

THE DEVELOPMENT OF TOTAL QUALITY MANAGEMENT (TQM),
WORK CULTURE AND EMPLOYEE PERFORMANCE RELATIONSHIP IN
MALAYSIA MANUFACTURING INDUSTRY

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To my parents

Zahari Bin Hashim & Ku Salmah Binti Ku Ahmad
For their endless love, continues support and courage

And

To My Brothers and Sister

Nazuan, Nazreen, Aswad Aizat & Putri
They have been my inspiration and my soul mates.

This hard work is a sign of my love to you!

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ABSTRACT

Total Quality Management (TQM) is a management philosophy and operating approach that aims to consistently exceed the current and future expectations of all stakeholders, based on continuous improvement in all processes, goods and services. TQM is very important to the organization in order for them to survive in the global market. Korean companies have had incredible achievement by implementing quality as their competitive advantages compared to Malaysian companies. Moreover, sales value of the Malaysian manufacturing sector in February 2013 has decreased compared to last year. The main objective of this study is to develop a TQM performance model with the work culture as mediator, and ownership as moderator. A total of 350 questionnaires have been distributed to 10 manufacturing companies in Malaysia and effective sample of 294 usable completed surveys (84.0 percent usable response rate). Reliability and validity testing were conducted to test the questionnaire before pilot test was done. Statistical analysis and regression were used to predict and estimate the relationship. The model was assessed using Analysis of Moment Structure (AMOS) based Structural Equation Modeling (SEM). The findings showed that TQM practices have a significant impact on employee performance with mediating effects of work culture and ownership as a moderating factor. The results also show that work culture partially mediated the relationship between TQM and employee performance. The study also showed that there were slightly differences of TQM implementation level towards employee performance between Korean and non-Korean companies.

ABSTRAK

Pengurusan Kualiti Menyeluruh (TQM) adalah falsafah pengurusan dan pendekatan operasi yang bertujuan untuk melebihi jangkaan semasa dan masa depan semua pihak yang berkepentingan secara konsisten, berdasarkan peningkatan yang berterusan dalam semua proses, barangan dan perkhidmatan. TQM adalah sangat penting untuk organisasi bagi membolehkan mereka untuk bertahan di pasaran global. Syarikat-syarikat Korea mempunyai pencapaian yang luar biasa dengan melaksanakan kualiti kelebihan daya saing mereka berbanding dengan syarikat-syarikat Malaysia. Selain itu, nilai jualan sektor pembuatan Malaysia pada Februari 2013 telah menurun berbanding tahun lepas. Objektif utama kajian ini adalah untuk membangunkan satu model prestasi TQM dengan budaya kerja sebagai mediator, dan pemilikan sebagai moderator. Sebanyak 350 soal selidik telah diedarkan kepada 10 syarikat pembuatan di Malaysia and 294 soal selidik (84.0%) telah berjaya menjawab dengan sempurna. Kebolehpercayaan dan kesahan ujian telah dijalankan untuk menguji soal selidik sebelum kajian rintis dilakukan. Analisis statistik dan regresi digunakan untuk meramal dan menganggarkan hubungan. Model ini telah dinilai menggunakan Analisis Struktur Moment (AMOS) berdasarkan pemodelan persamaan berstruktur (SEM). Dapatan kajian menunjukkan bahawa amalan TQM memberi kesan yang besar ke atas prestasi pekerja dengan pengantara kesan budaya kerja dan pemilikan sebagai moderator. Kajian ini juga menunjukkan terdapat sedikit perbezaan tahap pelaksanaan TQM terhadap prestasi pekerja antara syarikat Korea dan syarikat bukan Korea.

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LIST OF ABBREVIATIONS

AGFI	-	Adjusted Goodness-of-Fit
AMOS	-	Analysis of Moment Structure
AVE	-	Average Variance Extracted
CFA	-	Confirmatory Factor Analysis
CFI	-	Comparative Fit Index
CR	-	Composite Reliability
DF	-	Degree of Freedom
DV	-	Dependent Variable
EFA	-	Exploratory Factor Analysis
EP	-	Employee Performance
GFI	-	Goodness-of-Fit Index
IV	-	Independent Variable
MI	-	Modification Indices
MSV	-	Maximum Shared Squared Variance
R&D	-	Research and Development
RMSEA	-	Root Mean Square Error of Approximation
SEM	-	Structural Equation Modeling
SPSS	-	Statistical Product and Service Solutions
TQM	-	Total Quality Management
WC	-	Work Culture

