

THE EFFECT OF INCOME AND MOTIVATION ON THE PERFORMANCE OF HARVESTERS AT MARPINGGAN PALM OIL PLANTATION PTPN IV AFDELING V

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Abstract

This study aims to analyze the effect of income and motivation on the performance of harvesters at the Marpinggan Palm Oil Plantation PTPN IV Afdeling V. The research was conducted from January to June 2026 with 27 harvester respondents selected using the census method. The data was analyzed using multiple linear regression with the help of SPSS version 23. The research results show that income and motivation have a positive and significant effect on harvester performance. The regression equation obtained is $Y = 8.857 + 0.383X_1 + 0.427X_2$. The coefficient of determination (R^2) value of 0.427 shows that 42.7% of the variation in harvester performance can be explained by income and motivation, while 57.3% is influenced by other factors outside the study. Motivation is the most dominant variable affecting harvester performance.

Keywords: Income, Motivation, Harvester Performance, Oil Palm.

INTRODUCTION

Palm oil plantations are one of the strategic sectors that contribute greatly to Indonesia's economy and employ a large number of workers. The performance of harvesters, as the frontline of harvesting activities, greatly determines the productivity and operational success of the company. However, the harvester's job, which demands high physical conditions, production targets, and a challenging work environment, can affect work performance. Therefore, income and motivation are important factors that need to be considered in improving harvester performance.

Income is a form of compensation that can improve employee welfare and job satisfaction. According to Ryan and Deci (2020), adequate income can increase workers' motivation and loyalty. Meanwhile, work motivation, both intrinsic and extrinsic, plays a role in pushing individuals to achieve optimal performance. Robbins and Judge (2022) state that high motivation can boost employee productivity and commitment to their jobs. In addition, Rahman et al. (2023) found that income and motivation have a positive effect on the performance of palm oil harvesters, while Kusuma et al. (2022) reported that intrinsic motivation significantly contributes to increasing plantation labor productivity.

Although various studies have discussed the relationship between income, motivation, and performance, research specifically conducted on harvesters at Marpinggan Oil Palm Plantation PTPN IV Afdeling V is still limited. The characteristics of the location, working conditions, and labor management system allow for variations in the influence of these two variables on harvester performance. Therefore, this study aims to analyze the effect of income and motivation on harvester performance, both partially and simultaneously, as well as to identify the variable that most dominantly affects harvester performance at Marpinggan Oil Palm Plantation PTPN IV Afdeling V.

RESEARCH METHOD

This research was conducted at the Marpinggan Palm Oil Plantation, PTPN IV, Afdeling V, South Tapanuli Regency, North Sumatra, from January to June 2026. The research location was chosen deliberately (purposively) considering that this afdeling has regular harvesting activities and involves a fairly large number of harvesters, making it suitable for studying the influence of income and motivation on harvester performance.

The research uses a quantitative approach with a survey method. The population in this study is all active harvesters at the Marpinggan Oil Palm Plantation, PTPN IV Afdeling V, totaling 27 people. Since the population is relatively small, the study uses a saturated sampling technique (census), so all members of the population are taken as research respondents. The data used consists of primary and secondary data. Primary data is obtained through field observations, interviews, and distributing questionnaires to respondents. Meanwhile, secondary data is obtained from company documents, relevant reports, and various literature related to the research. Variable measurements are done using a five-point Likert scale, which includes strongly agree, agree, somewhat agree, disagree, and strongly disagree.

The research variables consist of income (X₁) and motivation (X₂) as independent variables, and harvester performance (Y) as the dependent variable. The collected data were tested for validity and reliability, then analyzed using multiple linear regression analysis with the help of SPSS version 23. Before conducting the regression analysis, the data were first tested through classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, to ensure the research model's feasibility.

RESULTS AND DISCUSSION

Validity and Reliability Test

Validity testing is done to find out how well a research instrument can accurately measure the variables being studied. According to Hair et al. (2022), a statement item can be said to be valid if it is able to represent the construct being measured so that the data produced truly reflects the actual conditions.

Table 1. Validity Test Results

Item	Corrected Item–Total Correlation	Cronbach’s Alpha if Item Deleted	Keterangan
Work Income (X1)	0.790	0.803	Valid
Work Motivation (X2)	0.729	0.856	Valid
Harvester Performance (Y)	0.771	0.819	Valid

Reliability testing aims to find out how consistent a research instrument is in producing stable and trustworthy data. According to Hair et al. (2022), an instrument is considered reliable if it has a Cronbach's Alpha value greater than 0.70.

Table 2. Reliability Test Results

Cronbach’s Alpha	Cronbach’s Alpha Based on Standardized Items	N of Items
0.877	0.878	3

The Cronbach’s Alpha value of 0.877 is higher than the minimum limit of 0.70, so the research instrument is considered reliable. This means that the variables of Work Income (X₁), Work Motivation (X₂), and Employee Performance (Y) have very good internal consistency.

