

The Implementation of Total Quality Management (TQM) Based On Staff Perception to the Operational Performance of PT. Kereta Api Indonesia

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ABSTRACT

The research investigated the effect of the implementation of Total Quality Management (TQM) consists of variables: focus to customer, continuous improvement and the complete involvement to the operational performance of the company, based on the staff perception. The object of the investigation is the PT. Kereta Api Indonesia (PT. KAI) iso certified 9001:2000. Using 38 sample based on simple random sampling, the reseach used questionnaire and asked the employer start from staff up to general manager. The analysis used path analysis to investigate the hypotheses. The result showed that all of the three variables which are focus to customer, continuous improvement and the complete involvement have positive and significant effect to the operational performance of the company either partially or simultaneously .

Keywords: *Total Quality Management, focus to customer, continuous improvement, complete involvement, operational performance.*

1. INTRODUCTION

As impact from globalization, fierce competition is addressed by the company by focusing on the customer satisfaction as an effort to improve competitiveness and ensure the survival of the company. Achieving a high level of quality not only on the product, yet thoroughly regarding all aspects of the company is a strategy that is widely used to meet customer satisfaction, which is known as Total Quality Management (TQM).

The implementation of TQM as suggested by Brah et al. (2002) discussed that operational performance is the major benchmarks (primary measure) because this performance is a direct impact caused by the activities undertaken during the implementation of TQM, where aspects of operational performance include: the relationship with suppliers, processing, dissemination policy, relations with employee, and customer relationships.

Rudi Suardi (2003: 37) suggests an ISO 9001: 2000 is strongly influenced by the principles known as the "Eight Quality Management Principles", namely: customer focus, leadership, personnel involvement, process approach, system improvements to management, continual improvement, making decisions based on facts, as well as mutually beneficial relationships with suppliers. ISO 9001: 2000 is the latest version that emphasizes the structure based on the pattern Plan, Do, Check, Act (PDCA) process approach, customer focus, continuous improvement (continuous improvement), and the role and responsibilities of top management in quality management systems. In general, the contents of the ISO 9001: 2000 show a model approach to TQM. Companies that accredited certified ISO in Indonesia range from manufacturing companies to service companies.

One of companies that accredited a certified ISO 9001:2000 is PT.Kereta Api Indonesia. This company engaged in railway transport and serve the need for transportation for most people of Indonesia specially in Jawa and Sumatra. although it implement the ISO principles but this companies still experiencing some problems in the quality of its

services. The data showed that a train crash between the period of 2008 recorded about 117 incidents and 36% of total incidents caused by human error factor (Department of Transportation, Directorate General of Railways 2008).

The high number of train accidents is an urgent problem faced by the management of PT.KAI. As we all know the safety of the passengers is priority in this kind of business. The evaluation showed the facts that this company have human resources constraints. High number of low quality human resources in terms of transport services knowledge, education and skills and also low commitment and discipline either in operational staffs or regulator staffs are conditions that must be handled immediately. This constraint could be the major causes of inefficient transportation services and high level of accidents caused.

Based on the discussion above, the research investigated the implementation of Total Quality Management based on the staff perception to the operational performance of PT. Kereta Api Indonesia.

2. PROBLEM IDENTIFICATION

Based on the background as discussed above the research identified some problem identification as followed:

1. How is the implementation of *Total Quality Management (TQM)* in PT. Kereta Api Indonesia.
2. How is the operational performance of PT. Kereta Api Indonesia.
3. How is the effect of TQM to the operational performance of PT. Kereta Api Indonesia.

3. PURPOSE OF THE RESEARCH

The purpose of the research are

1. to investigate and obtain the information about the implementation of *Total Quality Management (TQM)*,
2. To investigate the operational performance of PT.KAI.
3. To investigate the effect of TQM to the operational performance of PT. Kereta Api Indonesia either partially or simultaneously.

4. THE ADVANTAGE OF THE RESEARCH.

The advantages of the research are:

1. Give empirical evidences about the implementation of TQM, operational performance and the effect of TQM to the operational performance of PT.KAI.
2. As a reference to other researcher in the field implementation of TQM and its impact to operational performance of business.
3. The result of the investigation can give important information to improve the quality of service.

4. EMPIRICAL FRAMEWORK

Quality has an important meaning both as a strategic tool to compete as well as a means to satisfy the customer. Some researchers' such as Deming and Juran are a pioneer in the field of quality, in addition to Ishikawa, Taguchi, Crosby, and Feigenbaum. Juran stated quality has many meanings, including: a) Quality is the excellence of product that answer the customer's needs), b) quality is zero defect, and c) fitness of use.