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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

For several years, Manufacturing companies have been using Total Quality Management (TQM) to manage quality within their organization. The manufacturers realized the importance of taking the customer's needs into account to improve product effectiveness, competitiveness, efficiency, and flexibility (Ahmad and Yusof, 2010). TQM is a process that is used strictly for managing quality. It is important to understand that it must be a continuous way of life and a philosophy of perpetual improvement in everything that is done. To determine the success or failure of the firms in manufacturing industry, quality is the key success factor to survive and sustain in the global market (Mohammad Talha, 2004). The effectiveness of TQM implementation can be seen in Japanese companies. TQM has transformed Japanese companies to be more competitive in the global market to win the market share (Garvin, 1988). Now Japanese products are proven to be the best in quality and can compete with their competitors and survive in this stiff market.

The manufacturing sector has played an important role in achieving sustainable economic growth in Malaysia. Services and manufacturing sectors remained as a catalyst for that growth. The industry has to widen its perspective to take on the challenges ahead and produce more products with better quality, cheaper price, better service and faster delivery to the customers compared to the competitors

(Zadry, H.R., & Yusof, 2007). As shown in Figure 1.1, manufacturing sector contributes 24.1%, which is RM52.1 billion of the total investment approved in 2013. The manufacturing sector is the second largest of economic generator after service sector in Malaysia. This figure shows that the manufacturing is one of the Malaysian economic generators and proven to be very significant in Malaysian economic growth. Due to this significant data, the author has chosen the manufacturing sector in this TQM implementation study.

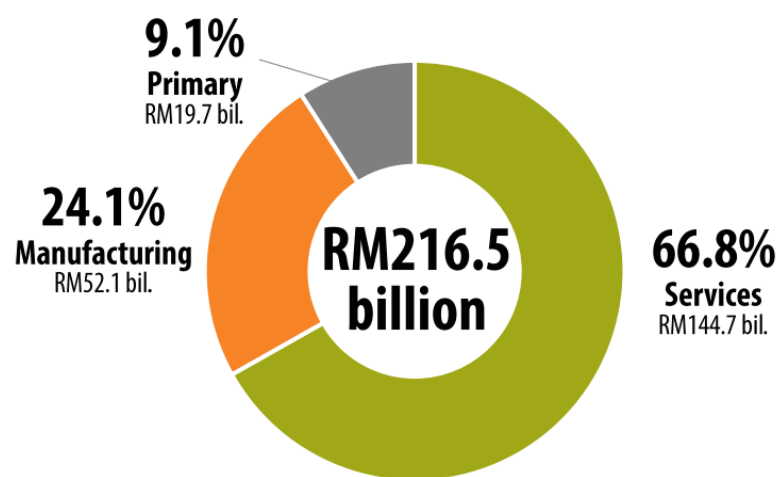


Figure 1-1 Total Investment Approved in 2013

Source: (Malaysian Investment Development Authority, 2013)

The government realized that if they do not make any change in economic policies and strategies, Malaysia cannot compete with other countries which are increasingly encouraging economic growth such as South Korea and Singapore. Therefore, Malaysian companies have the challenge to improve their business performance in order to make the vision 2020 aspiration come true. Total Quality Management (TQM) is an essential practice to improve the products on a systematic basis to meet customer satisfaction. TQM has transformed the organizations to better business performance (Zakuan *et al.*, 2010).

South Korea over the past four decades has demonstrated incredible growth and global integration to become a high-tech industrialized economy (Margo, 1991). In the 1960s, GDP per capita was comparable with levels in the poorer countries of Africa and Asia. Now, South Korea has a market economy, which ranks 15th in the world by nominal GDP, identifying it as one of the G-20 major economies from the early 1960s to the late 1990s, and South Korea is still one of the fastest growing developed countries in 2000s.

From the aspect of history in the 1950s, Malaysia and South Korea were a poor country after a long colonized. South Korea suffered from poverty after the end of civil war in 1950 to 1953 and led Korean economy at that time was very bad and terrible. During that time, Malaysia has been already independent and slowly generates economic growth. Unlike Malaysia, having almost no natural resources and always suffering from overpopulation in its small territory. South Korea is now rising very rapidly from the economic perspective and is currently the world 12th largest economy. The Gross Domestic Product per capita in South Korea was last recorded at 23892.53 US dollars in 2013. The GDP per Capita in South Korea is equivalent to 189 percent of the world's average. GDP per capita in South Korea averaged 9107 USD from 1960 until 2013, reaching an all time high of 23892.53 USD in 2013 and a record low of 1106.75 USD in 1960. GDP per capita in South Korea is reported by the World Bank as shown in Figure 1.2 (Bank, 2014).

