

Boosting Work Productivity: The Crucial Roles of Employee Engagement, Organizational Climate, and Ability

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Abstract

Purpose: The objective of this study is to examine the influence of employee engagement, organizational climate, and ability on work productivity among employees at PT Kaldusari Nabati Indonesia

Research Methodology: This study uses a quantitative approach, combining descriptive and verification methods to test the hypotheses. Data were collected via questionnaires from 99 employees randomly sampled from a large population of 9,374. To ensure statistical accuracy, we used SPSS 25 to perform classical assumption tests and multiple linear regressions (t-tests and F-tests).

Results: The results indicate that employee engagement, organizational climate, and ability have a positive and significant effect on work productivity. Specifically, ability had the most dominant influence (28%), followed by employee engagement (22.8%) and organizational climate (21.6%).

Conclusions: Increasing Employee Engagement, creating a conducive organizational climate, and improving employee ability significantly enhance work productivity at PT Kaldusari Nabati Indonesia.

Limitations: This study offers a targeted exploration of the Majalengka Plant, prioritizing a deep dive into three pivotal performance drivers over a broad, multi-industry scope. While the findings are inherently localized to this facility, the study serves as a specialized benchmark for understanding workforce productivity within high-output manufacturing environments

Contributions: This research enriches the Human Resource Management literature by providing rare empirical evidence on the specific drivers of productivity within the food manufacturing sector. Beyond its theoretical value, this study provides management with actionable, evidence-based insights to strategically optimize workforce performance in high-output industrial environments.

Keywords: Ability, Employee Engagement, Organizational Climate, Work Productivity

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1. Introduction

In the dynamic and highly competitive landscape of the modern food and beverage industry, sustainable competitive advantage is no longer determined solely by product innovation or aggressive marketing strategies; rather, it is inextricably linked to employee productivity. As market demand fluctuates and consumer expectations for quality increase, companies are compelled to optimize their production capacities through work efficiency and technological optimization. However, scholars and industry experts argue that productivity is fundamentally a multidimensional construct driven by human factors

rather than machinery. According to [Mathis and Jackson \(2002\)](#), productivity is a measure of the quantity and quality of work done, considering the cost of the resources used. While technology provides the infrastructure for high output, the actual realization of productivity targets is contingent on the workforce.

Despite the abundance of literature on productivity, a significant research gap remains in understanding how psychological factors and technical competencies synchronize within the high-pressure environment of the Indonesian snack food industry. Previous studies, have focused heavily on Western corporate environments, often overlooking the unique labor-intensive dynamics of large-scale manufacturing plants in emerging industrial hubs such as Majalengka. Furthermore, while many studies have examined job satisfaction, there is a lack of integrated research that simultaneously tests employee engagement, organizational climate, and ability as a unified predictor of output in the context of Industry 4.0 transition in Indonesia. The theoretical foundation of this study is rooted in the Job Demands-Resources (JD-R) Model, which suggests that organizational resources (climate) and personal resources (Engagement and Ability) are the primary drivers of work engagement and, subsequently, high performance. In Indonesia, emphasize that in labor-dense sectors, the human touch remains the variable that determines whether automation succeeds or fails.

PT Kaldu Sari Nabati Indonesia, a prominent international-scale snack food manufacturer, faces distinct challenges in maintaining stability, particularly within its Majalengka Plant. In this high-output setting, productivity serves as the Key Performance Indicator (KPI) for assessing whether human resources are utilized efficiently. Fluctuations in the output of the plant suggest that external interventions, such as automation, are insufficient on their own. As noted by [\(Kehista, Faeni, & Fikri, 2024\)](#), individual performance is a function of the interaction between ability, motivation, and the opportunity to perform, indicating that internal human factors are the root drivers of operational success [\(Koopmans et al., 2011\)](#)

The transition toward Industry 4.0 in the food manufacturing sector necessitates sophisticated synchronization between automated technologies and human capabilities. However, organizations frequently succumb to techno centrism, an approach that prioritizes hardware acquisition while marginalizing the psychological well-being of the workforce [\(Vogel & Feldman, 2009\)](#). In large-scale production facilities, such as those situated in emerging industrial hubs like Majalengka, operational success is increasingly contingent upon managing human assets as strategic capital rather than mere procedural executors. This paradigm shift underscores the necessity of exploring emotional attachment and environmental perceptions as primary catalysts for productivity, transcending the traditional mechanical boundaries of industrial output [\(Almazrouei, Zacca, & Alfayez, 2020\)](#).

