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Evaluating the Influence of Work Environment and Discipline on Employee Performance Sustainability: A Case Study of PT. Wana Sawit Subur Lestari 01 in Central Kalimantan

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A R T I C L E I N F O

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A B S T R A C T

Palm oil concessions constitute a pivotal macroeconomic backbone within the Indonesian economy, underwriting the livelihoods of millions, fortifying balance of payments via foreign currency inflows, facilitating labor absorption, and galvanizing downstream industrialization. Nevertheless, corporate management within this domain frequently prioritizes sheer yield volume over operational optimization and resource-use efficiency. This empirical inquiry examines the atmospheric conditions and behavioral compliance at PT Wana Sawit Subur Lestari 01 in Central Kalimantan, evaluating their explicit ramifications for workforce efficacy. Employing a quantitative paradigm framed within descriptive and associative analytical frameworks, primary metrics were derived through structured questionnaires administered to a target cohort of 94 personnel at PT Wana Sawit Subur Lestari 01. The empirical data underwent evaluation via multiple linear regression diagnostics at a 10% significance threshold ($\alpha = 0.10$). The empirical output demonstrates that both workplace ambient conditions and behavioral compliance independently exert a statistically significant, positive influence on employee efficacy. Furthermore, simultaneous diagnostic estimations confirm that ambient workplace quality and occupational discipline jointly amplify overall output at PT Wana Sawit Subur Lestari 01.

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INTRODUCTION

The oil palm agro-industry serves as an indispensable pillar of Indonesia's macroeconomic framework, sustaining millions of smallholder households, augmenting foreign exchange reserves, and propelling downstream value-chain expansion. Notwithstanding escalating global commodity valuations, national plantation governance remains beset by structural impediments—most notably a pervasive orientation toward absolute volumetric throughput at the expense of operational efficiency and per-unit productivity. Data extracted from the 2023 Enterprise Survey via the SEDAPP platform indicates that Indonesia encompasses 2,281 registered palm oil entities distributed across 26 provinces, with major operational concentrations situated in West Kalimantan (343 firms), East Kalimantan (253 firms), and Central Kalimantan (220 firms). In an increasingly competitive global landscape, the long-term viability of commercial plantations rests squarely upon human capital optimization and institutional performance.

Optimizing workforce output is imperative for realizing organizational objectives, directly dictating operational throughput, qualitative yield, and corporate longevity. However, preliminary diagnostic observations at PT Wana Sawit Subur Lestari 01—a prominent palm oil enterprise operating in Central Kalimantan—reveal chronic human resource friction. Over three consecutive operational cycles, the workforce has persistently underperformed relative to established key performance indicators (KPIs). This productivity deficit is exacerbated by concurrent annual retrenchments in personnel and functional responsibilities, indicating systemic managerial bottlenecks that jeopardize operational stability.

Prior empirical literature asserts that physical workplace conditions and normative behavioral compliance serve as primary determinants of workforce productivity. For example, Kusmiyatun and Sonny (2021) demonstrated that both tangible and intangible workplace environments, alongside operational discipline, exert significant individual and joint effects on employee productivity. Suboptimal environmental conditions heighten psychological strain, depress morale, and elevate absenteeism, whereas an ergonomically sound and resource-replete setting fosters task engagement and cognitive focus. Concurrently, rigorous work discipline—anchored by explicit regulatory protocols, accountability metrics, and corrective mechanisms—preserves operational continuity and task completion speed (Zaenal Arifin & Sasana, 2022).

Despite these theoretical assertions, preliminary empirical diagnostics encompassing 16 personnel at PT Wana Sawit Subur Lestari 01 highlight severe workplace deficiencies:

- **Environmental Deficits:** An average of 54% of surveyed personnel expressed dissatisfaction with existing operational conditions. Specifically, 60% noted an unsupportive workplace climate, 68% highlighted inadequate supervisory support, and 56% reported

insufficient physical infrastructure and logistical tools necessary for task execution.

- **Disciplinary Deficits:** An average of 52% of respondents reported suboptimal adherence to organizational norms. Crucially, 56% cited issues concerning punctuality, while 57% acknowledged failures in executing assigned tasks within designated timeframes and accountability parameters.

These empirical realities highlight an evident research gap regarding the extent to which managerial recalibration of environmental factors and disciplinary frameworks can mitigate declining performance metrics in agro-industrial settings. Accordingly, this study investigates the partial and simultaneous impacts of workplace environment and work discipline on employee performance at PT Wana Sawit Subur Lestari 01 in Central Kalimantan, providing actionable insights for human resource strategy in commercial agribusiness.

LITERATURE REVIEW

To construct a robust theoretical foundation regarding the focal constructs—work environment, work discipline, and employee performance—relevant management paradigms are synthesized below:

Work Environment Theory

In accordance with Sedarmayanti (2021), the work environment comprises the totality of physical surroundings and interpersonal conditions within an enterprise that influence employee task execution directly or indirectly. A conducive environment—encompassing tangible dimensions (ergonomics, illumination, ventilation) and intangible dimensions (organizational climate, peer relations)—is essential for minimizing cognitive fatigue and bolstering output efficiency.