The Gross Domestic Product (GDP) per capita in Malaysia was last recorded at 6990.25 US dollars in 2013. The GDP per Capita in Malaysia is equivalent to 55 percent of the world's average. GDP per capita in Malaysia averaged 3250.85 USD from 1960 until 2013, reaching an all time high of 6990.25 USD in 2013 and a record low of 815.29 USD in 1960. GDP per capita in Malaysia is reported by the World Bank as shown in Figure 1.3 (Economics, 2014). In comparison, the GDP of South Korea is higher than the GDP of Malaysia even though, according to the history, South Korea was late to achieve independence compared to Malaysia. The Korean manufacturing industry contributes to the economic growth in Korea. The new wave of quality awareness made a significant impact on business operations in

Korea by increasing their investment in quality management. As the quality is one of the key success factors to survive in global markets, the Korean manufacturing companies have implemented TQM approach to improve their manufacturing competitiveness. Malaysian manufacturing needs to learn on how Korean improve their productivity and GDP by implementing TQM practices in the companies.



Figure 1-2 South Korea GDP Per Capita



Figure 1-3 Malaysia GDP Per Capita in U.S dollar

1.2 Problem Statement

The Manufacturing sector is one of the important sectors of the growth of the Malaysian economy. Companies are able to compare their productivity performance against industry averages and review the status by different period, such as monthly, quarterly, half yearly and yearly for monitoring purposes and comparison. The source of data was generated from the Monthly Manufacturing Survey, Department of Statistics, Malaysia (Malaysia Productivity Corporation, 2013).

As shown in Figure 1.4, the sales value of the Manufacturing sector in February 2013 declined by 6.9% (RM3.4 billion) to record RM46.2 billion as compared to RM49.6 billion reported in February 2012. Moreover, Table 1.2 shows the percentage change in sales value for the five (5) major industries (Department of Statistics Malaysia, 2013). The five major industries in manufacturing indicated the decrease compared to last year. Due to this problem, it is significant to conduct a study in this manufacturing sector. Perhaps TQM practices can help to explain this situation. The Malaysian Manufacturing Sales Value is shown in Figure 1.4 and Table 1.1 until February 2013.

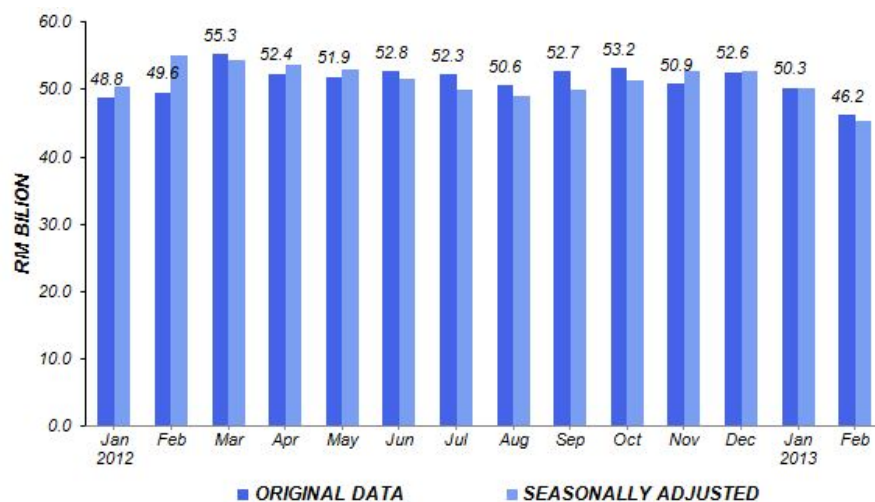


Figure 1-4 Sales Value of Manufacturing Industries in Malaysia

Table 1-1 Sales Value of Manufacturing Industries in Malaysia

Industries	Sales Value (RM million)		Decrease	
	February, 2013	February, 2012	(RM million)	%
Manufacture of Computer and Computer Peripherals	1,757.3	2,490.3	733.0	29.4
Manufacture of Semi-Conductor Devices	2,718.9	3,330.8	611.9	18.4
Manufacture of Television and Radio Receivers, Sound Or Video Recording Or Reproducing Apparatus, and Associated Goods	1,622.9	2,194.3	571.4	26.0
Manufacture of Basic Iron and Steel Products	1,533.7	1,960.5	426.8	21.8
Manufacture of Other Basic Industrial Chemicals Except Fertilizers and Nitrogen Compounds	2,319.5	2,641.1	321.6	12.2