The basic principles of the implementation of TQM as suggested by Blocher et al. (2000: 209), dan Rao et al. (1996: 20) are focus to customer, continuous improvement and the complete involvement

Based on the problems identification and empirical framework, the hypotheses in this research is that there is effect of the implementation of TQM both partially and simultaneously on the operational performance of the company PT. Kereta Api Indonesia.

6. LITERATURE STUDY

Burril & Ledolter (1999: 34) defined TQM as followed:

“Total Quality Management is a business management methodology that aligns the activities of all employees in an organization with the common focus of customer satisfaction through continuous improvement in the quality of all activities, good and services.”

Talha (2004) also defined “TQM refers to the broad set of management and control processes designed to focus an entire organization and all of its employees on providing products or services that do the best possible job of satisfying the customer”. Agus (2005) “TQM is a management philosophy that aims for continuously improving products and services as well as to increase market and business performance in a competitive world”.

6.1. Basic Principles of *Total Quality Management* (TQM)

Blocher et al. (2000: 209) argue that basic principles of TQM are are focus to customer, continuous improvement and the complete involvement. Rao et al. (1996: 20) also argued three basic principles as a success key in the implementation of TQM :

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

6.2. Costumer Focus

Customers in the context of TQM is the internal and external customer. Internal customers are employees or other department involved in the production process, while the external customer is the person or company that buys and uses the company's products.

Tenner & Detoro (1992: 32) argued that: “Quality is based on the concept that everyone has a customer and that the requirements, needs, and expectations of that customer must be met every time if the organization as a whole is going to meet the needs of the external customer.”

6.3. Continuous Improvement

TQM required unended process which is defined as continuous improvement where perfection is never get but always searched. Japanese use term “kaizen” to defined continuous improvement (Render & Heizer, 2001: 98).

Tenner & Detoro (1992: 32) defined that “The concept of continuous improvement is built on the premise that work is the result of a series of interrelated steps and activities that result in an output”.

6.4. Total Involvement

Tenner & Detoro (1992: 33) argued that total involvement started from the leadership and support from the top management that actively utilized all the ability of the staffs to obtain comparative advantage(empowered work force). All staff in each level are given authority to improve their result through cooperation and flexible job structure in order to solve problems, repair process and to satisfy the customers.

7. RESEARCH METHOD

7.1. Research Design and Object of the Research

The research method used in this research is an explanatory survey using the sample to explain the relationship between variables by testing the hypothesis. Horizon time of the study is the cross sectional study conducted at a specific time period at PT. Kereta Api Indonesia.

The object of the investigation is the total quality management and operational performance and the subject is the staff of PT.KAI. The population of the subject is all of the staff of PT.KAI in Bandung ranged from general manager to staff. The size of the population is 38 staffs based on formula suggested by Yamane. The data is collected either by direct interview, questionnaire and literature study. The analysis and hypotheses are tested by using path analysis using SPSS software.

The validity and reliability of the primary data obtain from the investigation is first tested by Rank-Spearman correlation test and the reliability applied the Spearman-Brown.

The ordinal data obtain from the investigation is transformed into interval scale using the Method of Successive Interval (MSI).

The hypothesis testing applied F test for the simultaneous relation and the t test for the partial relation.

8. INVESTIGATION RESULT

Rank-Spearman correlation test showed that all of the items in the questionnaire significantly valid and the reliability test using split-half method from Spearman-Brown also showed that all of the variables is reliable on 95% confidence level.

Simultaneous Hypothesis

H₀ : $\rho_{xyi} = 0$
i = 1, 2, 3

The implementation of TQM consist of customer focus, continuous improvement, and total involvement simultaneously did not affect the operational performance of PT.KAI based on employees' perception

H₁ : at least one $\rho_{xyi} \neq 0$
i = 1, 2, 3

The implementation of TQM consist of customer focus, continuous improvement, and total involvement has positive and simultaneously affect the operational performance of PT.KAI based on employees' perception

Partial Hypotheses

H₀ : $\rho_{xyi} \leq 0$
i = 1, 2, 3

The implementation of TQM consist of customer focus, continuous improvement, and total involvement partially did not affect the operational performance of PT.KAI based on employees' perception

H₁ : $\rho_{xyi} > 0$
i = 1, 2, 3

The implementation of TQM consist of customer focus, continuous improvement, and total involvement has positive but partial affect the operational performance of PT.KAI based on employees' perception

The hypotheses is tested by path analysis and the magnitude of the effect of exogenous variables to endogenous variables is analysed from direct and indirect relation from each exogenous variables.

