quality practice of an organization .The major strength of this instrument was the high level of external validity, for both manufacturing and service industries were included in the sample (Saraph et al., 1989).

The Flynn et al.'s study based on the Saraph's study focuses on a plant rather than an organization as a unit of analysis and utilizes the perceptions of both line and managerial level employees. This study identified seven dimensions of quality management primarily based on the empirical and practitioner literature (Flynn et al., 1994, 1995). Organizations that adopt a quality management strategy focus on achieving and sustaining high quality outputs using management practices as the inputs and quality performance as the outputs (Flynn et al., 1994).

Based on an extensive review of the conceptual and empirical literature on TQM, Ahire et al. identified, validated, and tested 12 constructs of integrated quality management through an empirical survey of 371 manufacturing firms (Ahire et al., 1996). Based on a series of items from the Baldrige model and the literature, Black and porter developed a 39-item questionnaire. This study produced 10 different (Black & porter, 1996)

According to the study of Yang (2006), TQM along with human resource management significantly affected quality performance, especially with regard to customer and employee satisfaction. According to Sila (2007), customer and employee satisfaction and streamlined processes together produce improved operational and financial results which will eventually lead to business excellence. Study by Wilson & Collier (2000) empirically tested the causal relationships of the MBNQA framework and overall IS quality. They found significant impact and on business results. There is growing evidence that QM implementation has improved organizations' performance and significantly impacted on most organizations (Dewhurst, Martinez-Lorente, & Sanchez-Rodriguez, 2003).

Several studies showed that QMPs had the strongest effect on the quality performance measures such as Flynn et al. (1994) and others founded positively correlated with organizational performance such as (Powell, 1995; Ahire et al., 1996; Samson & Terziovski, 1999; Agus, 2003; Rao et al., 1999; Kaynak, 2003; Prajogo & Sohal, 2003; 2006; Sila & Ebrahimpour, 2005; Zu, 2009).

5. Methodology

5.1 Instrument Development

The aim of this study is to develop an instrument for measuring TQM implementation for the banking sector in Jordan. To reach such a goal, a set of items for measuring QM practices constructs had to be well developed. This was realized on based on a thorough review of the QM literature, expert guidance, and input from colleagues.

Originally the questionnaire was designed in English. The decision was made to translate the research questionnaire into Arabic and to distribute the questionnaire because of the official language in Jordan, to make it very clear for the respondents.

The primary data for the study was collected through the survey method by using standardized, structured self-administered questionnaires. The unit of analysis is the individual since the study is concerned with the perceptions of individuals. Finally, these results only 384 usable questionnaires were collected comprising the final sample of the study which comprised of 64 percent of the total number of questionnaires distributed.

5.2 Population and Sample

The target population for this study is employees in the banking sector in Jordan which consist of 22 Commercial banks; and the number of employees working in its about 14036 employees (Association of Banks in Jordan, 2010). While a sample of this study consists of 600 employees; which was selected randomly.

5.3 Measurement and Operationalization of Variables

An empirical examination of the proposed model of quality management in this study requires the operationalization of the theoretical constructs included in the model of study. Measurement statements for each construct were identified from previous studies, and developed by the author and adopted from previous studies (E.g., Saraph et al., 1989, Ahire et al., 1996; Powell, 1995; Flynn et al., 1994, 1995). Five point Likert's scales will be used to measure model dimensions.

The Operationalization of QMPs Constructs shown in Table 3 based on previous literature, the QM practices will be operationalized using six main dimensions namely leadership, strategic planning, customer focus, employee relation, supplier quality, and process management.

5.4 Data Analysis and Research Findings

The Statistical Package for the Social Sciences (SPSS) has been used to analyze the data.

The Preliminary analysis was conducted to check for any violations in normality, equality of variances and linearity. The data from the sample fulfilled all the assumptions allowing for parametric tests to be conducted.

5.4.1 Reliability Analysis

The validity of the instrument researchers adopted items, which were used in previous research; and seeking an opinion from individuals such as academics and professionals who are experts in their respective area. The scale of Cronbach's coefficient alpha value is the most widely used statistics to determine the reliability of the measurement; Cronbach Alphas in our study were Table 4 illustrates test results.

The overall value of Cronbach's alpha for independent variables is above 0.89, which means that the constructs were reliable for measure the organizational performance. Whereas the alpha value of dependent variable 'Performance' is 0.874, which is in an acceptable range and means that individual constructs were reliable for measure the parameters of performance.

