

THE ROLE OF SOFT TOTAL QUALITY MANAGEMENT TOWARDS OPERATIONAL PERFORMANCE AT PT SIER

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Abstract: Every firm needs to adapt in the global business environment so that can still sustain in the midst of intense competition. One of the tools that can be used is using soft Total Quality Management (TQM). The purpose of this research is to analyse the role of soft TQM implementation towards operational performance at PT Surabaya Industrial Estate Rungkut (SIER). The variables that are used are soft TQM elements, that is, top management commitment, continuous improvement, training and education, customer focus, process management, workforce management, and supplier relationship. This research uses quantitative method through questionnaire. The population in this research are PT SIER employees with the level of position as an officer from logistics, SIER strategic business unit, and supporting service division. The sampling technique that is used is proportional stratified random sampling that then results the total sample of 72 people. Data is analysed using SEM-PLS method with SmartPLS 3 software. Based on the results of the research can be concluded that from all elements of soft TQM only top management commitment, customer focus, and supplier relationship that are found have positive and significant effect towards operational performance at PT SIER.

Keywords: total quality management, soft total quality management, quality management, operational performance, industrial estate

Abstrak: Setiap perusahaan perlu beradaptasi dalam lingkungan bisnis global agar tetap bisa bertahan di tengah ketatnya persaingan. Salah satu cara yang dapat digunakan adalah menggunakan soft Total Quality Management (TQM). Penelitian ini bertujuan untuk menganalisis pengaruh dari penerapan soft TQM terhadap kinerja operasional pada PT Surabaya Industrial Estate Rungkut (SIER). Variabel yang digunakan adalah elemen soft TQM yaitu top management commitment, continuous improvement, training and education, customer focus, process management, workforce management, dan supplier relationship. Penelitian ini menggunakan metode kuantitatif melalui kuesioner. Populasi dari penelitian ini adalah karyawan PT SIER dengan jenjang jabatan sebagai pelaksana yang berasal dari divisi logistik, strategic business unit SIER, dan usaha jasa penunjang. Teknik pengambilan sampel yang digunakan adalah proportional stratified random sampling yang kemudian menghasilkan total sampel sebanyak 72 orang. Data dianalisa menggunakan metode SEM-PLS menggunakan software SmartPLS 3. Berdasarkan hasil penelitian, dapat disimpulkan bahwa dari semua elemen soft TQM hanya top management commitment, customer focus, dan supplier relationship yang ditemukan memiliki pengaruh yang positif dan signifikan terhadap kinerja operasional pada PT SIER.

Kata kunci: total quality management, soft total quality management, manajemen mutu, kinerja operasional, industrial estate

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INTRODUCTION

In march 2020, Indonesian economy was challenged with the emergence of the first case of the covid-19 outbreak in Indonesia. Indonesian government then took a policy to implement LSSR (Large-scale Social Restrictions) but this made the market demand goes down (Muliati, 2020). One of the sectors that being affected is finance, service, and real estate sector.

From table 1, it can be concluded that in the second quarter of 2020, business performance of financial, services, and real estate sector have a slow performance. This is due to the pandemic situation that made entrepreneur as well as public society become doubtful to do an investment.

PT Surabaya Industrial Estate Rungkut (SIER) is a state-owned enterprise that engaged in the development, management, and provider of industrial estate. PT SIER was established in 1974 and currently manages three industrial estates that spread across several locations in East Java, namely in Surabaya, Berbek, and Pasuruan. The product and services offered by PT SIER are divided into three segments, namely core business, non-core business (direct), and non-core business (indirect).

Based on table 2, it can be seen that the overall of the income condition from the three business segments of PT SIER has a fluctuating trend. Along with the decline of WBT in financial, services, and real estate sectors, we can see that the income of the three business segments of PT SIER in 2020 experienced a decline too.

