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# **Business Performance and Implementation of Total Quality Management: A Case Study in Indonesia\***

Sri Dewi ANGGADINI<sup>1</sup>, Surtikanti SURTIKANTI<sup>2</sup>, Asep SAEPUDIN<sup>3</sup>, Dean Subhan SALEH<sup>4</sup>

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#### Abstract

This study aims to determine the influence of the application of Total Quality Management (TQM) in coffee exporting companies in Bali. The research was conducted as there was not much research done to explore the application of TQM in coffee exporting companies in the city of Kintamani, Bali. Thus, this research plays an important role in examining the effect of the application of total quality management factors on company performance. In this research, the effect of TQM variables which are: customer focus factors, continuous improvement factors and employee empowerment factors on the company's performance was measured by using a balanced scorecard approach. The research result showed that the customer focus, the continuous improvement, and the employee empowerment factor has a positive impact on the performance of coffee exporting companies in the City of Kintamani. The result showed that continuous improvement factor has a more dominant influence compared to the customer focus factors and the employee empowerment factor. Thus, it is very important to consider the consistency when the companies implement TQM. In conclusion, TQM is important for coffee exporting companies in Indonesia to enter global competition, especially for world market-oriented companies and should be supported by the government and stakeholders.

Keywords: Total Quality Management, Customer Focus, Continuous Improvement, Employee Empowerment

JEL Classification Code: D51, E02, E44, G15, G30

# 1. Introduction

A cost management accounting system appears to maintain the company's performance in the changing economic environment which brings a major tendency to consumer

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This research is a development of research on Total Quality Management (TQM) and the factors that affect it. The difference in this study was conducted in Bali as a coffee producing province as measured by applying a balanced scorecard.

First Author and Corresponding Author. Lecturer, Accounting Department, Universitas Komputer Indonesia, Indonesia [Postal Address: Jl. Dipati Ukur No. 112–116, Lebakgede, Kecamatan Coblong, Kota Bandung, Jawa Barat 40132, Indonesia] Email: sri.dewi.anggadini@gmail.com

<sup>2</sup>Lecturer, Accounting Department, Universitas Komputer Indonesia, Indonesia.

<sup>3</sup>Lecturer, Management Department, Langlang Buana University, Indonesia.

<sup>4</sup>Lecturer, Accounting Department, STIE Dr. Khez Muttaqien, Indonesia.

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orientation, application of TQM time as a competitive element, advances in information technology, advancements in the production environment, growth of the service industry, and global competition (Hansen & Mowen, 2000).

It is believed that to win the competition, companies need to focus on quality or with the application of TQM (Soriano, 1999). It has become a demand for companies to be able to produce high-quality products and services to be able to survive in tight business competition. Increasing purchasing power which is supported by more mature consumers who are both cultured and knowledgeble, whose quality product needs leads to an in increase in the demand for quality products and services. (Sihotang & Zebedeus, 2013). Thus, to achieve high company performance, companies need commitment and continuous efforts in terms of quality development. Quality is a theme that integrates all organizations, according to the results of studies show that the cost of quality could be a significant source for savings. Quality experts state that quality-based costs can reduce costs by 2-4% of sales (Hansen & Mowan 2000).

At this time there are several internationally recognized quality measures, including ISO 9000, and even ISO 14000 which adds to the measurement of environmental

quality, or European Quality Award (Black & Porter, 1996) originating from Europe, the Malcolm Baldridge Award in the United States, and the Deming Prize from Japan. Many of these measurements have also been used as a reference for the demand for world quality in general (Joiner, 2007). Companies who have received recognition or have won quality awards are companies that have developed the concept and practice of quality management appropriately (Black & Porter, 1996).