Work Discipline Theory

Hasibuan (2021) conceptualizes work discipline as an internalized consciousness and voluntary compliance regarding adherence to institutional regulations, operational protocols, and societal codes. High organizational discipline reflects an operational state wherein personnel meticulously observe schedule parameters, procedural guidelines, and assigned duties without coercive oversight.

Employee Performance Theory

Mangkunegara (2020) defines individual performance as the qualitative and quantitative yield achieved by an employee in fulfilling allocated responsibilities in alignment with institutional benchmarks. Performance

assessment typically spans dimensions of task quality, output volume, timeliness, operational cost-effectiveness, and autonomy.

Human Resource Management Theory

Dessler (2020) defines human resource management as the systemic process of recruitment, talent development, performance appraisal, and compensation management, alongside the oversight of labor relations, occupational health, safety, and equity. Strategic HR interventions directly govern institutional climate, employee engagement, and overall performance outputs.

Goal-Setting and Organizational Behavior Theory

Locke and Latham (2002) posit that establishing explicit, challenging operational goals—when coupled with constructive feedback, supportive environmental conditions, and strict adherence to institutional standards—substantially enhances intrinsic motivation and individual task performance.

RESEARCH METHODOLOGY

Research Design and Operational Framework

This study deploys a quantitative research design utilizing descriptive and associative analytical frameworks to investigate the structural relationships between Work Environment (X_1), Work Discipline (X_2), and Employee Performance (Y) at PT Wana Sawit Subur Lestari 01.

Population and Sampling Technique

The target population comprised 1,518 personnel at PT Wana Sawit Subur Lestari 01. The sample size determination utilized Slovin's formula with a 10% margin of error ($e = 0.10$):

$$n = \frac{N}{1 + N(e)^2} = \frac{1518}{1 + 1518(0.10)^2} = 93.82 \approx 94$$

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The calculated sample was rounded to 94 respondents. Primary data acquisition was executed via structured Likert-scale questionnaires (ranging from 1 = Strongly Disagree to 5 = Strongly Agree).

Instrument Diagnostics: Validity and Reliability

To verify construct validity and internal consistency, preliminary diagnostic tests were conducted:

- **Validity Testing:** Evaluated by comparing corrected item-total correlation coefficients (r_{count}) against critical table values ($r_{\text{table}} = 0.1689$ at $N = 94, \alpha = 0.10$). Survey items were rendered valid when $r_{\text{count}} > r_{\text{table}}$.
- **Reliability Testing:** Assessed using Cronbach's Alpha (α). Following Ghozali (2021), constructs were deemed internally consistent if $\alpha > 0.60$.

Analytical Framework

Hypothesis testing relied on multiple linear regression modeling, operationalized as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$$

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Where Ydenotes Employee Performance, αrepresents the intercept, $\beta_1$and $\beta_2$indicate unstandardized regression coefficients, X_1signifies Work Environment, X_2denotes Work Discipline, and $e$constitutes the stochastic error term.

Classical Assumption Diagnostics

Prior to regression estimation, diagnostic procedures were performed at $\alpha = 0.10$:

1. **Normality Diagnostic:** Assessed via the One-Sample Kolmogorov-Smirnov test utilizing a Monte Carlo procedure. Normality was confirmed if the asymptotic significance exceeded 0.10 ($p > 0.10$).
2. **Heteroscedasticity Diagnostic:** Executed using the Glejser test by regressing absolute residual terms ($|e|$) on independent variables. Homoscedasticity was confirmed if significance levels exceeded 0.10 ($p > 0.10$).
3. **Multicollinearity Diagnostic:** Assessed via Tolerance parameters and Variance Inflation Factors (VIF). The absence of severe multicollinearity was established if Tolerance $> 0.10$and VIF < 10.

Hypothesis Diagnostic Procedures

- **Partial Significance (t-test):** Performed to determine the isolated statistical effect of each predictor (X_1 and X_2) on Y.
- **Simultaneous Significance (F-test):** Executed to assess the collective explanatory power of the predictor set on Y.
- **Coefficient of Determination (R^2):** Calculated to quantify the proportion of variance in the dependent variable explained by the operational model.

RESULTS AND DISCUSSION

Instrument Diagnostic Evaluation

All survey items across the measured constructs demonstrated empirical validity, as evidenced by calculated correlation metrics exceeding the critical threshold ($r_{\text{count}} > r_{\text{table}} = 0.1689$).

- **Work Environment Construct (X_1):** Item correlations ranged from $r = 0.619$to $r = 0.814$, surpassing $r_{\text{table}} = 0.1689$.
- **Work Discipline Construct (X_2):** Item correlations ranged from $r = 0.684$to $r = 0.818$, exceeding $r_{\text{table}} = 0.1689$.
- **Employee Performance Construct (Y):** Item correlations ranged from $r = 0.616$to $r = 0.807$, satisfying the validity criteria ($r_{\text{count}} > 0.1689$).