Changes in economic condition that continue to occur around us require businessman to adapt and innovate so the companies can survive in the midst of intense competition and achieve a sustainable competitive advantage. One of the tools that can be used to achieve this is Total Quality Management (TQM). TQM is a holistic approach method and a management philosophy to look for company improvement systems to produce products or services that can meet customer expectations (Sutrisno et al. 2021). TQM can help companies to make continuous quality improvements that adapt to customer wants and needs which in the end can also increase the company's competitiveness and profits (Lestari & Sutrisna, 2021).

TQM is divided into two sides, namely soft TQM and hard TQM. Soft TQM side focuses on internal relation of the company while the hard TQM side focuses on technique to improve product quality (Tanjojo et al. 2021). Soft TQM side has a dominant effect in service firms because its focuses on human resource management (Aripin & Sumarsid, 2019). The elements of soft TQM are top management commitment, continuous improvement, training and education, customer focus, process management, workforce management, and supplier relationship (Sutrisno, 2019a).

In this global environment, every firm is looking for a way to do an expansion and improve their businesses in case of quality to increase their firm performance (Keinan & Karugu, 2018). So far, many firms prefer to measure their firm performance from the financial and employees aspects even though operational aspects are also important because it related to quality, reliability, speed, flexibility, and cost to produce a product or service (Ghazani & Wibowo, 2021). Efficient operational performance has a direct effect on the company's income level (Abubakar & Odock, 2018). Based on that and looking at the condition of the income of the three business segments of PT SIER which is still volatile, the performance that was chosen in this study is operational performance. Operational performance itself provides an overview of the company's ability to compete and respond to customer needs and expectations by developing the ability to be better than competitors in the long term (Ghazani & Wibowo, 2021).

Table 1. Business performance in financial, service, and real estate sector (Bi.go.id, 2021)

Year	Quarter	WBT-Weighted Net Balance (%)
2019	I	1,93
	II	3,01
	III	2,99
	IV	3,01
2020	I	1,13
	II	-2,69
	III	0,26
	IV	0,79

Table 2. PT SIER’s income based on business segments (PT Surabaya Industrial Estate Rungkut, 2020)

Year	Segment	Income (in billion)
2019	Core Business	127,82
	Non-Core Business (Direct)	281,84
	Non-Core Business (Indirect)	252,26
2020	Core Business	83,35
	Non-Core Business (Direct)	265,24
	Non-Core Business (Indirect)	34,39

TQM that implemented properly can improve operational performance (Hibau et al. 2019). This is in line with a number of studies that prove that TQM has a positive effect on the company’s operational performance (Kiprotich et al. 2018; Sutrisno, 2019a; Lestari & Sutrisna, 2021; Tanjoyo et al. 2021). Many previous studies have discussed the effect of soft TQM on manufacturing companies (Kiprotich et al. 2018; Sutrisno, 2019a; Tanjoyo et al. 2021), but not many of them discussed the effect of soft TQM on service companies. In fact, soft TQM approach is not only limited for quality improvement in the manufacturing sector but can also be widely adopted by service sector companies to provide services with good quality (Khan et al. 2020).

PT SIER, which is a service company providing industrial estates is a home for many companies. They need to provide good service quality in order to retain customers and increase their income. In addition, by providing good service quality, PT SIER can also be a good example for companies that is using their services. Thus, the title of the research is, “The Effect of Soft Total Quality Management towards Operational Performance at PT SIER”. The research objectives were to find out the effect soft TQM elements that consist of top management commitment, continuous improvement, training and education, customer focus, process management, workforce management, and supplier relationship toward PT SIER’s operational performance. Based on the theoretical background above, the hypothesis formulated in this study is that all of the soft TQM elements has a significant effect on PT SIER’s operational performance. The results of the research are expected to be used as the basis for making and taking strategies in service company to improve their operational performance through the application of soft TQM.

METHODS

The population of this study is PT SIER’s active employees from logistics, strategic business unit SIER, and supporting services divisions with a total population of 89 people. This study uses quantitative method, where this method is using data in the form of numbers and analyzed through statistics (Nana & Elin, 2018). This research was conducted in February 2022-June 2022. This study uses slovin’s formula and proportional stratified random sampling to determine the sample, it was found that the number of the sample was 72 samples. This sampling method was chosen because it can ensure a fair and equitable selection of units that vary across various groups thereby reducing sampling bias (Etikan & Babatope, 2019). The criteria used for the sample is employees with the level of position as an officer.

