

The Effect Of Time Management, Occupational Safety And Health (Osh) On Employee Work Productivity At Pt. Garuda Maintenance Facility Aero Asia Tbk

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Keyword	Abstract
Employee Engagement, Quality of Work Life, Job Satisfaction	<p>Productivity is an interdisciplinary approach to effectively determining goals. There is a low level of work productivity in the TRP production department at PT. GMF Aero Asia Tbk. Therefore, the objective of this study is to analyze the influence of time management, occupational health, and safety (OHS) on employee productivity.</p> <p>This research employs explanatory research method with a quantitative approach. The sample consists of TRP production department employees, using total sampling technique, with a known sample size of 82 individuals. Data analysis includes descriptive statistical analysis, instrument testing, regression analysis, and determination coefficient analysis. Data processing is aided by Microsoft Excel and SPSS software version 26.</p> <p>The research findings indicate that partially, time management variables have a positive and significant effect on work productivity, as evidenced by t-value $4.238 > t\text{-table } 1.990$ and sig value $0.000 < 0.05$. Occupational health and safety (OHS) variables do not have a positive and significant effect on work productivity, as evidenced by t-value $0.578 < t\text{-table } 1.990$ and sig value $0.565 > 0.05$. Simultaneously, time management variables, and occupational health and safety (OHS) have a positive and significant effect on work productivity, as evidenced by f-value $26.995 > f\text{-table } 3.11$ and sig value $0.000 < 0.05$. The R value is 0.637 indicating a "strong" correlation. Time management and occupational health and safety (OHS) contribute to work productivity by 40.6%. The remaining $(100\% - 40.6\% = 59.4\%)$ is influenced by other variables not studied.</p> <p>It is advisable for PT. GMF Aero Asia Tbk to focus on planning and implementing time management systems to enhance work productivity, while also considering occupational health and safety (OHS) factors through strategic efforts related to facilities and OHS training</p>

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I. Introduction

One of the most important aspects of rapid progress in the industrial era 5.0 in an effort to improve human life is the growth and expansion of industry, where the transportation industry, including air transportation, plays an important and strategic role in supporting all aspects of human life. Companies that adopt digital collaboration tools and implement skills development programs experience an increase in productivity of up to 25% (McKinsey & Company, 2020). Increased productivity can reduce operating costs by up to

20% and increase company profits. Higher efficiency allows companies to offer more competitive prices and expand market share (McKinsey & Company, 2023). In addition to reducing operating costs, according to Sultana et al., (Briyan Artha Ginting and I Wayan Suana, 2020) stated that the main purpose of increasing work productivity is so that employees are able to work more effectively, efficiently, and productively. A productive employee is an employee who is reliable and able to produce goods or services according to

predetermined quality standards in the shortest possible time.

The role of human resources has an important and strategic position in a company, therefore it is necessary to have a role in managing, organizing and utilizing to obtain productive and functional employees in order to achieve the company's goals.

Work productivity at PT. GMF Aero Asia Tbk is influenced by several factors, one of which is time management (Siti Nurbaya et al., 2019). According to Peter (2020), time management is very important because it is an interdisciplinary activity that involves actions or processes to control the amount of time used for certain activities and may have a direct impact on company activities.

In this case, some employees of PT. GMF Aero Asia Tbk are less than optimal in carrying out their obligations such as employees coming late and being less able to carry out their duties due to the inability of employees to manage their time well. This can hinder work and make the work not finished on time.

In addition to time management, another factor that affects the work productivity of PT. GMF Aero Asia Tbk employees is occupational safety and health (OHS) according to the ILO (Aprilliani et al., 2022). According to Niewiadomska, M., 2019 Every accident in the aviation industry has the potential to become a serious concern and receive great attention, especially since safety is the main priority in aviation. Therefore, the issue of OHS at this time is not just an obligation that must be fulfilled by workers, but must be fulfilled by a work system (Suwandi, 2019). The use of Personal Protective Equipment (PPE) is the last form of risk control to protect workers from occupational safety hazards. Implementing compliance with the use of PPE is important as a company's responsibility to protect workers from occupational safety and health hazards (Prabawati, 2018).

Based on the background that has been presented above, there are problem formulations that can be submitted as follows: 1). How does time management affect employee work productivity at PT. Garuda Maintenance Facility Aero Asia Tbk? 2).

How does occupational safety and health (OHS) affect employee work productivity at PT. Garuda Maintenance Facility Aero Asia Tbk? 3). How do time management, occupational safety and health (OHS) simultaneously affect employee work productivity at PT. Garuda Maintenance Facility Aero Asia Tbk?.

