

THE IMPACT OF QUALITY MANAGEMENT SYSTEMS ON THE ORGANIZATION PERFORMANCE OF MANUFACTURING FIRMS

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Abstract: *Many empirical studies that suggest that ISO certification has no effect on performance continue to cast doubt on the effectiveness of quality management systems (QMS) on performance. This paper examines quality management systems and how they affect the performance of manufacturing firms in Malaysia because of this contradiction and the dearth of empirical studies there. Food processing companies still struggle to put quality management systems into practice in a way that results in improved organizational performance. As a tactic to obtain a competitive edge in the target market through the creation of superior product quality, market growth, and improved customer satisfaction, many manufacturing businesses in Malaysia are still finding it difficult to adopt efficient quality management systems.*

The article offers deeper understandings into the advantages of quality management systems, methods, and concepts that managers should consider for any certification, including ISO, TQM, & others, to be effectively applied and then transfer to improved company performance. The study discovered a significant positive relationship between the competitive performance of a firm and the quality management techniques under investigation. These quality practices—which include top management support, capacity expansion, adoption and exploitation of information technology, and control measures—are essential to achieving and maintaining this competitive performance.

The study suggests that manufacturing companies should concentrate on changing the organizational culture as a whole in order to make it overtly quality-oriented. In order for the company to reap the rewards of a quality management system, it is essential to regularly conduct training in this area in order to instill habits and make employees more amenable to the change of working methods. Organizations may increase internal efficiency via the use of quality management strategies, which is a must for competing in the global market.

Keywords: *ISO 9001, Quality Management, TQM, Six Sigma, Performance of Organizations.*

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1. Introduction

Successful organizations are crucial for developing countries because they play a significant part in our everyday lives. As a result, a lot of economists liken organizations and institutions to an engine that drives advancement in the economy, society, and politics. Organizational performance is undoubtedly the most significant measure of organizational performance and one of the most significant factors in management research.



The goal of this study was to build research by analyzing theoretical ideas related to the quality management system and organizational performance that had been researched by earlier researchers. Surveys and a study of the literature are the methods employed for this. To build constructs in accordance with the research that the phenomena in the form of case studies mentioned in the journal related with the study variables, the literature review approach was used. Review indicates that the company has a number of quality management systems. The systems that best meet a company's demands must be selected by the companies. The parameters of various quality management systems are essentially the same; just the terminology is different. The building blocks of a quality management system are leadership, a focus on customers, a focus on people, a focus on operations, measurement, data analysis, and information, and improved results, whereas the components of organizational performance, such as achieving financial performance goals and finances, are profitability, cost effectiveness, the efficiency of the service system, and increased sales. The effectiveness of an organization's quality management system is impacted.

2. Need for this Study

A surprising proportion of industrial enterprises lack well-established quality systems, despite the fact that quality management systems tend to gain fame and knowledge in Malaysia and worldwide. Several detractors claim that the government has not responded particularly well to the significance of putting into place successful and effective quality systems that would offer it a competitive advantage in the global market by ensuring high quality standards. Problems with lost time and rising expenditures exist that cannot be rectified.

If major chances to enhance the standard of their production processes and products are not taken advantage of, the manufacturing sector might suffer large financial losses. The majority of these businesses are concerned about the expenses associated with implementing quality procedures, namely the preventative, evaluation, and failure costs. The knowledge and tools needed to reduce waste in industrial processes are provided through the preventative costs (Rodchua, 2006).

For businesses to survive, it is crucial that they are able to meet and even surpass client expectations through efforts to continuously improve. Since they stand to benefit from these measures, manufacturing organizations should turn their attention away from the expense of implementing quality procedures and towards sustainability. Consistently increasing value to consumers is one of the primary goals of adjusting a quality process (Stamatis, 2004, p. 23). In a study by Master Six Sigma Black Belt Chuck Cox, it was discovered that 25% of such costs can be decreased in half through continuous effort every year and six months. For businesses that do not perform ongoing continual development, their costs of quality may range from 20 to 35% of the revenue stream, or equal to the product's selling price (Anderson, 2011).

