

The Influence of Workload and Stress on Employee Performance in PT X Palm Oil Mill

Nidya Wisudawati^{1*}, Dodi Aprianto Pratama²

^{1,2}Department of Industrial Engineering, Faculty of Engineering, Universitas Muhammadiyah Palembang, South Sumatra 30263, Indonesia.

*Corresponding Author:

Email: nidyawisudawati@gmail.com

Abstract.

The aim of this study was to determine the effect of employee workload and stress on the production process at PT X palm oil mill with a capacity of 600 tons/day. The process in this palm oil mill are broadly divided into 6 parts through several processing stations namely reception, threshing, stirring and pressing, clarification and nut and kernel stations. Work activities carried out with a standing attitude for a long time, monotonous, exposed to noise from production machines and the number of extra hours will have an impact on workload and work stress felt by employees. This study uses multiple linear regression analysis with 32 respondents. The results showed that workload and work stress simultaneously had a positive and significant effect on employee performance. Partially the workload has a positive and significant effect, while work stress does not significantly influence the performance of employee.

Keywords: *employee performance, palm oil mill, workload, work stress.*

I. INTRODUCTION

Humans with various expertise they have are needed in the achievement of organizational goals [1]. Realizing professional human resources for a company sometimes has obstacles. Various factors can emerge both obstacles from company factors and from within employees themselves [2]. The mill which operates palm oil processing is located in South Sumatra area. In addition to produce palm oil, this mill also produces side products in the form of palm kernel seeds. All production activities use manual and machining.

PT X has a production target of 600 tons per day. Work activities in this mill require a long time, overtime during holidays, and the monotonous type of work makes this work can cause boredom and stress, even some workers are dominated by standing work attitude and are exposed to noise from production machines that can interfere with work so that it can create a heavier workload. The high consumer demand for the products produced makes the mill further increase production productivity. This will have an impact on workloads and the level of stress felt by workers. Workload and work stress experienced by employees can affect the performance, as well as the quality of the products produced. Products that are not in accordance with mill standards have an impact on the decline in mill revenue. Based on the description, it

can be formulated the aim of this study is to determine the effect of workload and work stress on employee work performance.

Workload

Workload is an effort that must be spent by someone to fulfill the demand of the work. The capacity is the ability / human capacity. This capacity can be measured and one's physical and mental condition [3]. Workload is influenced by internal and external factors [4]. Everyone has different abilities with different ones. Excessive workload by deadline for work or use up human resources. The workload cannot always be in full control of the total workload, but we can overcome the effect and take some preventive actions [5]. The level of loading that is too high allows the use of excessive energy and over stress occurs, on the other hand, the intensity of the loading is too low to allow boredom and boredom or under stress. Therefore it is necessary to strive for an optimum level of intensity of loading that is between the two extreme limits and of course it differs from one individual to another.

Work stress

According to Mangkunegara [6], work stress is a feeling of pressure or a feeling of stress experienced employees in dealing with their work. Job stress will arise when there is a gap between individual abilities and the demands of their work While the factors that influence work stress include external environmental factors, organizational factors and individual factors. It can be said that job stress can arise if job demands are not balanced with the ability to meet these demands, causing various levels, including moderate and high levels. Moderate stress acts as a motivator that has a positive impact on behavior, including work behavior. High level stress means events that occur repeatedly and last long so that individuals feel the threat, experiencing physical, psychological and work behavior disorders [7].

Employee Performance

Based on Sari [8] defines employee performance as the work achieved by a person or group of people according to the authority or responsibility of each employee during a certain period. A company needs to conduct a performance appraisal on its employees. Performance appraisal plays a very important role in increasing motivation in the workplace. Assessment should provide an accurate picture of work performance. From the previous description, it can be concluded that performance is related to the results of the work achievement of employees who work in an organization or company, which is in accordance with the authority and responsibility of each employee and is important in explaining their work performance.