Many terms are used in the development of quality concepts, including total quality improvement (TQI), or continuous measurable improvement (CMI), or total quality management (TQM). These concepts are described by experts in various dimensions. Mitreva et al. (2016) divided the dimensions of top quality; (1) top management commitment, (2) Consumer focus, (3) Supplier quality management, (4) Design quality management, (5) Benchmarking, (6) Use of statistical process control (SPC), (7) the use of quality information internal, (8) employee empowerment, (9) employee involvement, and (10) employee training. These dimensions implicitly or explicitly contain three quality principles, (1) Continuous improvement, (2) Focus on consumers, and (3) Organizational systems that emphasize the empowerment (Lindsay & Evans, 1996; Ahire et al., 1996; Anggadini, 2017). If the company has implemented these dimensions correctly and consistently, it could be said that the company has implemented all of the TQM factors (Phan et al., 2019).

As stated by Phan et al. (2019) that the application of TQM will minimize and eliminate errors in the production of a product and service. It is time for companies in Indonesia to evaluate the concepts of developing quality management. This is important for companies to enter global competition, especially for those companies who are looking to create an international market for their products and services. Especially for exporting companies which have market segments internationally, because they will compete with exporting companies from other countries (Nguyen et al., 2020).

Kintamani is a city in the Province of Bali, which is one of the regions that has a large well-known coffee production in the country. Kintamani Coffee exports rose to 43.46 tons with a value of IDR 4.8 billion for the period January—October 2019. This figure increased compared to the same period in 2018 which was only 32.8 tons which was valued at IDR 2.8 billion. The condition of Kintamani area that does not have a coffee bean processing industry shows that all coffee production is expected to meet the quality of export standards, but in reality there are still production that does not meet the quality of export standards. In addition to the management aspects of coffee plantations, aspects of the strategy of coffee exporting companies also play a role in determining the fulfillment of export standards for coffee

commodities. In addition, some coffee companies who do not apply TQM properly, will not be able to produce quality coffee products, so the quantity of export demand volume is low, this causes low sales turnover, which in turn will reduce the company's performance (Al-Damen, 2017).

#### 2. Literature Review

## 2.1. Total Quality Management (TQM)

Various renewal efforts made by producers in order to meet customer satisfaction, as explained by Blocher et al. (1999), have given customers many choices and they have become increasingly "cost conscience" and "value conscious" in asking for quality products and services. As Ohy (2018) stated in their research that service is very closely related to customer satisfaction, if the service in marketing activities is ignored, it can lead to dissatisfaction on the part of customers and this will obviously harm the producers and sellers.

Goetsch (2000) defined the total quality (TQ) consists of continuous improvement activities involving everyone in the organization managers and workers-in a totally integrated effort toward improving performance at every level (Kustono, 2020). This improved performance is directed toward satisfying such cross-functional goals as quality, cost, schedule, mission need, and suitability (Phan et al., 2019). TQ integrates fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach focused on continued process improvement (Anggadini & Susanto, 2017). The activities are ultimately focused on increased customer satisfaction (Hebbar & Mathew, 2017).

The explanation above is in accordance with the understanding of TQM defined by Rao, et al. (1996) which stated three basic concepts of TQM which is the key to the successful implementation of TQM, namely as follows:

- Customer focus; the value of the work done is determined by the customer.
- Total participation; the person closest to the task is the most qualified to suggest improved ways of working. That person should be able to make and implement those suggestions as part of his or her daily work.
- Continual improvement; the quality of work can always be improved, and this can be done gradually or through breakthroughs.

Jimoh et al. (2019) explained that the concept of TQM is based on a business philosophy by focusing on customer satisfaction through efforts in order to integrate and coordinate among all activities in an organization. Through focusing on process improvement, Alzamil (2019)

explained that TQM is a tool, technique and method used as an effort to continuously improve processes. As one of the patterns of the Quality Management System, TQM is believed to have several advantages when compared to other quality management system techniques, such as Business Process Reengineering (BPR) and Just in Time (JIT). The main strength of TQM lies in an effort to involve all elements in an organization on an ongoing basis to meet customer satisfaction through the creation of quality products and services with no defects (Jatmiko et al., 2020).

