# THE EFFECT OF WORK ENVIRONMENT AND ORGANISATIONAL CULTURE ON WORK PRODUCTIVITY

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**Abstract:** The purpose of this study was to analyse how the influence of work environment and organisational culture on employee productivity at PT Maju Bersama Gemilang, with a quantitative approach. The population in this study were all employees of the production department. The sampling technique used probability sampling as many as 76 employees as respondents in this study. The data processing method uses SPSS software. The data analysis tool used in this study is multiple linear regression. The results of this research indicate that the work environment has a significant effect on employee productivity. The results of the regression equation show that the work environment has a positive influence on employee productivity. The results of the calculation of organisational culture have a significant effect on employee work productivity. The results of the regression equation show that organisational culture has a positive influence on employee work productivity.

**Keywords**: Environment, organisational culture, productivity, employees

## INTRODUCTION

High employee productivity will bring progress for the company to be able to get maximum results and quality. Hasibuan (2008) states that work productivity is part of how to use existing resources efficiently to increase the yield of goods and services as high as possible. According to Siagan (2006) employee work productivity is one of the factors that affect the success rate of an organisation. Productivity means the ability to get the maximum benefit from the available facilities and infrastructure by producing optimal output. To increase employee productivity, companies need to build a comfortable and safe working environment.

The work environment and organisational culture are factors that can support or increase employee productivity. According to Erisman & Azhar (2015) the work environment is expected by the company due to the existence of a dynamic organisation and adjusts to using the existing environmental consequences, encouraging social progress and economic prosperity. Meanwhile, according to Sedarmayanti (2011) the work environment is all the conditions that exist around the workplace, will affect employees both exclusively and non-exclusively.

In general, the work environment is social, psychological, and physical life in a company that affects workers in carrying out their duties. Human life is inseparable from various conditions of the surrounding environment, between humans and the environment there is a very close relationship. In this case, humans will always try to adapt to the various

circumstances of the surrounding environment. Similarly, when doing work, employees as humans cannot be separated from the circumstances around where they work, namely the work environment. Each employee will interact with various conditions contained in the work environment. In addition to the work environment, another element that affects employee productivity is work discipline.

Robbins (2006), organisational culture is a shared perception shared by members of the organisation. Organisational culture can suggest the way members behave, how to describe work and how to work with other members. Every company has a good organisational culture because organisational culture is related to the success or failure of the organisation to achieve its goals. Hutapea & Thoha (2008), organisational culture is a value owned by an organisation that is suggested and understood by all members of the organisation. This value is reflected in the beliefs, symbols, rituals, myths, and practices that occur in the organisation, while according to Edison (2016), the dimensions of organisational culture are described as follows, including: self-awareness, aggressiveness, personality, performance and team orientation.

PT Maju Bersama Gemilang is a joint venture company engaged in the manufacture of Fiber Optic and Power cable companies. The company is located in Kendal Industrial Estate Complex Jl. Tanjung Anom No.93, Tambak, Wonorejo, Kec. Kaliwungu, Kendal Regency, Central Java 51372. There are problems in achieving production targets that fluctuate every month in the last four months. Here we present the productivity target data at PT Maju Bersama Gemilang in the production section.

Table 1 Work Productivity of Production Section Employees
PT Maju Bersama Gemilang (June - September 2023)

| No | Month | Achievement Realisation |
|---|---|---|
| 1 | June | 85 % |
| 2 | July | 89 % |
| 3 | August | 87 % |
| 4 | September | 90 % |

Source: Production data (2023)

Based on the data above, that productivity at PT Maju Bersama Gemilang has not reached the expected target, this is evidenced by the ups and downs of productivity over the past four months which are always changing, experiencing fluctuations. On the basis of this data, the research team intends to conduct research on production employees. It is hoped that with this research the problem can be overcome.

Here we also convey the research gap of previous research results, to support the background of this research.

