

# The Implementation Practices of Total Quality Management and Its Impact on Employee Performance

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## ABSTRACT

The study aimed to examine the influence of Total Quality Management (TQM) on employee performance. TQM and employee performance becomes the objects of this study. The characteristics of respondents are categorized into age, how long they work for this company, and gender. Research methods used by the author is the descriptive verification. Data collection techniques used are interview and questionnaire. Based on the result of this research, the implementation of TQM and employee performance at PT Royal Abadi Sejahtera, Bandung, is in the category of "good". So, as conclusion, the implementation of TQM significantly affects employee performance at the level of 71.5%. The company is expected to keep up or even improve its TQM implementation, so employee performance will get better, and in the end the company can reach its objective.

**Keywords :** *Total Quality Management (TQM), Employee Performance*

## 1. INTRODUCTION

PT. Royal Abadi Sejahtera, Bandung, is a factory of foam and mattress product. It has the trademarks of "ELITE" and "LADY AMERICANA", which operates in domestic and international market. It has employees who are required to be always in touch with customers and to maintain good relations. There were several phenomena regarding the implementation of TQM and employee performance at PT. Royal Abadi Sejahtera, Bandung, which was still not optimal, such as: (1) Focusing on customers. The standard is zero customer-complaint cases due to finished goods that are not up to standard, but the realization in January 2017, there were 17 cases stated in the customer-complaint form; (2) HR management. The standard is that the criteria for recruiting new workers must be in accordance with job description required by the company, during the internal audit period II 2016, in the audit checklist form no. AC-1611-0052, it was found that the employee's request to the foundation was only made by phone without written evidence attaching job description; (3) Process management. The planned internal-target for Finished Goods (FG) to pass the Quality Control (QC) is 99%, which is only 1% tolerance for FG that does not. However, the realization of rejected FG was 3.4% (calculated from a total of 405 rejected FG divided by the total check of 11,619, times 100%) during January 2017; (4) Quality of work. The company targeted zero-passing rate in QC check for FG that is not in accordance with the standards. However, there were 3 (three) findings revealed by the company's internal-

audit department in the second period of 2016, as stated in the audit checklist form no. AC-1701-0042; (5) Effectiveness. The company gives a deadline of 2 (two) days from receipt for inspection of raw materials in accordance to what has been determined by QC, but in reality, there were findings of time processing carried out by QC on inspection of raw materials (fabric) for 3 days from the date of receipt number BPB 135232/OV; (6) Production quantity. The quantity of targeted production-output is 100%, but the realization was only 99.89% for low-end products and 99.35% for high-end products; (7) Punctuality. The company's targeted number of delays is zero, but during January 2017, there were 221 late cases; (8) Independence. The company standard states that self-checking is mandatory for every production operator to reduce internal-production rejection, but during the implementation, there were some internal-production rejection caused by poor self-checking procedure by production operators as stated in the quality improvement form no. FQI-04-01-17-0001; (9) Work commitment. The company targets zero-absenteeism, but during January 2017, there were 64 cases of absenteeism.

This study aimed to determine the effect of the practice of implementing TQM on employee performance at the Head Office of PT. Royal Abadi Sejahtera, Bandung.

## 2. BACKGROUND

TQM is divided into 6 (six) main factors, namely: leadership, strategic planning, information and analysis, customer focus, human resource management, and process management [1]. The implementation of TQM will have a positive impact on employees [2].

There are six indicators to measure employee performance individually, namely: Quality, Quantity, Punctuality, Effectiveness, Independence, and Work Commitment [3]. Performance standards are targets, goals, objectives of employees' work efforts within a certain period of time [4]. When performing their work, employees must utilize all energy, thoughts, skills, knowledge, and work time to achieve what has been set by the performance standards [4].

### 2.1. Framework

Framework of thinking is a conceptual model dealing with how a person develops a theory or logically connects several aspects that are considered important for a problem [5]. Variable X is TQM consisting of: 1. Leadership; 2. Strategic Planning; 3. Information and Analysis; 4. Customer Focus; 5. Human Resource Management; 6. Process Management [1]. Variable Y is Employee Performance consisting of: 1. Work Quantity; 2. Quality of Work; 3. Punctuality; 4. Effectiveness; 5. Independence; 6. Work Commitment [3].