Research on the effect of TQM on managerial performance with a performance measurement system and a reward system as a moderating variable conducted by Supratiningrum and Zulaikha (2004), in the hotel industry in Indonesia, showed that the application of TQM has a positive effect on managerial performance. However, the interaction of TQM and the performance measurement system has no effect on managerial performance. To examine the application of TQM in hospitality companies, an instrument that has been tested by Breiter and Bloomquist (1998) was developed, including 12 quality management principles, they are leadership, customer focus, employee empowerment, continuous improvement, basic facts in decision making, training and development, rewards and recognition, flexibility, equipment and techniques for their use, strategic planning, work teams, and supplier involvement. The results of the study conducted by Agus (2004), regarding the relationship of TQM and overall performance shows that there is a positive correlation among TQM, overall performance and customer satisfaction (Jimoh et al., 2019). On the other hand, the results of the study also explained that through an emphasis on service quality would benefit the company. Based on the studies conducted at public sector service departments in Malaysia, indicating focus on employees is an important factor in implementing TQM supported by training, customer focus, benchmarking, and top management commitment. By using statistical methods including reliability analysis, correlation analysis, and a structural equation modeling (SEM), also show the unique contribution of TQM on service performance and customer satisfaction. With the same topic, Brah et al. (2000) conducted a study of the impact of applying TQM factors on business performance in ISO 9000 certified service companies in Singapore.

In the end, TQM or TQC has become a trend in various companies in developed countries (Mia & Patiar, 2001). Even considered as a way out of the country's multi-dimensional crisis. As quoted in Pertamina News, Sukamdani S. Gitosardjono once presented an interesting illustration, about quality development in Japan after World War II ended, 1945. In three decades, namely 1950, 1960, and 1970 became a period of TQC development, especially in Japan,

which produced the quality of the country's manufactured goods reaching a level of excellence, to be able to compete in the world trade.

## 2.2. Company's Performance

Atkinson et al. (2004) argued that the first step in the selection of performance measurement methods to be used for any specific company, there is a need to adjust the method used to the company's strategy as well as accommodate it to the company's interests. The statement according to Hansen and Mowen (2000) implied that the activity of performance appraisal of two types of measurement, financial and non-financial. This assessment is designed to assess how well the activity and the final results are working at any specific company. The assessment of activity center performance is divided into three main dimensions, (1) efficiency, (2) quality, and (3) time. The Performance Pyramid Model proposed by Lynch and Cross (1991) stated that the measurement of activities carried out at various levels of the organization in the company. Measurement of these activities is divided into two parts, external effectiveness and internal efficiency. According to Dess et al. (2003), there are two approaches used to assess company performance, the first approach is the financial ratio analysis and the second approach is seen from the perspective of the concerned parties (stakeholder perspective) (Sharma et al., 2006).

In early 2000s, the balanced scorecard has become the core of a strategic management system, not only for executives, but also for all company people, especially in those companies that have used information technology intensively in their business operations. The balanced scorecard provides a clear and inclusive framework for all people to produce financial performance through the realization of various non-financial performance. So far, in conducting performance appraisals, companies have not used measurements with strategic dimensions. According to Kaplan and Norton (1996), the strategy management system which was compiled should carry out two things, firstly, building a scorecard, and secondly is using the scorecard. The two things are not interrelated, but it is a process that interacts with one another. Strategic performance measurement is a performance appraisal that can measure all aspects and functions existing in the company, and the implications are not only having an impact on the short term but medium and long term. Kaplan and Norton (1996) described the relationship between the causes of the centers' measurement impact of the company activity and the following corporate strategies.

Balanced scorecard can describe the vision of a company's organization into goals that can improve or multiply the company's performance. Starting with a learning and growth perspective that seeks to improve

the capabilities and commitment of people, which will then improve the quality of customer service processes, and integrate customer service processes with the use of state-of-the-art technology, thereby increasing customer trust, quality relationships with customers, and an increase in service speed, ultimately has an impact on revenue growth and cost reduction, which will increase ROI growth (Ngambi & Nkemkiafu, 2015).