Path Analysis result

The value of coefficient determination can be interpreted as the effect of exogenous variables to endogenous variables. The result showed that 68.61% operational performance of this company is determined by the TQM variables applied in the investigation which are :focus to customers, continuous improvement and total involvement and 31.39% is determined by other variables. The result of path analysis:

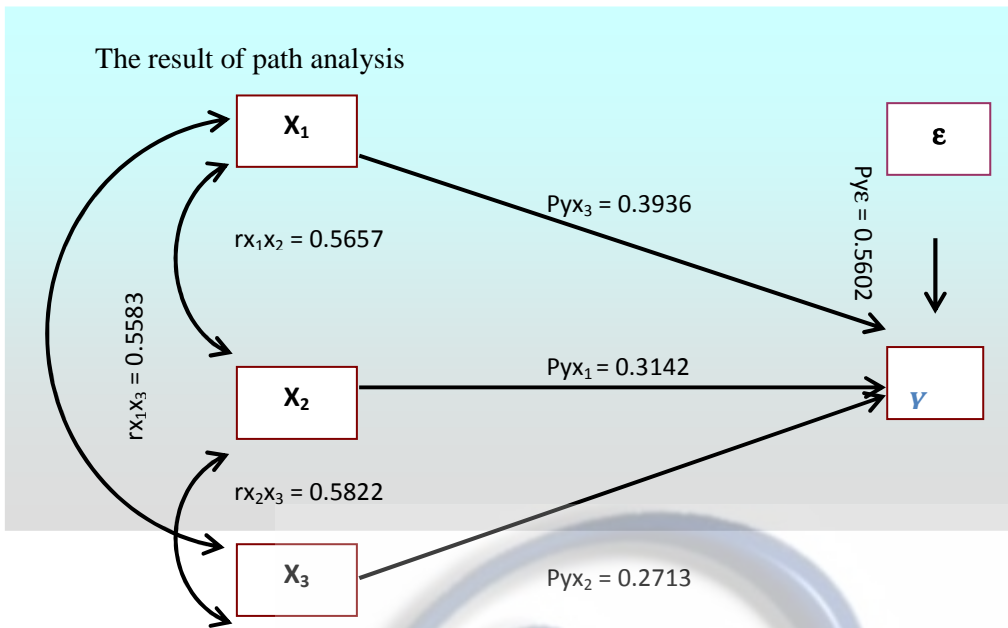


Figure 4.1 Path analysis diagram variable X to Y

The result of the path analysis then followed by F statistic test and the analysis of variance (ANOVA) table is as followed:

Simultaneous Relation Three Variables of TQM to Operational Performance of PT.KAI

Table 1 the F test result

ANOVA^b

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|---------|--------------------|
| 1 | Regression | 6.7258 | 3 | 2.2419 | 24.7758 | .0000 ^a |
| | Residual | 3.0766 | 34 | .0905 | | |
| | Total | 9.8025 | 37 | | | |

a. Predictors: (Constant), X3, X1, X2

b. Dependent Variable: Y

Table 1 showed that the F stat is significant and we can conclude that there is significant effect of the implementation of Total Quality management simultaneously to the operational performance of the company.

The directly and indirect impact of the three variables which are Customer Focus (X_1), continuous improvement (X_2), and total involvement (X_3) can be observed from the table below :

Table 2. Direct and Indirect Effect three variables of TQM to the operational performance of PT.KAI

| Direct Effect | | Indirect Effect | | | | | | | Total Effect | | |
|---|--------|-----------------|--------|----------------|--------|----------------|--------|-----------|--------------|---|--------|
| | | X ₁ | | X ₂ | | X ₃ | | Sub Total | | | |
| X ₁ | 0.0987 | + | | + | 0.0482 | + | 0.0691 | + | 0.1173 | + | 0.2160 |
| X ₂ | 0.0736 | + | 0.0482 | + | | + | 0.0622 | + | 0.1104 | + | 0.1840 |
| X ₃ | 0.1549 | + | 0.0690 | + | 0.0622 | + | | + | 0.1312 | + | 0.2861 |
| Effect of X₁, X₂, X₃ to Y | | | | | | | | | | | 0.6861 |
| Effect other variable outside the investigation to Y | | | | | | | | | | | 0.3139 |
| Total Effect | | | | | | | | | | | 1.0000 |

Sumber: estimation result.

Table 2 shows that the better implementation of TQM in the company results in increasing the company's operational performance. This can be observed from the implementation of indicators such as : the timeliness of delivery from suppliers, timeliness of delivery to the customer's company, better corporate reputation, increases employee productivity, motivation and employee satisfaction, lower employee turnover, decreased employee absenteeism, customer satisfaction, loyalty and the increase number of product repurchase, and the decline of customer complaints.