In response to these operational challenges, the management paradigm at PT Kaldu Sari Nabati Indonesia is shifting towards a Human Capital perspective, where employees are viewed not as variable costs but as strategic assets essential for achieving organizational goals. This perspective necessitates a holistic management approach that prioritizes three critical independent variables, such as employee engagement, organizational climate, and ability. Employee Engagement is the first pillar, it goes beyond simple job satisfaction to reflect a deep, two-way emotional commitment. As elucidated by, engagement is the harnessing of organization members' selves to their work roles, where people employ and express themselves physically, cognitively, and emotionally during role performance. Furthermore, [\(Schaufeli & Bakker, 2004\)](#) define it as a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption. When employees are engaged, they are statistically more likely to expend discretionary effort, which directly translates into higher productivity and operational stability.

However, motivation and engagement do not exist in a vacuum, they are heavily influenced by the Organizational Climate. This second variable represents the collective perception of the work environment the atmosphere of the workplace. [Ariyani \(2012\)](#) define organizational climate as a set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in it, which influences their motivation and behavior. A positive climate acts as a psychological support system, reducing turnover intention and fostering a culture of high performance. Finally, these psychological factors must be grounded in Ability. Regardless of how high the

engagement or how positive the climate is, productivity cannot be achieved without competence. emphasizes that ability is an individual's capacity to perform the various tasks in a job, encompassing both intellectual and physical skills. Therefore, high productivity is the result of a synergy, the will to work (Engagement), the supportive environment to work (Climate), and the skill to work (Ability).

The uniqueness of this research lies in its specific industrial context and its strategic focus on human competence within a high-output manufacturing setting. While contemporary Human Resources (HR) literature often overemphasizes soft factors like culture or happiness, this study argues that in the labor-intensive and highly automated snack food industry, Ability (technical and intellectual competence) may serve as the most critical yet overlooked determinant of productivity. By shifting the spotlight toward the synergy between technical skill and psychological engagement, this research provides a more pragmatic blueprint for operational success in large-scale plants. Furthermore, conducting this study at PT Kaldu Sari Nabati Indonesia, Majalengka, a hub for Indonesia's emerging industrial growth offers a localized perspective that is often missing from broader global studies. Based on these theoretical frameworks and the practical urgency identified at the facility, this study aims to determine and analyze the influence of employee engagement, organizational climate, and ability on work productivity at PT Kaldu Sari Nabati Indonesia, Plant Majalengka.

2. Literature Review and Hypotheses Development

2.1 Work Productivity

Work productivity depicts an employee's ability to produce output compared to the amount of input used. in the broader context of human resource management, work productivity is not only a result of individual effort but is significantly influenced by work discipline and leadership styles that stimulate employee motivation ([Hidayat, Perkasa, & Saluy, 2026](#); [Urfa & Tarigan, 2026](#)). High work productivity is measured not only by how fast or how much someone works but also by the quality of their work results. According to [Abdullah and Hernita \(2026\)](#); [Simamora, Sitorus, Ginting, Simbolon, and Agustina \(2025\)](#), indicators of work productivity include work quantity, quality, timeliness, and cooperative attitude.