This study uses primary data source that refer to data collected from research respondent (Jameel & Majid, 2018). Data were collected using a questionnaire with likert scale. The likert scale used severe alternative answers, namely 1) Strongly disagree, 2) Disagree, 3) Slightly disagree, 4) Neutral, 5) Slightly agree, 6) Agree, and 7) Strongly agree. This study uses data collection methods by distributing the questionnaires directly to the 72 samples. This method was chosen because the procedure is efficient. Then, the collected data will be analysed using Structural Equation Model-Partial Least Square (SEM-PLS) with SmartPLS 3 software. This method was chosen because the number of samples required is not large, can analyse constructs with both normative and reflective indicators, and can be used on models whose theoretical basis is not strong (Furadantin, 2018).

Keinan and Karugu (2018) stated that top management commitment that prioritizes quality can improve operational performance. Based on that, he first hypothesis of this research is proposed as follows: **H₁: Top Management Commitment has a positive effect on Operational Performance**

Continuous improvement is important to be implemented in every process. Job description of each employee must also include continuous improvement as a responsibility because continuous improvement can improve the company's operational performance (Kiprotich et al. 2018). Based on that, the second hypothesis of this research is proposed as follows: **H₂:**

Continuous Improvement has a positive effect on Operational Performance

Quality improvement based on training and education contributes to improve the company's operational performance (Ghazani & Wibowo, 2021). Based on that, the third hypothesis of this research is proposed as follows: **H₃: Training and Education has a positive effect on Operational Performance**

Companies that has more focus on customer needs can improve organizational operational performance (Senarath et al. 2020). Based on that, the fourth hypothesis of this research is proposed as follows: **H₄: Customer Focus has a positive effect on Operational Performance**

Process management that applied effectively can improve the operational performance of the organization (Senarath et al. 2020). Based on that, the fifth hypothesis of this research is proposed as follows: **H₅: Process Management has a positive effect on Operational Performance**

Soft TQM where one of the elements is workforce management has a significant influence on operational performance (Sutrisno, 2019a). Based on that, the sixth hypothesis of this research is proposed as follows: **H₆: Workforce Management has a positive effect on Operational Performance**

Supplier relationship can help the company to improve operational performance because it related to product quality, delivery time, flexibility, and productivity while keeping production costs to a minimum (Adem & Viridi, 2021) and Structural Equation Modeling (SEM). Based on that, the seventh hypothesis of this research is proposed as follows: **H₇: Supplier Relationship has a positive effect on Operational Performance**

Based on Figure 1, it can be concluded that top management commitment, continuous improvement, training and education, customer focus, process management, workforce management, and supplier relationships are independent variables and operational performance is the dependent variable.

RESULTS

From 72 respondents, most respondents in this study were male (72.2%). The respondent's age dominated by the age range of 30 to 39 years old (45.8%). Most of the respondents live in Surabaya (54.2%). Lastly, 40,3% of the respondents worked for 1 to 5 years at PT SIER.

Descriptive Statistics Analysis

The purpose of this analysis is to determine the status and describe the collected data (Murjani, 2022). The performance of each variable can be seen in Table 3. Based on Table 3, it can be known that the mean of all variables was above 6 and that means the respondents agree with the indicators that was used in the questionnaire.