5.4.2 Descriptive Statistics for Quality Management Variables

Table 5 shows The Results of Descriptive Statistics of QM dimensions and the characteristics of QM dimensions used in this study. The results indicated the mean of the QM dimensions ranged from (4.05) to (4.20). Top management (TOP) has the highest mean (4.20) while Process management (PRO) has the lowest mean (4.05) with a minimum score of (3) and maximum score of (5).

The means of all variables in the study above the scale midpoint which is most respondents share similar opinions toward each variable in this study. Also the SD is less than one; that is, the variations in respondent's opinions were small. In brief, mean, SD was used to determine the extent of spread of the data.

5.4.3 Correlation Analysis and Multiple Regressions Analysis

The major statistical measure of the relationship is the correlation coefficient. Correlation analysis is primarily concerned with finding out whether a relationship exists and with determining its magnitude and direction (Saunders et al., 2007; Hair et al., 1998). In order to know the most contributory of this relationship between the variables, the multiple regression was conducted. Hair et al. (1998); Saunders et al. (2007) and Sekaran (2003) described the multiple regressions as a statistical technique to predict the variance in a single dependent variable caused by the effect of more than one independent variable. In other words, correlation indicates to the existence of the relationship between the variables while the multiple regressions specify the most crucial variables for this relationship.

5.4.4 Test Hypothesis

The output SPSS we concerned with three tables are summary model, ANOVA and coefficient tables. The main hypotheses proposed to answer the research questions. The hypothesis was tested by using the correlations and

multiple regressions as it was seeking to determine the relationships between quality management dimensions (independent variables) and organizational performance (dependent variables).

The main hypothesis is:

H 1: there is significant, positive relationship between Quality management variables and organizational performance.

The Results of Correlation Test between QM variables and OP is shown in Table 6.

The relationships between the QM variables (top management, strategic planning, customer focus, employee relation, supplier quality, and process management) and OP employed in this study are presented in Table 6. Using correlation analysis, the results show that all variables are positive correlation but the results show that the four out of six variables (top management, strategic planning, customer focus, and employee relation) are highly positively correlated with the OP but process management and supplier quality are a weak positive correlation and not significant with OP. The correlation value suggests the four out of the six QM dimensions are significantly correlated to the OP and the rest are supplier quality and process management is not significantly correlated to OP. Furthermore, the result showed the QM overall is a positive and significant correlation with OP.

The highest correlation values with OP are customer focus, employee relation, top management, and strategic planning. This indicates that these four variables have a strong influence on OP. On the other hand, the process management and supplier quality have not influenced on OP. In general, the findings indicate that four of QM variables are supported and impact on OP in their banks. So the result of the correlation analysis, therefore, supported all the hypothesized relationships developed in this study excepted process management and supplier quality.

The results of correlations indicated the existence of the relationship between the variables but did not identify the most crucial variables for this relationship. To achieve this objective, the multiple regressions were conducted between QM variables and OP. Stepwise Multiple Regression analysis was used to determine the importance of each independent variable and its contribution to the mathematical model.

The multiple regressions were conducted between QM dimensions namely (top management, strategic planning, customer focus, employee relation, supplier quality, and process management) as they were the independent variables, and the OP a dependent variable. The results of multiple regression analysis between QMPs variables and OP were shown in Tables 7 and 8.

Table 7 revealed that the R^2 adjusted value of 0.847 indicates that four out of factors proposed in our model, including top management, strategic planning, customer focus, employee relation, can explain 84.7% of the variance in OP as a dependent variable. Table 7 shows that the measures of significance for the overall model ($F = 530.440$; sig. =; Sig. = 0.000), indicated the model is statistically significant.

Table 8 showed the independent variables that were found to contribute to this relationship (a greater effect on the DV) were four out of the six of the QM variables which had significant relationships with OP. These four variables are top management, strategic planning, customer focus, and employee relation. But process management and supplier quality were out of the regression equation which provides confirmation of the previous analysis as a weak.

According to the standardized beta (Beta-B-) coefficient, we can arrange them according to strongest contribution in explaining the dependent variable.