II. Literature Review

Work Productivity

Work productivity according to Mawarni (2019), is the result of employee input and output work which is then compared. A worker whose work results are high but not necessarily his productivity also increases. Employees can be said to be productive if they produce output (goods and services) according to targets with an effective and efficient time frame.

Work productivity according to Setiawan (2021), is a comparison between output (results) and input (input). If productivity increases, this is only possible by increasing efficiency (time-materials-labor) and work systems, production techniques and increasing skills of the workforce.

Work productivity according to Hartatik (2021:208), states that more simply, the meaning of productivity is a comparison in arithmetic between the amount produced and the amount of each source used during production. These sources can be land, raw materials and factory auxiliary materials, machines, and tools and labor.

Time Management

According to Patrick Forsyth (2019), time management is a way to control time so as to ensure effectiveness, efficiency and productivity..

Time management according to Atkinson in Faroh et al., (2019:224), states that time management is a type of skill related to all forms of efforts and actions of an individual that are carried out in a planned manner so that the individual can make the best use of their time. Time management according to Peter (2020:203), argues that time management is the act or process of exercising conscious control over the amount of time used for a particular activity, with the aim of increasing efficiency or productivity.

Occupational Safety and Health (OSH)

According to Widyaningrum (2019), Occupational Safety and Health (OSH) is a

program implemented by workers and employers to prevent accidents and occupational diseases. This is done by identifying risk policies and taking preventive measures, as well as providing fair compensation such as salaries, wages, and incentives to increase employee motivation and productivity.

According to Anolraga (2019:2), Occupational Safety and Health is an effort and effort to create protection and safety from the risk of accidents and physical, mental and emotional hazards to workers, companies, communities and the environment.

According to the International Labor Organization (ILO) in Aprilliani et al (2022), Occupational Safety and Health (OHS) or Occupational Safety and Health is an effort to improve and maintain optimal conditions for all workers, both physically and mentally, as well as social welfare in various types of work. The goal is to prevent health disorders caused by work, protect workers from risks arising from factors that can endanger health, create a work environment that is in accordance with the physical and psychological conditions of workers, and achieve compatibility between work, workers, and their respective tasks.

Hypothesis

H1: Time Management affects employee work productivity at PT. Garuda Maintenance Facility Aero Asia Tbk.

H2: Occupational Safety and Health (OHS) affects employee work productivity at PT. Garuda Maintenance Facility Aero Asia Tbk.

H3: Time Management, Occupational Safety and Health (OHS) simultaneously affect employee work productivity at PT. Garuda Maintenance Facility Aero Asia Tbk.

III. Methode

The population in this study were employees of PT. Garuda Maintenance Facility Aero Asia Tbk TR SBU Defense Industry service, TRP production section totaling 82 employees. While for sampling in this study using saturated samples. So the author took the entire population as a sample, namely 82 respondents.

Variables and Measurement Scales

The variables in this study will be described and can be seen in the following table: Table 1. Research Variables and Indicators:

Table 1. Operational Variables

Variables	Indicators
Work Productivity (Work productivity according to Setiawan (2021))	Ability
	Increasing the working target
	Working spirit
	Self Developments
	Quality
Time Management (Time management according to Atkinson in Faroh et al., (2019:224))	Efficiency
	Organizing the goals
	Organizing the right priority scales
	Organizing Schedule
Occupational Safety and Health(OHS) (According to the International Labor Organization (ILO) in Aprilliani et al (2022))	Reducing the distractions
	Work Environment
	Tools and working equipment
	Workforce

The data analysis method in this study uses:

1. Descriptive Statistical Analysis: Descriptive analysis is carried out to describe the data. The data in this study are in the form of minimum and maximum result scores, data range, average value and standard deviation.
2. Research Instrument Test: To determine how high the validity and reliability of the measuring instrument that will be used later.

3. Regression Analysis: By using linear regression analysis, it will measure changes in the dependent variable based on changes in the independent variable.
4. Correlation Analysis: Used to find the relationship between independent variables and dependent variables.
5. Determination Coefficient Analysis (R²): Used to determine the magnitude of the contribution of X to the increase and decrease of the Y value.
6. t-Test Results: The t-test is used to test the regression coefficient partially or to determine the effect of variables X1 and X2 on variable Y.
7. F-Test Results (Simultaneous): This test is used to test the hypothesis simultaneously between variables X1 and X2 on variable Y in a multiple regression model.