Also, businesses must stress superior quality to their suppliers. Many businesses now only work with suppliers that have established continuous improvement programs because they understand that by doing so, the supplier will invariably reduce waste and expenses, resulting in components that are more affordable and of the highest quality. A strong supplier connection is one of the most important requirements for supplier selection. A positive connection suggests that there is trust and that the supplier may be ready to make process improvements to lower the cost of their goods when the opportunity presents itself. It will benefit both the provider and its client in this case.

Policy makers and development partners that aid in the expansion of private sector initiatives that support a varied and productive manufacturing industry will find great value in the research. Policies and rules will be introduced in order to enhance and stimulate both quality and performance. The management of manufacturing companies, who are the primary players in organizational success, stand to gain from this.

The study's insights into how quality management influences overall performance would be helpful to the many firms that engage in manufacturing in Malaysia. Industry participants who comprehend that improving a product's worth before it is introduced to the market boosts sales, boosting the average profits per input, will do well.



Academicians will gain from the study by adding to the body of knowledge, particularly in the areas of quality management and organizational performance. Consequently, the study's conclusions might be relevant in providing academics with a variety of contextual viewpoints..

3. Background

Quality management approaches have had a great influence on the frantic organizational initiatives. Positive impacts inside the organizational networking can witness to the implementation of quality management methods, according to earlier studies. Every technique used in quality management aims to improve product quality while lowering costs and raising customer satisfaction. Customer satisfaction is typically characterized as a post-purchase comparison of a product's performance to expectations before to purchase (Jun & Cai, 2010). Because the addition of human resource practices improve organizational performance, the involvement of quality management practices in companies is essential. According to earlier research, numerous sectors had severe issues with quality management procedures that could only be remedied by the involvement of a cutting-edge quality management cell. Manufacturing companies all over the world use quality management techniques primarily to satisfy customers.

Better organizational performance, increased productivity, effective procedures, and competitive goods and services that satisfy the customer and increase organizational competitiveness are the anticipated outcomes of quality management. The most important factor in the administration investigation and unquestionably the most important indicator of hierarchical success is organizational performance. The main requirement for improving and achieving excellence in business is developing and implementing a system for assessing the association's performance.

As indicated by Robert Kaplan (2003), "Every association must make and impart approaches to gauge execution to mirror its special methodology. The prompt part of an execution estimation is to check the association's advance in accomplishing its objectives. Another essential part of an execution estimation framework is to inform people the angles that are critical for achievement and distinguishing the areas that need change.

Ionita, Pindiche (2014) explains that the implementation of quality management systems positive effect on increasing revenue and reducing costs, improving the organization's image, competitive differentiation, improve customer satisfaction, facilitate the participation in tenders nationally and internationally, control of all processes within the organization, consciousness (empowerment) staff involvement in achieving organizational goals, understand better management decisions by the employees, leads to improved teamwork, implementation, understand a good attitude towards continual improvement of product processing and management system of the organization. Rudolph, Cristian and Charles (2012) acknowledges that Malcolm Baldrige award winners can be viewed positively by investors and could increase the company's market value. Research experts about the financial performance of the winner of the Malcolm Baldrige award of 1995 by Helton, Hendrik and Eakins (1994) shows that award winners have an improvement in financial performance. Kaziliunas and Vysinaukene (2014) explains that the quality management system of ISO 9001-2008 has a different impact on the company. The existences of ISO 9001-2008 QMS in companies which are predominant use of tacit knowledge would hinder the performance instead for a more dominant firm uses explicit knowledge, existence ISO 9001-2008 will support the performance. While Psomas (2014) explained that the ISO 9001-2008 have positive impact to performance.

4. Objectives

This research project attempted to understand the common quality tools and quality practices within Malaysia manufacturing firms and to evaluate the contribution of existing quality systems toward the company's overall performance. The primary objectives are to:

RO 1. Ascertain the important organizational performance metrics in the QMS in manufacturing firms.



RO 2. Understand the QMS implementation impact the organization performance in manufacturing firms.

RO 3. Identify which area of implementation of QMS improved the organization performance in manufacturing firms.

RO 4. Investigate whether certain certification body impact organizational performance metrics in the QMS in manufacturing firm.

RO 5. Examine the challenges in implementing QMS to achieve high level of organizational performance in manufacturing firms.

