



The Effect Of Work Engagement, Work Stress, and Motivation on Employee Performance of PT. Daria Dharma Pratama Ipuh

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ABSTRACT

This study aims to analyze the effect of work engagement, work stress, and motivation on the employee performance of PMKS Ipuh PT. Daria Dharma Pratama. The research employed a quantitative approach with an explanatory research design and multiple linear regression analysis using IBM SPSS version 25. The research population consisted of 117 permanent employees, with a saturated sampling technique applied. Data were collected through a questionnaire using a 5-point Likert scale and analyzed through validity tests, reliability tests, multiple linear regression analysis, t-test (partial), F-test (simultaneous), and coefficient of determination (R^2). The results show that work engagement has a positive and significant effect on employee performance ($\beta = 0.184$; $p = 0.012$), work stress has a negative and significant effect ($\beta = -0.075$; $p = 0.035$), and motivation is the most dominant predictor with a positive and significant effect ($\beta = 0.369$; $p = 0.000$). Simultaneously, the three variables significantly affect employee performance ($F = 43.313$; $p = 0.000$) with a coefficient of determination of 53.5%. The study concludes that motivation serves as the primary driver of performance, while work engagement acts as a facilitating condition and work stress functions as an inhibiting factor requiring management. Integrated and holistic human resource management interventions are recommended, with priority given to enhancing motivation, maintaining work engagement, and implementing comprehensive stress management programs.

INTRODUCTION

At the provincial level of Bengkulu, similar conditions have also been identified. Based on data from the Bengkulu Plantation Office (2023), several palm oil mills (PMKS) reported a decline in productivity due to high work pressure, low work enthusiasm, and unstable performance during certain shifts. This phenomenon highlights the importance of paying attention to

psychological variables that play a role in improving employee work effectiveness. This situation is also evident at PMKS Ipuh of PT. Daria Dharma Pratama. With a total of 117 employees, most of whom work in core operational units such as the loading ramp, sterilizer, press, clarification, and kernel units, the company faces high job demands and considerable occupational risks. Based on field observations conducted during 2024–2025, several performance-related issues were identified, including delays in operational processes, lack of accuracy, declining motivation in certain sections, and complaints regarding the intensity of the workload. Some employees also exhibited symptoms of work-related stress, such as fatigue, boredom, and reduced focus, particularly during peak production hours. Work engagement is one of the key aspects influencing performance quality. According to Schaufeli and Bakker (2023), engagement consists of vigor, dedication, and absorption. Employees with high levels of engagement tend to be more energetic, dedicated, and deeply immersed in their work. However, observational findings indicate that some employees at PMKS Ipuh have begun to experience a decline in work enthusiasm, especially when production workloads increase.

On the other hand, work stress has emerged as a significant influencing factor. Luthans (2011) explains that prolonged work stress can lead to decreased productivity, increased risk of errors, and even burnout. The working environment at PMKS, which is characterized by high temperatures, noise, occupational hazards, and intense production target pressures, has the potential to trigger stress that negatively affects performance.

Meanwhile, work motivation serves as a primary driving force that encourages employees to perform optimally. According to Ryan and Deci (2017), motivation consists of intrinsic and extrinsic components, both of which influence employee commitment to work. However, several employees at PMKS Ipuh have expressed dissatisfaction regarding the lack of recognition, limited opportunities for career development, and monotonous work routines, which may ultimately reduce motivation and discipline. These phenomena become increasingly relevant when linked to recent empirical studies. Amelia (2022) found that work stress has a significant negative effect on employee productivity in the processing industry. Muchtadin (2023) demonstrated that work motivation plays a crucial role in improving performance in the industrial sector. Fatimah (2023) reported that work engagement is positively correlated with employee performance, indicating that individuals with high engagement are better able to maintain performance even under work pressure. Tri Diana and Amelia (2022), in a study conducted at a palm oil mill, found that workload and role pressure significantly reduce employees' operational performance. Furthermore, a recent study by Purnomo (2024) reinforces the view that motivation and engagement are important predictors of performance in physically demanding work environments such as manufacturing and processing industries.