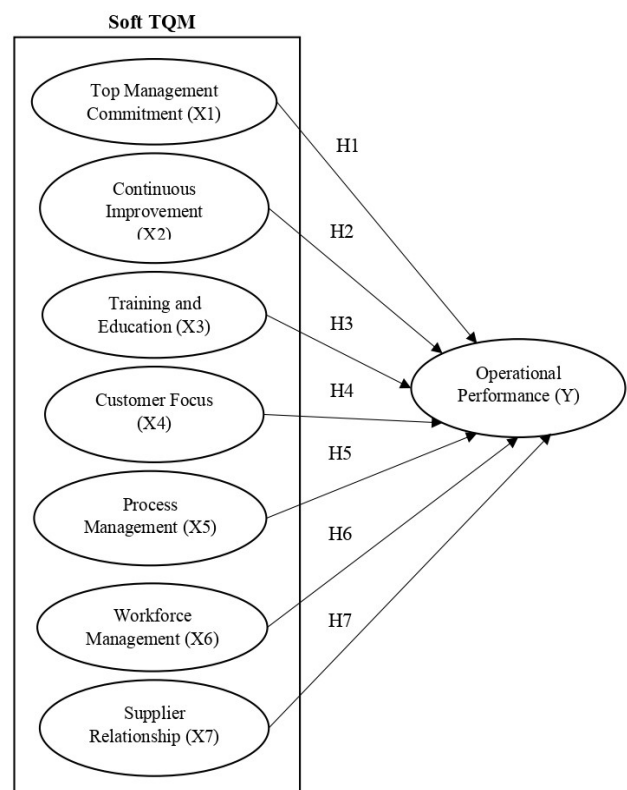


Figure 1. The research model

Outer Model Evaluation

The first test in outer model evaluation is convergent validity. The purpose of this test is to measure how much the correlation between constructs and latent variables (Purwanto & Sudargini, 2021). The data is considered valid if each item tested has an Outer Loading (OL) value > 0,7 and has an Average Variance Extracted (AVE) > 0,5 (Hair et al. 2014). From table 4, it can be known that all variables were valid because it meets all the criteria for convergent validity test.

The second test is Discriminant. This test aims to determine whether a reflective indicator can be a good measure of its construct. The way to measure is by looking at the Fornell Larcker criterion or cross loading value (Hair et al. 2014). This study uses cross loading to check the validity. It was found that the value of cross loading on a variable against the variable itself has met the criteria for this test because it has a greater value than its correlation to other variables. This also show that all indicators can be a good measure of its construct.

The third test is reliability. The purpose of this test is to measure the reliability of the internal construct (Hair et al. 2014). The variable is reliable if the value of the cronbach's alpha \geq 0,7. Based on table 4, it can be concluded that all variables in this study is reliable because it meets the criteria of this test.

Inner Model Evaluation

The first test in inner model evaluation is R-square. This test aims to assess how much endogenous constructs can be explained by exogenous constructs (Furadantin, 2018). The value of this test is between 0 to 1 to indicate the level of predictive accuracy (Hair et al. 2014). It can be known that the R-square value of operational performance variable is 0,817. The value represents the effect of soft TQM elements towards operational performance is 81,7% and other variables influence the remaining 18,3%.

The second test is Q-square. The purpose of this test is to assess the predictive relevance of a model (Furadantin, 2018). If the Q-square value is more than 0 then it indicates a good predictive relevance (Hair et al. 2014). It was found that the value of the Q-square test is 0,583 that means the model of this study has a good predictive relevance.

The third test is F-square that aims to know how much influence between variables (Hair et al. 2014). If the value of F-square 0,02 then it has a small effect, 0,015 has a moderate effect, and 0,35 has a large effect (Furadantin, 2018). It was found that top management commitment, continuous improvement, training and education, process management, and workforce management has a small effect towards operational performance. Customer focus has a moderate effect towards operational performance. Supplier relationship has a large effect towards operational performance.