Table 2. Research Gap

| No | Researcher | Research Title | Result |
|---|---|---|---|
| 1. | Andre Lourens & Fx Pudjo Wibowo (2022) | The influence of organisational culture, work environment, and work discipline on employee productivity at PT Graha Grafis Indonesia. | Organisational culture, work environment, and work discipline variables have a positive and significant effect on employee productivity.. |
| 2. | Didiek Handayani Gusti (2022 ) | The Effect of Work Culture and Work Discipline on Work Productivity in Employees of the Regional Financial and Asset Management Agency of North Toraja Regency | Work Culture has an insignificant effect on Work Productivity of employees of the Financial Management and Regional Assets Agency of North Toraja Regency |

The purpose of this study is to analyse how the influence of work environment and organizational culture on employee productivity at PT Maju Bersama Gemilang, with a quantitative approach.

**LITERATURE REVIEW**
**Relationship between Work Environment and Employee Productivity**
The work environment is a situation where employees carry out activities every day both physically and non-physically. A conducive work environment provides a sense of security and

comfort for employees to be able to work optimally. This work environment includes working relationships formed between fellow employees and working relationships between subordinates and superiors and the physical environment in which to work. The work environment greatly affects employee productivity because with an appropriate and pleasant environment and in accordance with individual culture will be able to provide encouragement to employees to work more enthusiastically so that with a pleasant work environment employees perform better. According to Anoraga, in Yuniarsih & Suwanto (2009) states that the factors that affect work productivity is a good working environment or work atmosphere. With the existence of a good working environment and also pleasant it will support the formation of a high productivity in an employee in a company. The work environment is also something that exists in the environment of workers who can affect him in carrying out his duties, such as temperature, humidity, pentilation, lighting and noise, cleanliness of the workplace and whether or not the work equipment is adequate (Isyandi, 2004). The results of research by Yunita & Saragih (2019) which found that work environment variables have a positive and significant effect on employee productivity and based on previous research, the hypotheses that can be taken in this study are:

*H1: The work environment has a positive and significant effect on employee work productivity.*

**Relationship between organisational culture and employee work productivity**
 Hakim & Kusdiyanto (2010), the dimensions of organisational culture that have a significant influence on employee productivity are the variables of accuracy, results orientation, team orientation, and stability. Nikpour (2016) in his research states that the suggested model has appropriate fit and organisational characteristics beyond the direct impact on the indirect impact on organisational productivity through the mediation of employee organisational commitment that the level of indirect impact is higher than the direct impact. The results of research by Lourens & Wibowo (2022) which resulted in that organisational culture variables have a positive and significant effect on employee work productivity and based on previous research, the hypotheses that can be taken in this study are:

*H2: organisational culture has a positive and significant effect on employee work productivity.*
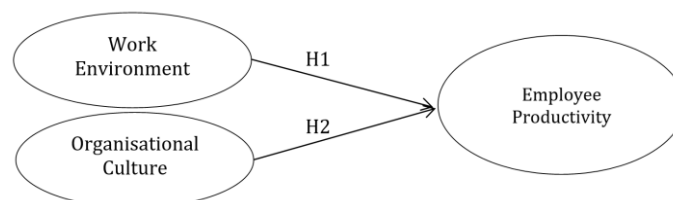
**Theoretical Framework**



Figure 1. Framework of Thought

$$n = \frac{N}{1 + N(e)^2}$$

Notes:
  n   = sample size/number of respondents
  N   = population size
  e   = The percentage of allowance for the accuracy of sampling errors that can still be tolerated;
  e   = 0.1
  n   = 76,47
  n   ≈ 76
  The sample of respondents in this study were 76 employees or 23% of the total population. There are 2 variables in this study, namely the independent variable (free) and the dependent variable (bound).
a) Independent Variable : Independent variables are Work Environment (X1), Organisational Culture (X2).
b) Dependent Variable : The dependent variable is Employee Productivity (Y).