The variable employee relation has been the strongest contribution ($B=0.356$; sig. =0.000; $R^2_{adj}=0.828$) which explained with (customer focus and top management) 82.8% of the variation in (OP) the dependent variable, followed by variable top management ($B=0.258$; sig. =0.000; $R^2_{adj}=0.791$) which explained with (customer focus) 79.1% of the variation in the dependent variable. The third variable was customer focus ($B=0.249$; sig. =0.000; $R^2_{adj}=0.739$) which explained 73.9% of the variation in the dependent variable. The fourth and final variable was strategic planning ($B=0.185$; sig. =0.000; $R^2_{adj}=0.847$) which explained with (customer focus, top management and employee relation) 84.7% of the variation in the dependent variable. Nonetheless, process management and supplier quality variable was out of the regression equation which provides confirmation of the previous analysis because of a weak correlation and did not meet the criteria of Multiple Regression.

Consequently, our proposed hypotheses are tested and discussed below:

Table 9 summary of the results of the hypothesis; as shown in Table 9, the results of the hypothesis show that T value, significance level, the Beta value and the decision. That indicates that the top management, strategic planning, employee relation, and customer focus, have a significant direct impact on the ISS overall. On the other hand, our hypothesis supported, and asserts that there is a strong trend among the individuals in the sample for the impact of top management, strategic planning, employee relation, and customer focus on OP. On the other hand, supplier quality and

process management have no significant impact on the OP. Moreover, the values of VIF and tolerance showed no multicollinearity between the variables as their values less than 10 for the VIF and more than 0.10 for tolerance level as suggested by Hair et al. (1998). Another way to check it is a coefficient of correlation the highest in this research is 0.859, which is below the cutoff of 0.90 for the collinearity problem. Therefore, multicollinearity problem does not occur in this research (Hair et al., 1998).

The findings are consistent with previous studies on relationships between quality management variables and OP (e.g.: Flynn et al., 1994; Powell, 1995; Saraph et al., 1989; Sila, 2007; Jaafreh, 2011; Kaynak & Hartley, 2005; Kaynak, 2003; Prajogo & Sohal, 2003; 2006; Sila & Ebrahimpour, 2005; Zu, 2009).

6. Conclusions and Future Research Directions

To achieve this objective a systematic approach study was employed to determine the quality management dimensions used in the previous literature and suitable to be tested in this study. This approach provided a new instrument for assessing the quality management dimensions required for all management levels in the banking sector in Jordan.

The findings of this study contributed to both theoretical and managerial perspectives. From the theoretical standpoint, the results gained from this study consistent with the theories and the previous literature which supported these theories by providing empirical evidence throwing in enrichment the body of knowledge about the QM theory.

From the managerial perspective, the results of this study showed that there was a significant relationship between quality management dimensions (leadership, strategic planning, customer focus, and employee relation) and OP. This means the managers should be concerned about these dimensions to enhance the OP of the organization.

In conclusion, the researcher offers this brief summary of conclusions. This study has advanced research in the QM field by (1) providing support for using the model QM at the individual level of analysis in its entirety; (2) Shown support for the use of objective, real features to be used both as dependent and independent variables in the analysis to provide practical results that can be used immediately by practitioners in the real world, and by researchers in a further analysis. (3) The results showing how QM concept can be applied in Jordan's context and providing some empirical evidence from a survey that QM model are effective. Finally, the proposed model has the potential to contribute to the quality and the OP and the organization by providing feedback to manage and improve the OP to better meet the needs of the organization.

Although the results of this study only drawn from the banking sector in Jordan. It is acknowledged that differences among sectors may impact upon the results, but these are beyond the scope of this research, and those issues could be addressed by further research.

The theoretical model of this study can be further extended as well. Moreover, integrating those findings into the model and empirically testing it would make a further research contribution in this vital research stream. The researchers could also build more detailed models specific to a particular set of circumstances. Future research needs to continue the development of sound theoretical models and instruments.

