



The Influence of Work Environment and Occupational Safety on Employee Productivity at PT. Mega Bata Indonesia Bogor Regency

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ARTICLE INFO

Keywords: Work Environment, Work Safety, and Employee Productivity

Received : 27 June

Revised : 20 July

Accepted: 18 August

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ABSTRACT

The purpose of this study is to determine the influence of the work environment and work safety on employee productivity at PT. Mega Bata Indonesia. The type of research is associative with a quantitative approach. The sample in this study amounted to 98 respondents. Data analysis uses validity tests, reliability tests, classical assumption tests, regression analysis, correlation coefficients, determination coefficients and hypothesis tests. The results of this study are that the work environment has a significant effect on employee productivity with a determination coefficient value of 50.6% with a correlation value of 0.711 and the hypothesis test obtained $t_{count} > t_{table}$ or $(9.920 > 1.985)$. Work safety has a significant effect on employee productivity with a determination coefficient value of 51.6% with a correlation value of 0.718 and the hypothesis test obtained $t_{count} > t_{table}$ or $(10.109 > 1.985)$. Work environment and work safety simultaneously have a significant effect on employee productivity with a regression equation $Y = 17.585 + 0.277X_1 + 0.365X_2$. The coefficient of determination is 54.8%, while the remaining 45.2% is influenced by other factors. With a correlation value of 0.740 and a hypothesis test, the calculated F value is greater than the F table value, or $(57.495 > 3.09)$.

INTRODUCTION

Entering the era of globalization, labor plays a central role as the main driver in realizing the company's targets. In order to face the fierce market competition, every business entity is required to consistently offer a competitive advantage through the products and services produced. The various advantages that have been possessed need to be maintained and developed continuously, while the aspects that are still lacking must be immediately corrected to ensure the achievement of the company's vision and mission.

In order to ensure the smooth running of management activities, an organization must have sufficient and qualified human resources so that operations can be managed optimally, so that the productivity of individual employees increases. Human resources are a crucial asset for the company, in addition to the capital factor. Therefore, good HR management is essential to increase effectiveness and efficiency in achieving targets, and must be able to face various challenges, including maintaining the quality of human resources and fostering harmonious relationships with stakeholders.

In modern business, readiness to compete is a necessity, accompanied by the need to operate efficiently and effectively. This level of intensive competition encourages companies to constantly adapt and meet consumer demands for their existence. To support smooth management, the availability of competent human resources is vital to manage operations optimally, which in turn will increase employee productivity. Human resources are a core element in an organization, not just as a complement to capital. Therefore, excellent human resource management is needed to achieve effectiveness and efficiency, and must be able to overcome various challenges, including maintaining quality and establishing synergies with policy makers.

Work productivity can be interpreted as a comparison between an employee's production capacity and the inputs used. A worker is said to be productive if he or she shows good work results. Employee productivity is very important because the progress of an organization or company depends on the results of their work.

In order to realize corporate targets, one of the crucial steps that management must take is to create a conducive and supportive work atmosphere. This work environment represents the entire ecosystem around employees, starting from the availability of physical infrastructure, the completeness of production materials, to the task organization scheme for both personnel and teams. Based on the results of the pre-survey of the work environment at PT. Mega Bata Indonesia, it is considered that it has not reached the maximum point in supporting operational efficiency. This is indicated by several aspects of the work environment that still need improvement, which directly have a negative impact on the level of output and performance of the company

The main problem in the company's work environment lies in the level of noise generated by brick production machines. Noise that constantly exceeds the comfort limit greatly interferes with the concentration and communication ability between employees in the factory area. This condition is exacerbated by

the poorly maintained environmental cleanliness aspect due to the dust of production materials, as well as the work safety factor where employees feel that protection against the risk of work accidents still needs to be improved. Conversely, in the color aspect, as many as 16 out of 30 respondents stated that the combination or color conditions of the paint/interior of the room did not support a good working atmosphere, the choice of wall colors and the lack of fresh color variations could affect visual saturation and the level of employee morale during indoor activities. Overall, noise disturbances and unconducive environmental physical conditions hinder employees' focus, which ultimately has an impact on reducing work efficiency in achieving the company's production targets.