Other variables that could affect the operational performance of the company but not investigated in this research (epsilon) are the variable of company culture and reward system. Company culture built on PT Kereta Api is "RELA" or Ramah, Efisien & Efektif, Lancar, dan Aman. This can be translated as "willing" which is Friendly, Efficient & Effective, Current, and Safe. This is because for service company like PT.KAI the human resources plays important role in determining the quality of its services to customers. The implementation of this culture started from the top of the management where the exemplary of employer hoped can generate enthusiasm, and create an atmosphere of work and cooperation that produces synergy.

Partial Relation Three Variables of TQM to Operational Performance of PT.KAI

Table 3. T test result

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | |
|-------|------------|-----------------------------|------------|---------------------------|--------|-------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .1802 | .3206 | | .5620 | .5778 |
| | X1 | .2635 | .1040 | .3142 | 2.5347 | .0160 |
| | X2 | .2548 | .1188 | .2713 | 2.1449 | .0392 |
| | X3 | .3882 | .1240 | .3936 | 3.1303 | .0036 |

a. Dependent Variable: Y

The table showed that there is positive and significant effect of the implementation of TQM partially which is focus to customers, continuous improvement and total involvement to the operational performance of PT.KAI

• Customer Focus

The path analysis showed that customer Focus has a positive and significant effect to the operational performance of PT.KAI. The correlation dimension showed between X₁ and X₂ is 0.5657 and between X₁ and X₃ is 0.558, this result is inline with the criteria from Guilford and we can say that the relation between dimension or variables is intermediate. The effect of customer focus to the operational performance of PT.KAI is about 21.60%.

• Continuous Improvement

The path analysis showed that Continuous Improvement has a positive and significant effect to the operational performance of PT.KAI. The correlation dimension showed between X₁ and X₂ is 0.5657 and between X₁ and X₃ is



0.558, this result is inline with the criteria from Guilford and we can say that the relation between dimension or variables is intermediate. The effect of continuous improvement to the operational performance of PT.KAI is about 18.40%

Furthermore, if this company make continuous improvements by monitoring some activities such as monitoring other companies, reduce order fulfillment time, conduct an inspection for quality control, conduct program to evaluate the time and cost wasted, standardized process instructions, and use of statistical control charts then this company's operational performance will improve.

• Total Involvement

The path analysis showed that Total Involvement has a positive and significant effect to the operational performance of PT.KAI. The correlation dimension showed between X_1 and X_2 is 0.5657 and between X_1 and X_3 is 0.558, this result is inline with the criteria from Guilford and we can say that the relation between dimension or variables is intermediate. The effect of total involvement to the operational performance of PT.KAI is about 28.61%.

Overall involvement can be seen from: a long-term plan that focuses on improving the quality, the translation of quality improvement purposes, the discussion of the importance of quality management, and emphasis on quality improvement. Customer complaints should be handled quickly so as not to arise dissatisfaction.

Companies should encourage employees to have the initiatives deal with complaints of subscribers so that customers complaint can be handled fast. It is important for managers to give authority to employees to participate actively in taking the initiative in hopes of employee involvement can improve the company's operations. Employees are encouraged to take the initiative by providing education and training. One example is of driver training held by PT Kereta Api.

In order to solve problems, then companies can form a GKM or Quality Control Unit . The meetings in this unit can be held depend on the needs and policy. This can encourage employees to seek new ways of providing services. The company can provide facilities, such as: internal media, internal communication tools (such as KRL radio, automated train telephone or Toka train), call centers (such as: 121 on PT Kereta Api, 13 897 for complaints customers in the PT Kereta Api, 0-800-10-12345. But from the research seen by the company is not optimal because it may require large investments.

9. CONCLUSION & SUGGESTION

9.1. Conclusion:

1. The implementation of three variables of *Total Quality Management* (TQM) consist of customer focus, continuous improvement and total involvement simultaneously have significant effect to the operational performance of PT.KAI.
2. The three variables of TQM also have significant effect partially to the operational performance of PT.KAI. The highest effect came from total involvement , followed by customer focus and the last is continuous improvement.
3. The relation between variables as showed in the coefficient of correlation showed an intermediate effect according to Guilford .

9.2. Suggestion :

1. The implementation of TQM in PT.KAI should be continuoud due to the facts that this has increased the operational performance of this company. To obtain more effective result the support from the top management is essential.
2. In services based business good relationship between top management and staff is important since the staff plays important role in delivering the services of the company. Furthermore the relation should also be maintained with suppliers.
3. Company shoould also monitoring the activity of other company to have the comparative study. The evaluating by doing the inspection is aslo important to gain information about the deleivery of services in the field.

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