

REVIEW ARTICLE

RELATIONSHIP OF TOTAL QUALITY MANAGEMENT TO QUALITY PRODUCT AND CORPORATE PERFORMANCE

Ayi Tejaningrum

Management, STIE EKUITAS, Bandung Indonesia

*Corresponding Author Email: ayi.tejaningrum@ekuitas.ac.id

This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ARTICLE DETAILS

Article History:

Received 14 February 2020
Accepted 18 March 2020
Available online 20 April 2020

ABSTRACT

Background: Small and medium businesses (SMEs) have major problems with regard to product quality so that it affects the low competitive ability. Some indications include high product variability, low process capability and low customer satisfaction. The purpose of this study is to prove whether the implementation of Total Quality Management (TQM) in SMEs influences product quality and company performance? The research method is descriptive qualitative with a survey approach, samples taken using the simple random sampling method of 60 SMEs in two districts namely Cianjur and Bandung. The questionnaire was used as a data collection tool. Based on the results of the study showed that the quality of products perceived by consumers is influenced by the implementation of TQM, the better SMEs implement TQM, the better the product quality. The data further proves that organizational performance as assessed by ROA (Return of Investment) is influenced by product quality, so that if the company wants to increase profits then improve product quality. This research is limited to processing industry SMEs not to the service sector. Some of the limitations of SMEs that have an impact on low quality are low access to technology, access to raw material sources which results in high product variability.

KEYWORDS

Total Quality Management, Dimension of Quality, Corporate Performance.

1. INTRODUCTION

The problem of product quality is not only a problem in large industries but also occurs in SMEs, especially those engaged in the processing industry. The business world is making significant progress in the 21st century, mainly related to the company's competitive ability which is increasingly believed to be based on quality products. The evolution of quality meaning began in the 1920s with the concept of inspection, in this decade all companies trying to sell products have no mistakes. In this 21st century, the development of product quality studies is very rapid which is characterized by the concepts of Six Sigma, TQM, MBNQA, QFD etc. One study is related to total quality management (TQM), where all components in the organization play an active role in the process to ensure that the product has good quality.

Small and medium businesses (SMEs) in Indonesia are the backbone of the economy because they are able to absorb 97% of the workforce and contribute to GDP by 60%, with growth of 5%. On the other hand, SMEs have problems that are closely related to product quality, access to raw materials, access to marketing and also access to technology and capital. These conditions resulted in the development of SMEs that are far below the development of medium and large businesses. Based on the results of the author's analysis, the main problem of SMEs is on product quality, where almost 72% of consumers agree that the quality of SME products is not good (Tejaningrum 2016). Some characteristics of the quality of SME


products include inconsistency or high variation, low features, poor reliability and durability, dominant owner in accessing product quality and all aspects of the company so that the role of the system is very low.

TQM (Total Quality Management) is a comprehensive quality control method, involving all components of the organization and the scientific approach becomes very important. TQM itself has been studied in various countries, especially its implementation in SMEs, several studies show: study in Korea, Tunisian, Qatar, in Indians, in Iranian by describing several key criteria in the process of implementing TQM (Yang, 2005; Lakhali et al., 2006; Ismail, 2009; Khanna et al., 2011; Valmohammadi, 2011). This study aims to analyze the implementation of TQM in Indonesia by connecting with consumer perceptions and company performance.

While on the other hand the role of product and service quality is significantly related to the company's progress, this was stated that quality will improve: company reputation, product reliability, will have the ability to compete globally (Juran, 1998; Heizer and Render, 2012). Quality is one of the measurement tools for performance besides productivity and efficiency (AL Darrab, 2000). Quality will become a market mover and increase productivity, besides that quality will increase consumer loyalty (Tejaningrum, 2016; Ross, 1994).

2. LITERATURE REVIEW

2.1 Total Quality Management Concept

Quick Response Code	Access this article online	
	Website: www.myecommercejournal.com	DOI: 10.26480/mecj.01.2020.20.23

TQM first appeared as a result of the many products that were still rejected by consumers even though the company had carried out quality control. TQM is directed into the process to ensure that there will be no errors in the process from input to the final product. TQM guarantees that quality is the responsibility of all components of the organization from leadership to operations. The TQM dimension consists of Prayogo and Dermott: leadership, strategic planning, customer focus, information and analysis, people management, and process management. While Goest: Focus on Customers, Obsession with Quality, Scientific Approach, Long-term Commitment, Teamwork, Continuous System Improvement, Education and Training, Controlled Freedom, Unity of Purpose, Employee Engagement and Empowerment.