Findings from previous studies strengthen the theoretical foundation that work engagement, work stress, and motivation have a direct influence on employee performance, particularly in the processing industry sector. Recent research by Fatimah (2023) shows that work engagement has a positive and significant effect on employee performance in the manufacturing industry, where higher levels of engagement lead to better performance outcomes. Similarly, Purnomo (2024) found that both intrinsic and extrinsic motivation are key factors in enhancing employee performance in physically demanding work environments. In addition, a study by Amelia (2022) indicates that work stress has a significant negative effect on employee productivity in the processing industry, as high work pressure can reduce focus, accuracy, and work enthusiasm. These three recent studies collectively emphasize that work engagement, work stress, and motivation are critical variables that must be addressed in efforts to improve performance, particularly in industries characterized by heavy workloads such as PMKS. These findings further reinforce the urgency of this study to examine the extent to which these three variables influence employee performance at PMKS Ipuh of PT. Daria Dharma Pratama.

Although numerous studies have examined the effects of work engagement, work stress, and motivation on employee performance, most have been conducted in the service sector and general manufacturing industries, with findings that are not always consistent. Some studies report a positive and significant effect of work engagement on performance (Fatimah, 2023; Purnomo, 2024), while others indicate that high levels of work stress may have varying negative impacts depending on the characteristics of the work environment (Amelia, 2022). These inconsistencies suggest that industry context plays a crucial role in determining the direction and strength of relationships among variables. Moreover, research that specifically examines these three variables simultaneously within the palm oil processing industry, particularly PMKS in the Bengkulu region, remains very limited. Therefore, further research is needed to address this gap and provide empirically relevant contributions to human resource management in the plantation and palm oil processing sectors.

As an author who is also part of the working environment at PMKS Ipuh of PT. Daria Dharma Pratama, the author has directly observed and experienced the dynamics of working conditions within the company. The author has noted that some employees frequently complain about heavy workloads, especially during peak production periods, when pressure to meet targets for processing fresh fruit bunches (FFB) becomes extremely intense. Such situations often give rise to tension among coworkers, declining morale, and even increased absenteeism during certain periods. In addition, the author has observed that an uneven reward system and limited opportunities for self-development contribute to declining motivation among some employees, particularly those who have worked for extended periods in the same positions. These phenomena have encouraged the author to conduct a more systematic and scientific study to identify the factors that significantly influence employee performance at PMKS Ipuh, so that the results of this research may serve as a basis for concrete improvement recommendations for the company.

LITERATURE REVIEW

According to Campbell (1990), employee performance is a central construct in human resource management that reflects an individual's contribution to the achievement of organizational goals. Performance encompasses work outcomes, work behaviors, adaptability, and social contributions within the organization. It can be assessed through aspects such as quantity, quality, timeliness, efficiency, and other relevant work behaviors. Conceptually, employee performance is not only measured by the output produced, but also by the processes, attitudes, and behaviors that support overall organizational effectiveness. From a multidimensional perspective, employee performance reflects the extent to which individuals are able to meet role expectations, adapt to change, and contribute to a positive work climate. Therefore, performance measurement should encompass multiple complementary dimensions in order to provide a comprehensive picture of employee contributions. In the context of modern organizations, employee performance is increasingly viewed as the result of a complex interaction between individual factors (such as ability, motivation, and work engagement) and contextual factors (such as organizational support, work culture, and leadership). A holistic understanding of employee performance enables organizations to design more effective and sustainable human resource development strategies.

According to Luthans (2011), work stress is an emotional and physiological reaction that arises when job demands are not balanced with an individual's abilities or available resources. Stress can be either positive (eustress) or negative (distress), depending on an individual's perception and capacity to cope with the demands. Work stress occurs when there is a mismatch between environmental job demands and an individual's ability to meet those demands. The stress response involves activation of the sympathetic nervous system, the release of stress hormones such as cortisol and adrenaline, as well as behavioral and cognitive changes. In the

short term, stress may enhance alertness and performance; however, chronic stress can have detrimental effects on physical health, mental well-being, and employee performance.