The financial perspective in the balanced scorecard is the most important perspective, because it is the ultimate goal of all activities integrated in the other three perspectives. This is because the measure of finance is a consequence of an economic decision taken from an economic action. This financial measure indicates the implementation planning and evaluation of the established strategy planning. This evaluation will be reflected in the objectives that can be specifically measured through the profits obtained, such as by using Return on Investment (ROI), or Economic value Added (EVA).

Assessment of the company's performance with customer perspective is also a way to determine whether the financial performance of the company has been to the expected level or not. This is supported by the era of globalization that creates intense competition, so companies have to work hard to win the competition in search of new customers, as well as in retaining old customers. In general, the company directs its strategy to customer driven strategies, in other words the customers need must be met by the company. The quality of products produced by the company must be at least the same as what the customer perceive it to be. The quality of the product is lacking, causing the consumer to move to another product, for that the company must be able to perceive the quality of the product that the customer wants according to the price that the customer can afford to pay.

Indicators of performance measurement with an internal business perspective consists of innovation, operations, and after sales service. Innovation activities in the company are carried out through identifying the needs of customers or prospective customers, both now and in the future. Identification and formulation of customer needs are carried out at the research and product development stage by the R&D section.

Learning and growth stem from three principles, people, system, and organizational procedure. The creation of learning for employees requires a conducive organizational climate and supports the provision of motivation and to encourage employee initiatives. Measurement of success on aspects of motivation, alignment and employee empowerment can be seen from the number of suggestions submitted by employees, the number of suggestions implemented and the level of employee ability to know the vision and mission set by the company.

# 2.3. Hypothesis Development

Based on research conducted by Brah et al. (2000), Rezaee (1996), Shafiq et al. (2019) showed that the application of TOM factors affects all operational and functional aspects of an organization. Kinera company is one of them, so the activity and scope of the company's performance functions are also influenced by each of the TQM factors. Several studies have examined the relationship between the application of total quality management and company performance as measured by the level of company profitability. The company's performance as measured by the level of profitability is considered no longer able to provide sufficient feedback information for organizational improvement. According to Atkinson et al. (2004), performance appraisal is intended to measure various activities at various levels of the organization will ultimately produce feedback information to make improvements to the organization.

The idea to balance the measure of company performance in financial aspects with non-financial aspects gave birth to what is called the "Balanced Scorecard" (Mutasowifin, 2002). The balanced scorecard has provided a comprehensive concept to explain the company's vision and strategy into measuring its performance (Atkinson et al., 2004). Balanced scorecard can be used as a tool to measure company performance, including financial and non-financial performance, as stated by Wheelen (2002) that instead of evaluating a corporation by using a few financial measures, having a balanced scorecard is necessary, including the stages performed to find out what actions are performed whether late is appropriate in the measurement of customer satisfaction, processes carried out by internal parties, organizational innovation and motivation to stay afloat and develop.

Furthermore, Kaplan and Norton (1996), in his book "Translating strategy into action: The Balanced Scorecard" divided the balanced scorecard into 4 perspectives is financial, customer, internal business process, learning and growth. Kaplan and Norton (1996) added that a balanced scorecard seems as a tool to balance in four perspectives, among others, a financial perspective which discuss the finances of a company, including receipts and expenditures of cash, profit, final capital, cost of goods sold, and the economic life of a fixed asset. Customer perspective focuses more on customers such as customer wants and tastes, customer market share, new customer improvement, customer loyalty, customer capabilities and benefits for customers; internal business process perspectives including forward design, product design and innovation, product marketing, effectiveness and efficiency as well as product quality; learning perspectives include reviewing employee capabilities, employee loyalty, implemented information systems, culture and organizational structure, adaptation to

the environment and environmental uncertainties. All these conditions are inseparable from the information system implemented in an organization that implements a balanced scorecard (Al-qahtani & Aziz, 2014; Anggadini, 2015).