Table 3. Descriptive Statistics

Variable	Mean	Std. Deviation
Top Management Commitment (TMC)	6.160	0.977
Continuous Improvement (CI)	6.403	0.720
Training and Education (TNE)	6.449	0.673
Customer Focus (CF)	6.361	0.727
Process Management (PM)	6.542	0.665
Workforce Management (WM)	6.125	0.880
Supplier Relationship (SR)	6.225	0.871
Operational Performance (OP)	6.315	0.755

Table 4. Convergent validity and reliability test result

Variable	Indicator	OL	AVE	Cronbach's Alpha
TMC	X1.1	0.898	0.793	0.739
	X1.2	0.883		
CI	X2.1	1.000	1.000	1.000
	X3.1	0.873		
	X3.2	0.770		
TNE	X3.3	0.810	0.671	0.782
	X4.1	0.924		
	X4.2	0.897		
CF	X4.1	0.924	0.829	0.795
	X4.2	0.897		
PM	X5.1	1.000	1.000	1.000
	X6.1	0.771		
WM	X6.2	0.872	0.6888	0.885
	X6.3	0.916		
	X6.4	0.827		
	X6.5	0.749		
	X7.1	0.802		
SR	X7.2	0.884	0.735	0.880
	X7.3	0.871		
	X7.4	0.871		
	X7.4	0.871		
OP	Y1.1	0.855	0.791	0.867
	Y1.2	0.931		
	Y1.3	0.881		

Hypothesis Test

The results of the data processing can be used to test the hypothesis in this study. This test uses the algorithm bootstrapping report-path coefficients by looking at the t-statistics and original sample value to determine the significance and relevance of each formative indicator (Hair et al. 2014). Hypothesis accepted if the t-statistics value > t-table (Furadantin, 2018). This study uses 72 samples so the significance t-table value that was used is 1,66. The value of the original sample that close to 1 indicates a strong positive relation and if its close to -1 indicates a strong negative relation (Hair et al. 2014). The summary of hypothesis testing can be seen in Table 5.

Table 5. Hypothesis test results

Hypothesis	Original Sample	T-statistics	Result
TMC→OP	0.170	1.748	Supported
CI→OP	-0.060	1.023	Unsupported
TNE→OP	-0.119	1.365	Unsupported
CF→OP	0.303	2.467	Supported
PM→OP	0.058	0.605	Unsupported
WM→OP	0.019	0.122	Unsupported
SR→OP	0.583	2.911	Supported

Top Management Commitment Positively and Significantly Affects the Operational Performance at PT SIER

This research showed that top management commitment affects PT SIER's operational performance. The result of this study is supported by the research of Ghazani and Wibowo (2021) and Sutrisno (2019a) which stated that top management commitment has a positive and significant effect on operational performance. Quality purposes can be achieved with top management commitment. Top management is the person who is responsible for determining the strategic direction and setting up processes that drive the company's high performance (Ahmad & Zaidi, 2020). The existence of top management's commitment is needed to empower their members to achieve these qualities.

Continuous Improvement Has No Effects on Operational Performance at PT SIER

This research showed that continuous improvement has no effect on PT SIER's operational performance. In general, continuous improvement needs to be done

to respond to the current tight global competition. On the other hand, the observation made by Tanjoyo et al. (2021) states that to carry out continuous improvement in various aspects, require high cost. This condition is not in line with PT SIER's condition which requires them to do some cost efficiency caused by the covid-19 pandemic (Laporan Tahunan PT Surabaya Industrial Estate Rungkut 2020, 2020). This condition limits the company's movement to do a continuous improvement.

Training and Education Has No Effects on Operational Performance at PT SIER

This research showed that training and education have does not affect on PT SIER's operational performance. In general, training and education aims to give employees a competitive advantage (Lestari & Sutrisna, 2021). However, in 2020, the number of PT SIER's employees that participated in training and education were decreased. This is in line with PT SIER's financial situation which requires PT SIER to do some cost efficiency (Laporan Tahunan PT Surabaya Industrial Estate Rungkut 2020, 2020). Pandemic situation also forces us to work from home. Training and education have also changed from what previously could be done offline to now have to be done online. On the other hand, most of the respondents were employees with the range of age between 30-39 years old. That range of age potentially resistance to changes especially in technology. The results of this study is in line with the research conducted by Adem and Viridi (2021) and Structural Equation Modeling (SEM) that also stated that training and education have no effect on operational performance.