In addition to the aspect of the work environment, the crucial variable that also determines the level of labor output is the guarantee of work safety. Productivity optimization can only be realized if the company is able to provide a sense of security to each of its personnel while in the production area. Occupational safety is basically an integrated system designed to minimize potential hazards due to human negligence and technical failures.

With the background and formulation of the problems that have been explained, the purpose of this study is to find out the work environment has a partial effect on the work productivity of employees at PT. Mega Bata Indonesia; To find out that work safety has a partial effect on the work productivity of employees at PT. Mega Bata Indonesia; and To find out the work environment and work safety together affect the work productivity of employees at PT. Mega Bata Indonesia.

LITERATURE REVIEW

Work Environment

The work environment is a place where employees carry out work activities. The work environment in a union is very important for management to pay attention to. A work environment that is satisfactory for employees can increase performance. On the other hand, if the work environment is inadequate, it will be able to reduce performance. According to Sedarmayanti (2021:11), the work environment is the whole of tools, tools and materials that face, the environment around where a person works, work methods, and work arrangements both individually and in groups.

From some of the opinions above, it can be concluded that the work environment is a physical and non-physical condition around workers or employees that can affect their motivation, comfort, and performance in carrying out their duties optimally. Work environment factors include work tools, physical conditions such as temperature and lighting, as well as social and psychological aspects in the workplace. A good and conducive work environment is very important to increase employee work productivity, because it can provide a sense of security to work optimally.

Occupational Safety

Safe conditions or survivors from suffering, damage, or loss in the workplace are related to protection against hazards that can cause fire,

dangerous electrical currents, injuries, sprains, fractures, loss of body tools, vision, and hearing (Mangkunegara 2023:13). Meanwhile, according to Suma'mur (2020:2), occupational safety is safety related to machines, work tools, their processing processes, the foundation of the workplace and the environment, and ways of doing work. According to Leon C. Megginson, (in Mangkunegara, 2021), the term safety includes the term occupational safety risk.

From some of the above opinions, it can be concluded that occupational safety is a systematic and comprehensive effort to protect workers from accidents, occupational diseases, and the risk of physical, mental, and social hazards in the work environment so that workers can work safely, healthily, and productively. This implementation must include correct and consistent procedures in accordance with laws and regulations, as well as include training, supervision, and the use of appropriate personal protective equipment (PPE) to minimize the risk of accidents and health problems, this aims to create safe, healthy, and productive working conditions by protecting workers from various risks that can harm their physical and mental health.

Work Productivity

Work productivity is generally defined as a measure of efficiency that describes the comparison between work outputs and resources or inputs used in the work process. Work productivity also includes the mental attitude or motivation of workers to always strive to improve the quality and quantity of work results in a sustainable manner. In other words, work productivity is the ability of a person or an organization to produce maximum work results with efficient use of resources, both in terms of time, energy, materials, and equipment, as well as continuous efforts to improve and improve performance.

From some of the above understandings, it can be concluded that work productivity is a measure of efficiency that describes the comparison between output (work output) and input (resources used), with the aim of producing optimal work results both in terms of quality and quantity. Experts agree that productivity is not only related to the quantification of results, but is also influenced by the mental attitude of workers who always try to improve their abilities and work results from time to time. Therefore, work productivity with a good mental attitude can encourage continuous work improvement.

Frame of Mind

The reference of the researcher to explain the concept and logical flow of systematic research is a framework of thinking that contains a combination of theory, facts, observations, and literature studies. The conceptual framework describes the flow of thought between concepts and each other related to the variables being studied, described as follows:

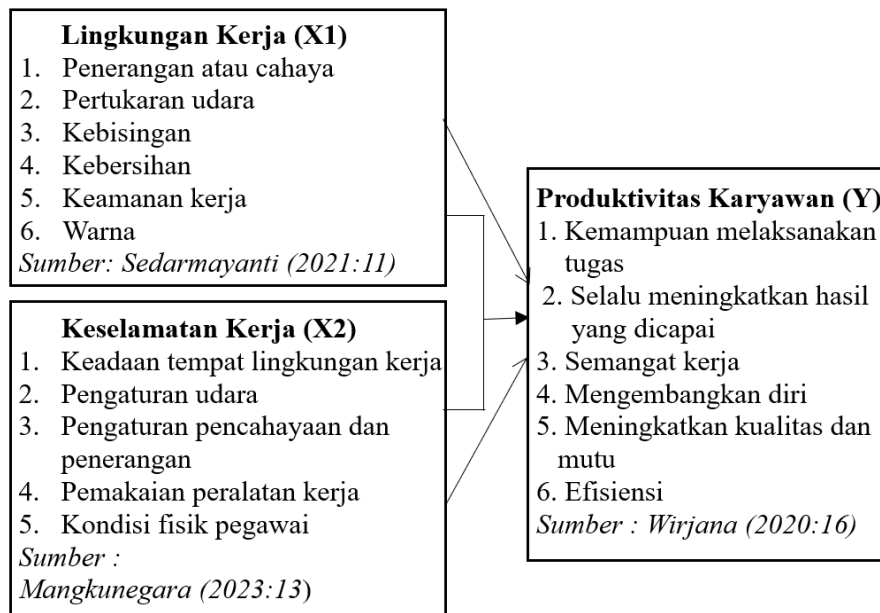


Figure 1. Thinking Frame

METHODOLOGY

In this study, a quantitative method is used with the type of associative research. In this case, quantitative research does not have a problem with the relationship between the researcher and the research subject because the results of the research depend more on the instruments used and the measurable variables used. The variables studied in this study are variables consisting of work environment variables (X1), occupational safety variables (X2), and employee productivity (Y).

This research was carried out at PT Mega Bata Indonesia which is located at Jalan Raya Batujajar Kp. Babakan Bogor. West Java. The time of this research starts from the preparation to the implementation of the research which starts from July 2025 - July 2026.

The population in this study is the entire object or subject that has characteristics that are the focus of the research. The employee population of PT. Mega Bata Indonesia in this study is 98 employees in 2026. The sampling technique used in this study is saturated sampling. This technique is often used if the population is relatively small or the researcher wants to make generalizations with a very small error rate. Another term for saturated sampling is the Census, where every element in the population is studied without exception. The number or size of the sample required to be studied is 98 people.

Data collection techniques are methods used to collect information relevant to research. The selection of the right technique is very important to obtain accurate and valid data. Data collection is an effort to obtain information that will be used in variable measurements. According to Sugiyono (2020:308) "the data collection method is a scientific way to obtain valid data with the aim of being proven, developing knowledge so that it can be used to solve and anticipate problems".

RESEARCH RESULTS

Normality Test

Table 1. Data Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		98
Normal Parameters ^{a,b}	Red	.0000000
	Std. Deviation	4.03593274
Most Extreme Differences	Absolute	.056
	Positive	.056
	Negative	-.053
Test Statistic		.056
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Referring to the previous calculation table, a significance figure of 0.200 was obtained, which is greater than the threshold of 0.05. So that the assumption of the normality of the model has been fulfilled.

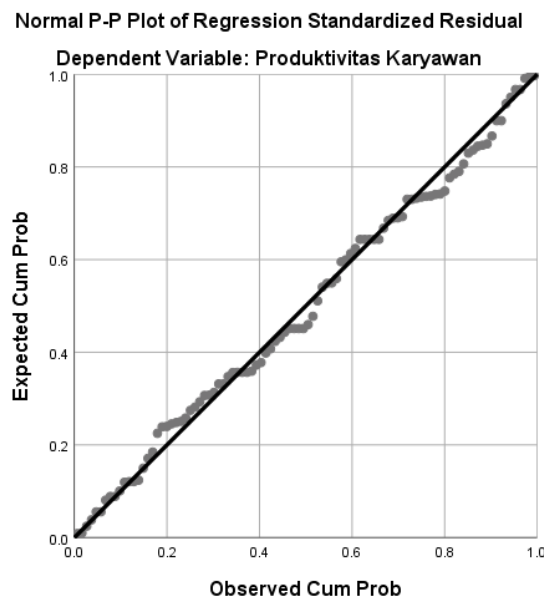


Figure 1. P-P Graph of Normality Test Results Plot

Based on the visual display in Figure 1. The normal probability plot diagram shows a normal distribution pattern. This condition is proven by the location of data points that are evenly spread around the diagonal line and follow the flow. Thus, it can be concluded that the regression model used has passed the normality assumption test.