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Table 1. To explore objectives, fundamental principles, and criteria for award models

| Awards | Objectives | Fundamental Quality principles | Criteria |
|--|--|---|---|
| The Malcolm Baldrige National Quality Award The National Institute of Standards and Technology (NIST), The 2009-2010 Criteria for Performance Excellence. http://www.nist.gov/baldrige/publications/criteria.cfm | To help improve performance practices and capabilities for enhancing the value of the organizations' products and services to customers; To facilitate communication and sharing of best practices among U.S. organizations; To serve as a working tool for understanding and managing performance; planning, training and assessment.; To guide organizations toward performance excellence | Visionary leadership, customer-driven excellence, organizational and personal learning, valuing workforce members and partners, agility, focus on the future, managing for innovation, management by fact, social responsibility, focus on results and creating value, and systems perspective. | Leadership; Strategic Planning; Customer Focus; Measurement, Analysis and Knowledge Management; Workforce Focus; Process Management; Results: Product Outcomes, Customer-Focused Outcomes, Financial and Market Outcomes, Workforce-Focused Outcomes, Process Effectiveness Outcomes, Leadership Outcomes |
| European Foundation Quality Model (EFQM) 2010 http://www.efqm.org | To stimulate and assist management teams in adopting and applying the principles of organize; To improve the competitiveness of European Industry; To close the gap of competitiveness between Europe and the USA and Japan | Achieving Balanced Results; Adding Value for Customers; Leading with Vision, Inspiration and Integrity; Managing by Processes; Succeeding through People; Nurturing Creativity and Innovation; Building Partnerships; Taking Responsibility for a Sustainable Future. | Leadership; People; Strategy; Partnership and resources; Processes, products and services; People results; Customer results; Society results; Key results. |
| The Deming Prize -Japan- http://www.juse.or.jp/e/publications/ | To evaluate and recognize methods of companywide quality control for Japanese businesses. | Create a vision, and demonstrate commitment; Learn the new philosophy; Understand inspection; Stop making decisions purely on the basis of cost; Improve constantly and forever; Institute training; Institute leadership; Drive out fear; Optimize the efforts of the teams; Eliminate exhortations; Eliminate numerical quotas and management by objective; Remove barriers to pride in workmanship; Encourage education and self-improvement; Take action. | Customer focus; Leadership; Quality planning; Human resource development; Information management; Process management; Supplier relationship; Organization culture; Social responsibilities; Business results. |
| ISO 9000:2005, 9004:2000, http://www.iso.org/iso/home.htm | The main goal of ISO 9000 is to produce an effective quality system that will assist in eliminating errors, save money on rework and wasted work and satisfy customer requirements; To maintain quality; To support continuous improvement; Used by senior as a framework to guide; their organizations towards improved performance. | | Customer focus, leadership, involvement of people, a process approach, a system approach to management, continual improvement, a factual approach to decision making, and mutually beneficial supplier relationships |
| The King Abdullah II Award for Excellence in private sector (KAAPS) Booklet 2010; http://www.kaaps.jo/award-criteria | Enhancing the competitiveness of Jordanian businesses by promoting quality awareness and performance excellence, recognizing quality and business achievements of Jordanian organizations, and publicizing these organizations' successful performance strategies and sharing them. | Achieving Balanced Results; Adding Value for Customers; Leading with Vision, Inspiration & Integrity; Managing by Processes; Succeeding through People; Nurturing Creativity & Innovation.; Building Partnerships; Taking Responsibility for a Sustainable Future. | 1. Leadership, 2. Strategy, 3. People, 4. Partnerships & Resources, 5. Processes, Products and Services, 6. Customer Results, 7. People Results, 8. Society Results, 9. Key Results. |

