The 1st International Student Conference on Economics and Business Excellence (ISCEBE) 2024
e-ISSN: xxxx-xxxx/Vol.1/SI-ISCEBE (2024)

# A QUANTITATIVE STUDY OF THE EFFECT OF EMPLOYEE INVOLVEMENT IN IMPROVEMENT ENTITLED BEST OF BEST ON PERFORMANCE IMPROVEMENT WITHIN PT EVOLUZIONE TYRES

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**Abstract**

*Employee involvement in development in the company will have a significant effect on improving the quality of performance. Employees who feel valued and supported by the company will be motivated and dedicated to show high enthusiasm and productivity, and actively participate in the process of innovation and improvement. This study aims to analyze the effect of employee involvement in improvement programs on improving employee performance at PT Evoluzione Tyres. The method used is quantitative, with data obtained from questionnaires distributed to employees. The results showed that improvement has a positive and significant effect on performance, with a regression coefficient value of 0.845. The t-test resulted in a t-count value of 9.938, which is much greater than the t-table (2.009), and a p-value of 0.000, indicating that the null hypothesis is rejected. In addition, the ANOVA test showed a significance value of 0.000, indicating that the regression model used is valid to predict the relationship between the two variables. The regression equation obtained is Y = 6.916 + 0.845X the coefficient for variable X is 0.845. The coefficient of determination ($R^2$) of 65.5% indicates that improvement has a significant effect on improving performance. This research confirms the importance of employee involvement in improvement programs as a key factor in improving performance in the company.*

**Keywords:** development, employee, improvement, performance enhancement

## Introduction

PT Evoluzione Tyres is a company that produces motorcycle tires under the Pirelli, Metzeler, and Aspira Premio trademarks. The company is a joint venture between Pirelli S.p.A., an international tire manufacturer, and PT Astra Otoparts Tbk, a leading automotive component provider in Indonesia. In today's highly competitive era, companies are required to continue to innovate and improve performance to survive and thrive. Employee performance is the result of work achieved by individuals, both quantitatively and qualitatively, in accordance with the duties and authorities assigned to them as part of an effort to achieve company goals (Tsui, et al., 1997, in Chen & Wei, 2020). Improvement comes from the word improve which means improvement, which is a change towards a better condition. Continuous Improvement involves everyone working together to make improvements without requiring large capital investments (Tjiptono and Anastasia, 2003). Improvement is a Japanese management concept (Kaizen) that refers to the practice of continuous improvement in production and management processes within the company. This concept aims to improve the efficiency and productivity of the company by paying attention to every stage in the production process (Cane, 1998).

The concept of continuous improvement has its roots in the American discipline of statistical quality control (Shewhart, 1931) and the Japanese concept of 'Kaizen' (Imai, 1986). Developing the ability to make continuous improvements is seen as a long-term investment that creates conditions where continuous improvement and refinement become an integral part of organizational life (Caffyn, 1999). Employee involvement in improvement and development programs, such as the “Best of Best” improvement program at PT Evoluzione Tyres is one of the important factors that influence the achievement of organizational goals. According to Gheisari et al. (2014), employee involvement has an important role for companies because it can improve social aspects, such as teamwork, participation in decision making, the level of employee support for organizational goals, and show achievement and progress in their work.

All employees can participate in this improvement program. Employee involvement not only increases motivation and job satisfaction, but also directly contributes to productivity and quality of work results. According to research by Rusdiana et al. (2022), implementing improvement in a company can provide various benefits, such as avoiding waste, accelerating adaptability, ensuring timeliness in production, accelerating product completion, improving production flow, improving product quality, developing responsive employees, helping in dealing with uncertainty, increasing productivity, reducing

costs, improving quality, optimizing resource utilization, strengthening communication, and improving employee morale. PT Evoluzione Tyres, as one of the companies engaged in the tire industry, realizes the important role of employees in this improvement process. Therefore, this study aims to explore and analyze the effect of employee involvement in the "Best of Best" improvement program on performance improvement within PT Evoluzione Tyres.

The issues raised include the condition of employee performance before involvement in the program, the effect of employee involvement in the improvement program on their performance, and the extent to which the level of employee involvement affects performance results in the company environment. Productivity is the amount of output produced by a worker or a unit of another factor in a given period of time. According to Sinungan (2005), productivity is traditionally defined as the ratio between the results obtained (output) and all production resources used (input). Basically, productivity reflects an optimistic mental attitude, with the view that the quality of life today must be better than yesterday, and the quality of tomorrow is better than today. This study aims to identify the extent to which employee involvement in the "Best of Best" program affects performance improvement, by measuring indicators such as productivity, work quality, and job satisfaction. Through this analysis, the research aims to provide a deeper understanding of the influence of improvement programs on the company's success in achieving organizational goals.