Multicollinearity Test

Table 2. Multicollinearity Test Results

Model		Coefficient						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	17.585	2.252		7.808	.000		
	Work Environment	.277	.107	.358	2.592	.011	.249	4.013
	Occupational Safety	.365	.124	.408	2.949	.004	.249	4.013

a. Dependent Variable: Employee Productivity

Based on the results of the multicollinearity test in table 2. Above, the tolerance value of the variables of the work environment and occupational safety variables was 0.249 where the value was > 0.10 and the value of the variance inflation factor (VIF) of the variables of the work environment and occupational safety variables was 4.013 where the value was < 10 . Thus, it can be concluded that this regression model is stated that multicollinearity does not occur.

Heteroskedastika Test

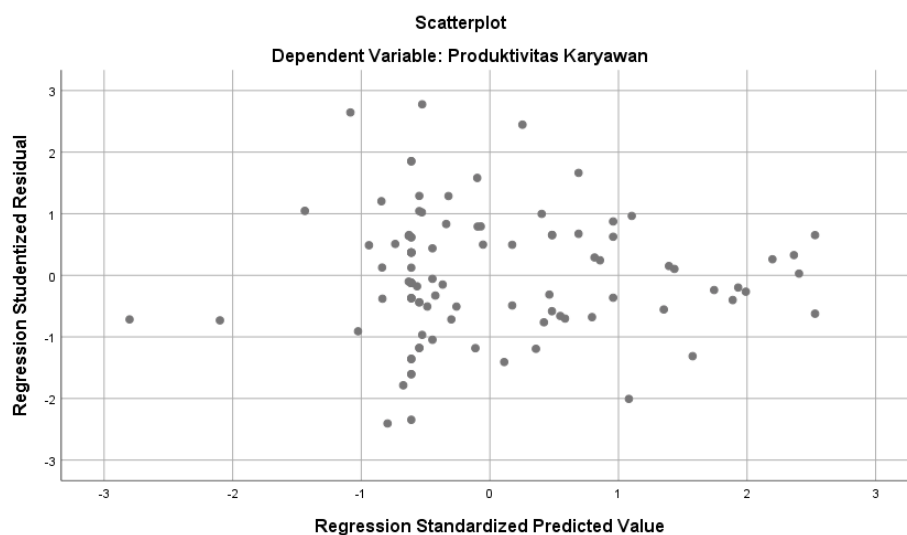


Figure 2. Scatterplot Graph of Heteroskedastika Test Results

Based on Figure 2. The results of the heteroscedastasis test using scatterplots show that the data points are randomly spread above and below the number 0 on the Studentized Residual Regression axis. These points also do not form a definite clear pattern. This shows that the regression model of this study is free from heteroscedastastic symptoms.

Simple Linear Regression Analysis

Table 3. Results of Simple Linear Regression Test of Work Environment Variables (X1) on Employee Productivity (Y)

Coefficient						
Models		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.762	2.304		8.145	.000
	Work Environment	.550	.055	.711	9.920	.000
a. Dependent Variable: Employee Productivity						

Based on the test results in table 3. above, the regression equation $Y = 18.762 + 0.550X_1$ can be obtained. From the above equation, it can be concluded as follows:

- A constant value of 18.762 means that if the Work Environment variable (X_1) is 0, then the consistent value of the Employee Productivity variable (Y) is 18.762.
- The regression coefficient (X_1) of 0.550 states that every time 1 unit of Work Environment value is added, the Employee Productivity value will increase by 0.550. The regression coefficient has a positive value, so it can be said that the direction of influence of the Work Environment variable (X_1) on Employee Productivity (Y) is positive (unidirectional).
- Significance Test (t-test) Based on the significance value from the Coefficients table above, a significance value of $0.000 < 0.05$ was obtained, so it can be concluded that the Work Environment variable has a significant effect on Employee Productivity (Y).