### 2.2. Hypothesis

It is suspected that the practice of implementing TQM at PT. Royal Abadi Sejahtera, Bandung, has an effect on employee performance.

## 3. RESEARCH METHODS

The research used descriptive and verification methods. "Descriptive method is a method in examining the status of a human group, an object, a set of conditions, a system of thought, or a class of present events" [6]. Verification is: "Research to find out the relationship between two or more variables" [7]. "Operationalization of variables is the process of operationalizing the concept of a variable so that the variable can be measured, which is formulated based on the dimensions of the concept and then categorized on the elements that can be measured" [8].

Operational indicators of TQM variables are: 1. Leadership (items P1 and P2); 2. Strategic planning (items P2 and P4); 3. Information and analysis (items P5 and P6); 4. Focus on the customer (items P7 and P8); (5) Human resource management (items P9 and P10); and 6. Process management (items P11 and P12). The operational indicators of Employee Performance variables are: 1. Quantity of Work (items P1 and P2); 2. Quality of Work (items P2 and P4); 3. Punctuality (items

P5 and P6); 4. Effectiveness (items P7 and P8); 5. Independence (items P9 and P10); 6. Work Commitment (items P11 and P12).

The scale used for variable operations is the ordinal scale. "Ordinal scale is a measurement scale that not only states the category, but also states the rank of the construct being measured" [9].

### 3.1. Research Object

The object of this research is TQM and Employee Performance obtained from the manufacturing company of PT Royal Abadi Sejahtera, Bandung, which is located at Jalan Cimareme No. 275, Padalarang, from February 2017 till completed. The Company has decided to adopt the ISO 9001: 2008 Quality Management System. ([www.royalabadisejahtera.com](http://www.royalabadisejahtera.com)) [20].

### 3.2. Population and Sampling Techniques

Population is an area of generalization, which consists of the objects or subjects with certain qualities and characteristics determined by researchers to be studied and in order to draw conclusions [10]. This study used all the employees of PT. Royal Abadi Sejahtera, Bandung, as population consisting of 21 people in the Quality Control section, 417 people in the Production section, and 7 people in the HRD section.

"Sample is part of the number and characteristics possessed by the population" [11]. The technique was carried out by simple random sampling, meaning that each member in the population gets the same opportunity to be sampled, each part is about 10-15% [12]. So, the sample was taken from the QC section (10% x 21) as many as 3 people, from the production section (10% x 417) as many as 41 people, and from HRD section (10% x 7) as many as 1 person. Thus, the total sample was 45 people.

### 3.3. Data Collection Technique

There are two types of data based on the source, namely: 1. Primary Data Sources (Interviews, Questionnaires), 2. Secondary Data Sources (Observation and Documentation). Operationalization of variables for the independent variable and the dependent variable was measured using a 5-level scale model (Likert Scale). "Likert scale is used to measure attitudes, opinions and perceptions of a person or group of people about social phenomena" [13]. The Likert Measurement Scale consists of: Strongly Agree (SA) - Score 5, Agree (A) - Score 4, Neutral (N) - Score 3, Disagree (D) - Score 2, and Strongly Disagree (SD) - Score 1.

### 3.4. Hypothesis Testing Design

Data quality was tested using the validity and reliability test. To test the data validity, we used the SPSS program. If r-count is greater than or equal to r-table (2-sided test with

significance level of 0.05), then the statement items have a significant correlation with the total score (valid). Otherwise, if r-count is less than or equal to r-table, then the instrument was considered invalid. The value of r-table is 0.300 and above [14]. If the alpha value < 0.5, it means low reliability. If the alpha is low, it is possible that one or more items are not reliable. Alpha between 0.50-0.70 means sufficient reliability, while 0.70-0.90 alpha indicates that all items are reliable. If Alpha > 0.90, it means perfect reliability [14]. "Simple regression is based on a functional or causal relationship of one independent variable with one dependent variable"[15]. "Simple Linear Regression aims to study the linear relationship between two variables."