2.2 Employee Engagement

Employee engagement is a positive psychological condition regarding work, characterized by vigor, dedication, and work absorption. Employees with high engagement levels do not only perform tasks as a formal obligation but also show enthusiasm and a sense of belonging to the company. As explained by [Robbins and Judge \(2016\)](#) that within the framework of organizational behavior, employee engagement is fundamentally defined by an individual's involvement, satisfaction, and enthusiasm for their work, which collectively drives superior performance. In contemporary organizational psychology, employee engagement is increasingly analyzed using the Job Demands-Resources (JD-R) model. This framework posits that job resources, such as social support, feedback, and autonomy, initiate a motivational process that fosters high levels of engagement, subsequently leading to superior organizational performance ([A. B. Bakker & Demerouti, 2017](#));([Arnold B. Bakker & Albrecht, 2018](#)). Engagement is not merely a static trait but a fluctuating state of energy influenced by the perceived meaningfulness of the work ([Bailey, Madden, Alfes, & Fletcher, 2015](#)). Within the manufacturing context, physical and cognitive absorption is paramount; even minor lapses in engagement can lead to significant disruptions in production cycles and compromise food safety standards.

2.3 Organizational Climate

Organizational climate can be understood as the atmosphere or collective perception formed from the experiences of organizational members regarding their work environment [Firrentin, Zaman, and Hidayah \(2026\)](#). A positive climate is usually marked by trust, openness, role clarity, and management support. A conducive climate supports productivity improvements. Organizational climate serves as a psychological filter through which employees interpret objective organizational structures as subjective experiences ([Minti Hari, Herni Justiana Astuti, Naelati Tubastuvi, & Fakhruddin, 2024](#)). [Loi, Xu, Chow, and Chan \(2019\)](#) emphasized that a climate characterized by psychological safety and innovation support allows employees to execute tasks without the paralyzing fear of retribution for honest errors, directly enhancing process efficiency. In a factory setting, this climate encompasses perceptions of

distributive justice regarding workload and transparency in management communication. A positive climate acts as a social lubricant, reducing inter-departmental friction and accelerating the conversion of inputs into high-quality outputs ([Shanker, Bhanugopan, van der Heijden, & Farrell, 2017](#)); [Asbari, Purwanto, and Santoso \(2020\)](#) explain that a positive organizational climate, particularly when synchronized with transformational leadership, plays a pivotal role in driving innovative work productivity within the manufacturing sector.

2.4 Ability

Ability is an individual's capacity to perform specific jobs or activities effectively, formed from a combination of skills, knowledge, talent, and experience. Adequate ability enables employees to complete tasks effectively and efficiently ([Aknes & Silaswara, 2023](#)). In the modern industrial landscape, ability extends beyond technical proficiency to encompass adaptability to digital ecosystems and collaborative intelligence ([Saks, 2022](#)). According to the Resource-Based View (RBV) of the firm, unique and inimitable human capabilities are the primary sources of sustainable competitive advantage. Continuous capacity building through targeted training is no longer a mere operational cost; it is a strategic investment that ensures that the workforce remains resilient amidst rapid technological shifts. The synergy between innate talent and institutionalized learning determines the ceiling of an organization's productive capacity ([Wollard & Shuck, 2011](#)).

2.5 Hypotheses Development

2.5.1 The Influence of Employee Engagement on Work Productivity

The relationship between Employee Engagement and productivity is rooted in the Social Exchange Theory (SET), which suggests that when employees feel valued and engaged, they return the favor through high levels of effort and commitment. Engagement acts as an internal psychological catalyst; engaged employees do not just work harder, they work smarter and with greater resilience. As they become physically, cognitively, and emotionally tethered to their roles, the frequency of errors decreases, and output efficiency increases. Based on this theoretical underpinning:

H₁: Employee Engagement has a positive and significant effect on Work Productivity

2.5.2 The Influence of Organizational Climate on Work Productivity

Organizational Climate serves as the "psychological ecosystem" of the workplace. According to the Person-Environment (P-E) Fit Theory, productivity is optimized when the workplace environment aligns with employees' needs and perceptions. A positive climate, marked by management fairness and social support, reduces cognitive load and workplace stress, allowing employees to focus entirely on their production goals. Conversely, a toxic climate acts as a friction point that hampers even the most skilled workers' performance. Therefore:

H₂: Organizational Climate has a positive and significant effect on Work Productivity

2.5.3 The Influence of Ability on Work Productivity

Ability is a fundamental prerequisite for performance. Based on the Ability-Motivation-Opportunity (AMO) Model, even the most motivated or engaged employees cannot achieve high productivity without the requisite technical and intellectual competence. In a high-output manufacturing setting, such as PT Kaldu Sari Nabati, Ability represents the ceiling of an individual's productive capacity. While engagement provides the will, Ability provides the way to achieve quality and quantity standards. Thus:

H₃: Ability has a positive and significant effect on Work Productivity

Although the current model establishes a direct relationship between the variables, future research could enhance the depth of this analysis by incorporating more complex interactions within the manufacturing context. Future studies could investigate whether the impact of organizational climate on productivity is mediated by job satisfaction, exploring the possibility that a positive climate first increases satisfaction, which then serves as the primary driver for higher output. Given the industry's rapid shift toward automation, technological self-efficacy could also be proposed as a moderating variable to see if the influence of ability on productivity is significantly stronger for employees who possess high confidence in operating advanced technologies. Additionally, the link between employee engagement and productivity could be further explored through work discipline as a mediator to understand how

emotional commitment translates into consistent behavioral adherence to production schedules. These additions would provide a more comprehensive understanding of the multifaceted nature of human resource management in large-scale industrial facilities.

3. Methodology

This study employed descriptive and verification methods using a quantitative approach. The research approach goes beyond merely comparing variables without direct association, it aims to describe, analyze, and deeply understand the obtained data according to the research focus and objectives. In this context, the variables examined include employee engagement, organizational climate, and work ability, all of which are used to test hypotheses formulated based on existing theories and prior research. this study focuses on three independent variables: employee engagement, organizational climate, and ability. the dependent variable analyzed was work productivity.

The operationalization of the variables in this study was conducted by breaking down each variable into specific indicators derived from established theoretical frameworks. Employee Engagement (X_1) was measured using three primary dimensions developed by [Schaufeli and Bakker \(2004\)](#): vigor (levels of energy and resilience), dedication (a sense of significance and pride), and absorption (full concentration and being happily engrossed in one's work). Meanwhile, the Organizational Climate (X_2) variable is operationalized by referring to the theory of ([Ariyani, 2012](#)), which encompasses employee perceptions of the physical work environment, social support among colleagues, and management fairness in decision-making processes. For the Ability (X_3) variable, the measurement focuses on three fundamental capacities, technical skills in operating production equipment, intellectual ability in problem-solving, and physical capability or stamina required by the manufacturing work rhythm. Finally, the Work Productivity (Y) variable is evaluated based on the criteria established by [Mathis and Jackson \(2002\)](#), which include the quantity of output produced, quality of work meeting standards, timeliness in achieving targets, and efficiency in the use of organizational resources. The integration of these indicators ensures that each variable can be measured objectively through the prepared questionnaire instrument

The verification method was used to test previously established hypotheses. As explained by [Sugiyono \(2019\)](#), this method is applied to a specific population or sample to test the validity of formulated theoretical assumptions. The data used are quantitative in the form of scores, with the primary source being primary data. As stated by, this method is used to prove the validity of a specific hypothesis or theory through a systematic and structured data collection process.

This study focuses on all employees of PT Kaldu Sari Nabati Indonesia Plant Majalengka, totaling 9,374 individuals. To determine the sample, the Slovin Formula was applied with a 10% margin of error (e) of 99 respondents. Probability random sampling was used as the sampling method for this study. This method reduces bias and enhances data representativeness by providing an equal opportunity for every member of the population to be selected as respondents. Primary data were gathered via questionnaires using a 5-Point Likert Scale. This interval scale allows for nuanced statistical analysis and is categorized as follows: (5) Strongly Agree, (4) Agree, (3) Neutral, (2) Disagree, and (1) Strongly Disagree. Validity and reliability tests were used to ensure the accuracy (validity) and consistency (reliability) of the data generated. The validity test ensured that each questionnaire item truly measured what it was intended to measure, while the reliability test assessed the extent to which the measuring instrument provided consistent results when used repeatedly under the same conditions ([Hair, 2019](#)).