Based on the description above, the hypotheses that can be put forward in research are:

**H1:** The application of TQM in terms of customers affects the performance of coffee exporting companies in Kintamani city, Bali.

**H2:** The application of TQM in terms of continuous improvement affects the performance of coffee exporting companies in Kintamani Bali.

**H3:** The application of TQM in terms of employee empowerment factors affects the performance of coffee exporting companies in Kintamani Bali.

# 3. Data and Methodology

## 3.1. Analysis Data

This type of research is descriptive and verification research, which is a study that aims to examine and test the truth of research hypotheses that have been determined before. To measure these variables, questionnaires were distributed to respondents. For each answer there was a score given and the score obtained had a level of ordinal measurement. Scores or weight values used are 5 to 1. To analyze the required data with a size of at least an interval as a requirement in using the path analysis tool (see Figure 1).

#### 3.2. Data Collection

The companies that became the population of this study were those companies which export coffee commodities in the Kintamani. Based on the data from the Kintamani Industry and Trade Office of Bali, there are 11 coffee exporting companies in Kintamani. Thus, the total population of coffee export companies in Kintamani that will be the subject of research is 11 companies. The population

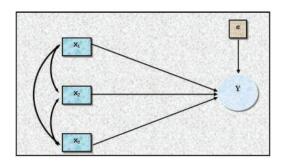


Figure 1: Research Model

of eleven companies will be censused as respondents. Data collected in this study includes primary data and secondary data. Primary data used to analyze the effect of total quality management factors consisting of focus on consumers, continuous improvement, and total employee empowerment on the performance of coffee exporting companies in Kintamani measured by the balanced scorecard. Secondary data used to describe the general condition of the study area and to decide the description of the condition of coffee exporting companies in Kintamani. Primary data was obtained through statement instruments (questionnaires) and direct interviews with respondents and direct observation in the field. Questionnaire, which is a data collection through a list of written statements compiled to obtain information or information from several people. The type of questionnaire used is a closed questionnaire that is a set of questions or statements with possible answers that have been provided, respondents only choose one of five alternative answers. This questionnaire was addressed to company leaders and production managers of coffee exporting companies in Kintamani, Bali.

#### 4. Results and Discussion

#### 4.1. Results

The discussion in this study is to examine the effect of the application of total quality management factors on company performance with an enhanced scorecard approach to coffee exporting companies in Kintamani as explained in the research framework, consisting of; 1) Customer Focus, 2) Continuous Improvement, and 3) Employee Empowerment, as follows: (See Table 1)

Next is described through the following path coefficients (see Table 1 and Figure 2):

The application of customer focus factors contributes or positively influences the performance of coffee exporting companies in Kintamani. The size of the coefficient of the focus factor pathway on customers to company performance as measured by the balanced scorecard

Table 1: Path Coefficient Analysis Results

Coefficient X <sub>1</sub> on Y	<i>Py, x</i> <sub>1</sub>	0.3031
Coefficient X <sub>2</sub> on Y	Py, x <sub>2</sub>	0.3885
Coefficient X <sub>3</sub> on Y	<i>Py, x</i> <sub>3</sub>	0.2848
Koefisien Determinan Multipel	$R^2y, X_1, X_2, X_3$	0.7388
Koefisien Determinasi Variabel Luar terhadap Y	<i>P</i> <sup>2</sup> <i>y</i> , ε	0.2612
Koefisien Jalur Variabel Luar terhadap Y	Ру, ε	0.5111