Regression Analysis

It is known that the significant value is 0.600. Time Management, K3 and Work Productivity are stated to be reliable. This is indicated by the Crohnbach's Alpha value > from the significant value of 0.600.

Table 2. Regression Test

Coefficients ^a					
		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	
Model					
1	(Constant)	6.636	2.438		2.721 .008
	Time Management	.757	.179	.575	4.238 .000
	OSH	.091	.157	.078	.578 .565

a. Dependent Variable: Work Productivity

Source: Spss

IV. Result and Discussion

Descriptive Statistical Analysis

The descriptive results of the variable (X1) show that the Time Management variable has a minimum value of 1 and a maximum of 5. The descriptive results of the variable (X2) show that the Occupational Safety and Health (OSH) variable has a minimum value of 1 and a maximum of 5. And the descriptive results of the variable (Y) also show that the Work Productivity variable has a minimum value of 1 and a maximum of 5.

Validity Test

It is known from the r table that is 30-2 = 28 with an error rate of 5% or 0.05, the rtable value of 0.361 can be known. Time Management, Occupational Safety and Health (OSH) and Work Productivity are declared valid. This is indicated by the rcount value > from rtable 0.361.

Reliability Test

It is known that the significant value is 0.600. Time Management, K3 and Work Productivity are stated to be reliable. This is indicated by the Crohnbach's Alpha value > from the significant value of 0.600.

Based on the results of multiple linear regression analysis in the table above, the coefficient for the time management variable (X1) is 0.757 and the (OSH) occupational safety and health variable (X2) is 0.091 with a constant coefficient of 6.636. So the correlation equation can be written as follows:

$$Y = 6.636 + 0.757 + 0.091 + e_l$$

The correlation (b) is called the correlation of the direction of the correlation and indicates the change in the variable indicating the unit. This change is an increase if the value of b is positive and a decrease if b is negative. So from the results of the equation in this study it is translated that work productivity in a fixed condition or not influenced by time management and occupational safety and health (OSH), the condition of work productivity already has a value of 6.636, then after being influenced by time management with an increase of 1, work productivity increases by 0.757, and from the variable of occupational safety and health (OSH) by 0.091 for every increase of 1.

Correlation Analysis

Table 3. Correlation Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.637 ^a	.406	.391	4.912

a. Predictors: (Constant), OSH, Time Management

Source: Spss

Based on the calculation results above, the R value of 0.637 was obtained, so the correlation between time management (X1) and occupational safety and health OSH (X2) on work productivity (Y) has a "strong" relationship. This is supported by the correlation coefficient standard of 0.60 - 0.799 (Sugiyono, 2022:184).

Determination Coefficient Analysis

Table 4. Determination Coefficient Test

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.637 ^a	.406	.391	4.912

a. Predictors: (Constant), OSH, Time Management

Source: Spss

Based on the results of the correlation test of the above determination, it can be seen that the value of the R Square column is 0.406 then multiplied by 100% according to the correlation test formula of determination ($r^2 \times 100\%$), so that the result is 40.6%. This figure means that the variables of time management (X1) and occupational safety and health (OSH) (X2) simultaneously (together) affect the variable of work productivity (Y) by 40.6%. While the rest ($100\% - 40.6\% = 59.4\%$) is influenced by other variables that are not studied in this research.

Hypothesis testing

T-test

It is known that the significant value is 0.600. Time Management, K3 and Work Productivity are stated to be reliable. This is indicated by the Cronbach's Alpha value > from the significant value of 0.600.

Table 5. T-test

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	6.636	2.438		.008
	Time Management	.757	.179	.575	.000
	OSH	.091	.157	.078	.565

a. Dependent Variable: Work Productivity

Source: Spss

It can be seen:

1. The Influence of Time Management on Work Productivity

From the table above, $t_{count} 4.238 > t_{table} 1.990$ and sig value $0.000 < 0.05$, at a confidence level of 95% so that the conclusion H_a is accepted. Thus, there is a positive and significant influence of time management on work productivity of employees of PT. GMF Aerojet Asia Tbk in the TRP unit production section.

2. The Influence of Occupational Safety and Health (OSH) on Work Productivity

From the table above, the t count is $0.578 < t_{table} 1.990$ and the sig value is $0.565 > 0.05$, at a confidence level of 95%, so the conclusion H_a is rejected. Thus, there is no positive and significant influence of occupational safety and health (OSH) on work productivity of employees of PT. GMF Aerojet Asia Tbk in the TRP unit production division.

