



## Application Of Total Quality Management (TQM), Performance Measurement System And Effectiveness Systems On Managerial Performance

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### ABSTRACT

*The application of high TQM will improve managerial performance, and vice versa. Managers will be more motivated to improve performance, if high performance measurements in the form of information needed that provide feedback for improvement and learning. After TQM is applied, managerial performance must be measured to find out how the manager's abilities (keep in mind that this has entered the millennial era) in supporting the company's strategy. The measuring instrument used to determine how much the manager's ability is a performance measurement system based on multicultural, because the performance measurement system based on multicultural is a combination of financial performance and non-financial performance. The multicultural performance measurement system is the Balance Scorecard (BSC). BSC was chosen because the BSC indicator which consists of financial, customer, internal business processes, and learning and growth perspectives and is very comprehensive. These indicators are very applicable to measure the manager's performance. The awards received by middle managers can be in the form of financial and non-financial rewards. Financial awards are external awards given to the performance given to companies in the form of salaries, wages, bonuses, commissions, pensions, accident insurance, and others. While non-financial rewards are part of the work itself such as task completion, achievement, personal development and so on. Performance-based reward systems encourage employees to change their tendencies from enthusiasm to fulfill their own interests to the spirit of meeting organizational interests. Performance-based rewards provide two benefits, namely motivating and providing information (Mulyadi and Jhony, 1998).*

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## 1. Introduction

In the millennial era (generation Y / genY or Generations of Broadlines) every company is required to carry out the digital era, and this makes companies face increasingly fierce competition with more and more competitors and demands that companies must always be able to pay attention to the needs and desires of consumers with the digital era.

This can be seen in changes in the global environment that have an impact on market growth and international trade, requiring that every business person who wants to win competition in the industrial world pay full attention to the quality of products in the millennial era so that the organization can run effectively, and so that the product is liked by consumers millennial. Companies that try to make continuous improvements usually use TQM or JIT techniques. Some companies that have implemented TQM have managed to improve their performance, but some have not been able to improve their performance. To be able to make products or services that have good quality, the company is very dependent on the ability of management to carry out management functions, namely planning, organizing, directing and solving problems.



Managerial performance is one of the factors that can increase the effectiveness of the organization, situations and environmental conditions that change (dynamic) according to the management to always follow the changes, especially in the current situation in the millennial era if not then the decisions taken and the actions of the organization will not in accordance with organizational goals. Managerial performance includes technology, environmental uncertainty, strategy, management accounting systems, and competence. In the end, performance is a management tool to assess and see the progress achieved so far or in a certain period of time.

## 2. Theoretical Review

### 2.1. TQM (Total Quality Management)

TQM is a new paradigm in doing business that seeks to maximize organizational competitiveness through: a focus on customer satisfaction, involvement of all employees, and continuous improvement of the quality of products, services, people, processes and organizational environment (Tjiptono, 2002) in Melia (2011). TQM is also a combination of all functions of the organization / company into a holistic philosophy that is built based on the concepts of quality, teamwork, productivity and customer understanding and satisfaction.

According to Garrison (2006) there are two main characteristics of TQM namely, focus on customer service and systematic problem solving by using a team that is in the front post. One way to serve the desires of consumers is to create quality products or services.

The application of high TQM will improve managerial performance, and vice versa. Managers will be more motivated to improve performance, if performance measurements are high in the form of information needed that provides feedback for improvement and learning.

#### Performance Measurement System

In modern organizations, performance measurement provides an important mechanism for employees to be used in explaining goals and performance standards and motivating individual performance at a later time. Performance measurement provides the basis for decisions affecting salary, promotion, termination, transfer training and other staffing conditions. Implementation of performance measurement systems in a company is to determine the characteristics and quality of performance and identify what actions need to be taken to make improvements in order to improve work. the more often a company is measuring the performance of its employees, the company will further improve the performance of its employees, so that with increasing performance the quality of the main objectives will be achieved.

### 2.2. Reward System

Rewards (compensation) are what are received by employees in exchange for their contribution to the organization. (Simamora 2001: 540).

Awards given by companies greatly affect the productivity and tendency of employees to stay with the organization or find other work. The greater the company's attention to the needs of its employees, the company will get the appropriate reciprocity, namely maximization in work productivity.

Likewise, a performance-based reward system encourages employees to change their tendencies from passion to fulfill their own interests to the spirit of meeting organizational interests. Performance-based rewards provide two benefits, namely motivating and providing information (Mulyadi and Jhony, 1998).

#### Managerial Performance

Performance is the center of attention in an organization. Performance is a condition that must be known and informed to certain parties to determine the level of achievement of an agency's results associated with the vision carried by an organization and to know the positive and negative impacts of an operational policy taken.