Formula :  $Y = \alpha + \beta X$

Description : Y = Employee Performance,  $\alpha$  = Constant,  $\beta$  = Regression Coefficient, X = TQM [16]

The R-Square value shows the strength or weakness of the independent variable's ability in explaining the dependent variable [17]. In this study, the coefficient of determination is carried out to see how much TQM can affect employee performance.

The t-statistical test basically shows how much the effect of one independent variable, or variable X, individually that can explain the dependent variable's variation, or variable Y [18]. The testing criteria in the t-test or partial-test are: If the significant value of  $t > 0.05$ , thus the hypothesis is rejected, meaning that the TQM variable (X) does not affect employee performance (Y). If the significant value of  $t \leq 0.05$ , then the hypothesis is accepted, meaning that the TQM variable (X) significantly affects employee performance (Y).

#### **4. RESEARCH RESULTS AND DISCUSSION**

SPSS software was used to process the data-validity test. The test result can be considered valid, if the correlation coefficient of the statement item being tested is greater than r-table, and otherwise. The results of validity test of TQM variable have the r-count as follows: P1 = 0.703, P2 = 0.588, P3 = 0.799, P4 = 0.627, P5 = 0.648, P6 = 0.637, P7 = 0.691, P8 = 0.528, P9 = 0.643, P10 = 0.772, P11 = 0.793, P12 = 0.707. The results of validity test of employee performance variable have the r-count as follows: P1 = 0.794, P2 = 0.802, P3 = 0.759, P4 = 0.787, P5 = 0.649, P6 = 0.627, P7 = 0.689, P8 = 0.757, P9 = 0.416, P10 = 0.757, P11 = 0.667, P12 = 0.541. Thus, both variables are declared valid, because r-count > r-table (0.300).

The result of reliability test of TQM variable has a reliability coefficient of 0.922. The result of reliability testing of employee performance variable has a reliability coefficient of 0.923. The reliability test used the SPSS software. If the result of the correlation is 0.700 or greater, then the item provides a good level of reliability.

#### **4.1. Research Results and Discussion (Implementation of TQM at PT. Royal Abadi Sejahtera, Bandung)**

The number of statements in each TQM dimension is the same, namely two items, so the assessment criteria for each dimension in TQM are also the same. The following is the calculation for obtaining the assessment category class: Highest Score ( $2 \times 45 \times 5 = 450$ ), Lowest Score ( $2 \times 45 \times 1 = 90$ ), Number of Classes 5, Interval = (Total Highest Score - Lowest Total Score) : Number of Classes =  $(450 - 90) : 5 = 72$ . The assessment categories for each dimension in the TQM variable are as follows: Interval 90 - 161 : Not Good, Interval 162 - 233 : Less Good, Interval 234 - 305 : Fairly Good, Interval 306 - 377 : Good, Interval 378 - 450 : Very Good.

The calculations to obtain the assessment criteria for the overall practice of implementing TQM are: Highest Score ( $12 \times 45 \times 5 = 700$ ), Lowest Score ( $12 \times 45 \times 1 = 540$ ), Number of Classes 5. Interval =  $(2700 - 540) : 5 = 432$ . The TQM Variable Assessment Categories are as follows : Interval 540 - 971 : Not Good, Interval 972 - 1403 : Less Good, Interval 1404 - 1835 : Fairly Good, Interval 1836 - 2267 : Good, and Interval 2268 - 2700 : Very Good.

The scores of respondents' answers to the TQM variable statement items are as follows: SA (5) = 450, A (4) = 1388, N (3) = 237, D (2) = 42, SD (1) = 3. Most of the respondents answered "Agree" (4). The actual scores are as follows: P1 = 180, P2 = 180, P3 = 184, P4 = 179, P5 = 178, P6 = 172, P7 = 174, P8 = 175, P9 = 175, P10 = 172, P11 = 181, P12 = 170.