 After all the data is obtained, it is then analysed using SPSS for windows software. Using

several test methods, namely: validity, reliability, classical assumptions, multiple linear regression analysis to the coefficient of determination test.

## RESULTS AND DISCUSSION
Residual Normality Test

The output of the Residual Normality Test results for the regression model is as follows:
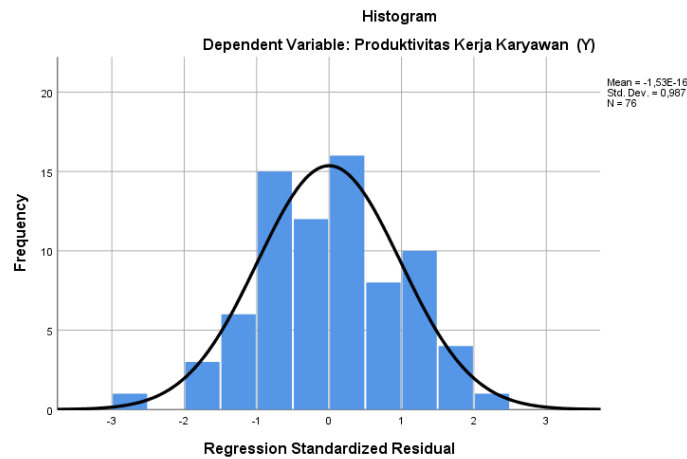


Figure 2. Normality test (histogram graph)

Based on the histogram graph above, it can be concluded that the data is normally distributed because it has bell-shaped characteristics and does not deviate to the right or left.
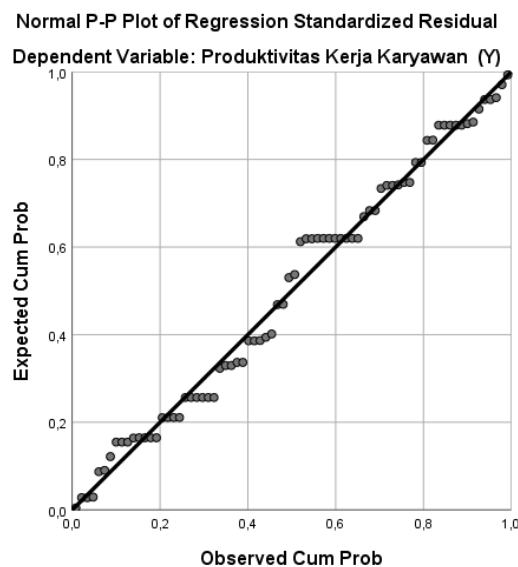


Figure 3. Normality test (graphical method)

Based on the picture above, the results of the normality test using the graphical method above the Normal P-P plot of regression standardised residuals can be seen that the points spread around the straight line and follow the diagonal line, so the data is normally distributed. Because the dots spread around the straight line and follow the diagonal line, the data is normally distributed.

Ghozali (2016), this normality test aims to test whether in the regression model, confounding or residual variables have a normal distribution. The assumption that must be met in the regression model is that it is normally distributed or close to normal. If the assumption is violated, the statistical test becomes invalid for a small sample size. The test used to test residual normality is the Kolmogorov-Smirnoff non-parametric statistical test, namely: If the significance value in this test is greater than 5 per cent or > 0.05, then the residuals are normally distributed.

## Table 3. Normality Test
**One-Sample Kolmogorov-Smirnov Test**

|  |  | Unstandardized Residual |
|---|---|---|
| N |  | 76 |
| Normal Parameters[a,b] | Mean | ,0000000 |
|  | Std. Deviation | 1,35834572 |
| Most Extreme Differences | Absolute | ,101 |
|  | Positive | ,075 |
|  | Negative | -,101 |
| Test Statistic |  | ,101 |
| Asymp. Sig. (2-tailed) |  | ,055[c] |

Test distribution is Normal.

The results of the normality test of the regression model obtained a Test Statistics value of 0.138 with a significance level of 0.055> 0.05. meaning that it can be concluded that the data is normally distributed in the regression model.