5. Research Questions and or Hypothesis

Based on the objectives of this study and extensive literature review, three main research questions were proposed. There are:

RQ 1. What are the important organizational performance metrics in the QMS in manufacturing firms?

RQ 2. How much QMS implementation impact the organization performance in manufacturing firms?

RQ 3. What area of implementation of QMS improved the organization performance in manufacturing firms?

RQ 4. Does certain certification body impact organizational performance metrics in the QMS in manufacturing firms?

RQ 5. What are the challenges in implementing QMS to achieve high level of organizational performance in manufacturing firms?

6. Research Methodology

The conceptual model of this study is based on the literature review and was developed to identify quality management practices and explore their correlation to a company's overall performance and quality metrics by measuring quality performance as a performance indicator. Based on the objectives of the study, a questionnaire was developed which included questions on organizational profile, organizational quality practices, a firm's quality expectations to suppliers, and organizational performance. All these were developed to obtain details in the aspects of customer focus, buyer-supplier relationships, leadership and overall performance.

The best way to collect primary data is through questionnaires/ surveys. However, there are two clear options:

1. A single case study of one manufacturing firm, and its subsidiaries in different locations. This research method provides the deepest and broadest research data. But the research result may highly influenced by some unique factors of this interviewed company, limiting the scope for generalization.

2. A multicast study of multiple manufacturing firms in different industries, which are located at different locations. It will be possible then to compare the differences and similarities between the companies, draw comparative conclusions about QMS implementation on organization performance, and generate more generalisable findings. The access demands, however, especially for a long-time investigation then become substantial, and present new problems. For example, people move jobs, making it difficult to maintain long-term relationships with interviewees. Which research method would be taken highly depends on the process of gaining access, but the general research steps have been decided. Through reduplicate checking of the same general questions, the complete change process will be discovered and examined.

Due to one of the problems of qualitative research is that it cannot be used for generalization purposes (Finch, 1986). It also does not reflect the society as a whole. This might make it useless to policy makers who usually prefer statistical figures. Data that can be generalised might be more worthwhile to them. On the other hand, one of the problems with quantitative methodology is that it emphasises the product more than the process (Finch). Pollard (1984) states that since both have their advantageous aspects, the use of both methods would help in producing a more authoritative research.

7. Research Timeline


The project is expected to be completed in 17 weeks with the following indicated as the activity's durations for every section of the research project:


Research Section Duration

Research Section	Duration
1. Title	1 week
2. Introduction	1 week
3. Need for this Study	2 weeks
4. Background	3 weeks
5. Objectives	1 week
6. Research Questions and or Hypothesis	1 week
7. Research Methodology	2 weeks
8. Data analysis interpretations and discussions	3 weeks
9. Summary conclusion and recommendations	2 weeks
10. Reviewing work for final submission	1 week