The actual total score is 2120 or 78.5% of the highest score of 2700. The 2120 score is in the 1836 - 2267 interval with good criteria. It was concluded that the practice of implementing TQM at PT. Royal Abadi Sejahtera lies in the "Good" category. Based on this result, all TQM indicators have been implemented "Well" by PT. Royal Abadi Sejahtera, Bandung. However, it cannot be said to be perfectly good, because some respondents chose neutral, disagreed, or even strongly disagreed with the practice of TQM implementation.

#### **4.2. Research Results and Discussion (Employee Performance at PT. Royal Abadi Sejahtera, Bandung)**

The number of statements in each dimension of Employee Performance is the same, namely two items, so the assessment criteria for each dimension in Employee Performance are also the same. The following is the calculation for obtaining the assessment category class: Highest Score ( $2 \times 45 \times 5 = 450$ ), Lowest Score ( $2 \times 45 \times 1 = 90$ ), Number of Classes 5, Interval = (Total Highest Score - Lowest Total Score) : Number of Classes =  $(450 - 90) : 5 = 72$ . The assessment categories for each dimension in the TQM variable are as follows: Interval 90 - 161 : Not Good, Interval 162 - 233 : Less Good, Interval 234 - 305 : Fairly

Good, Interval 306 – 377 : Good, and Interval 378 – 450 : Very Good.

The calculations to obtain the assessment criteria for the overall of the Employee Performance are: Highest Score (12 x 45 x 5 = 700), Lowest Score (12 x 45 x 1 = 540), Number of Classes 5. Interval = (2700 - 540) : 5 = 432. TQM Variable Assessment Categories are as follows: Interval 540 – 971 : Not Good, Interval 972 – 1403 : Less Good, Interval 1404 – 1835 : Fairly Good, Interval 1836 – 2267 : Good, and Interval 2268 – 2700 : Very Good.

The scores of respondents' answers to the statement items of the Employee Performance variable are as follows: SA (5) = 470, A (4) = 1323, N (3) = 243, D (2) = 66, SD (1) = 3. Most of the respondents answered "Agree" (4). Actual scores are as follows: P1 = 181, P2 = 182, P3 = 182, P4 = 177, P5 = 177, P6 = 177, P7 = 171, P8 = 176, P9 = 160, P10 = 181, P11 = 173, P12 = 167.

The actual total score is 2104 or 77.9% of the highest score of 2700. The 2104 score is in the 1836 – 2267 interval with good criteria. So, it can be concluded that Employee Performance at PT. Royal Abadi Sejahtera falls in the "Good" category. Thus, based on this result, all employee

performance indicators have been implemented "Well" by employees of PT. Royal Abadi Sejahtera, Bandung. However, it cannot be said to be perfectly good, because some respondents chose neutral, disagreed, or even strongly disagreed with their own performance.

### **4.3. Research Results and Discussion (Effect of TQM Implementation on Employee Performance)**

#### **4.3.1. Simple Linear Regression Analysis**

" $Y = \alpha + \beta X$ " is a simple linear regression model, whereas: Y = Employee Performance,  $\alpha$  = Constant,  $\beta$  = Regression Coefficient, and x = Total Quality Management. This simple linear regression equation was obtained using SPSS software to process the data by distributing questionnaires to a total of 45 respondents at PT. Royal Abadi Sejahtera, Bandung.

The result is :  $Y = 4.922 + 0.888X$

**Simple Linear Regression Analysis Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			
	B	Std. Error	Beta			Zero-order	Partial	Part	
1	1(Constant)	4.922	4.066		1.210	.233			
	TQM	.888	.086	.845	10.378	.000	.845	.845	.845

a. Dependent Variable: Kinerja Karyawan

The equation means that, if the TQM variable is zero, the employee's performance will be positive with a constant value of 4.922 units. This means that, if the TQM variable increases by one unit, then the employee's performance will also increase by 0.888 units from a constant value of 4.922. When being viewed from linear regression analysis, the effect of TQM implementation practices on employee performance produces a regression coefficient of 0.888 for the TQM variable, which illustrates that the TQM variable has a positive influence on employee performance, meaning

that the higher the TQM implementation, the higher the level of employee performance will occur.