**Multicollinearity Test**

Ghozali (2016), the multicollinearity test aims to test whether the regression model found a correlation between independent variables. A good regression model should not have a correlation between the independent variables. If the independent variables are correlated, then these variables are not orthogonal. Multicollinearity testing according to Ghozali can be observed through the tolerance value must be> 0.1 and Variable Inflation Factor (VIF) with the condition that VIF < 10, it can be said that there is no multicollinearity (Ghozali, 2016). The Multiconearity Test output of the regression model is as follows:

## Table 4 Multicollinearity Test

| Model | | Collinearity Statistics | |
|---|---|---|---|
|  |  | Tolerance | VIF |
| 1 | (Constant) |  |  |
|  | Work Environment ( X1 ) | ,770 | 1,299 |
|  | Organisational Culture (X2) | ,770 | 1,299 |

Dependent Variable: Employee Productivity (Y)

The Multicollinearity Test results above indicate that there is no Multicollinearity problem in the regression model. This statement is indicated by the results of the value above the multicollinearity test table which shows that the Tolerance value> 0.1 and (VIF) variance inflation factor obtained from each predictor is less than 10, so it is concluded that there is no multicollinearity.

**Heteroscedasticity Test**

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another (Ghozali, 2016). It can be said to be heteroscedasticity if the residuals have an unequal variance, but it is said to be homoscedasticity if the residuals have the same variance. A good regression model is one with homoscedasticity or no heteroscedasticity (Ghozali, 2016). The Heteroscedasticity Test output for regression model 1 is as follows:
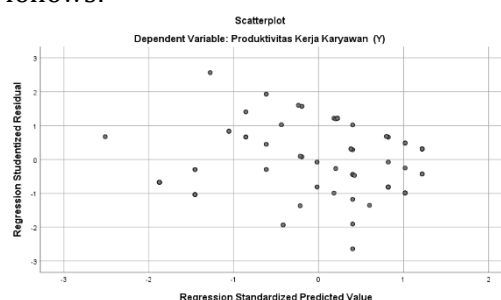


Figure 4. Heteroscedasticity Test

The Scatter Graph above, it is clear that there is no particular pattern because the points spread irregularly above and below the 0 axis on the Y axis. So it can be concluded that there are no symptoms of heteroscedasticity or free from heteroscedasticity. The heteroscedasticity test can also be done using the Glejser test by regressing the absolute residual value on the dependent variable (Ghozali, 2016). If the probability value (sig)> from 0.05, then there is no heteroscedasticity (Ghozali, 2016).

Table 5. Heteroscedasticity Test

|   | Model | B | t | Sig. |
|---|---|---|---|---|
| 1 | (Constant) | 3,233 | 2,615 | ,011 |
|   | Work Environment ( X1 ) | -,003 | -,065 | ,948 |
|   | Organisational Culture (X2) | -,090 | -1,738 | ,086 |

a. Dependent Variable: ABS_RES_1

The test results show that there is no heteroscedasticity problem in the regression model. This statement is evidenced by the absence of independent variables that have a sig value <0.05, all of which are more than 0.05. It is concluded that there is no heteroscedasticity in the data.

**Validity Test**
The validity test is a test used to show the extent to which the measuring instrument used in a measure what is measured. Ghozali (2016) states that the validity test is used to measure whether a questionnaire is valid or not by looking at the t-count> t-table value, it is concluded that it has good validity. r-table in this study with a sample of 76 is known to be = 0.220. This means that if from the results of data processing the r-count value is greater than the r-table, the indicator is valid, and vice versa if the r-count value from data processing is smaller than the r-table of 0.220, the indicator is invalid.