According to Nasution (2005) what is meant by managerial performance is the performance of individual members of the organization in managerial activities, including: planning, investigation, coordination, evaluation, supervision, staffing arrangements, negotiation and representation. Managerial performance is one of the factors that can improve the effectiveness of the organization, situations and environmental conditions that change (dynamic) according to the management to always follow the changes, otherwise the decisions taken and organizational actions will not be in accordance with organizational goals. Managerial performance includes technology, environmental uncertainty, strategy, management accounting systems, and competence. Managerial performance is needed in the organization because with maximum managerial performance is expected to be able to bring success to the company he leads.

## 3. Research Methods

The type of data used in this study is Primary Data, that is data obtained from respondents in connection with the object of research using a questionnaire given to parties related to the object under study. The questionnaire used is closed, namely the questionnaire that has provided alternative answers. Data sources in



this study were respondents, namely lecturers and employees who work at PTS STIE Malangkecwara Malang. Data collection in this study, carried out by questionnaire, was carried out by giving a set of written statements to the respondents to be answered. The questionnaire contained questions relating to TQM, a performance measurement system and a system of rewards for Managerial performance with Managerial Performance. To avoid respondents' doubts about various questions that might be considered sensitive, the application letter also explained that the information from the respondent would be kept confidential. The dependent variable in this study is Managerial Performance (Y). Independent variables The independent variables in this study are TQM (X1), Performance Measurement System (X2), and Award System (X3). This regression analysis is used to calculate the amount of influence between the independent variables, namely Total Quality Management (X1), Performance Measurement System (X2), Reward System (X3) to the dependent variable, namely Managerial Performance (Y).

#### 4. Research Results And Discussion

Regression equation is used to determine the form of the relationship between the independent variable with the dependent variable. By using SPSS for Windowsver 21.00 a regression model is obtained as shown in Table 1:

**Table 1**  
Regression Equations

Variabel Bebas	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.960	6.993		0.709	0.481
X1	0.466	0.210	0.322	2.222	0.031
X2	0.887	0.435	0.311	2.038	0.047
X3	0.958	0.471	0.245	2.034	0.047

Based on Table 1 we get the following regression equation:

$$Y = 4.960 + 0.466 X1 + 0.887X2 + 0.958X3$$

From the above equation can be interpreted as follows:

- Regression coefficient X1 of 0.466, meaning that Managerial Performance will increase by 0.466 units for each additional one unit X1 (Total Quality Management). So if Total Quality Management experiences an increase of 1 unit, the Managerial Performance will increase by 0.466 units assuming the other variables are considered constant.
- Regression coefficient X2 of 0.887, meaning that the Managerial Performance will increase by 0.887 units for each additional one unit of X2 (Performance Measurement System), So if the Performance Measurement System experiences an increase of 1 unit, the Managerial Performance will increase by 0.887 units with the assumption that the other variables are considered constant.
- Regression coefficient X3 of 0.958, meaning that the Managerial Performance will increase by 0.958 units for each additional one unit of X3 (Award System), So if the Performance Measurement System has increased by 1 unit, the Managerial Performance will increase by 0.958 units, assuming the other variables are considered constant.

#### 4.1 Coefficient of Determination (R<sup>2</sup>)

To find out the contribution of the independent variable (Total Quality Management (X1), Performance Measurement System (X2), and Reward System (X3)) to the dependent variable (Managerial Performance), the value of R<sup>2</sup>, R<sup>2</sup> value as in Table 2 below:

**Table 2**  
Correlation and Determination Coefficient

R	R Square	Adjusted R Square
0.794	0.630	0.608

The coefficient of determination is used to calculate the amount of influence or contribution of the independent variable on the dependent variable. From the analysis in Table 2 the adjusted R (coefficient of determination) results is obtained at 0.608. This means that 60.8% of the Managerial Performance variable will be influenced by the independent variables, namely Total Quality Management (X1), Performance Measurement System (X2), and Reward System (X3). While the remaining 39.2% of the Managerial Performance variable will be influenced by the variables the others are not discussed in this study.

In addition to the coefficient of determination also obtained correlation coefficient which shows the magnitude of the relationship between the independent variables namely Total Quality Management, Performance Measurement System, and Valuation System with Managerial Performance variables, the value of R (correlation coefficient) is 0.794, the value of this correlation indicates that the relationship between the independent variables is Total Quality Management (X1), Performance Measurement System (X2), and Reward System (X3) with Managerial Performance are included in the strong category because they are in the interval 0.6 - 0.8.

**4.2. Hypothesis Testing**

Hypothesis testing is an important part of research, after data is collected and processed. Total Quality Management is primarily to answer the hypotheses made by researchers.

