

A STRUCTURAL RELATIONSHIP BETWEEN TOTAL QUALITY  
MANAGEMENT, STRATEGIC CONTROL SYSTEMS AND  
PERFORMANCE OF MALAYSIAN LOCAL GOVERNMENTS

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A STRUCTURAL RELATIONSHIP BETWEEN TOTAL QUALITY  
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PERFORMANCE OF MALAYSIAN LOCAL GOVERNMENTS

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## ABSTRAK

Penyelidikan ini mengkaji perhubungan berstruktur di antara strategi Pengurusan Kualiti Menyeluruh (PKM), Sistem Kawalan Strategik (SKS) dan Prestasi Organisasi (PO). Kajian ini didorong oleh hasil penelitian literatur yang mendapati bahawa kajian-kajian lepas telah melaporkan hasil penemuan yang tidak konsisten berkaitan dengan hubungan di antara PKM dan PO. Keadaan ini telah mendorong wujudnya satu aliran kajian baru yang mencadangkan bahawa perlunya pengkaji mengambilkira pembolehubah ketiga bagi menjelaskan hubungan di antara PKM dan PO. Oleh yang demikian, kajian ini mengintegrasikan literatur PKM dan literatur perakaunan pengurusan dengan mengkaji pembolehubah sistem kawalan. Sistem kawalan telah dibincangkan secara meluas oleh ahli-ahli perakaunan pengurusan sebagai pembolehubah yang penting bagi tujuan pelaksanaan strategi. Daripada penelitian literatur PKM, sepuluh faktor kritikal bagi strategi PKM telah dikenalpasti. Prestasi organisasi kajian pula telah diukur menggunakan empat dimensi, iaitu: kewangan, proses dalaman, kakitangan dan pelanggan. Data kajian telah dikumpul daripada 205 jabatan yang berada di dalam Kerajaan –Kerajaan Tempatan di Malaysia, dengan menggunakan soalselidik. Bersesuaian dengan ciri-ciri organisasi kajian, persampelan kluster berstrata telah digunakan. Sebanyak 205 soal selidik telah dikembalikan dan digunakan untuk dianalisis, iaitu 82% daripada keseluruhan 250 soal selidik yang diedarkan. Kadar pulangan soal selidik yang tinggi adalah disebabkan soal selidik diedarkan sendiri oleh pengkaji ke setiap kerajaan tempatan yang dikaji. Kajian ini menemukan bahawa hubungan di antara PKM dan PO melalui SKS adalah lebih kuat berbanding hubungan langsung di antara PKM dan PO. Justeru, kajian ini menyokong premis Teori Kontigensi yang menyatakan bahawa strategi boleh dilaksanakan dengan lebih jaya sekiranya diselaraskan dengan sistem kawalan. Seterusnya, kajian ini mendapati terdapat hubungan yang signifikan di antara enam faktor kritikal PKM dengan PO. Enam faktor kritikal tersebut adalah komitmen pengurusan; fokus pelanggan; pengurusan sumber manusia; pengurusan berterusan; sistem maklumat kualiti; dan rekabentuk servis. Kajian ini juga mendapati hubungan yang signifikan di antara SKS dan PO. Seterusnya, hubungan di antara PKM dan SKS juga didapati signifikan. Sebagai sebuah kajian yang bertitik tolak dari isu wujudnya ketidakselarisan di antara kajian-kajian lepas berkaitan hubungan di antara PKM dan PO, kajian ini berupaya menyumbang kepada pengayaan bidang ilmu yang sedia ada. Bagi mereka yang meragui potensi PKM sebagai strategi bagi meningkatkan prestasi, kajian ini mendedahkan bahawa pelaksanaan PKM mesti diselaraskan dengan sistem kawalan yang berfokuskan PKM. Justeru, kajian ini mencadangkan kepada para pengamal untuk mengambil langkah yang wajar dalam melaraskan amalan sistem kawalan organisasi dengan keperluan strategi PKM.