According to Ryan and Deci (2017), work motivation refers to internal and external forces that energize, direct, and sustain employee behavior in order to achieve work-related goals. Motivation may be intrinsic or extrinsic in nature and influences both the quality of performance and individual work behavior. Work motivation is a psychological process that provides energy, direction, and persistence to work-related behavior. It explains why individuals choose to engage in certain activities, how much effort they exert, and how long they persist in the face of difficulties. Strong and high-quality motivation leads to superior performance and higher levels of job satisfaction.

METHODS

Validity Test

The validity test is used to measure the extent to which a questionnaire instrument is able to accurately assess the intended variable constructs (Ghozali, 2018). Validity testing is conducted by calculating the correlation between each item score and the total score using the Pearson Product Moment technique. An item is considered valid if the calculated correlation coefficient (r_{count}) is greater than the critical value (r_{table}) at a 5% significance level ($\alpha = 0.05$).

Reliability Test

The reliability test is used to evaluate the consistency of the research instrument. A reliable instrument will produce consistent data when applied repeatedly under the same conditions (Ghozali, 2018). In this study, reliability testing is performed using the Cronbach's Alpha method. An instrument is considered reliable if the Cronbach's Alpha value is ≥ 0.60 (Ghozali, 2018; Nunnally, 1978). This standard is commonly applied in social and organizational behavior research, particularly for exploratory instruments with a limited number of items.

Multiple Linear Regression Analysis

Multiple linear regression analysis is employed to examine the effect of independent variables (work engagement, work stress, and work motivation) on the dependent variable (employee performance), both partially and simultaneously (Ghozali, 2018). The multiple linear regression model used in this study is expressed as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Employee Performance

α = Constant

$\beta_1, \beta_2, \beta_3$ = Regression coefficients

X_1 = Work Engagement

X_2 = Work Stress

X_3 = Work Motivation

ε = Error term (disturbance variable)

The results of this inferential analysis are used to test the research hypotheses concerning the influence of work engagement, work stress, and work motivation on employee performance at PMKS Ipuh of PT. Daria Dharma Pratama.

t-Test (Partial Test)

The t-test is used to examine the effect of each independent variable individually on the dependent variable (Ghozali, 2018). The hypothesis is accepted if the significance value (p -value) is less than 0.05 or if the calculated t value (t_{count}) is greater than the critical t value (t_{table}). The decision criteria are as follows:

- If $p\text{-value} < 0.05$, H_0 is rejected and H_a is accepted, indicating that the independent variable has a significant effect on the dependent variable.
- If $p\text{-value} > 0.05$, H_0 is accepted and H_a is rejected, indicating that the independent variable does not have a significant effect on the dependent variable.

F-Test (Simultaneous Test)

The F -test is used to examine the simultaneous effect of all independent variables on the dependent variable (Ghozali, 2018). The hypothesis is accepted if the significance value (p -value) is less than 0.05 or if the calculated F value (F_{count}) is greater than the critical F value (F_{table}). The decision criteria are as follows:

- If $p\text{-value} < 0.05$, H_0 is rejected and H_a is accepted, indicating that all independent variables jointly have a significant effect on the dependent variable.
- If $p\text{-value} > 0.05$, H_0 is accepted and H_a is rejected, indicating that all independent variables jointly do not have a significant effect on the dependent variable.

Coefficient of Determination (R^2)

The coefficient of determination (R^2) is used to measure the extent to which the regression model explains the variation in the dependent variable (Ghozali, 2018). The R^2 value ranges from 0 to 1, where values closer to 1 indicate a stronger explanatory power of the regression model. In this study, the Adjusted R^2 value is used to determine the extent to which work engagement, work stress, and work motivation explain variations in employee performance at PMKS Ipuh of PT. Daria Dharma Pratama.