**4.3. Hypothesis I (F test / in unison)**

Testing F or testing the model is used to find out whether the results of the regression analysis are significant or not, in other words the model that is allegedly appropriate / appropriate or not. If the results are significant, then H0 is rejected and H1 is accepted. Whereas if the results are not significant, then H0 is accepted and H1 is rejected. This can also be said as follows: H0 is rejected if F arithmetic > F table  
H0 is accepted if F arithmetic < F table

**Table 3**  
F / Concurrent Test

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	2884.881	3	961.627	29.482	0.000
Residual	1696.101	52	32.617		
Total	4580.982	55			

Based on Table 3 the calculated F value of 29.482. While the F table ( $\alpha = 0.05$ ; db regression = 3: db residual = 52) is 2.783. Because F arithmetic > F table is  $29.482 > 2.783$  or sig F (0,000)  $< \alpha = 0.05$  so the regression analysis model is significant. This means that H0 is rejected and H1 is accepted so that it can be concluded that the dependent variable (Managerial Performance) can be significantly influenced by the independent variables (Total Quality Management (X1), Performance Measurement System (X2), and Award System (X3)).

**4.4. Hypothesis II (t test / Partial)**

t test is used to determine whether each independent variable partially has a significant effect on the dependent variable. It can also be said if t count > t table or -t count < -t table then the result is significant and means that H0 is rejected and H1 is accepted. Whereas if t arithmetic < t table or -t arithmetic > -t table then the results are not significant and means that H0 is accepted and H1 is rejected. The results of the t test can be seen in Table 4.

**Table 4**  
T / Partial Test Results

Independent variable	t count	Sig.	Information
(Constant)	0.709	0.481	
X1	2.222	0.031	Significant
X2	2.038	0.047	Significant
X3	2.034	0.047	Significant

Based on Table 4 the following results are obtained:

- a) t test between X1 (Total Quality Management) with Y (Managerial Performance) shows t arithmetic = 2.222. While t table ( $\alpha = 0.05$ ; db residual = 52) is 2.007. Because t arithmetic > t table is  $2.222 > 2.007$  or sig t value (0.031)  $< \alpha = 0.05$ , the effect of X1 (Total Quality Management) on Managerial Performance is significant. This means that H0 is rejected and H1 is accepted so it can be concluded that Managerial Performance can be significantly influenced by Total Quality Management or by increasing Total Quality Management so Managerial Performance will experience a significant increase.
- b) t test between X2 (Performance Measurement System) with Y (Managerial Performance) shows t arithmetic = 2.038. While t table ( $\alpha = 0.05$ ; db residual = 52) is 2.007. Because t arithmetic > t table is  $2.038 > 2.007$  or sig t value (0.047)  $< \alpha = 0.05$ , the effect of X2 (Performance Measurement System) on Managerial Performance is significant at alpha 5%. This means that H0 is rejected and H1 is accepted so that it can be concluded that the Managerial Performance can be significantly influenced by the Performance Measurement System or by improving the Performance Measurement System the Managerial Performance will increase significantly.
- c) t test between X3 (Award System) with Y (Managerial Performance) shows t arithmetic = 2,034. While t table ( $\alpha = 0.05$ ; db residual = 52) is 2.007. Because t arithmetic > t table is  $2.034 > 2.007$  or sig t value (0.047)  $< \alpha = 0.05$ , the effect of X3 (Award System) on Managerial Performance is significant at alpha



5%. This means that H<sub>0</sub> is rejected and H<sub>1</sub> is accepted so that it can be concluded that Managerial Performance can be significantly influenced by the Rewards System or by increasing the Rewards System the Managerial Performance will experience a significant increase.

From the overall results it can be concluded that the independent variables have a significant effect on Managerial Performance simultaneously and partially. And from this it can be seen that the three independent variables which have the most dominant influence on Managerial Performance are Total Quality Management because they have the greatest beta coefficient and t arithmetic value.

## 5. Conclusions

Based on the results of data analysis using multiple regression analysis in this study it can be concluded that the coefficient value of Total Quality Management (X<sub>1</sub>) is 0.466, meaning that Managerial Performance will increase by 0.466 units for each additional one unit of X<sub>1</sub> (TQM) and the Positive Performance Measurement System (X<sub>2</sub>) equal to 0.887 means that Managerial Performance will increase by 0.887 units for each additional one unit X<sub>2</sub> or (Performance Measurement System) and Reward System (X<sub>3</sub>) by 0.958 meaning Managerial Performance will increase by 0.958 units for each additional one unit X<sub>3</sub> (Award System). Meanwhile, to determine the contribution of TQM independent variables (X<sub>1</sub>), Performance Measurement Systems (X<sub>2</sub>), and Award Systems (X<sub>3</sub>) the R<sup>2</sup> value of determination coefficient is used to calculate the amount of influence or contribution of independent variables to the dependent variable. From the analysis of table 4.12 the adjusted R<sup>2</sup> results are 0.608 meaning that the Managerial Performance variable will be influenced by independent variables namely X<sub>1</sub> (TQM), X<sub>2</sub> 9 Performance Measurement System and X<sub>3</sub> (Award System), while the remaining 39.2% dependent variable Managerial Performance will be influenced by other variables not discussed in this study.

Only 60 questionnaires returned, but 56 questionnaires can be further processed.

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