The following is an explanation of each dimension: (1) Customer focus is oriented to the organization's ability to make customers the main basis in establishing quality. (2) Quality obsession is related to the desire of the leadership which is inscribed into the implementation of how the quality of new goods and services becomes a target and dream to be achieved. (3) The scientific approach with regard to the process of solving the problem based on the quality of data and numbers which is then processed with scientific rules to identify the suitability to find causes and determine solutions, in their applications often use statistical quality control with 7 tools. (4) Long-term commitment means that quality is not a project without time limit, but it is related to the long term or there is no time limit. (5) Teamwork is related to the concept that quality is the overall responsibility of the members in the organization. (6) Continuous improvement, this concept provides an understanding that quality is dynamic, changes from time to time, so quality improvement must be carried out continuously. (7) Education and training: to develop quality that is constantly changing, it is necessary to increase the overall competence of the members of the organization team, therefore education and training is absolutely necessary. (8) Controlled freedom: each team member is given full authority on the limits of his control to make decisions in quality improvement. (9) Unity of Purpose: All members of the organization from top management to the lowest level have the same goals in achieving quality products. (10) Employee involvement and empowerment: in the implementation of TQM the term QCC, is known as a form of employee participation in quality improvement.

2.2 Quality Concept

Conceptually the quality of goods and services is difficult to interpret, but implementation in the field can easily identify the quality of goods and services. If we get services from a hospital, of course we hope to get a neat and clean hospital condition, a simple procedure, friendly and responsive medical personnel, an affordable price and of course a healing treatment. Meanwhile, when we deal with goods for example shoe products, of course we hope, good models, durability, no defects, friendly servants, varied products, comfortable to use. Some concepts related to quality, introduced by Juran, known as Trylogi Juran, are: planning, controlling and improving quality. Crosby with 4 quality concepts: conformity to specifications, quality is prevention, zero defects and quality of the relationship with the price of compatibility, while Deming emphasizes that quality is the responsibility of all components of the organization.

From these concepts Tejaningrum states that quality is more emphasized into the company's efforts to meet consumer expectations, is dynamic meaning it will change from time to time, also the quality of the relationship with the extent to which we exceed that of competitors, with the ultimate goal to expect consumers make a repeat purchase. To measure product quality there are 8 dimensions: performance, features, reliability, conformance to specifications, durability, serviceability, aesthetics and perceived of quality (Garvin, 1998). In the context of this research, SMEs studied are engaged in the processing industry that works in the creative industry sector, such as: food, clothing, crafts, printing.

2.3 Corporate Performance

In measuring the performance of companies using a financial-based measure of the value of the profits the company. This concept is in accordance with what was stated by Kaplan (1996) regarding the

performance based on the balanced scorecard by providing financial indications as one measure of business performance, in addition to customer satisfaction, internal business and growth learning. Financial performance measures at the beginning of the 20th century are more focused into the accounting management system, where the data used are financial statements in the form of a balance sheet and income statement, the usual measurement units are: Profit margin (PM) Total assets turn over, Return on Investment (ROI), Return on assets (ROA), Market value added (MVA), Economic Value added (EVA) (Vanani: 2009).

General Electric (GE) is the first company to allow measurement of organizational performance from non-financial aspects by including productivity, job satisfaction and labor turnover. Each performance system has weaknesses and strengths. SMEs is the object of this research, where financial and non-financial administration is not recorded well. Therefore, to measure performance, it is assessed from financial aspects that are not based on records but based on estimates of the value of profits and the value of assets owned. Thus the measurement is to use Return on Assets.

$$RoA = \frac{\text{Profit Margin}}{\text{Total Asset}}$$

3. METHODOLOGY

3.1 Research Method and Hypotesis

The research objective is to obtain a comprehensive condition regarding the implementation of TQM in SMEs, consumer perceptions of product quality and company performance. Next analyze whether there is a relationship between the implementation of TQM with product quality and company performance. In connection with this, the descriptive qualitative research method, which is a method to describe the condition of the object at and connect between one variable with another variable to further draw conclusions. The research instrument used a questionnaire with data collection techniques through interviews and field observations. The research model and hypothesis is:

Hypothesis 1:

H₀: TQM affects the quality of the product

H₁: TQM has no effect on product quality.