## ABSTRACT

The purpose of this study was to investigate the structural relationship between Total Quality Management (TQM) strategy, Strategic Control Systems (SCS) and Organizational Performance (OP). This study was motivated by the inconsistent findings concerning the relationship between TQM and OP as appeared in the contemporary literature. Due to the inconsistencies in the findings, a new research stream emerged which suggests for future researchers to investigate the third variable that can clarify the link between TQM and OP. Therefore, this study integrated the TQM literature and management accounting literature by investigating the control systems variable, as control systems have been widely discussed in management accounting literature as an important variable for the purpose of strategy implementation. In this study, ten critical factors of TQM strategy had been identified from the TQM literature. Performance of organization understudy was measured by using four generic dimensions of performance, namely: financial, internal process, employee and customer. Data for this study was collected from 205 departments attached to the Malaysian local government by using questionnaire as a research instrument. Stratified cluster sampling was used in selecting the sample of the study according to the characteristics of the Malaysian local government. Of 250 questionnaires distributed, 205 questionnaires which is 82% were returned and used for further analysis. The high response rate was achieved due to the research instrument being personally distributed by the researcher to each local government. This study found that the TQM, through the presence of SCS, had a stronger relationship with OP, as compared to the direct relationship between TQM and OP. Therefore, this study supported the premise of contingency theory, which holds that a strategy can be implemented more successfully through the presence of aligned control systems. Additionally, this study found a significant relationship between six critical factors of TQM strategy and organizational performance. The six critical factors of TQM strategy were management commitment; customer focus; human resource management; continuous improvement; quality information systems; and service design. This study also reported a significant relationship between TQM strategy and SCS. The relationship between SCS and OP was also reported to be significant. As this study provided insights regarding unresolved issues on the relationship between TQM and OP as reported in the contemporary literature, this study was able to expand the boundary of existing literature. For those who are skeptical on whether TQM would lead to good OP, this study revealed TQM as a strategy that is only a means towards an end. What is more important is a presence of strategically focused control systems. Thus, this study strongly suggests that managers of local governments should take necessary actions in aligning their control systems with the requirements of TQM strategy.

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## LISTS OF ABBREVIATIONS

AMOS	Analysis of Moment Structure
BSC	Balanced Scorecard
CC	City Council
CR	Critical Ratio
DAC	Development Administration Circular
DC	District Council
EQA	European Quality Award
GDP	Gross Domestic Product
HOD	Head of Department
INTAN	Institut Tadbiran Awam Negara
KMO	Kaiser-Meyer-Olkin
MAMPU	Malaysian Administrative Modernisation & Management Planning Unit
MBNQA	Malcom Baldrige National Quality Award
MC	Municipal Council
MMPF	Multi Model Performance Framework
OP	Organizational Performance
SCS	Strategic Control Systems
SEM	Structural Equation Modeling
SPSS	Statistical Package for Social Science
TQM	Total Quality Management



# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Total Quality Management (TQM) has become a universal strategy for the survival and growth of many organizations in today's fiercely global competitive environment. Given its strategic importance, TQM has gained increasing attention from many academic scholars (Ehigie & McAndrew, 2005); manufacturing (Arawati, 2005; Sohal & Terziovski, 2000; Zakaria, 1999); small medium enterprises (Mohd Nizam & Tannock, 2005); higher education (Cruickshank, 2003) as well as public organizations administrator (Abdul Karim, 1999; Hunt, 1995; Nor Hazilah, 2004). The area of quality management has evolved through several phases, starting from 'quality by inspection', 'Statistical Quality Control (SQC)', 'Quality Assurance (QA)', and 'Total Quality Management (TQM)' (Prybutok & Ramasesh, 2005). As documented by Kanji (2002), TQM is built on a philosophy where all members of an organization work closely to achieve customer satisfaction through continuous improvement. In essence, the fundamentals of TQM are employee empowerment, continuous improvement and customer focus.