Table 4. Results of Simple Linear Regression Test of Occupational Safety Variables (X2) on Employee Productivity (Y)

Coefficient						
Models		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.506	2.189		8.911	.000
	Occupational Safety	.643	.064	.718	10.109	.000
a. Dependent Variable: Employee Productivity						

Based on the test results in table 4. above, the regression equation $Y = 19.506 + 0.643X_2$ is obtained. From these equations, it can be concluded as follows:

- A Constant value of 19.506 means that if the Occupational Safety variable (X_2) is 0, then the consistent value of the Employee Productivity variable (Y) is 19.506.
- The regression coefficient X_2 of 0.643 states that every time 1 unit of Occupational Safety value is added, the Employee Productivity value will increase by 0.643. The regression coefficient is positive, so it can be said that

the direction of the influence of the Occupational Safety variable (X2) on Employee Productivity (Y) is positive (unidirectional).

- c. Significance Test (t-test) Based on the significance value of the Coefficients table above, a significance value of $0.000 < 0.05$ was obtained, so it can be concluded that the Occupational Safety variable (X2) has a significant effect on Employee Productivity (Y).

Multiple Linear Regression Analysis

Table 5. Results of Multiple Linear Regression Test of Variables of Work Environment (X1) and Occupational Safety (X2) on Employee Productivity (Y)

Coefficient						
Models		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.585	2.252		7.808	.000
	Work Environment	.277	.107	.358	2.592	.011
	Occupational Safety	.365	.124	.408	2.949	.004

a. Dependent Variable: Employee Productivity

Based on the results of the regression calculation analysis in the table above, the regression equation $Y = 17.585 + 0.277X_1 + 0.365X_2$ can be obtained, so it can be concluded as follows:

- Constant (17.585) if the variables Work Environment (X1) and Occupational Safety (X2) are considered constant or zero, then the value of Employee Productivity (Y) is 17.585.
- The Regression Coefficient X1 (0.277) with a positive value of 0.277 indicates that every 1 unit increase in the Work Environment (X1) will increase Employee Productivity (Y) by 0.277 assuming the Occupational Safety variable (X2) is fixed.
- The Regression Coefficient X2 (0.365) shows that every increase of 1 unit of Occupational Safety (X2) will increase Employee Productivity (Y) by 0.365, assuming the variable Work Environment (X1) is a fixed value.

Partial Correlation Coefficient Test

Table 6. Partial Correlation Test Results Between Work Environment (X1) And Employee Productivity (Y)

Correlations			
		Work Environment	Employee Productivity
Work Environment	Pearson Correlation	1	.711**
	Sig. (2-tailed)		.000
	N	98	98
Employee Productivity	Pearson Correlation	.711**	1

	Silg. (2-tailed)	.000	
	N	98	98
**. Correlatilon ils silgnilfilcant at the 0.01 level (2-tailed).			

Based on the test results in table 6. above, a correlation coefficient value of 0.711 was obtained where the value was on the interval scale of 0.60-0.799 which means that the two variables have a strong level of relationship.

Table 7. Partial Correlation Test Results Between Occupational Safety (X2) and Employee Productivity (Y)

Correlations			
		Occupatilonal Safety	Employee Productilvilty
Occupatilonal Safety	Pearson Correlatilon	1	.718**
	Silg. (2-tailed)		.000
	N	98	98
Employee Productilvilty	Pearson Correlatilon	.718**	1
	Silg. (2-tailed)	.000	
	N	98	98
**. Correlatilon ils silgnilfilcant at the 0.01 level (2-tailed).			

Based on the test results of table 7. above, a correlation coefficient value of 0.718 was obtained where the value was on the interval scale of 0.60-0.799 which means that the two variables have a strong level of relationship.