Normality Test

Based on the Kolmogorov-Smirnov test, the Asymp. Sig. value obtained is 0.200 (>0.05), so the research data is normally distributed and meets the normality assumption.

Classical Assumption Test

Multicollinearity Test. The test results show all variables have Tolerance values > 0.10 and VIF < 10, so there is no multicollinearity.

Table 3. Results of the Multicollinearity Test

Variable	Tolerance	VIF
Income Variable	0.840	1.191
Motivation Variable	0.840	1.191

Heteroskedasticity Test. The test results show that the significance values of all variables are greater than 0.05, so the regression model does not experience heteroskedasticity.

Multiple Linear Regression Analysis

Table 4. Results of Multiple Linear Regression

Variable	Koefisien (B)	Std. Error	Beta	t Hitung	Sig.	Description
Constants	8,857	8,921		0,993	0,331	Not Significant
Income (X ₁)	0,383	0,158	0,409	2,429	0,023	Significant
Motivation (X ₂)	0,427	0,194	0,372	2,204	0,037	Significant

Based on the multiple linear regression analysis, the regression equation obtained is $Y = 8.857 + 0.383X_1 + 0.427X_2$. Income (X₁) and Motivation (X₂) have a significant effect on employee performance (Y).

Hypothesis Test

1. Partial Test (t Test):

- Income (X₁): Has a significant effect on harvester performance with a significance value of 0.023 (<0.05) and a calculated t-value of 2.429.
- Motivation (X₂): Has a significant effect on harvester performance with a significance value of 0.037 (<0.05) and a calculated t-value of 2.204.

2. Simultaneous Test (F Test):

Table 5. F Test Results

F Count	Sig.	Description
8,954	0,001	Significant

The results show that the variables income (X₁) and motivation (X₂) together significantly affect harvester performance (Y).

Coefficient of Determination

Based on the analysis results, the coefficient of determination (R²) was found to be 0.427. This indicates that 42.7% of the variation in harvester performance can be explained by income and motivation variables, while the remaining 57.3% is influenced by other factors outside the research model that were not studied in this research. This R² value shows that income and motivation have a fairly strong contribution in explaining changes in harvester performance at the Marpinggan Oil Palm Plantation, PTPN IV Afdeling V.

Discussion

Based on the results of the multiple linear regression analysis, the regression equation obtained is $Y = 8.857 + 0.383X_1 + 0.427X_2$. This equation shows that income (X₁) and motivation (X₂) have a positive relationship with harvester performance (Y). In other words, an increase in income or motivation will be followed by an increase in harvester performance, assuming other variables remain constant. Partial testing results show that the income variable (X₁) has a regression coefficient of 0.383, a t-value of 2.429, and a significance level of 0.023. A significance value below 0.05 indicates that income has a real effect on harvester performance. This suggests that providing proper income, whether in the form of salary, incentives, or bonuses, can encourage harvesters to work more productively and meet the harvest targets set by the company.

The motivation variable (X₂) also shows a significant influence on harvester performance with a regression coefficient of 0.427, a calculated t-value of 2.204, and a significance value of 0.037. The higher coefficient compared to the income variable indicates that motivation is a factor that has a more dominant effect on improving harvester performance. This suggests that work drive, rewards, recognition of achievements, and responsibility in the job can boost the harvesters' enthusiasm, which in turn improves their performance. Simultaneously, income and motivation variables have a significant impact on harvester performance. The F-test results showed an F value of 8.954 with a significance level of 0.001, which is less than 0.05. These findings suggest that both variables together contribute to explaining changes in harvester performance at Marpinggan Palm Oil Plantation PTPN IV, Section V. Besides that, the analysis results show a coefficient of determination (R²) value of 0.427. This value means that 42.7% of the variation in harvester performance can be explained by income and motivation, while the remaining 57.3% is influenced by other factors not included in the research model. These factors could include

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work experience, working environment conditions, skills, work discipline, leadership, or other individual factors. This result shows that, although income and motivation play an important role in improving harvester performance, there are still other variables that need to be considered to get a more comprehensive picture of the factors affecting harvester performance.

CONCLUSION

The research results show that income and motivation have a positive and significant effect on the performance of harvesters at Marpinggan Palm Oil Plantation PTPN IV Afdeling V. Individually, income and motivation each have a real impact on harvester performance, with motivation being the more dominant variable. Together, both variables also significantly affect harvester performance. The coefficient of determination (R^2) of 0.427 indicates that 42.7% of the variation in harvester performance can be explained by income and motivation, while the rest is influenced by other factors outside of this study.

SUGGESTION

The company is expected to be able to boost work motivation and provide proper income so that harvester performance becomes more optimal. In addition, future research is suggested to add other variables that are suspected to affect harvester performance to get more comprehensive results.

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