Customer Focus Positively and Significantly Affects the Operational Performance at PT SIER

This statement means that if the company focuses on customer needs and wants could affect PT SIER's operational performance. Organizations that depend on customers in terms of determining their needs and wants are important to support long-term performance of the company. Senarath et al. (2020) also stated that customer-focused companies have a positive correlation with operational performance. If the company understands the needs, wants, and expectations of the customers accurately and on time, the company will be able to produce high quality and reliable products or services and deliver them on time.

Process Management Has No Effects on Operational Performance at PT SIER

This study showed that process management has no effect towards operational performance. This result is supported by the research that conducted by Saleh et al. (2018) which states that process management has no effect on operational performance. In general, process management aims the results desired by the company can be achieved efficiently both in terms of costs and resources (Sutrisno, 2019b). However, to achieve good process quality performance requires a lot of costs, one of the example is by investing in technology that allows the company to achieve high level process capabilities that can't be achieved by manual processes. The pandemic situation forced PT SIER to cut expenses for cost efficiency in order to survive in this difficult time. This situation prevents PT SIER's efforts to develop a more efficient process system. On the other hand, most of the respondents were employees with the range of age between 30-39 years old. That range of age potentially resistance to changes especially in technology.

Workforce Management Has No Effects on Operational Performance at PT SIER

This study showed that workforce management has no effect towards PT SIER's operational performance. In line with the result, Adem and Viridi (2021) and Structural Equation Modeling (SEM) also states that workforce management has no significant effect on operational performance. Workforce management is driven by top management. Meanwhile, top management is responsible for many other things so employees need to have some self-awareness to involve themselves in an activity and in terms of decision making. This pandemic condition also makes it difficult for top management to control their employees because many activities are carried out online.

Supplier Relationship Positively and Significantly Affects the Operational Performance at PT SIER

This statement means that having a good relationship with supplier could increase PT SIER's operational performance. The result of this study is supported with the research conducted by Sutrisno (2019a) and also

by Adem and Viridi (2021) and Structural Equation Modeling (SEM), where establishing a good relations and transactions with suppliers allows the company to receive materials well. With that, the materials can be processed properly and being sent to the customer on time. Adem and Viridi (2021) and Structural Equation Modeling (SEM) also stated that by evaluating and selecting suppliers based on their commitment to quality, involving them in addressing quality-related issues, and building a long-term and collaborative relationships with suppliers can improve the company's performance related to product or service quality, delivery speed, and cost efficiency.

Managerial Implications

Based on the research results, the most effective way to improve service company's operational performance is by improving their top management commitment, customer focus, and supplier relationship. Companies need to encourage their top management to commit to quality improvement because they are the key driver for their members to also improve their quality. If top management has a good strategic plan and able to mobilize its members to achieve quality, operational performance will also be increased. Besides that, if companies able to build a good and sustainable relationships with customers, it will be easier for them to find out the needs, wants, and expectations of their customers. It goes the same with the suppliers, if the company able to build a good and sustainable relationship with their suppliers, it is easier for the company to get higher quality material. From that, the company can improve its products or services quality and reliability or even produce a new product or service by market demand.

The limitation of this research is when distributing the questionnaires. Even though the questionnaires distributed directly, employees that work in operational fields is difficult to find in the office because they spread in the industrial area so it takes a quite long time. Many respondents asked to leave the questionnaire for them to fill out on their own so in the process of filling the questionnaire there were some respondents who were not under control of the researcher.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study concluded that top management commitment, customer focus, and supplier relationship affects positively and significantly on PT SIER's operational performance. It's important for PT SIER to encourage their top management to commit to quality improvement, increase their focus on customer, and maintain a good relationship with their supplier. On the other hand, continuous improvement, training and education, process management, and workforce management has no effect on PT SIER's operational performance and most of them caused by the pandemic situation.

Recommendations

It is recommended for PT SIER to focus and improve their top management commitment, customer focus, and supplier relationship so they can achieve a better operational performance. For future research, it is recommended to use a different research model by adding more variables using variables other than those that already in this current study, such as hard TQM elements. It aims to find other factors that can improve the company's operational performance.

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