Simultaneous Correlation Coefficient Test

Table 8. Results of the Simultaneous Correlation Coefficient Test Between Work Environment (X1) and Occupational Safety (X2) on Employee Productivity (Y)

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Silg. F Change
1	.740 ^a	.548	.538	4.07819	.548	57.495	2	95	.000

a. Predilctors: (Constant), Occupatilonal Safety, Workilng Envilronmlent

Referring to the tabulation of the results of the analysis above, a correlation coefficient of 0.740 was obtained. This number is included in the range of intervals of 0.60 to 0.799 which indicates that work environment and work safety factors have a close association level with employee productivity.

Partial Determination Coefficient Test**Table 9. Results of the Partial Determination Coefficient Test Between the Work Environment (X1) and Employee Productivity (Y)**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.711a	.506	.501	4.23851
a. Predictors: (Constant), Work Environment				

Referring to the tabulation of the results of the previous analysis, a determination coefficient of 0.506 was obtained. This amount shows that the Work Environment factor contributes 50.6% to the level of employee productivity, while the remaining percentage of 49.4% is determined by other variables outside the scope of this research.

Table 10. Results of the Partial Determination Coefficient Test between Occupational Safety (X2) and Employee Productivity (Y)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.718a	.516	.511	4.19787
a. Predictors: (Constant), Occupational Safety				

Based on the data output in the table, the value of the determination coefficient was recorded at 0.516. This figure represents the magnitude of the influence of the occupational safety aspect on employee productivity, which is 51.6%. Meanwhile, the remaining difference of 48.4% is due to other factors that are not studied in this study.

Simultaneous Determination Coefficient Test**Table 11. Results of Simultaneous Determination Coefficient Between Work Environment (X1) and Occupational Safety (X2) on Employee Productivity (Y)**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.740a	.548	.538	4.07819
a. Predictors: (Constant), Occupational Safety, Work Environment				

Referring to the tabulation of the data above, a determination coefficient of 0.548 was recorded. The findings indicate that the combination of work environment and occupational safety variables has a combined effect on employee productivity of 54.8%. While the remaining 45.2% difference is influenced by other factors beyond the limits of this study.

Partial Hypothesis Test (t-test)**Table 12. Results of Hypothesis Test (t-test) Variables of Work Environment (X1) on Employee Productivity (Y)**

Coefficient				
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	18.762	2.304		8.145	.000
	Work Environment	.550	.055	.711	9.920	.000

a. Dependent Variable: Employee Productivity

Based on the table above, the test results were obtained with a value of $>$ or ($9.920 > 1.985$). This was also strengthened by a significance value of < 0.050 or ($0.000 < 0.050$). Thus, it was rejected and accepted, showing that there was a significant influence between the Work Environment on Employee Productivity. $t_{hitung} > t_{tabel} H_0 H_1$

Table 13. Results of Hypothesis Test (t-test) Occupational Safety Variable (X2) on Employee Productivity (Y)

Coefficient						
Models		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.506	2.189		8.911	.000
	Occupational Safety	.643	.064	.718	10.109	.000

a. Dependent Variable: Employee Productivity

Based on the table above, the test results obtained a value of $>$ or ($10.109 > 1.985$). This is strengthened by a significance value of < 0.050 or ($0.000 < 0.050$). Thus, it is rejected and accepted, this shows that there is a significant influence between Occupational Safety and Employee Productivity. $t_{hitung} > t_{tabel} H_0 H_2$

Simultaneous Hypothesis Test (F Test)**Table 14. Results of Simultaneous Hypothesis Test Between Work Environment (X1) and Occupational Safety (X2) on Employee Productivity (Y)**

NEW ERA						
Models		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1912.491	2	956.245	57.495	.000b
	Residual	1580.009	95	16.632		
	Total	3492.500	97			
a. Dependent Variable: Employee Productivity						
b. Predictors: (Constant), Occupational Safety, Work Environment						

Referring to the data output in the ANOVA table, the value of F is calculated $> F$ of the table or $(57.495 > 3.09)$, and is supported by a significance of < 0.050 or $(0.000 < 0.050)$. These statistical findings confirm that they are rejected and accepted, which confirms the existence of a significant influence together between work environment and occupational safety factors on employee productivity. $H_0 H_3$

DISCUSSION**Influence of Work Environment (X1) on Employee Productivity (Y)**

Based on the results of data processing, a regression equation model of $Y = 18.762 + 0.550X_1$ was obtained. This number symbolizes that every addition of one unit to the Work Environment variable will have a positive impact on increasing Employee Productivity. In addition, the value of the correlation coefficient (Beta) of 0.711 confirms that the Work Environment variable has a close association level with the Employee Productivity variable.