The data analysis stages applied in this study included classical assumption tests covering data normality, multicollinearity, autocorrelation, and heteroscedasticity tests. Subsequently, a model feasibility test was conducted using the F-test and the coefficient of determination (R^2) test to determine the extent to which independent variables explain the dependent variable, and hypothesis testing using the t-test to examine the partial effect of each variable. Through the application of these systematic methods and procedures, it is expected that the research results will provide an accurate and relevant overview, serving as a basis for strategic decision-making to improve employee work productivity."

4. Results and Discussions

4.1 Results

The results of the descriptive analysis in this study from the questionnaire data show that the total score obtained from the responses of the employees of PT Kaldu Sari Nabati Indonesia Plant Majalengka regarding employee engagement was 2,180. The results of the calculation show that the results of the study on employee engagement are in the high category. The total score for the employee respondents' assessment of Organizational Climate was 2.257. The calculation results show that the research results on Organizational Climate are in the good category. The total score for the employee respondents' assessment of competence was 2,358. This shows that the calculation results of the research on competence fall in the high category. The total score obtained from the employee respondents' assessment of Work Productivity was 2,767. This shows that the results of the calculation of the research on work productivity fall into the high category. [Raharjo, Paramita, and Warso \(2016\)](#) explained that the synergy between inherent ability, practical experience, and structured training serves as a fundamental determinant of an employee's readiness and output quality.

The reliability test results were as follows:

Table 1. Reliability

No	Variables	Cronbach's Alpha	Realiability	Result
1	Employee Engagement (X_1)	0.850	0.6	Reliable
2	Organizational Climate (X_2)	0.856	0.6	Reliable
3	Ability (X_3)	0.871	0.6	Reliable
4	Work Productivity (Y)	0.833	0.6	Reliable

The reliability test results for each variable showed that all Cronbach's alpha values were above the required threshold. In detail, the Employee Engagement (X_1) variable obtained a value of 0.850, Organizational Climate (X_2) of 0.856, Competence (X_3) of 0.871, and Work Productivity (Y) of 0.833. All of these values exceed the minimum threshold of 0.60, so it can be concluded that all items in the questionnaire are reliable, and the research instrument is suitable for data collection. The results of the confirmatory analysis using the classical assumption test for normality are as follows.

Table 2. One-sample Kolmogorov Smirnov test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		99
Normal Parameters	Mean	.0000000
	Std. Deviation	1.27857599
Most Extreme Differences	Absolute	.057
	Positive	.057
	Negative	-.044
Kolmogorov-Smirnov Z		.569
Asymp. Sig. (2-tailed)		.902
a. The test distribution was normal.		
b. Calculated from data.		

Based on the normality test results presented in Table 2, the Asymp. The Sig (2-tailed) value was 0.902. This value is greater than the significance level used in this study ($\alpha = 0.05$). This condition indicates that there is no significant difference between the distribution of research residuals and a normal distribution. In other words, the residuals from the regression model followed a normal distribution pattern. The fulfillment of this normality assumption is important because it is one of the main requirements for linear regression analysis. If the residuals are normally distributed, the model parameter estimation results can be considered valid and interpreted more accurately. Therefore, the findings of this study indicate that the basic assumption of normality was fulfilled by the regression

model used. The results also show that classical assumption testing and hypothesis analysis stages can still be continued.