Based on the previous study, there is still lack of study discussing the relationship of TQM practices and employee performance. Most of the studies related the TQM practices with the organizational performance. The relationship between TQM and business performance in previous studies were found mixed (Sadikoglu and Zehir, 2010). The performance is measured in an overall view of the organization and less study is emphasizing the employee performance (Jun *et al.*, 2006). Nowadays, the researchers are interested to do research on human capital as one of the factors in an organization's financial performance. Employee performance has positive effects towards organizational performance (Carmeli and Tishler, 2004). The organizational effectiveness improvement is currently seen as critical to the growth and survival of the organization by the process of measuring and managing employee performance (Den Hartog *et al.*, 2004). There are numerous studies on what the most important variables are when studying firm outcomes, but most approaches fail and overlooked the impacts of employee have on the organization's performance (Kidd, 2006). It is important for the organization to evaluate employee performances in term of their contribution to an organization's objectives (Boudreau and Ramstad, 2003). According to Hansen and Wernerfelt, (1989) they had

illustrates the importance of employees and the relationship to the organizational performance. Human factor is one of the determining variables besides environmental factors and organizational factors on the organizational culture, which will influence employee behaviours and organization performance (Kidd, 2006). Besides that, TQM implementation is still an inconclusive result for many companies in Malaysia because these companies have been slow to adopt and implement TQM (Ahmad and Yusof, 2010). Thus, it is significant to conduct a study which is to examine the employee performance of TQM practice in this research.

Based on the previous researches, there are less researches have examined the mediators and moderators between TQM and business performance (Sadikoglu and Zehir, 2010). The mediators or moderators should not be overlooked in research designs because without these third variable, the results obtained are not accurate and inconsistent (Psomas and Fotopoulos, 2010). A mediator or moderator is a third variable that will change the relationship between independent variable and dependent variable. In this research, work culture is the mediator in the relationship between TQM practices and employee performance. Work culture is hard to teach in a traditional sense, though it can be learned. In this manner, culture in the organization will determine the behaviour and mentality towards work culture as well and important enabler of high-performing companies (Al-Bourini *et al.*, 2013). Work culture refers to a system of shared meaning held by members that distinguishes the organization from other organizations (Fateme *et al.*, 2012). Logically, different country has different culture and that culture is said to influence the organization such as management style, working environment, employee behaviour and mentality towards work. Therefore, due to that reason, the ownership is suitable and significant to be the moderator in this study. Korean workers perceive their workplaces as a second home and will do anything to ensure the success of the business or their company. The level of loyalty and commitment are high due to this sense of ownership (Margo, 1991). Thus, from this study, author will examine the ownership of Korean manufacturing company in Malaysia and Malaysian company. Therefore in this research, the author proposed a TQM performance model with moderators and mediators which was amore comprehensive model for developing countries like Malaysia.

1.3 Research Question

Four research questions to be addressed in this research are:

- i. What are the critical success factors of TQM that contributes to employee performance in Malaysia?
- ii. What are the relationships among TQM, work culture, and employee performance?
- iii. Do work culture acts as mediator between TQM practices and employee performance?
- iv. Does ownership affect the relation between TQM and employee performance between Korean and non-Korean companies?

1.4 Research Objectives

The research has four main objectives as follows:

- i. To identify the critical success factors of TQM practices that contributes to the employee performance in Malaysian manufacturing industries.
- ii. To analyse the relationship between TQM, employee performance and work culture.
- iii. To examine the effect of work culture as mediator in the relationship between TQM practices and employee performance.
- iv. To determine the moderator effect of ownership between Korean and non-Korean companies.

1.5 Scope of Study

To make the research more effective and manageable, the research scope of this study focused on three main areas as follows:

- i. This research focused on the TQM implementation and employee performance in Malaysian manufacturing industries.
- ii. The research parameters will take place in Johor, Selangor, Negeri Sembilan, Penang and Kedah.
- iii. The proposed research model can act as a guideline for Malaysian manufacturing industries to improve their employee performance and TQM implementation.
- iv. This research focused on the manufacturing sector in Malaysia.