Furthermore, the evaluation of the hypothesis test showed the acquisition of a calculated t value of 9.920 where this figure is much larger than the t table of 1.985. This statistical fact is strengthened by the significance level of 0.000, which is far below the threshold of 0.05. Based on these criteria, it is rejected and accepted. Which states that there is a positive and significant influence between the Work Environment on Employee Productivity at PT. Mega Bata Indonesia. $H_0 H_a$

The findings of this research are in line with empirical studies published by Rosa Aprilia, Erawati Kartika and Suhaji Nathanael. Scientific Journal of Assets, Vol. 26, No 1, March 2024, p. March 23-28 (2024) Where it is stated that safe, comfortable, and adequate work environment conditions are proven to directly boost employee motivation and work results. Through the findings of this research, it can be understood that a conducive work environment holds a crucial position that needs to be considered by the Company, because a supportive work ecosystem has proven to be effective in triggering employees to work more optimally in achieving the company's productivity targets.

The Effect of Occupational Safety (X2) on Employee Productivity (Y)

Based on the results of the analysis, a regression value of $Y = 19.506 + 0.643X_2$ was obtained. This equation indicates that there is a positive relationship between the Occupational Safety variable and Employee Productivity. The correlation coefficient value (Beta) of 0.718 shows that the influence of the Occupational Safety variable on Employee Productivity has a strong attachment.

The results of the hypothesis test showed that the t-value of 10.109 was much higher than the table t-value of 1.985. This fact was strengthened by a significance value of 0.000 which means that it was below the threshold of 0.05. With this result, it was rejected and accepted. This empirically proves that partially, Occupational Safety has a positive and significant influence on Employee Productivity at PT. Mega Bata Indonesia. $H_0 H_a$

The results of this study are strengthened by the results of research by M. Fajar Nugroho, Rahmat Haryono, Scientific Journal of Management Vol XI, No. 3 November (2020) Pages 197-206 E-ISSN: 2615-4978 with the title "The Effect of Occupational Safety and Occupational Health on the Productivity of Hospital Employees. Private in Bandung". The results of the study show that occupational safety partially affects the productivity of employees at the hospital.

The Influence of Work Environment (X1) and Occupational Safety (X2) on Employee Productivity (Y)

Based on the results of the analysis, the F value of the calculation was obtained of 57.495 with a significance value of 0.000. When compared to the F value of the table of 3.09, the F value of the calculation was much greater ($57.495 > 3.09$) as well as the significance value was far below 0.05. This shows that it was rejected and accepted. $H_0 H_3$

Thus, it can be concluded that simultaneously or together, the variables of Work Environment (X1) and Occupational Safety (X2) have a significant effect on Employee Productivity (Y) at PT. Mega Bata Indonesia.

The results of this study are strengthened by the research results of Fabiola Estelin Peila, Victor P.K. Lengkong, and Greis M. Sendow, EMBA Journal (2023) entitled "The Effect of Occupational Safety and Occupational Health and the Work Environment on Employee Work Productivity at PT. Manado Koran Paradise During the Covid 19 Pandemic". The results of the study show that the support of a good and safe work environment together strengthens the influence of occupational safety in increasing employee productivity positively and significantly.