Table 2. Selection and analysis of QM framework

| Authors / factors | QMPs | Customer focus | Employee Relations | Leadership | Process quality management | Results | Strategic Planning | Supplier quality management |
|---------------------------------------|------|----------------|--------------------|------------|----------------------------|---------|--------------------|-----------------------------|
| Ahire et al. (1996) | | 1 | 1 | 1 | 1 | 1 | | 1 |
| Anderson et al. (1995) | | 1 | 1 | 1 | | | | |
| Black & Porter (1995) | | 1 | 1 | 1 | 1 | | 1 | 1 |
| Crosby (1979) | | | 1 | 1 | 1 | 1 | 1 | 1 |
| Deming prize | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| EFQM (European Quality Award) | | | 1 | 1 | 1 | 1 | 1 | 1 |
| Feigenbaum (1991) | | | 1 | 1 | 1 | 1 | 1 | 1 |
| Flynn et al. (1994) | | 1 | 1 | 1 | 1 | 1 | | 1 |
| Ishikawa (1985) | | | 1 | 1 | 1 | 1 | | 1 |
| Ismail (2006) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Juran (1988) | | 1 | 1 | | 1 | 1 | 1 | 1 |
| Kaynak & Hartley (2005) | | 1 | 1 | 1 | 1 | 1 | | 1 |
| King Abdullah II Award for Excellence | | | 1 | 1 | 1 | 1 | 1 | 1 |
| Malcolm Baldrige Award (U.S.) | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Prajogo & Sohal (2006) | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Rao et al. (1999) | | 1 | 1 | 1 | | | 1 | 1 |
| Samson & Terziovski (1999) | | 1 | 1 | 1 | 1 | | | 1 |
| Saraph et al. (1989) | | | 1 | 1 | 1 | | 1 | 1 |
| Sureshchandar et al. (2001) | | 1 | 1 | 1 | | | | |
| Tari' et al. (2007) | | 1 | 1 | 1 | 1 | | 1 | 1 |
| Xingxing Zu (2009) | | 1 | 1 | 1 | 1 | | | 1 |
| Zhang et al. (2000) | | 1 | 1 | 1 | 1 | | 1 | |
| Deming (1986) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ISO standards | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Powell (1995) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sila & Ebrahimipour (2005) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Agus et al. (2009) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sila (2007) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Table 3. Operationalization of the constructs QM

| Dimension of QM | Definition | Related Studies |
|--------------------|---|---|
| Leadership | Acceptance of quality responsibility by top management. Evaluation of top management on quality. Participation by top management in quality improvement efforts. Specificity of quality goals. Importance attached to quality in relation to cost and schedule. Comprehensive quality planning (Saraph et al., 1989, p. 818). | Saraph et al.(1989); Ahire et al. (1996); Flynn et al. (1994,1995); Agus et al. (2009); Kaynak & Hartley (2005); Tarrí et al. (2007); |
| Strategic planning | Strategic quality planning is defined by “Strategic Quality Planning is a structured process for establishing long-range quality goals, at the highest levels of the organization, and defining the means to be used to reach those goals.”(Juran, 1993, p. 300) | Kaynak (2003); Zu (2009). |
| Customer focus | Customers’ involvement in product or service design. Use of customer satisfaction surveys. Focusing on achieving greater customer satisfaction (Ahire et al., 1996; Powell, 1995). | |
| Employee relation | Implementation of employee involvement and quality circles. Open employee participation in quality decisions. Responsibility of employees for quality. Employee recognition for superior quality performance. Effectiveness of supervision in handling quality issues. On-going quality awareness of all employees (Saraph et al., 1989, p. 818). | |
| Process management | Clarity of process ownership, boundaries, and steps. Less reliance on inspection. Use of statistical process control. Selective automation. Fool-proof process design. Preventive maintenance. Employee self-inspection. Automated testing (Saraph et al., 1989, p. 818). | |
| Supplier quality | Fewer dependable suppliers. Reliance on supplier process control. Strong interdependence of supplier and customer. Purchasing policy emphasizing quality rather than price. Supplier quality control. Supplier assistance in product development (Saraph et al., 1989, p. 818). | |

Table 4. Reliability analysis

| Variable | Cronbach's alpha | No. of items |
|--------------------------|------------------|--------------|
| Net benefit (Net) | 0.86 | 4 |
| Top management (TOP) | 0.757 | 6 |
| Strategic planning (PS) | 0.704 | 6 |
| Customer focus (CUS) | 0.828 | 5 |
| Employee relation (EMP) | 0.787 | 4 |
| Supplier quality (SUPL) | 0.715 | 4 |
| Process management (PRO) | 0.70 | 3 |
| OP (dependant variable) | 0.874 | 4 |

Table 5. Results of descriptive statistics of overall QM dimensions

| Variables | Mean | Std. Deviation |
|---------------------------------|------|----------------|
| Top management (TOP) | 4.20 | .408 |
| Strategic planning (PS) | 4.14 | .388 |
| Quality management overall (QM) | 4.11 | .301 |
| Customer focus (CUS) | 4.09 | .432 |
| Supplier quality (SUPL) | 4.09 | .472 |
| Employee relation (EMP) | 4.07 | .435 |
| Process management (PRO) | 4.05 | .522 |
| Valid N | 384 | |