F-test

Table 6. F-Test

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1302.854	2	651.427	26.995	.000 ^b
	Residual	1906.366	79	24.131		
	Total	3209.220	81			
a. Dependent Variable: Working Productivity						
b. Predictors: (Constant), OSH, Time Management						

Source: Spss

From the table above, it is known that the f count is 26.995 with a significance level of 5% $df = n-k-1 = 82-2-1 = 79$, then the f table is 3.11. Thus, based on the results of the table, it can be concluded that the f count is $26.995 > f \text{ table } 3.11$ and the sig. value is $0.000 < 0.05$, meaning that H_0 is rejected and H_a is accepted. This shows that there is a positive and significant influence of time management and occupational safety and health (OSH) simultaneously on work productivity.

Discussion

The Effect of Time Management on Work Productivity

Based on statistical testing on the time management variable on the work productivity of employees of PT. Garuda Maintenance Facility Aero Asia Tbk, it is concluded that the results of the study show a t-value of $4.238 > t\text{-table } 1.990$, so it can be seen that H_a is accepted. Thus, there is a positive and significant influence of time management (X1) on work productivity (Y) of employees of PT. Garuda Maintenance Facility Aero Asia Tbk in the TRP unit production section.

The Influence of Occupational Safety and Health (OSH) on Work Productivity

Based on statistical testing on the variables of occupational safety and health on the work productivity of employees of PT. Garuda Maintenance Facility Aero Asia Tbk, it is concluded that the results of the study show a t-value of $0.578 < t\text{-table } 1.990$, so it can be seen that H_a is rejected. Thus, there is no positive and significant influence of occupational safety and

health (X2) on work productivity (Y) of employees of PT. Garuda Maintenance Facility Aero Asia Tbk in the TRP unit production section.

The Influence of Occupational Safety and Health (OSH) on Work Productivity

Based on statistical testing on the variables of occupational safety and health on the work productivity of employees of PT. Garuda Maintenance Facility Aero Asia Tbk, it is concluded that the results of the study show a t-value of $0.578 < t\text{-table } 1.990$, so it can be seen that H_a is rejected. Thus, there is no positive and significant influence of occupational safety and health (X2) on work productivity (Y) of employees of PT. Garuda Maintenance Facility Aero Asia Tbk in the TRP unit production section.

The Effect of Time Management, Occupational Safety and Health (OSH) on Work Productivity

Based on statistical testing on the variables of time management, occupational safety and health on the work productivity of employees of PT. Garuda Maintenance Facility Aero Asia Tbk, it is concluded that the results of the study show a value of f count $26.995 > f \text{ table } 3.11$ and a sig. value of $0.000 < 0.05$, meaning that H_0 is rejected and H_a is accepted. This shows that there is a positive and significant influence of time management and occupational safety and health (OSH) simultaneously on the work productivity of employees of PT. Garuda Maintenance Facility Aero Asia Tbk, the TRP unit production section.

V. Conclusion

Based on the results of the hypothesis testing that have been presented in the previous chapter, the following conclusions can be drawn:

1. Time management has a significant influence on employee work productivity based on the results of t count $4.238 > t \text{ table } 1.990$ and a sig value of $0.000 < 0.05$, at a confidence level of 95% so that the conclusion H_a is accepted. Thus, there is a positive and significant influence of time management on work productivity of employees of PT. GMF Aerol Asia Tbk in the TRP unit production section.

2. Occupational safety and health (OSH) has a significant influence on employee work productivity based on the results of t count $0.578 < t_{table} 1.990$ and a sig value of $0.565 > 0.05$, at a confidence level of 95% so that the conclusion H_a is rejected. Thus, there is no positive and significant influence of occupational safety and health (K3) on work productivity of employees of PT. GMF Aero Asia Tbk in the TRP unit production section. However, accidents often occur because the number of Personal Protective Equipment (PPE) provided by the company is not yet sufficient according to the type of work.
3. Time management, occupational safety and health (OSH) together (simultaneously) have a significant influence on employee work productivity based on the results of the calculated f value of $26.995 > f_{table} 3.11$ and the sig. value. $0.000 < 0.05$ means H_0 is rejected and H_a is accepted, this shows that there is a positive and significant influence of time management and occupational safety and health (K3) simultaneously on the productivity of employees of PT. Garuda Maintenance Facility Aero Asia Tbk, TRP unit production division.

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