CONCLUSION

Work Environment (X1) was proven to have a significant impact on Employee Productivity (Y) which was represented through the regression equation model $Y = 18.762 + 0.550X_1$. The acquisition of a correlation coefficient of 0.711 confirmed the existence of a close association between variables. In addition, the influence of determination was 50.6% and the hypothesis test was obtained $> \text{or } (9.920 > 1.985)$. This fact confirms that it is rejected and accepted

which concludes that the work environment has a real partial effect on employee productivity. $t_{hitung} > t_{tabel} H_0 H_1$

The Occupational Safety Variable (X2) was also proven to have a significant influence on Employee Productivity (Y) through the formulation of the regression equation function $Y = 19.506 + 0.643X_2$. The level of strong relationship tightness is reflected in the correlation magnitude of 0.718. The determination coefficient value was 51.6% and the hypothesis test was obtained $> \text{or } (10.109 > 1.985)$. So that it was rejected and accepted stating that it had a positive and significant effect on work safety on employee productivity. $t_{hitung} > t_{tabel} H_0 H_2$

Through simultaneous testing, the variables of work environment (X1) and occupational safety (X2) simultaneously had a significant effect on employee productivity (Y) with a regression equation of $Y = 17.585 + 0.277X_2$. The level of strong relationship was shown through a correlation coefficient of 0.740. The amount of determination of the joint contribution reached 54.8% while the remaining 45.2% was explained by other factors. The hypothesis test validation confirmed the acquisition of $> \text{or } (57.495 > 3.09)$. Which had implications for rejection and acceptance, concluding that the two independent variables simultaneously had a real effect on employee productivity performance at PT. Mega Bata Indonesia. $F_{hitung} > F_{tabel} H_0 H_3$

SUGGESTIONS

The company is expected to continue to maintain and improve the quality of the work environment, especially in the lighting indicators or lighting in the work area. Based on the results of the questionnaire, the respondents' responses showed the largest score, which was 3.98 in statement 1 (one) regarding the lighting indicator, which stated that inadequate lighting can trigger discomfort for workers. Scores that are included in the scale range of 3.41-4.20 with this agreeing criterion indicates that the majority of employees pay close attention to this aspect. Therefore, the concrete steps recommended for the company's management are to carry out periodic lighting rejuvenation and ensure that the light intensity is evenly distributed in every corner of the brick production space so that employees' work comfort is maintained.

Company management is advised to pay more attention to indicators of the state of the workplace environment in order to tighten the implementation of occupational safety. This refers to the questionnaire data where respondents gave the highest score of 3.70 with the criteria of agreeing with the statement that the preparation and storage of dangerous goods in the workplace is not paid attention to so that it can pose a risk of accidents. This score is in the range of 3.41-4.20 which means that employees confirm the existence of these potential hazards. The solution steps that need to be taken by the company are to implement a good housekeeping system, as well as provide a special area that is isolated and safe for the storage of dangerous goods or raw materials.

Based on the results of the response, the largest score was obtained, which was 3.78 on a scale of 3.41-4.20 with the criteria of agreeing on statement 4 (four) in the indicator of always improving the results achieved, the statement "that the

rich always check their work results to meet or exceed today's target. These findings show that employees have high independent responsibility for the company's targets. Therefore, it is recommended to support the commitment of these employees by integrating simultaneous improvement of the work environment and work safety. The form of support is to provide optimal lighting so that the brick quality check process runs accurately, while ensuring that the hazardous goods arrangement area is neatly organized so that the movement of employees while pursuing daily targets remains safe from the risk of work accidents.

For the next researcher, considering that the value of the combined determination coefficient (R Square) in this study shows a figure of 54.8%, meaning that there is still a remaining 45.2% of employee productivity influenced by other external factors. Therefore, the next researcher is expected to develop this research model by adding new relevant independent variables, such as compensation, work discipline, motivation, or leadership style.

ADVANCED RESEARCH

The coverage of independent variables studied in assessing employee productivity at PT. Mega Bata Indonesia is limited only to work environment and occupational safety factors even though there are many other predictive elements outside the model that contribute to the project.

The scope of the research object that focuses exclusively on the internal of PT. Mega Bata Indonesia makes this finding have generalization limitations, so it cannot necessarily be applied absolutely to other similar manufacturing corporations.

The number of sample sizes involved was limited to 98 respondents through questionnaire data collection instruments, where there is a certain potential subjectivity of the filler perception that may not fully reflect the real conditions in the field.

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