Table 6. Results of correlation test between QM variables and OP

| Correlations | | TOP | PS | CUS | EMP | SUPL | PRO | QM | OP |
|--------------|---------------------|--------|--------|--------|--------|------|------|--------|-----|
| OP | Pearson Correlation | .768** | .705** | .860** | .856** | .071 | .056 | .771** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .166 | .270 | .000 | |
| | N | | | | | | | | 384 |

** . Correlation is significant at the 0.01 level (2-tailed).

Table 7. Results of multiple regression analysis between QM variables and OP

| Model Summary | | | | Change Statistics | | | | ANOVA | | | |
|---------------|-------|----------|-------------------|-----------------------|----------------------|----------|-----|-------|-------------|---------|-------|
| Model | R | R Square | Adjusted R Square | Std. Error R Estimate | Change of the Square | F Change | df1 | df2 | Sig. Change | F | Sig. |
| 1 | .860a | .740 | .739 | .186 | .740 | 1085.563 | 1 | 382 | .000 | 1.086E3 | .000a |
| 2 | .890b | .792 | .791 | .166 | .052 | 95.303 | 1 | 381 | .000 | 724.428 | .000b |
| 3 | .911c | .829 | .828 | .151 | .037 | 82.960 | 1 | 380 | .000 | 614.498 | .000c |
| 4 | .921d | .848 | .847 | .142 | .019 | 48.385 | 1 | 379 | .000 | 530.440 | .000d |

a. Predictors: (Constant), CUS
b. Predictors: (Constant), CUS, TOP
c. Predictors: (Constant), CUS, TOP, EMP
d. Predictors: (Constant), CUS, TOP, EMP, PS
e. Dependent Variable: OP

Table 8. Results for multiple regression analysis between QM variables and OP

| Coefficients | | | | | | | | | | |
|--------------|------------|-----------------------------|------------|---------------------------|-------|-------------------------------|-------------|-------------------------|-----------|-------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | | 95% Confidence Interval for B | | Collinearity Statistics | | |
| | | B | Std. Error | Beta | T | Sig. | Lower Bound | Upper Bound | Tolerance | VIF |
| 4 | (Constant) | .360 | .087 | | 4.140 | .000 | .189 | .531 | | |
| | CUS | .210 | .039 | .249 | 5.397 | .000 | .133 | .286 | .187 | 5.337 |
| | TOP | .230 | .026 | .258 | 8.913 | .000 | .179 | .281 | .476 | 2.102 |
| | EMP | .298 | .036 | .356 | 8.234 | .000 | .227 | .369 | .214 | 4.681 |
| | PS | .174 | .025 | .185 | 6.956 | .000 | .125 | .223 | .564 | 1.773 |

a. Dependent Variable: OP

Table 9. Summary of the results of the hypothesis

| (IV) | T | Sig. | Beta | Results |
|--------------------|-------|------|-------|----------|
| Customer Focus | 5.397 | .000 | .249 | Accepted |
| Top Management | 8.913 | .000 | .258 | Accepted |
| Strategic Planning | 6.956 | .000 | .185 | Accepted |
| Employee Relation | 8.234 | .000 | .356 | Accepted |
| Supplier Quality | -.996 | 0.32 | -0.05 | Rejected |
| Process Management | -0.05 | 0.96 | -.003 | Rejected |

DV: OP

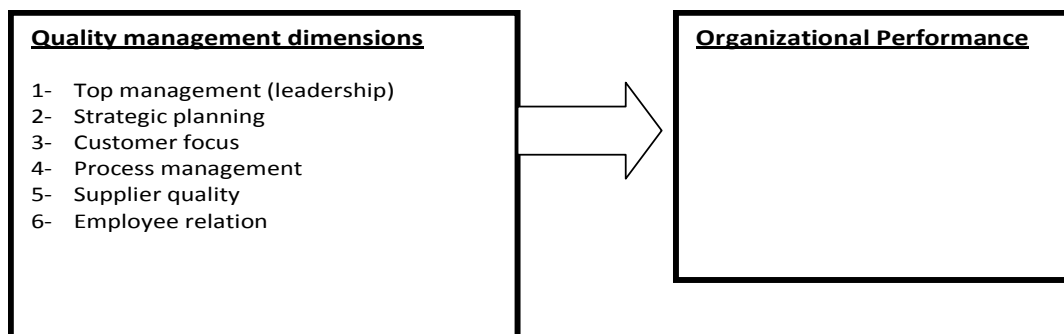


Figure 1. Research framework