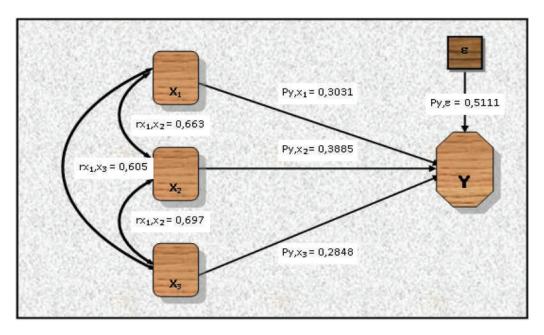


Figure 2: Path Coefficient

is 0.3031 or 30.31%. The influence consists of direct influence amount of 0.0919 or 9.19 % and the number of indirect effects through continuous improvement and employee empowerment factors is 0.1303 or 13.03%. The application of sustainable improvement factors contributes the greatest positive influence or influence on the performance of coffee exporting companies in Kintamani. The size of the path coefficient of the continuous improvement factor on company performance measured by the balanced scorecard is 0.3885 or 38.85%. The size of the effect of the total factors of continuous improvement on company performance measured by the balanced scorecard is 0.3062 or 30.62%. The influence consists of a direct influence of 0.1510 or 15.10% and the number of indirect influences through customer focus factors and employee empowerment factors of 0.1552 or 15.52%.

The application of sustainable improvement factors contributes the smallest positive influence among the three factors of total quality management on the performance of coffee exporting companies in Kintamani. The size of the path coefficient of employee empowerment factors on company performance as measured by the balanced scorecard is 0.2848 or 28.48%. The size of the total influence of employee empowerment factors on company performance is measured by the balanced scorecard is 0.2105 or 21.05%. The influence consists of a direct influence amount of 0.0811 or 8.11% and the number of indirect influences through a customer focus factor and a continuous improvement factor is 0.1293 or 12.93%.

#### 4.2. Discussion

The results of this study are in line with statement stated by Goetsch (2000) that customers focus must be a priority for the companies as it was noted that the companies that prioritize customer satisfaction will make customers become loyal to their products, and also increase products purchasing which all at once increase the profit of the company. This is in line with the statement proposed by Blocher et al. (1999) that the company can serve its main customers (external customers) better if the company can truly meet the needs of each of its internal customers. Richard C. Whitely, quoted by Rao et. al. (1996) suggested that companies that will succeed in forming a focus on customer satisfaction must have characteristics such as vision and commitment, alignment with customers, willingness to identify and resolve customer problems, utilize information from customers, approach customers, abilities, employee capabilities and empowerment, continuous improvement of Products and processes. Research conducted by Ahire et al. (1996) which shows that there is a positive influence of relationships with customers on company performance. Furthermore, Lindsay and Evans (1996) stated that companies should realize that customer satisfaction will guarantee the profitability and survival of the companies and furthermore be a competitive company. Research related that to the TOM continuous improvement factor with company performance was delivered by Al-Damen (2017) who stated that continuous improvement (kaizen) is a strategy driven by customers so management seeks to implement continuous improvements

so that it can satisfy customers and meet their needs if the company wants to survive and achieve profit. Taguchi and Wu as quoted by Blocher et al. (1999), stated that continuous quality improvement and cost reduction (Kaizen) were needed to remain competitive in today's global markets. Research conducted by Bolatan et al. (2016) showed that the improvement of process flow management and statistical control or feedback has a positive effect on company performance (Shafiq et al., 2019).

#### 5. Conclusion

The implementation of TQM focus on individual customers has a positive effect on the performance of coffee exporting companies in Kintamani as measured by a balanced scorecard. The implementation of TQM continuous improvement factor individually has a positive effect on the performance of coffee exporting companies in Kintamani as measured by a balanced scorecard. The continuous improvement factor has a more dominant influence compared to the customer focus factor and the employee empowerment factor. The implementation of TQM individual employee empowerment factor has a positive effect on the performance of coffee exporting companies in Kintamani, Bali as measured by a balanced scorecard.

The research supports the implementation of the TQM among the coffee exporters in Indonesia that is still not considered very important by these exporters. The consistency to improve the quality is important for coffee exporters in Indonesia. The government, industry association and internal companies should involve in the process of TQM implementation.

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