**Research Methods**

This research will use a quantitative method with a survey design, which is a method to test certain theories through research on the relationship between variables. In quantitative research, variables are measured using research instruments that allow data in the form of numbers to be analyzed with statistical procedures (Creswell, 2013). According to Dr. Soekidjo Notoatmodjo (2002), variables refer to measures or characteristics shared by members of a group, distinguishing them from other groups. These variables describe characteristics, traits, or measures obtained in research related to certain concepts, such as age, gender, education level, marital status, occupation, knowledge, income, and illness.

Data collection regarding the level of employee involvement of PT Evoluzione Tyres in the "Best of Best" program using the digital questionnaire method. The data source in this research comes from primary data obtained through the questionnaire method. Primary data is information about an event or object collected from individuals as a research sample. Husein Umar (2016) explains that primary data sources can be obtained from interviews or filling out questionnaires by respondents. Sugiyono (2001) states that population is a generalization area consisting of objects or subjects with certain characteristics set by researchers to study and draw conclusions. The population includes not only people, but also other natural objects. In this study, the population consists of PT Evoluzione Tyres employees who will be focused on one department that is very influential on this improvement program, namely the semi-finishing production department with a total of 109 employees. The sample was taken using the slovin method with the following calculation:

**Table 1. The percentage margin of error is as follows:**

| Survey Sample Size | Margin of Error Percent* |
|---|---|
| 2.000 | 2 |
| 1.500 | 3 |
| 1.000 | 3 |
| 900 | 3 |
| 800 | 3 |
| 700 | 4 |
| 600 | 4 |
| 500 | 4 |
| 400 | 5 |
| 300 | 6 |
| 200 | 7 |
| 100 | 10 |
| 50 | 14 |

Source: Lembaga Penelitian dan Pengabdian Marsyarakat Universitas Medan.

**Finding the Number of Samples Using the Slovin Method**

Referring to this standard with a population of 109 employees, a margin of error of 10% was determined. The calculation is as below:

$$n = \frac{N}{1 + Ne^2}$$

n is the number of samples sought;
N is the population size;
e is the tolerable margin of error.

$$n = \frac{109}{1 + 109\ x\ 10\%^2}$$

$$n = \frac{109}{1 + 109\ x\ 0{,}1^2}$$

$$n = \frac{109}{1 + 109\ x\ 0{,}01}$$

$$n = \frac{109}{1 + 1{,}09}$$

$n = \frac{109}{2{,}09}$ = 52,153 rounded up to 52 samples.

Thus, this study aims to provide a clear picture of employee engagement and their performance in the ongoing program through a quantitative approach and systematic survey design. The collected data will be analyzed using descriptive and inferential statistics. The t-test and regression analysis will be used to test the hypothesis and see the relationship between improvement and employee performance. After the analysis, the results will provide a clearer picture of the effect of the level of employee involvement in the "Best of Best" program on performance improvement at PT Evoluzione Tyres. Based on the results of this analysis, the researcher will draw conclusions about the effect of employee involvement and suggestions for further development.

**Result And Discussion**

Recapitulation of questionnaire data was carried out regarding the influence of employee involvement in improvement within PT Evoluzione Tyres, with 52 samples. The collected data was processed and analyzed using SPSS software, with descriptive and inferential statistical approaches to answer the research objectives and test hypotheses related to the correlation between improvement as variable X and performance as variable Y.

**Reliability Test of X Variable Indicator**

Referring to the results of the calculation of the Pearson formula correlation coefficient in SPSS software, all items meet the validity criteria based on the correlation test, because the correlation is significant ($p < 0.01$) with the total score of variable X which measures improvement. The following table is the information:

**Reliability of X Indicator (Performance)**

**Table 2. Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .922 | .925 | 10 |

Source: SPSS data processing application for Windows version 20

All items have a significant positive correlation to the total score of variable X (Total). The correlation value ranges from 0.671 to 0.856, with a significance level of 0.000 ($p < 0.01$). This indicates that all items are valid as indicators of variable X. The reliability of variable X showed excellent results, with a Cronbach's Alpha value of 0.922 for measurement without standardization and 0.925 for measurement

with standardization. In conclusion, the reliability value of variable X meets the established criteria, namely Cronbach's Alpha> 0.7, which means that the measurement instrument for variable X can be considered reliable.

**Reliability Test of Y Variable Indicator**

The validity of variable Y, which measures performance, shows that all items have a significant positive correlation with the total score of variable Y. The correlation value ranges from 0.791 to 0.897, with a significance level of 0.000 ($p < 0.01$). This indicates that all items can be considered valid as indicators of variable Y. In conclusion, all items meet the validity criteria based on the correlation test, as they show a significant correlation ($p < 0.01$) with the total score of variable Y.

**Reliability of Y Indicator (Performance)**

**Table 3. Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .958 | .959 | 10 |

Source: SPSS data processing application for Windows version 20

The reliability of variable Y shows very good results, with a Cronbach's Alpha value of 0.958 for measurement without standardization and 0.959 for measurement with standardization. The reliability value of variable Y meets the established criteria, namely Cronbach's Alpha> 0.7, which means that the measurement indicators for variable Y can be considered reliable.