RESULTS

Table 1. Summary of Validity Test Results

Variable	Indicator	r-value	p-value	Remarks
Work Engagement (X_1)	X1.1 (Persistence)	0.729	0.000	Valid
	X1.2 (Enthusiasm)	0.765	0.000	Valid
	X1.3 (Concentration)	0.710	0.000	Valid
Work Stress (X_2)	X2.1 (Workload volume)	0.511	0.000	Valid
	X2.2 (Task clarity)	0.677	0.000	Valid
	X2.3 (Contradictory instructions)	0.690	0.000	Valid
	X2.4 (Relationship with supervisor)	0.392	0.000	Valid
	X2.5 (Good working relationships)	0.677	0.000	Valid
	X2.6 (Job-related concerns)	0.328	0.000	Valid
Work Motivation (X_3)	X3.1 (Sense of achievement)	0.582	0.000	Valid
	X3.2 (Salary)	0.310	0.001	Valid
	X3.3 (Proving competence)	0.663	0.000	Valid
	X3.4 (Perceived importance of work)	0.639	0.000	Valid
	X3.5 (Alignment with personal values)	0.687	0.000	Valid
	X3.6 (Feelings of incompetence)	0.583	0.000	Valid
Employee Performance (Y)	Y1 (Production standards)	0.736	0.000	Valid
	Y2 (Helping coworkers)	0.819	0.000	Valid
	Y3 (Adaptability to change)	0.839	0.000	Valid

Based on the results of the validity test above, it can be concluded that all 18 questionnaire items (3 items measuring work engagement, 6 items measuring work stress, 6 items measuring work motivation, and 3 items measuring employee performance) meet the validity requirements. Therefore, all research instruments are deemed appropriate for use in subsequent hypothesis testing. These results also strengthen the empirical foundation of the operational definitions and indicators established in this study.

Table 2. Reliability Test Results

Variable	Number of Items	Cronbach's Alpha	Remarks
Work Engagement	3	0.675	Reliable
Work Stress	6	0.694	Reliable
Work Motivation	6	0.646	Reliable
Employee Performance	3	0.712	Reliable

Multiple Linear Regression Analysis

Multiple linear regression analysis is used to examine the simultaneous effect of the independent variables (work engagement, work stress, and work motivation) on the dependent variable (employee performance), as described in the research proposal (Subsection 3.5.4). The regression equation model used in this study is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

- Y = Employee Performance
- α = Constant
- $\beta_1, \beta_2, \beta_3$ = Regression coefficients
- X_1 = Work Engagement
- X_2 = Work Stress
- X_3 = Work Motivation
- ε = Error term (disturbance variable)

Based on data processing using SPSS, the following multiple linear regression equation was obtained:

$$Y = 2,600 + 0,184X_1 - 0,075X_2 + 0,369X_3$$

The regression equation can be interpreted as follows:

Constant ($\alpha = 2.600$)

The constant value of 2.600 indicates that if work engagement (X_1), work stress (X_2), and work motivation (X_3) are assumed to be constant or equal to zero, then the employee performance (Y) value is 2.600 units. This constant has limited theoretical meaning because, in practice, it is not possible for an employee to have zero values in all three psychological variables. However, statistically, the constant represents the intercept of the regression line on the Y-axis and serves as the baseline for estimating employee performance.

From a Human Resource Management perspective (Dessler, 2017), this constant can be interpreted as baseline performance generated by factors outside the research model, such as basic technical skills, work experience, organizational culture, and the existing management

system at PMKS Ipuh. These factors contribute to employee performance even in the absence of work engagement, work stress, and work motivation variables.

Work Engagement Regression Coefficient ($\beta_1 = 0.184$)

The regression coefficient of work engagement of 0.184 indicates that every one-unit increase in work engagement will increase employee performance by 0.184 units, assuming other variables (work stress and work motivation) remain constant (*ceteris paribus*). This positive coefficient indicates that work engagement has a positive effect on employee performance, meaning that the higher the level of employee engagement, the higher the resulting performance.

This finding empirically supports the Job Demands–Resources (JD-R) Model (Job Demands–Resources Model) (Bakker & Demerouti, 2023), which explains that job resources such as work engagement facilitate motivational processes that enhance employee performance. Employees with high vigor (energy), dedication, and absorption tend to invest more physical, cognitive, and emotional energy into their work, leading to improved productivity, work quality, and innovation.