**Reliability Test**

Table 6. Reliability Statistics

|   | Cronbach's Alpha | N of Items |
|---|---|---|
| X1 | ,721 | 5 |
| X2 | ,772 | 5 |
| Y | ,733 | 5 |

The reliability statistics table shows the analysis results of the reliability test with Cronbach's Alpha must be above 0.7, so that this questionnaire is said to be consistent (reliable). It is known for all research variables, among others: Work Environment (X1) and Organisational Culture (X2) and Work Productivity (Y) values above 0.7.
Regression Model Feasibility Test
Multiple regression analysis is used to determine how much influence the independent variable has on the dependent variable. Based on multiple linear regression calculations between the work environment and organisational culture on employee work productivity using the SPSS program in the calculation, the following results are obtained:

Table 7. Multiple Linear Regression Test Results

| Coefficientsa | | | | | |
|---|---|---|---|---|---|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|  | B | Std. Error | Beta |  |  |
| 1 (Constant) | 6,181 | 2,293 |  | 2,696 | ,009 |
| Work Environment (X1 ) | ,499 | ,099 | ,504 | 5,026 | ,000 |
| Organisational Culture (X2) | ,237 | ,096 | ,247 | 2,461 | ,016 |

a.     Dependent Variable: Employee Productivity (Y)

Regression equation is obtained as follows:
**Y = 0.504 X1 + 0.247 X2**

The results of the multiple linear regression equation are explained as follows:

1. The work environment (X1) has a positive influence on employee work productivity (Y). This variable has a large influence on employee work productivity compared to other variables. This means that if the work environment variable is getting better, employee productivity will increase.
2. Organisational culture (X2) has a positive influence on employee work productivity (Y). This variable has a small influence on employee work productivity compared to other variables. This means that if the organisational culture variable is getting better, employee work productivity will increase.

**Model Feasibility Test (F Statistical Test)**

The F Statistical Test basically shows whether all independent or independent variables included jointly affect the dependent or bound variable (Ghozali, 2005). If the significance probability value <0.05, then the independent variables jointly affect the dependent variable.

Table 8. Statistical F Test Results

| ANOVAa | | | | | |
|---|---|---|---|---|---|
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 Regression | 106,301 | 2 | 53,151 | 28,038 | ,000b |
| Residual | 138,383 | 73 | 1,896 | | |
| Total | 244,684 | 75 | | | |
| a. Dependent Variable: Employee Productivity (Y) | | | | | |
| b. Predictors: (Constant), Organisational Culture (X2), Work Environment (X1) | | | | | |

The calculated F value is 28.038 with a significance value of 0.000 <0.05. This concludes that the regression fulfils the assumptions of model feasibility and simultaneously the independent variable affects the dependent variable.

**Statistical t test**

The t test is used to test the hypothesis partially to show the effect of each independent variable individually on the dependent variable. The t test is a test of the regression coefficient of each independent variable on the dependent variable to determine how much influence the independent variable has on the dependent variable (Ghozali 2013). If the significance probability value <0.05, then an independent variable is a significant explanatory of the dependent variable.

Table 9. Statistical t test results

| Coefficientsa | | | | | |
|---|---|---|---|---|---|
| | Unstandardized Coefficients | | Standardized Coefficients | | |
| Model | B | Std. Error | Beta | t | Sig. |
| 1 (Constant) | 6,181 | 2,293 | | 2,696 | ,009 |
| Work Environment ( X1 ) | ,499 | ,099 | ,504 | 5,026 | ,000 |
| Organisational Culture (X2) | ,237 | ,096 | ,247 | 2,461 | ,016 |
| a. Dependent Variable: Employee Productivity (Y) | | | | | |

Based on the table above, it can be seen the effect of variable X on Y, namely: the t-statistic value > 1.97 t table and the sig value. (significance) <0.05 then it has a significant influence between variable X on variable Y. To see whether the effect is positive or negative, the value (b) can be observed. If it is negative it means it has a negative influence, and vice versa if it is positive it means it has a positive influence. Based on the table above: (1) Obtained Sig value. 0.000 <0.05 and the t-statistic value of 5.026> 1.97 means that the work environment (X1) has a significant effect on employee work productivity. (2) Obtained Sig value. 0.016 < 0.05 and the t-statistic value of 2.461 > 1.97 means, organisational culture (X2) has a significant effect on employee work productivity.