As commonly reported in the scholarly literature, many highly competitive and world class organizations have implemented TQM strategy in order to continually seek better performance, and in turn gain competitive advantage. Empirically, many previous studies (Arawati, 2005; Li, Andersen & Harrison, 2003; Yasin, Alavi, Kunt, & Zimmerer, 2004) have revealed that there is a significant relationship between TQM and

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Appendix 1: Deming's 14 Points (Source: Walton, M, 1990, pp.17-18)

1. *Create constancy of purpose for improvement of product and service.* Dr. Deming suggests a radical new definition of a company's role. Rather than making money, it is to stay in business and provide jobs through innovation, research, constant improvement, and maintenance.
2. *Adopt the new philosophy.* Americans are too tolerant of poor workmanship and sullen service. We need a new religion in which mistakes and negativism are unacceptable.
3. *Cease dependence on mass inspection.* American firms typically inspect a product as it comes off the line or at major stage. Defective products are either thrown out or reworked; both are unnecessarily expensive. In effect, a company is paying workers to make defects and then to correct them. Quality comes not from inspection but from improvement of the process. With instructions, workers can be enlisted in the improvement.
4. *End the practice of awarding business on the basis of price tag alone.* Purchasing departments customarily operate on orders to seek the lowest-price vendor. Frequently, this leads to supplies of low quality. Instead, they should seek the best quality and work to achieve it with a single supplier for any one item in a long-term relationship.
5. *Improve constantly and forever the system of production and service.* Improvement is not a one time effort. Management is obligated to continually look for ways to reduce waste and improve quality.
6. *Institute training.* Too often, workers have learned their job from another worker who was never trained properly. They are forced to follow unintelligible instructions. They cannot do their jobs because no one tells them how.
7. *Institute leadership.* The job of a supervisor is not to tell people what to do or to punish them, but to lead. Leading consists of helping people do a better job and of learning, by objective methods, who is in need of individual help.
8. *Drive out fear.* Many employees are afraid to ask questions or to take a position, even when they do not understand what the job is or what is right or wrong. People will continue to do things the wrong way, or to not do them at all. The economic loss from fear is appalling. It is necessary for better quality and productivity that people feel secure.
9. *Break down barriers between staff areas.* Often an organization's departments or units are competing with each other, or have goals that conflict. They do not work as a team so they cannot solve or foresee the problem. Worse, one department's goals may cause trouble for another.
10. *Eliminate slogans, exhortations, and targets for the work force.* These never helped anybody do a good job. Let workers formulate their own slogans.
11. *Eliminate numerical quotas.* Quotas take into account only numbers, not quality or methods. In contrast, they usually guarantee inefficiency and high cost. To hold a job, a person meets a quota at any cost, without regard for the larger organization.
12. *Remove barriers to pride of workmanship.* People are eager to do a good job and distressed when they cannot. Too often, misguided supervisors, faulty equipment, and defective materials stand in the way of good performance. These barriers must be removed.



13. *Institute a vigorous programme of education and retraining.* Both management and the work force will have to be educated in the new methods, including teamwork and statistical techniques.
14. *Take action to accomplish the transformation.* It will require a special top management team with a plan of action to carry out the quality mission. Workers cannot do it on their own, nor can managers. A critical mass of people in the organization must understand the 14 points.

Appendix 2: Juran's 10 steps. (Source: Juran, J. M., 1988)