In the context of PMKS Ipuh, the coefficient of 0.184 indicates that increased work engagement contributes positively to employee performance, although its effect size is smaller compared to work motivation. This can be understood because work engagement is a psychological state influenced by various contextual factors, including organizational support and working conditions.

Work Stress Regression Coefficient ($\beta_2 = -0.075$)

The regression coefficient of work stress of -0.075 indicates that every one-unit increase in work stress will decrease employee performance by 0.075 units, assuming other variables remain constant. This negative coefficient shows that work stress has a negative effect on employee performance, meaning that higher levels of stress are associated with lower performance.

This finding empirically supports the Conservation of Resources (COR) Theory (Hobfoll et al., 2018), which explains that stress represents a threat to personal resources (such as energy, time, and mental health), ultimately reducing work effectiveness. Prolonged work stress leads to physical and mental exhaustion (burnout), reduced concentration, impaired decision-making, and increased risk of errors.

In the context of PMKS Ipuh, the coefficient of -0.075 indicates that although the negative effect of work stress is relatively smaller compared to the positive effects of other variables, it remains an important factor to consider. The hot and noisy working environment, high production targets, and shift-based work system may serve as continuous sources of stress. Although the individual effect may be small, chronic stress can accumulate and significantly affect long-term performance.

Work Motivation Regression Coefficient ($\beta_3 = 0.369$)

The regression coefficient of work motivation of 0.369 indicates that every one-unit increase in work motivation will increase employee performance by 0.369 units, assuming other variables remain constant. This positive coefficient suggests that work motivation has a positive effect on employee performance, and its magnitude is the highest among the three independent variables.

This finding empirically supports Self-Determination Theory (Self-Determination Theory) (Ryan & Deci, 2017) and Expectancy Theory (Vroom, 1964), which explain that motivation is the primary driver of work behavior that directs individual energy, effort, and persistence toward achieving organizational goals. High levels of motivation, both intrinsic and extrinsic, increase

effort intensity, task focus, and resilience in facing difficulties, all of which directly contribute to improved performance.

In the context of PMKS Ipuh, the coefficient of 0.369 indicates that work motivation is the most dominant variable influencing employee performance. This emphasizes the importance for the company to continuously maintain and enhance employee motivation through various strategies such as competitive salaries and incentives, reward programs, career development opportunities, and the creation of harmonious working relationships. This finding is also consistent with Goal-Setting Theory (Locke & Latham, 2019), which shows that motivation driven by clear and challenging goals can significantly improve performance. Based on all hypothesis testing conducted, the summary of results is presented as follows:

Table 3. Summary of Hypothesis Testing Results

Hypothesis	Variable	t/F Value	p-value	Decision	Remarks
H ₁	Work Engagement (X ₁) → Employee Performance (Y)	2.539	0.012	Accepted	Significant
H ₂	Work Stress (X ₂) → Employee Performance (Y)	-2.134	0.035	Accepted	Significant
H ₃	Work Motivation (X ₃) → Employee Performance (Y)	8.551	0.000	Accepted	Highly significant
H ₄	Work Engagement (X ₁), Work Stress (X ₂), and Work Motivation (X ₃) → Employee Performance (Y)	43.313	0.000	Accepted	Highly significant

Based on the summary above, all four research hypotheses are empirically supported. These results provide strong support for the theoretical framework developed in the proposal, which integrates the Job Demands-Resources (JD-R) Model, Conservation of Resources (COR) Theory, Self-Determination Theory (SDT), and employee performance theory into a comprehensive model. These empirical findings also address the research gap identified in the proposal, namely the lack of studies simultaneously examining these three variables in the context of the palm oil industry in Indonesia.

From a theoretical perspective, this study contributes to the empirical literature on the relationship between psychological and motivational factors and employee performance within the palm oil processing industry, which has unique operational characteristics. The findings also provide empirical support for relevant theories in the Indonesian organizational context.