**Coefficient of Determination**

The coefficient of determination ($R^2$) is used to measure how far the model's ability to

explain variations in the dependent variable (Kuncoro, 2011). The coefficient of determination (R2) is between zero and one. A small R2 value means that the ability of the independent variables to explain the dependent variable is very limited. If the coefficient of determination is equal to zero, then the independent variable has no effect on the dependent variable. If the coefficient of determination is close to 1, then the independent variable has a perfect effect on the dependent variable. By using this model, the confounding error is kept to a minimum so that R2 is close to 1, so that the regression estimate will be closer to the actual situation.

Table 10. Coefficient of Determination
**Model Summary$^b$**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-----|----------|-------------------|----------------------------|
| 1 | ,659$^a$ | ,434 | ,419 | 1,377 |

a. Predictors: (Constant), Organisational Culture (X2), Work Environment (X1)
b. Dependent Variable: Employee Productivity (Y)

The coefficient of determination (R2) is a representation of the model's ability to explain variations in the dependent variable (Ghozali, 2016). The R-Square value obtained from the table above is 0.419 or indicates that 41.9% of the variation in Employee Work Productivity (Y) can be explained by the independent variables in this study, while the remaining 58.1% is explained by other variables outside this research model.

**Discussion**
**Effect of Work Environment on Work Productivity**
The results showed that the sig. value of 0.000 <0.05 and the t-statistic value of 5.026> 1.97 means that the work environment (X1) has a significant effect on employee work productivity. The regression equation results show that the work environment (X1) has a positive influence on employee work productivity (Y) of 0.504. This variable has a considerable influence on employee work productivity compared to other variables. This means that if the work environment variable increases, employee work productivity will increase. The results of this study support research from Yunita & Saragih (2019) which found that work environment variables have a positive and significant effect on employee work productivity. The work environment is a place where employees carry out activities every day. Employees will feel comfortable and at ease in a good environment in supporting their activities at work. PT. Megah Bersama Gemilang has paid attention to this considering that the work environment is a very supportive variable in carrying out activities for its employees. and to be well maintained.

**Effect of Organisational Culture on Work Productivity**
The calculation results can be obtained sig value. 0.016 <0.05 and the t-statistic value of 2.461> 1.97 means, organisational culture (X2) has a significant effect on employee work productivity. The regression equation results show that organisational culture (X2) has a positive influence on employee work productivity (Y) of 0.247. This variable has a small influence on employee work productivity compared to other variables. This means that if the organisational culture variable is getting better, employee work productivity will increase. The results of this study support research from Andre & Wibowo (2022) which found that organisational culture variables have a positive and significant effect on employee work productivity. The results of this study are also in line with Hakim & Kusdiyanto (2010) which states that organisational culture has a significant influence on employee work productivity. According to Madjidu (2022) organisational culture is a shared value system in an organisation that determines the level of how employees carry out activities to achieve organisational goals. PT Megah Gemilang Bersama in terms of organisational culture has been running well and can be maintained.

**CONCLUSION**
Based on the research results and discussion, that the work environment has a sig value. 0.000 <0.05 and the t-statistic value of 5.026> 1.97, meaning that the work environment has a significant effect on employee productivity. The results of the regression equation show that the work environment has a positive influence on employee work productivity of 0.504. This variable

has a considerable influence on employee work productivity compared to other variables. The results of the calculation of organisational culture can be obtained sig value. 0.016 <0.05 and t-statistic value of 2.461>1.97, meaning, organisational culture has a significant effect on employee work productivity. The results of the regression equation show that organisational culture has a positive influence on employee productivity by 0.247. This variable has a small influence on employee work productivity compared to other variables.

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