**Relationship Analysis of X and Y Variables**

**Table 4. Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | ,809[a] | .655 | .648 | 5.05290 | 2.442 |

Source: SPSS data processing application for Windows version 20

Analysis of the relationship between variable X (improvement) and variable Y (performance) showed significant results, where the R-value (correlation between X and Y) reached 0.809, indicating a very strong relationship between the two variables. In addition, the R Square ($R^2$) value of 0.655 indicates that 65.5% of the variation in performance (Y) can be explained by the improvement variable (X), while the remaining 34.5% is influenced by other factors outside the model. This finding confirms that the improvement variable has a substantial impact on performance in the company.

**ANOVA Test (Analysis of Variances)**

**Table 5. ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 2521.383 | 1 | 2521.383 | 98.755 | ,000[b] |
| | Residual | 1327.654 | 52 | 25.532 | | |
| | Total | 3849.037 | 53 | | | |

Source: SPSS data processing application for Windows version 20

The ANOVA test results show an F value of 98.755 with a significance of 0.000 ($p < 0.01$), which indicates that the regression model used is statistically significant. This means that variable X has a significant influence on variable Y.

**Regression Coefficients**

**Table 6. Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | |
|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part |
| 1 | (Constant) | 6.916 | 3.341 | | 2.070 | .043 | | | |
| | X | .845 | .085 | .809 | 9.938 | .000 | .809 | .809 | .809 |

Source: SPSS data processing application for Windows version 20

The regression equation obtained is Y=6.916+0.845X the coefficient for variable X of 0.845 indicates that every one unit increase in the improvement variable will increase performance by 0.845. Further analysis shows that the t-value for X is 9.938 with a p-value of 0.000, which confirms that the effect of the improvement variable on performance is highly significant. These results indicate that an increase in employee involvement in the improvement program directly contributes to improved performance in the company.

The hypothesis in this study consists of two statements, namely the Null Hypothesis ($H_o$) and the Alternative Hypothesis ($H_a$). The Null Hypothesis states that there is no significant influence between the independent variable X (improvement) on the dependent variable Y (performance). On the other hand, the alternative hypothesis suggests that there is a significant influence between the independent variable X on the dependent variable Y.

Hypothesis testing is carried out using a significance level (α) of 0.05. In this case, the t-table value for the degree of freedom df = n-2 = 52-2 = 50 is about 2.009 (from the t-table distribution). Based on the data obtained, the t-count value is 9.938 and the t-table value is 2.009. Because t-count = (9.938) > t-table (2.009), then Ho is rejected, and Ha is accepted. This indicates that there is a significant influence between employee involvement in improvement on improving performance within PT Evoluzione Tyres so that improvement can be considered as a factor that contributes positively to improving performance in the company.

**Conclusions And Suggestions**

**Conclusions**

Based on the results of a quantitative study of the effect of employee involvement in improvement entitled “Best of Best” on improving performance within PT Evoluzione Tyres, the following conclusions can be drawn:

Regression analysis shows that variable X (improvement) has a positive and significant influence on variable Y (performance), with a regression coefficient value of 0.845. This means that every one unit increase in employee engagement will contribute to an increase in employee performance by 0.845. In terms of statistical test significance, the t-count value of 9.938 far exceeds the t-table value (2.009) at a significance level of 0.05 with 52 degrees of freedom. This indicates that the null hypothesis ($H_0$) is rejected, and the alternative hypothesis ($H_a$) is accepted, indicating that employee involvement in improvement significantly affects performance improvement.

In addition, the ANOVA test results show a significance value of 0.000 (less than 0.05), which reinforces that the regression model used is valid to predict the relationship between improvement and performance. The strength of the relationship between the two variables is also evident from the coefficient of determination ($R^2$) of 65.5%, which indicates that employee involvement in improvement can influence 65.5% in improving employee performance, while the rest is influenced by other factors outside this study. Thus, the alternative hypothesis ($H_a$), which states that “employee involvement in improvement significantly affects performance improvement,” has been statistically proven based on the results of the t-test and F-test.

**Suggestions**

From the research conclusions above, the researcher provides several suggestions which are expected to help the management of PT Evoluzione Tyres to improve the improvement program and make the best steps or strategies for the future.

PT Evoluzione Tyres is advised to continue to improve employee engagement through various programs, such as providing relevant training and competency development, improving communication and collaboration between management and employees, and creating a work environment that supports innovation and creativity. In addition, the "Best of Best" program that focuses on employee involvement in improvement needs to be further optimized by providing rewards or appreciation for employee contributions and integrating employee involvement as one of the main indicators in performance evaluation.

Management is also expected to be able to utilize the results of this study as a basis for strategic decision making in human resource planning, with a focus on establishing a work culture that supports employee involvement in building the company. Management also needs to plan strategies that support increased employee involvement or participation in this "Best of Best" program.

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