1.6 Research Contribution

This study contributes in empirical studies on the importance of TQM to the manufacturing industries in Malaysia. This study will encourage organizations and managers to invest time and resources to practice an effective TQM. The effective implementation of TQM will help to enhance employee performance. The greater the employee performance will definitely increase the organization performance because employees are one of the key drivers to determine whether that organization is successful or not. Then at the same time will contribute to Malaysia economic growth.

1.7 Definitions

The following definitions are adopted in the context of this research. Total Quality Management (TQM) is a philosophy and management approach that involves the whole business activities with the involvement from all employees to create not only satisfied customers, but also total business performances such as production, financial performance, quality performance and employee satisfaction. Employee performance is the job related activities expected of a worker and how well those activities were executed. The next definition is the organizational culture. Organizational culture is members of the organization share the same value, concern beliefs and general pattern of mindset and then form the behaviours, conducts and practices which are easily observable. The last definition is ownership which is basically legal right to possess something.

1.8 Thesis Structure and Organization

In Chapter 1 has highlighted the background of the research, research problems, research questions, research objectives, scope, research contribution, definition of terms and thesis outline.

In Chapter 2 presents some reviews of literature to understand the issues of the research. The literature review, critical success factors of TQM practices, the work culture as mediator, ownership as moderator, employee performance parameter and theoretical framework will be discussed further in this chapter.

In Chapter 3, illustrate the methodology and procedures used in this research. It gives a detail description of the research process and discussion to select research instrument. This chapter starts with a research design, a discussion on the overall

structure of the research, and survey methodology. In survey methodology, a detailed explanation has been discussed on questionnaire, expert validation, pilot study, population and sampling, reliability, validity and statistical analysis.

In Chapter 4, to examine the relationship between independent variables and dependent variables with the mediating and moderating factor. It discusses the respondent demographic statistics and presents the set of hypothesis testing included to test the relationship between TQM practices and employee performance with organizational culture as mediator and ownership as moderator. The author used correlation and multiple regression analyses to generate the result.

In Chapter 5 and 6, it provides an overall discussion of research findings and implications in light of the result in Chapter 4. This chapter concludes the findings and discusses the research conclusions, limitations of the research, contribution to new knowledge, conclusion and provides recommendations and implications for further research. The organization of the thesis as shown in Figure 1.5.

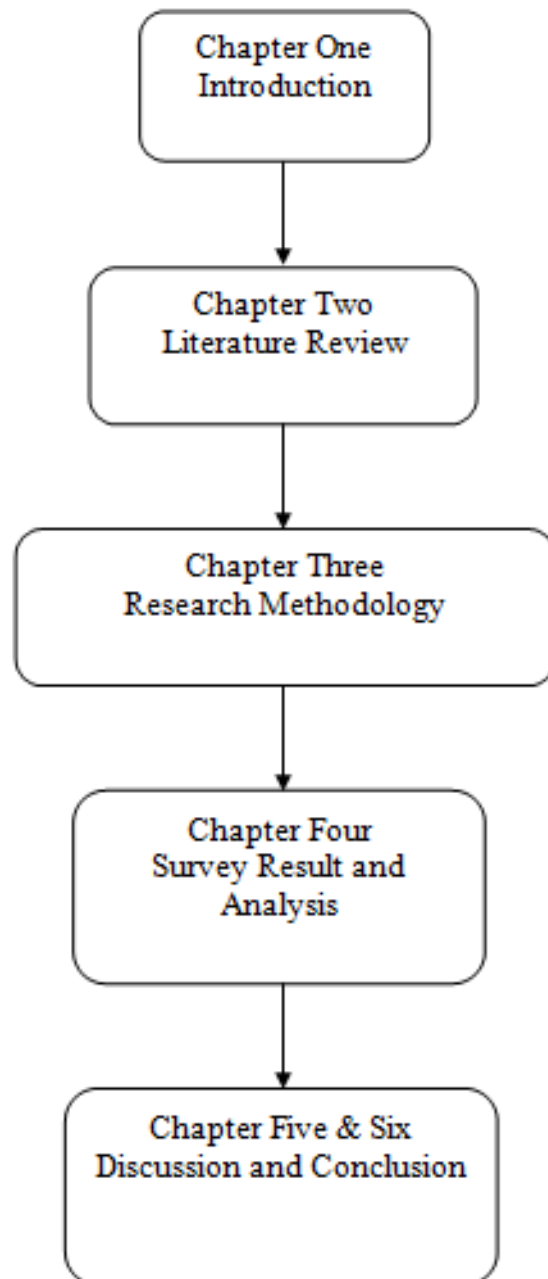


Figure 1-5 Organization flow of the research

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