#### **4.3.2. Coefficient of Determination (R<sup>2</sup>)**

The coefficient of determination is used to determine how much variation in the dependent variable can be explained by the independent variable.

**Coefficient of Determination (R<sup>2</sup>)**

**Model Summary**

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.845 <sup>a</sup>	.715	.708	3.59009

a. Predictors: (Constant), TQM

The output of the coefficient-of-determination analysis using SPSS software shows that the value of R-square is 0.715 or 71.5%. This illustrates that the effect of the independent variable (TQM) on the ups and downs of the dependent variable (employee performance) is 71.5%,

while the remaining 28.5% is a contribution from other variables not examined in this research. Meanwhile, the R-value of 0.845 indicates that the relationship between these two variables is very strong in this study, because the value is close to 1.

**4.3.3. t-Test**

The t-test was used to test the significance level of the effect of the independent variable (partially) on the dependent variable.

**t-Test Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
(Constant)	4.922	4.066		1.210	.233			
TQM	.888	.086	.845	10.378	.000	.845	.845	.845

a. Dependent Variable: Kinerja Karyawan

The t-test was carried out by comparing between the t-count and t-table values. The following are the results of t-test output using SPSS software, of which the t-count is 10.378. The degree of freedom is 43 (the number of data minus the number of variables) and at the significance level of 5% (two-way test 10% divided by two), then the t-table is 2.016. If t-count is less than or equal to t-table, then H<sub>1</sub> is rejected, meaning that there is no influence of variable X on variable Y. If the t-count is greater than t-table, then H<sub>1</sub> is accepted, meaning that there is an influence of variable X on variable Y. From Table 2, it is known that the t-count is 10.378 and the t-table is known to be 2.016. In this situation, it can be concluded that t-count > t-table (10.378 > 2.016), hence H<sub>1</sub> was accepted.

Therefore, TQM has a significant effect on employee performance. On this basis, it is proven that this study has the same results as other previous studies with the same topic as follows:

1. Musran Munizu (2010) [1]  
The title of this research is "Praktik Total Quality Management (TQM) Dan Pengaruhnya Terhadap Kinerja Karyawan (Studi Pada PT. Telkom Tbk. Cabang Makassar)". The result of this research is that the implementation of TQM consisting of leadership, strategic planning, customer focus, information and analysis, HR management, and management processes, have significant and positive effects on employee performance.
2. Said Alhudri and Meyzi Heriyanto (2015) [19]  
The title of this research is "Pengaruh Penerapan Total Quality Management (TQM) Terhadap Kinerja Karyawan Pada PT. PLN (Persero) Ranting Bangkinang". The result of this research is that the implementation of TQM positively and significantly affects employee performance.
3. Octriz Orista Amelia Yunanto (2016) [21]  
This study entitled "Pengaruh Total Quality Management Terhadap Kinerja Karyawan Pada PT Pos Indonesia (Persero) Klas II Makassar". The result of this study is that the implementation of TQM positively affects employee performance.

4. Abdul Aziz Nugraha Pratama dan Fira Nur Maghfiroh (2016) [22]  
This study entitled "Pengaruh Total Quality Management (TQM) Terhadap Kinerja Karyawan di BMT Taruna Sejahtera Ungaran, Jawa Tengah". The result of this study is that the implementation of TQM also positively affects the employee performance.

**5. CONCLUSION**

The results of this study are as follows:  
The implementation of TQM is concluded to significantly affect the employee performance at PT. Royal Abadi Sejahtera, Bandung. The test of simple linear regression analysis shows a positive effect with a beta coefficient of 0.888, the CD shows the magnitude of the effect of TQM on employee performance as much as 71.5%, and the t-test shows that H<sub>1</sub> was accepted, because t-count is greater than t-table (10.378 > 2.016), thus all these results have the meaning that the implementation of TQM positively and significantly affects the employee performance at PT. Royal Abadi Sejahtera, Bandung. The better the implementation of TQM, the better the performance of employees will occur. And as the opposite, the worse the implementation of TQM, the worse the performance of employees at PT. Royal Abadi Sejahtera, Bandung will be.

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