From a practical perspective, the results of this study provide empirical information to the management of PT. Daria Dharma Pratama regarding the factors that significantly influence employee performance at PMKS Ipuh. The finding that work motivation is the most dominant variable, followed by work engagement, while work stress has a negative effect, can serve as a basis for strategic decision-making in human resource management. The HR department can design employee development programs, reward systems, and work policies that are more responsive to employees' psychological and motivational needs, thereby improving productivity and work effectiveness.

DISCUSSION

Discussion of the Effect of Work Engagement on Employee Performance

The results of the first hypothesis testing indicate that work engagement has a positive and significant effect on employee performance at PMKS Ipuh, with a regression coefficient of 0.184 and a significance value of 0.012. This finding indicates that employees with higher levels of work engagement tend to demonstrate better performance, a relationship that is consistent

with the causal direction predicted by the Job Demands–Resources (JD-R) Model developed by Bakker and Demerouti (2023). In this model, work engagement is positioned as a job resource that facilitates a motivational process, where engaged employees invest greater physical, cognitive, and emotional energy into their work, ultimately enhancing task performance, contextual performance, and adaptive performance. The similarity between this finding and the theoretical proposition of the JD-R Model lies in the consistently positive direction of the relationship, confirming that work engagement is a promotive factor in improving employee performance.

However, an interesting difference emerges in the magnitude of the effect. The regression coefficient of work engagement in this study is relatively moderate ($\beta = 0.184$), which is weaker than commonly reported in international literature. Schaufeli, Bakker, and Salanova (2006) found a stronger correlation between work engagement and performance in a cross-sectional study across various industries in the Netherlands; however, that study examined a bivariate relationship without controlling for other psychological variables. When work stress and work motivation are included simultaneously in the regression model in this study, the effect of work engagement becomes more isolated (net effect), but also more moderate in magnitude. This suggests that part of the effect of engagement reported in previous studies may overlap with motivation and other psychological factors not controlled for, highlighting the importance of multivariate models in organizational psychology research.

A comparison with Fatimah (2023), conducted in the Indonesian manufacturing sector, shows strong contextual similarity. Fatimah found that work engagement has a significant positive effect on employee performance in manufacturing, which shares similar characteristics with palm oil processing industries, such as high physical demands, production pressure, and challenging working environments. However, a key difference lies in the hierarchical position of work engagement as a predictor. In Fatimah's study, which examined engagement in a univariate model, work engagement appeared as a dominant predictor. In contrast, in this study, which includes work motivation and work stress simultaneously, work engagement ranks second after work motivation ($B = 0.369$). This indicates that in the context of PMKS Ipuh, work engagement functions more as an enabling condition rather than a sufficient independent driver of performance.

Discussion of the Effect of Work Stress on Employee Performance

The results of the second hypothesis testing indicate that work stress has a negative and significant effect on employee performance at PMKS Ipuh, with a regression coefficient of -0.075 and a significance value of 0.035 . This finding shows that higher levels of work stress are associated with lower employee performance, consistent with the Conservation of Resources (COR) Theory (Hobfoll et al., 2018), which positions stress as a threat to individuals' personal resources such as energy, time, and mental health. When job demands exceed available resources, employees experience fatigue, reduced concentration, and impaired cognitive functioning, ultimately lowering work effectiveness.

However, the magnitude of this effect is relatively small compared to findings in some previous studies. This can be explained by the characteristics of PMKS Ipuh employees, most of whom have long tenure and are in productive age groups, enabling them to develop coping mechanisms and resilience that buffer the negative effects of stress. This finding enriches COR Theory by suggesting that resource caravans built through long work experience can reduce the impact of resource loss.

A comparison with Amelia (2022) confirms that work stress has a negative effect on performance in the Indonesian processing industry. However, unlike previous studies where stress was analyzed in isolation, this study shows that when work engagement and motivation are included simultaneously, the negative effect of stress becomes weaker, indicating a buffering role of positive psychological factors.

Discussion of the Effect of Work Motivation on Employee Performance

The results of the third hypothesis testing show that work motivation has a positive and significant effect on employee performance at PMKS Ipuh, with a regression coefficient of 0.369, a t-value of 8.551, and a significance value of 0.000. This indicates that higher work motivation leads to better employee performance, consistent with Self-Determination Theory (Ryan & Deci, 2017), which explains motivation as a driving force that directs and sustains behavior toward goal achievement.