References

- [1] Badri, Masood Abdulla Badri and Hasan Selim; Khaled Alshare and Elizabeth E. Grandon; Ounis and Mohammed Abdulla Hasan. (2006). *The Baldrige Education Criteria for Performance Excellence Framework*. *International Journal of Quality & Reliability Management*. vol 23. no 9.2006. pp1118-1157. Emerald Group Publishing Limited. [Http://www.search.proquest.com](http://www.search.proquest.com).
- [2] Dainelis, Cabeza Pulles; Leopoldo J. Gutierrez Guierrez; F Llorens-Montes. (2013). *Transactive Memory System and TQM: Exploring Knowledge Capacities*. *Industrial Management & Data System*. vol. 113. no. 2. pp294-318. Emerald Group Publishing Limited. <http://www.search.proquest.com>;
- [3] Gandhi. (2014). *Total Quality Management in Higher Education in India*. *International Journal of Organizational Behaviour & Management*. Emerald Group Publishing Limited. <http://www.search.proquest.com>
- [4] Heizer, Jay and Barry Render. (2004). *New Jersey*. Pearson Operations Management, Prentice Hall; Johnston; Chambers, Harland Harrison and Slack. (2003). *Operational Management*. United Kingdom. Pearson Education, Prentice Hall;
- [5] Kaziliunas, Adolf and Lina Vsynaukene. (2014). *Impact of Different Quality Management System Implementation Pattern On Performance Outcome*. *Intellectual Economics* vol 8, no 1 (19), p 140-155. <http://www.search.proquest.com>
- [6] Malik, Ashiah; Blumenfeld, Stephen. (2012). *Six Sigma, Quality Management Systems and Development of Organizational Learning Capability*. *The International Journal of Quality & Reliability Management*. Emerald Group Publishing Limited. United Kingdom. ISSN265671X. [Http://www.search.proquest.com](http://www.search.proquest.com).
- [7] Noor, Azlina Mhd, Shalleh; Salmiah Kasolang And Ahmed Jaafar. (2012). *Review Study of Developing an Integrated TQM with LM Framework Model I Malaysian Automotive Industry*. *The TQM Journal*. vol24. no5. Emerald Group Publishing Limited. <http://www.search.proquest.com>.
- [8] Psomas, Pantouvakis and Kafetzopolous. (2013). *The Impact of ISO 9001 Effectiveness on The Performance of Service Company*. United Kingdom.
- [9] Ahire, S., Golhar, D., & Waller, M. (1996). *Development and Validation of TQM Implementation Constructs*. *Decision Sciences*, 27(1), 23-56.
- [10] Altiok, T. (2012). *Performance Analysis of Manufacturing Systems*. Stanford: Springer Science & Business Media.
- [11] Anderson, S. W., Daly, J. D. & Johnson, M. F. (1994). *Why firms seek ISO 9000 certification: regulatory compliance or competitive advantage or competitive? Production and operations or competitive management or competitive*, pp. 28-43.
- [12] Barney, J. B. (2001). *Firm Resources and Sustained Competitive Advantage*. *Journal of Management*, Vol .17, 99-120.

- 
- [13] Crosby, P. B. (1979). *Quality Is Free: the Art of Making Quality Certain*, McGrawHill, New York, NY.
- [14] Deming, W. E. (1986). *Out of Crisis*. Cambridge, M. A: MIT Centre for Advanced Engineering Study.
- [15] DiMaggio & Powell, W. (1991) *The New Institutionalism and Organizational Analysis*. pp. 1-38. Chicago: University of Chicago Press.
- [16] Fotopoulos, C., Kafetzopoulos, D. & Psomas, E. (2009). "Assessing the critical factors and their impact on the effective implementation of a food safety management system", *International journal of quality and reliability management*, 894-910
- [17] Gitlow, H. (2000). *Quality Management Systems: A Practical Guide*. Washington DC: CRC Press. Jinhui Wu et al. [2011]
- [18] Goetsch D. & Davis S. (2006). *Total Quality Approach to Quality Management Quality Management. Introduction to Total Quality Management for Production, Processing, and Services*. 5th ed. New Jersey: Pearson Prentice Hall.
- [19] Hill, S. & Wilkinson, A. (1995). „In search of TQM“, *Employee Relations*, 17 (3):8-25
- [20] Hoyle, D. (2007). *Quality Management Essentials*. Tokyo: Routledge.
- [21] Hubert (2005). *Managing Total Quality, Enhancing Personal and Firms value*. Tata Me Grawhill, New Delhi, pp. 127-158.
- [22] Jain, J. (2001). *Quality Control and Total Quality Management*. New Delhi: Tata McGraw-Hill Education Lindsay, W., & Evans, J. (2007). *Managing for Quality and Performance Excellence*. Mexico: Cengage Learning.
- [23] Lindsay, W., & Evans, J. (2013). *Managing for Quality and Performance Excellence*. Mexico: Cengage Learning.
- [24] Mawby, W. (2005). *Decision Process Quality Management*. Wisconsin: ASQ Quality Press.
- [25] McCollum, W. (2004). *Process Improvement in Quality Management Systems: A Case Study Analyzing Carnegie Mellon's Capability Maturity Model (CMM)*. Cheshire: Trafford Publishing.
- [26] Miltenburg, J. (2005). *Manufacturing Strategy: How to Formulate and Implement a Winning Plan, Second Edition*. New York: CRC Press.
- [27] Mohanty, R. P. (2008). *Quality Management Practices*. New Delhi: Excel Books India.
- [28] Muchemu, D. (2008). *Designing A World-Class Quality Management System For FDA Regulated Industries: Quality System Requirements for Cgmp*. Bloomington: AuthorHouse.
- [29] Mutua, J. (2014). *Quality management practices and financial performance of cement manufacturing firms in Kenya*, Unpublished MBA Project, University of Nairobi Nanda, V. (2005). *Quality Management System Handbook for Product Development Companies*. Boca Raton: CRC Press.
- [30] Njuguna, M. (2013). *Value Chain Management Practices And Supply Chain Performance of Large Manufacturing Firms in Nairobi*, Unpublished MBA Project, School of Business, University of Nairobi
- [31] Oakland, J. (2012). *Oakland on Quality Management*. New York: Routledge.
- [32] Oakland, J.S. (2004). *Total Quality Management*. Oxford Butterworth; Heinemann On business performance. *International Journal of Quality and Reliability Management*, 135-144.
- [33] Prajogo, D., I. & McDermott, C. M. (2005) "The relationship between total quality management practices and organizational culture", *International Journal of Operations & Production Management*, Vol.25, No.11, pp.1101-1122.
- [34] Prajogo, D. I., & Sohal, A. S. (2004). *The multidimensionality of TQM practices in determining quality and innovation performance- an empirical examination*. *Technovation*, 443-453.
- [35] Prybutok, V. & Cutshall, R. (2004) "Malcolm Baldrige National Quality Award leadership model", *Industrial Management & Data Systems*, 558-566
- [36] Quazi, H. A. & Padibjo, S. R. (2008). "A journey towards total quality management through ISO 9000 certification a study on small and medium sized enterprises in Singapore", *International Journal of Quality and Reliability Management*. 489-508.
- [37] Rad, A. M. M. (2006) "The impact of organizational culture on the successful implementation of total quality management", *The TQM Magazine*. 606-625.
- [38] ReVelle, J. (2001). *Manufacturing Handbook of Best Practices: An Innovation, Productivity, and Quality Focus*. London: CRC Press.
- [39] Sila, I. (2007). *Examining the Effects of Contextual Factors on TQM and Performance through the Lens of Organizational Theories: An Empirical Study*. *Journal of Operations Management*, 25, 83-109.
- [40] Svensson, G., & Wood, G. (2005) "Business ethics in TQM: The qualities and spectrum zones of a case illustration", *The TQM Magazine*, 19-34.
- [41] Talha, M. (2004) "Total quality management (TQM): An over view, the bottom line", *Managing Library Finances*, 15-19.