Reliability estimations confirmed high internal consistency across all latent variables ($\alpha > 0.60$):

- Work Environment: $\alpha = 0.847$(6 items)
- Work Discipline: $\alpha = 0.833$(6 items)
- Employee Performance: $\alpha = 0.909$(10 items)

Classical Assumption Evaluation

- **Normality:** The One-Sample Kolmogorov-Smirnov test yielded an asymptotic significance of $p = 0.200$, surpassing the $\alpha = 0.10$threshold and confirming that model residuals conform to a normal distribution.
- **Heteroscedasticity:** The Glejser regression output revealed significance parameters of $p = 0.531$for Work Environment and $p = 0.137$for Work Discipline. Because both values exceed $\alpha = 0.10$, the presence of heteroscedasticity is rejected.
- **Multicollinearity:** Diagnostic metrics yielded a Variance Inflation Factor ($\text{VIF} = 1.827 < 10$) and a Tolerance value ($0.547 > 0.10$) for both predictors, establishing the absence of problematic multicollinearity.

Multiple Linear Regression Analysis

The estimated multiple regression equation is expressed as:

$$Y = 0.381 + 0.190X_1 + 0.689X_2$$

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- **Constant ($\alpha = 0.381$):** Indicates the baseline level of Employee Performance when environmental conditions and discipline remain static.

- **Work Environment Coefficient ($\beta_1 = 0.190$):** Denotes that a unit increase in workplace environmental quality enhances performance by 0.190 units, holding discipline constant.
- **Work Discipline Coefficient ($\beta_2 = 0.689$):** Demonstrates that a unit increase in behavioral compliance increases performance by 0.689 units, holding environmental factors constant.

Hypothesis Testing

- **Simultaneous Model Fit (F-test):** The ANOVA diagnostic produced an empirical $F_{\text{count}} = 109.970$, significantly exceeding the critical threshold ($F_{\text{table}} = 2.14$) with an associated p-value $= 0.000 < 0.10$. This confirms that work environment and work discipline jointly exert a statistically significant positive effect on employee performance.
- **Partial Significance (t-test):**
    - *Work Environment (X_1):* Empirical $t_{\text{count}} = 2.579 > t_{\text{table}} = 1.66177 (p = 0.012 < 0.10)$. Thus, Hypothesis 1 is supported, confirming a positive, statistically significant partial effect of workplace conditions on workforce output.
    - *Work Discipline (X_2):* Empirical $t_{\text{count}} = 9.024 > t_{\text{table}} = 1.66177 (p = 0.000 < 0.10)$. Thus, Hypothesis 2 is supported, establishing that work discipline exerts a substantial, positive partial effect on workforce output.

Correlation and Determination Analysis

- **Bivariate Correlations:** Bivariate Pearson coefficients indicated a strong positive association between work environment and performance ($r = 0.665, p < 0.01$) and a very strong positive association between work discipline and performance ($r = 0.827, p < 0.01$).
- **Coefficient of Determination (R^2):** The regression model yielded an $R^2 = 0.706$(Adjusted $R^2 = 0.699$). This establishes that 70.6% of the variance in employee performance at PT Wana Sawit Subur Lestari 01 is attributable to the combined effects of work environment and work discipline, while the remaining 29.4% is governed by unobserved exogenous factors.

DISCUSSION

The empirical findings corroborate that both ambient workplace conditions and behavioral compliance act as vital determinants of organizational output. The robust simultaneous test metric ($F = 109.970, p < 0.10$) alongside a strong coefficient of determination ($R^2 = 0.706$) highlights the synergistic impact of ergonomic support and institutional compliance. These findings align with previous empirical studies, such as Sondakh et al. (2023), which demonstrated that physical and non-physical working conditions combined with strict

adherence to institutional regulations concurrently elevate employee productivity in commercial enterprises.

CONCLUSION AND RECOMMENDATIONS

This investigation demonstrates that workplace environment and work discipline, both independently and concurrently, exert a significant positive effect on employee performance at PT Wana Sawit Subur Lestari 01. The findings underscore the strategic necessity of cultivating supportive operational conditions alongside enforcing transparent regulatory accountability to maximize labor efficiency in agribusiness enterprises.

Managerial Recommendations:

1. **Infrastructure & Environmental Optimization:** Enterprise leadership should invest in upgrading physical field infrastructure, providing appropriate operational tools, and bolstering supervisory support networks.
2. **Institutional Compliance Mechanisms:** Management should refine attendance tracking systems, clarify KPI expectations, and apply consistent accountability standards to sustain high disciplinary compliance.
3. **Future Research Directions:** Subsequent scholarly inquiries should expand the analytical framework by incorporating additional determinants of individual productivity, such as transformational leadership styles, intrinsic motivation, compensation structures, and organizational culture.

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