1. *Build awareness of the need and opportunity for improvement.* Before a quality improvement programme can be successfully launched, managers and administrators need to be convinced that a problem exists. This can be done by acknowledging the loss of customers due to foreign competition, poor records of delivery times, etc.
2. *Set goals for improvement.* Ford Motor set its goals as "Quality is Job One." Some companies decide to be very specific with goals like "We will cut the cost of poor quality by 25% within two years'. The major reason goals are important is to announce to all that a change is taking place within the company and that quality is important.
3. *Organize the overall programme.* Juran suggests the development of a quality improvement council that actively involves upper management. This group of upper managers guides, supports and coordinates the overall programme. The council helps to identify training needs, establishes support for team designs recognition plans and plans for publicity.
4. *Provide training.* The implementation of a quality improvement effort assigns new role to every associate. To be successful requires training in concept, skills and tools of continual improvement.
5. *Carry out projects to solve problems.* Juran teaches that breakthroughs in quality improvement are achieved project-by-project, and in no other way. A project is a problem chosen for a solution and is also a managerial way of life. There is no such thing as an improvement in general.
6. *Report progress.* Reporting progress is critical to ensure that there really is a 'meeting of the minds' as to what is happening and what plans are in store for the future. Reports keep managers informed so that they can help the team overcome obstacles.
7. *Give recognition.* There are numerous ways that recognition can be given to project teams including certificates, plaques, and dinners, in addition to the opportunity to report in the office of the ranking local manager.
8. *Communicate results.* Good communication is an essential component of a continual improvement effort. Communication can be enhanced through regular stories in the company's newsletter and local newspapers, posters and notes on bulletin boards.
9. *Keep score.* Scores can be kept in several ways, including 'progress on individual improvement projects, progress on projects collectively and merit rating of individuals with respect to quality improvement'. Juran states that there is no debate on revising the merit system to include performance on quality improvement. To do otherwise weakens the emphasis on quality.
10. *Institutionalize the annual improvement process.* Quality improvements need to become a regular component of the manager's job along with supervising, monitoring etc. Quality efforts should not be viewed as an 'add-on' to the other responsibilities of anyone working in the company. No meetings should be held without quality playing an important role in the agenda.

Appendix 3: Crosby's 14 steps (Source: Crosby, 1980)

1. *Management commitment.* Make it clear that management stands on quality, and that the final product will conform to standards at the optimum price.
2. *Quality improvement teams.* Representatives from each department will participate on teams because each is a contributor to defect levels.
3. *Quality measurement.* Quality measurement provides an overview of current and potential non-conformance problems that allow objective evaluation and corrective action. The measurement reports are straightforward and expressed in terms that can be understood and used.
4. *Cost of Quality.* Define and evaluate the cost of quality and explain its use as a management tool. Crosby states that the cost of quality is composed of the costs of scrap, rework, warranty, service (except regular maintenance), inspection labour, engineering charges, purchase order charges, software correction, consumer affairs, audit, quality control labour, test labour, acceptance equipment cost, and other cost of doing things wrong. The total expense of these costs should be no more than 2.5 percent of sales dollar.
5. *Quality awareness.* It is important that the personal concern for quality be raised by all within the company. This can be accomplished in an number of ways including regular meetings to discuss non-conformance problems, through articles in the company newsletter, etc.
6. *Corrective action.* The goal of corrective action is to provide a systematic method of resolving forever the problems that are uncovered through previous action steps. Corrective action is best accomplished when teams work on the most serious problems first-following the Pareto principle.
7. *Zero defect planning.* The purpose of this planning by a special quality improvement tasks team is to list all the individual action steps that must be taken before the zero defect day to ensure success. The concept and programme of zero defects are explained to all supervisors so that they may explain it to their staff. A time scheduled is prepared; functions outlined, and the method of launching the program decided.
8. *Supervisor training.* The key to a successful quality improvement program is the supervisor. Supervisors need to be knowledgeable and skilled in what to do to carry out their part of the quality improvement programme.
9. *Zero defect day.* The purpose of zero defects days is to let all employees realize through a personal experience that there has been a change. Zero defect is a new way of life, and accomplishing this requires a personal commitment and understanding that is new to most people.
10. *Goal setting.* Shortly after zero defects day, the supervisors should meet with their individual workers to determine what kinds of goals they should set for themselves. The goals should be specific and measurable. The goals should be developed by the people themselves rather than by their supervisors, and should be challenging. The goals should be posted by the worker in a conspicuous place.
11. *Error-cause removal.* Individual employees should communicate to management any obstacle that makes it difficult to meet their goals. This is important because one of the most difficult problems employees face is in communicating with management.

12. *Recognition.* People appreciate recognition. Initially, they come to work for the money, but once the salary is established, their concern is for appreciation. Through recognition they realize that management seriously needs and values their help.
13. *Quality council.* Quality councils offer the opportunity for professional quality people to communicate on a regular basis to share their problems, feelings, and experiences with each other.
14. *Do it over again.* The purpose of this step is to emphasize that quality improvement programme never ends.