Hypothesis 2:

H₀: Product quality affects company performance

H₁: Product quality has no effect on company performance

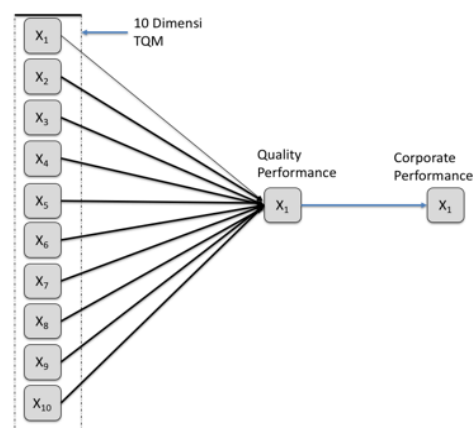


Figure 1: Research Model

3.2 Population and Sample

The study was conducted in 2 districts namely Cianjur and Bandung. These two districts were taken because they have relatively many SMEs engaged in the processing industry. Products in the form of tofu, candied fruit, car spare parts, crafts, garment, bread, dolls, shoes, sandals, socks, printing,

snacks, sauces, drinks. Each district we take 30 with the requirements: have a minimum of 10 employees, a minimum turnover of Rp 500 million / year, in accordance with the provisions of SMEs According to Law No 20 of 2008 concerning SMEs. The sampling method is simple random sampling where each UKM has the same opportunity to be sampled but must meet established criteria.

4. RESULT AND DISCUSSION

4.1 Implementation of TQM

As stated previously, the analysis of Total Quality Management is broken down into 10 dimensions, namely (1) customer focus, (2) obsession with quality, (3) scientific approach, (4) long-term commitment, (5) teamwork (6) system improvement On an ongoing basis (7) Education and training (8) Controlled freedom (9) Unity of purpose (10) Employee Engagement and Empowerment. Following are the average values given by 90 SMEs in each dimension. Following is the average value of TQM implementation using a Likert scale from one to five.

The main weaknesses of the 10 dimensions of TQM are: customer focus, Quality obsession, scientific approach, long-term commitment, Continuous System Improvement, training education. While the dimensions of TQM with good values are: Customer Focus, Teamwork, Controlled Freedom, Unity of Purpose, Employee Engagement and Empowerment.

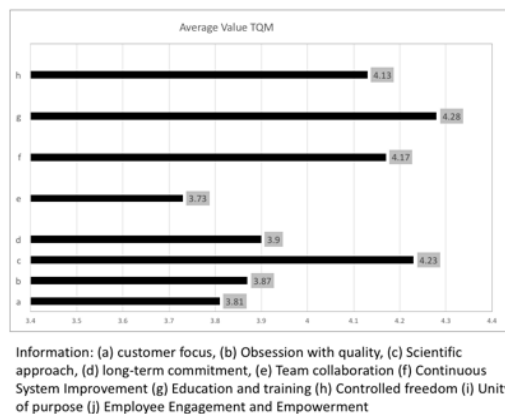


Figure 1: Average Value of TQM

4.2 Performance of Quality Product

For quality performance assessment, identified with 8 dimensions of product quality, namely: performance, features, reliability, conformance to specifications, durability, serviceability, aesthetics and perceived of quality. The magnitude of the average value of each quality dimension can be seen in Figure 2.



Figure 2: Average of value Quality Product

Based on Figure 2 it can be seen that the low dimensions of the quality of SMEs products are perceived features, durability, aesthetics and quality. Thus it can be concluded that the products produced by SMEs are perceived as low quality products, have an aesthetic or eye-catching appearance, are of low durability and tend to have disabilities. While consumers perceive that SMEs products tend to have the ability to meet good specifications, good service and performance.

4.3 Company Performance

Performance measurement refers to the amount of non-Asset Returns (ROA), which shows the ability of assets to generate corporate profits. The highest ROA value is 43 and the lowest ROA is 11, with an average of 27. ROA 43 shows that every one rupiah of assets is able to generate a profit of 0.43 far exceeding bank interest rates. The highest value is only owned by one company and the lowest value is 11, which means that the company is able to make a profit of only Rp. 0.11 from every Rp. 1 of the company's assets. The average ROA value of the sample SMEs is 0.27, generally still above the bank interest rate of 0.14.