II. METHODS

The sampling technique in this study uses total participation or total sampling [9]. This is because there are only 32 employees in the production department. Total sampling is a sampling technique where the number of samples is as same as the population. The reason for taking total sampling is because the total population is less

than 100 of the whole population was used as a sample of all studies. This study uses a survey to collect primary data and secondary data. Data was collected by survey in a cross-section through a questionnaire. To collect primary data, this study provides questionnaires for each of the employee in the production department. Measurement data from all research variables use a Likert scale. The Likert scale in this study uses level 1 to 5 scales for all variable. A five-point Likert scale is used with a score of 1, stating “strongly disagree”, and 5, representing “strongly agree”. Data also collected by interview, observation and literature. To analyse data used descriptive statistic analysis and inferential statistic analysis. The inferential statistic analysis using multiple regression analysis with SPSS for windows program.

III. RESULT AND DISCUSSION

Employees in this area of production are dominated by men (100%). This is because men have stronger and more agile energy in doing their jobs. The age of respondents in the range of 25-30 years, there are 14 respondents (42.42%), then the age of respondents with a range of 21-25 years there are 11 respondents (33.33%), and only 1 respondents at age of > 30 years (3.03%). The education level of employees is dominated by high school education of 96.96% with an average working period of <5 years and <10 years. The characteristics of the employees' respondents can be seen in Table 1.

Table 1. Characteristic of employee

Characteristics	Total	Percentage
Gender		
Men	32	100%
Women	-	
Age		
21-25	11	33.33%
25-30	14	42.42%
30-35	7	21.21%
>35	1	3.03%
Education		
High school	31	96.96%
Bachelor	1	3.03%
Years of service		
<5 years	18	54.54%
5-10 years	15	45.46%
>10 years	-	

Validity and reliability test

In the validity test, it is known that all r-count values are greater than r-table value, meaning all questionnaire items declared valid so that it can be used as a research instrument. For reliability test can be obtained from Cronbach’s alpha of the variable workload (X1) is 0.89, work stress (X2) 0.92 and Cronbach’s alpha value of the variable employee performance (Y) is 0.90. This shows that the variable used is reliable, because the data shows that the value of Cronbach’s alpha of each variable has

a value above 0.6. The results of validity and reliability test of the research instrument using SPSS software version 22.0 presented in Table 2.

Variable	Indicator	r-count	r-table	Status	Alpha Cronbach	Status
X1	X1.1	0.51	0.3	valid	0.89	reliable
	X1.2	0.87		valid		
	X1.3	0.70		valid		
	X1.4	0.77		valid		
	X1.5	0.83		valid		
X2	X2.1	0.79	0.3	valid	0.92	reliable
	X2.2	0.85		valid		
	X2.3	0.82		valid		
	X2.4	0.72		valid		
	X2.5	0.82		valid		
Y	Y1	0.52	0.3	valid	0.90	reliable
	Y2	0.49		valid		
	Y3	0.58		valid		
	Y4	0.38		valid		
	Y5	0.78		valid		
	Y6	0.79		valid		
	Y7	0.68		valid		
	Y8	0.81		valid		
	Y9	0.76		valid		
	Y10	0.78		valid		

The results of multiple linear regression tests can be written in the form of a standard coefficient regression equation obtained by the following equation: $Y = 5.876 + 1.681X1 + 0.029X2$. The number 5.876 shows the value of a constant which is influenced by the variable workload (X1), work stress (X2) then the work performance of employees at PT X will increase by 5,876 said to be increasing because the value of the constant is positive. The number 1.681 shows the value of the regression coefficient of workload variable (X1) which indicates that if the workload variable increases by 1%, the employee's work performance (Y) will increase by 1.681. The number 0.029 shows the regression coefficient of work stress variable (X2) which indicates that if the work stress variable increases 1% then the employee's work performance (Y) will experience an increase of 0.029.

Simultaneous testing with F test

This test is intended to test the effect of simultaneously variable workload (X1), work stress (X2), on work performance (Y). Based on the simultaneous test, the results show that the magnitude of F counts $124.769 > 3.33$ F table at a significance level of $0.000 < 0.05$ means that workload variables (X1), job stress (X2), together have a significant effect on employee work performance. at PT X. It can be concluded that the workload variable (X1), work stress (X2) simultaneously has a significant effect on employee work performance at PT X.