- 
- [42] Tamimi, N., & Sebastianelli, R. (1998) "The barriers to total quality management", *Quality Progress*. 57-60.
- [43] Tan, K. C. (2002) "A comparative study of 16 national quality awards", *The TQM Magazine*,. 165-171.
- [44] Tata, J., & Prasad, S. (1998) "Cultural and structural constraints on total quality management implementation", *Total Quality Management*, Vol. 9, No.8, pp.703710.
- [45] Terziovski, M. & Power, D. (2007). *Increasing ISO 9000 certification benefits: a continuous improvement approach. International Journal of Quality and Reliability Management*, Vol. 2 (2): 141-163.
- [46] Vasileios, I. & Odysseas, M. (2015). *The effects of ISO certification on the performance of Greek firms. The TQM journal*. Vol. 27 No.1, pp.150- 162.
- [47] Wachira, W.(2013).*Quality management practices and Performance of Supermarkets in Nairobi, Unpublished MBA Project, University of Nairobi*
- [48] Zabel, D., and Avery, C. (2002). *The Quality Management Sourcebook: An International Guide to Materials and Resources*. London: Routledge.
- [49] Badri, Masood Abdulla Badri and Hasan Selim; Khaled Alshare and Elizabeth E.Grandon; Ounis and Mohammed Abdulla Hasan. (2006) .*The Baldrige Education Criteria for Performance Excellence Framework. International Journal of Quality & Reliability Management*. vol 23.no 9.2006.pp1118-1157.Emerald Group Publishing Limited. [Http://www.search.proquest.com](http://www.search.proquest.com).
- [50] Dainelis, Cabeza Pulles; Leopoldo J.Gutierrez Guierrez; F Llorens-Montes. (2013). *Transactive Memory System and TQM:Exploring Knowledge Capacities. Industrial Management &Data System*.vol.113.no2.pp294-318.Emerald Group Publishing Limited. <http://www.search.proquest.com>;