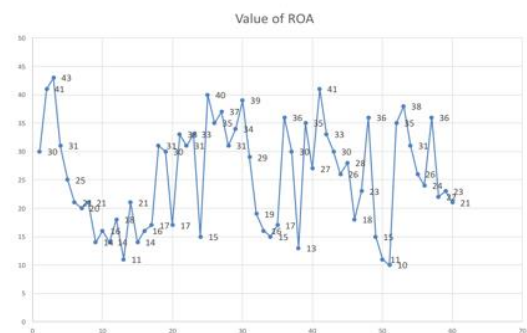


Figure 3: Value of Return On Investment

4.4 Relationship Implementation of TQM to Product Quality Performance

Seen in Table 1 the value of R Square is 0.609, this shows that the contribution of the influence of X_1 (TQM) to Y_1 (Product Quality) is 60.9% while the remaining 12.8% is influenced by other variables not included in the study.

Tabel 1: Model Summary Output Model				
Model Summary				
Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	,954 ^a	,609	,891	2,17549
a. Predictors: (Constant), X10, X9, X8, X7, X6, X5, X4, X3, X2, X1				

Thus, it can be concluded that the implementation of TQM has a significant effect on the quality of products perceived by consumers. The relationship between the two variables is positive which indicates, the better the implementation of TQM in SMEs, the better the quality of the product, and vice versa if the implementation of low TQM low quality product.

4.2 Relationship Implementation of TQM and Quality Product to Corporate Performance

Table 2 Model Summary Output Model 1 has a R Square value of 0.780, this shows that the contribution of X_1 (TQM) and X_2 (Quality Product) to Y_1 (Corporate Performance) is 87.2% while the remaining 12.8% is influenced by other variables not included in the study.

Tabel 2: Model Summary Output Model 2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,883 ^a	,780	,729	4,73726
a. Predictors: (Constant), Y1, X9, X2, X1, X10, X7, X6, X5, X3, X4, X8				

The amount of company profits is determined by product quality by 78%, while the remaining 22% is another variable, thus the higher the quality of SME products perceived by consumers, the higher the company's ability to generate profits. Therefore, company profits will decrease when the ability of SMEs to manage quality decreases.

5. CONCLUSION

Based on the results of research on 60 SMEs on the implementation of TQM, product quality and company performance, concludes the following sections: first the weaknesses of TQM implementation are in the dimensions of quality obesity, consumer focus, scientific approach, long-term commitment, Continuous System Improvement, and training education. Based on the results of the study that the implementation of TQM has a positive effect on product quality and company performance. Therefore, SMEs must: make consumers a barometer of product quality, make continuous quality improvements, improve education and training for employees to improve skills and record data and information regarding product compatibility so that the causative factors can be identified to get solutions.

The second regarding the weaknesses in the quality dimension is on: the aesthetics or appearance of the product as a whole, additional functions of the product, durability and improvement of the company's image. In response to this, the SMEs must ensure that the products sold to consumers are products that avoid compliance. Future improvements relate to the ability of SMEs to be able to access quality sources of raw materials, and technologies that help to improve product quality, especially those related to durability and aesthetics.

ACKNOWLEDGEMENT

I would like to thank STIE EKUITAS and the Directorate of Higher Education (Dikti) of the Ministry of Education and Culture of the Republic of Indonesia for supporting research activities to seminar activities which took place in Singapore in October 2019.

REFERENCES

- Garvin, D.A. 1998. *Managing Quality*. New York: The Free Press
- Heizer dan Barry Render. 2008. *Operatio Management: Edisi Sembilan*. Jakarta. Salemba Empat.
- Ismail, S., 2009. Critical success factors for TQM implementation and their impact on performance of SMEs. *International Journal of Productivity and Performance Management*, 58 (3), 215-237.
- Juran, Joseph M., 1998. *Juran's quality handbook 5 edition*. New York: McGraw- Hill.
- Kaplan, Norton, 1996. *Balanced Scorecard*, Erlangga Jakarta. ISBN 979-688-071-7.
- Lakhal, L., Pasin, F., Limam, M., 2006. Quality management practices and their impact on performance. *International Journal of Quality & Reliability Management*, 23(6), 625-646.
- Tejaningrum, A., 2016. Quality Culture and Capability Process Supply Chain SMEs. *Inter- national Journal of Organizational Innovation*, 9 (2), Pp. 214-225.
- Valmohammadi, C., 2011. The impact of TQM implementation on the organizational performance of Iranian manufacturing SMEs. *The TQM Journal*, 23(5), 496-509.
- Vanany, I. 2009. *Performance Measurement Models and Applications*. Its Press Surabaya, ISBN 978-979-8897-29-0.
- Yang, T., Chen, M., Su, C., 2003. Quality management practice in semiconductor manufacturing industries—empirical studies in Taiwan. *International Manufacturing Systems*, 10(1), 153-159.