The coefficient of work motivation is the highest among all independent variables, indicating that motivation is the most dominant predictor of employee performance in this study. This suggests that employees at PMKS Ipuh have internalized work values, with many operating at identified and integrated regulation levels of motivation. Consequently, motivation is not only a driver of effort but also a core determinant of performance.

Compared to previous studies such as Muchtadin (2023) and Purnomo (2024), which also found motivation to be a key determinant of performance, this study provides additional insight by positioning motivation as the strongest predictor even in the presence of work engagement and stress variables. This highlights that in the PMKS Ipuh context, motivation functions as a primary engine of performance.

Discussion of the Simultaneous Effect of Work Engagement, Work Stress, and Work Motivation on Employee Performance

The F-test results show that work engagement, work stress, and work motivation simultaneously have a significant effect on employee performance at PMKS Ipuh, with an F-value of 43.313 and a significance level of 0.000. This confirms that employee performance is not driven by a single dominant factor, but rather by the interaction of motivational factors (work engagement and motivation) and inhibitory factors (work stress) within an organizational ecosystem.

The coefficient of determination ($R^2 = 0.535$; Adjusted $R^2 = 0.523$) indicates that 53.5% of employee performance variation is explained by the model, which is considered strong in social science research. The remaining 46.5% is explained by other factors such as leadership, organizational culture, compensation systems, and individual abilities.

From a theoretical perspective, these findings validate the integration of the JD-R Model, COR Theory, and Self-Determination Theory. Motivation emerges as the strongest predictor, followed by work engagement, while work stress has a negative but weaker effect. This distribution of influence reflects a context-specific psychological ecosystem at PMKS Ipuh.

Practically, these findings suggest that human resource management interventions should adopt a holistic and integrated approach. Improving performance cannot rely on a single factor but must simultaneously strengthen motivation and engagement while managing work stress. A differentiated strategy is required across operational units depending on their workload intensity and job characteristics.

CONCLUSION

Based on the results of the research and discussion regarding the influence of work engagement, work stress, and work motivation on employee performance at PT. Daria Dharma Pratama Ipuh, the following conclusions can be drawn:

Work engagement has a positive and significant effect on employee performance at PT. Daria Dharma Pratama Ipuh. This finding indicates that the higher the level of work engagement, the better the performance produced. It also confirms that employees with high levels of vigor, dedication, and absorption tend to demonstrate more optimal performance outcomes.

Work stress has a negative and significant effect on employee performance at PT. Daria Dharma Pratama Ipuh. This indicates that high work pressure has the potential to reduce

employees' focus, accuracy, and work enthusiasm in the processing industry. It also shows that workload and role pressure significantly contribute to the decline in employees' operational performance in palm oil mills.

Work motivation has a positive and significant effect on employee performance at PT. Daria Dharma Pratama Ipuh. This finding indicates that both intrinsic and extrinsic motivation are key factors in improving employee performance, particularly in physically demanding work environments. The dominance of motivation as the main predictor of performance further emphasizes its central role in determining the quality and direction of work behavior.

Simultaneously, work engagement, work stress, and work motivation significantly affect employee performance at PT. Daria Dharma Pratama Ipuh. This simultaneous finding confirms that human resource management must be holistic and integrated rather than fragmented. Performance improvement cannot be achieved by focusing on a single factor alone, but requires balanced interventions across all three variables. Work engagement and work motivation function as positive drivers (motivational process), while work stress acts as a barrier (health impairment process) that must be managed effectively.

LIMITATION

The results of this study are expected to enrich the human resource management literature, particularly in relation to work motivation in a non-Western context, and can be integrated into organizational behavior and stress management curricula, for example through the PMKS Ipuh case study. Research collaboration and community service partnerships between universities and the palm oil industry should also be further developed, including the development of measurement instruments for work engagement, work stress, and motivation that are more suitable for the Indonesian palm oil industry context.

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