Partial testing with T test

This test aims to examine the effect of each consisting of workload (X1), work stress (X2), on the work performance of employees. Based on the results of the partial test (T test), it shows that the independent variables consisting of workload (X1), work stress (X2), are at a significant level of 5% and the regression coefficient value of X1 ($15.23 > 1.699$) and ($P < 0.05$) is obtained. , 05) so that H0 is rejected, it means that the workload variable (X1) has a significant effect on the work performance of employees at PT X. While the work stress X2 ($0.444 < 1.699$) and ($P > 0.05$) so that H0 is accepted, it means the work stress variable (X2) has no significant effect on employee work performance at PT X.

Coefficient determination

Determination coefficient is a value that indicates the magnitude of the influence of the independent variable X on the dependent variable Y. The results obtained for the R square coefficient value is 0.896 which means that the magnitude of the influence of workload (X1), work stress (X2), on employee work performance at PT X amounted to 89.6%. In other words it can be concluded that the change in the increase in employee work performance at PT X 86.9% is influenced by changes in the characteristics of the workload factor (X1), work stress (X2), while the remaining 13.1% is due to other factors not studied in this study.

Table 3. Recapitulation results of multiple regression tests between independent variables and dependent

Variable		R	Beta	t	Sig t	Decision on H0
Dependent	Independent					
Y	X1	1.681	0.954	15.323	0.000	rejected
Y	X2	0.029	0.028	0.444	0.661	Accepted
t- table = 1.699 R = 0.947 R ² = 0.896 F count = 124.769 F- table = 3.333						

Workload on employees at PT X palm oil mill has a significant positive effect on employee performance variables of 1,681. This opinion is also strengthened by the previous research conducted by Aprilia [10] in her research that workload has a significant effect on the performance of nurses at the Ibnu Sina Islamic Hospital Pekanbaru. Tjiabrata, et al [11] in their research also showed that there was a significant influence between workload and employee performance at PT. Sabar Ganda Manado. Workload problems at PT X are caused by employees who are tired due to workload pressure, in addition, excessive work pressure makes employees not focus on work. This can be prevented by the company if the company pays more attention to the number of complaints from employees, working hours and types of work. Sometimes complaints from employees are not the main concern for the company so that it is considered normal, which in essence is feedback for the company, so the company

knows what is happening to its employees, and what the company must do to its employees.

Other workloads such as employees working for long hours, during overtime and even on holidays, are also important things that companies must pay attention to. Managing employee workloads must be accompanied by good management of working hours that must be carried out by the company. Not only that, the company must also be able to pay attention to the effect of the workload, whether it will have a good impact on performance or otherwise will have a negative impact on employee performance. Therefore, a good workload management needs to be done by the company, such as responding to complaints from employees, where there is a feeling of dissatisfaction from the employees towards the company which is conveyed both verbally and in writing. In addition, managing working hours is also one way of managing workloads, so that employees no longer need to work continuously overtime and even on holidays. Workers who are physically fit can support the effectiveness of the company which will have an impact on maximizing company profits.

Work stress on employees at PT X palm oil mill does not have a significant effect on employee work performance variables due to job stress X2 ($0.444 < 1.699$) and ($P > 0.05$). This is also supported by previous research conducted by Nurhendar [12] which states that there is no the effect of job stress on employee performance. The results above are also supported by the theory Massie and Areros [13] which states that from an organizational point of view, management may not be worried if employees experience light stress. The reason is because at a certain level of stress will have a positive effect, because this will urge them to do the task better. Managing work stress is something that is really needed by both employees and companies, so that the stress can have a positive impact on employees. In terms of work stress that needs to be considered, among others, ambiguity where ambiguity can occur when information about roles is less clear. Ambiguity in certain situations can lead to several things including emotional distress which can run job stress due to lack or absence of the information needed. In addition, role conflict is also an indicator of work stress. The difference that occurs between employees and success cannot make it happen properly so it can be stressful at work for employees. Positive stress will build. It also includes the welfare of employees as well as companies that support growth, flexibility, adaptability and high levels of performance. Managing stress in order to obtain optimal results that will have an impact on performance is indeed very easy, but the results obtained will be proportional to the work done.

IV. CONCLUSION

Based on the research results, the results of the workload (X1) partially have a significant effect on employee work performance. Job stress (X2) partially has no significant effect on employee work performance. Workload (X1), work stress (X2),

simultaneously have a significant and significant effect on employee work performance at PT X palm oil mill.

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