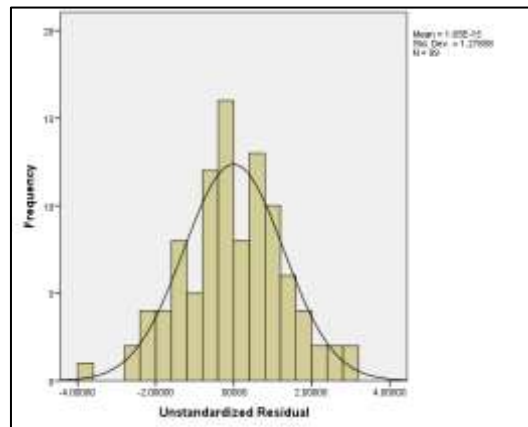


Figure 1. Normality test with histogram graph

In addition to the Kolmogorov-Smirnov (K-S) method, data normality was verified by examining histogram graphs and P-plots. The histogram Figure 1 shows a symmetrical distribution, confirming that the data were normally distributed.

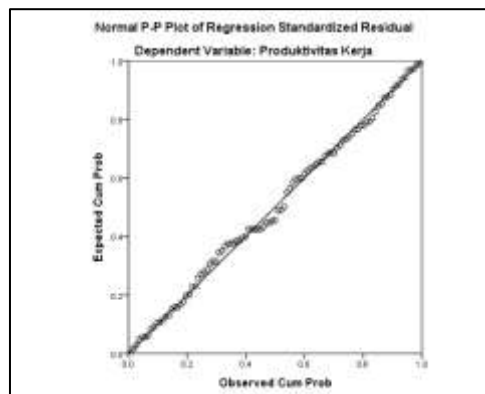


Figure 2. Normality test with p-plot

Figure 2 shows the results of the normality test using a probability plot (P-plot). In this plot, the data points are scattered along the diagonal line, indicating that the distribution of the research residuals is theoretically proportional to a normal distribution. This pattern reinforces the results of the previous statistical test, confirming that the regression model used met the normality assumption. In addition to testing normality, this study also conducted a multicollinearity test to ensure that there were no excessive or perfect relationships between the independent and dependent variables used in the model. Multicollinearity can interfere with the stability of regression coefficient estimates and the accuracy of model predictions, making normality testing important. The results of the normality test are shown in the following table.

Table 3. Multicollinearity test

Model		Collinierity Statistic	
		Tolerance	VIF
1	(Constant)		
	Employee Engagement	.503	1.989
	Organisational Climate	.519	1.927
	Ability	.457	2.189

Multicollinearity testing was conducted to determine whether there was a strong correlation between the independent variables in the regression model. Based on the calculation results, the employee

engagement variable showed a Variance Inflation Factor (VIF) value of 1.989, with a Tolerance value of 0.503. Furthermore, the organizational climate variable had a VIF value of 1.927 with a tolerance of 0.519. The Ability variable had a VIF value of 2.189, with a tolerance of 0.457. All VIF values obtained were well below the maximum limit of 10, and all tolerance values were greater than the minimum threshold of 0.10. Therefore, it can be concluded that the regression model used does not experience multicollinearity problems, and the next stage of analysis is feasible.

This study tested for heteroscedasticity using a scatterplot graph. The graph presents the distribution of residual points, which are then analyzed for patterns to assess whether there are indications of heteroscedasticity. The results of the heteroscedasticity test are as follows:

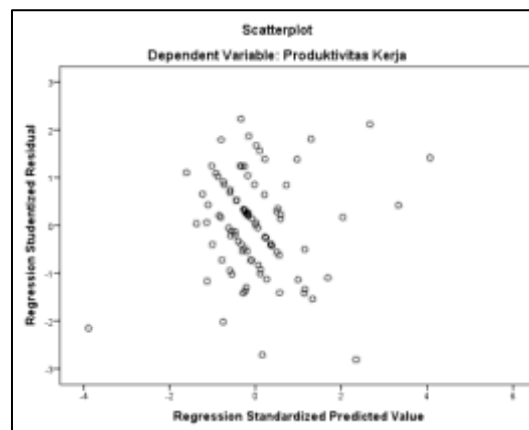


Figure 3. Heteroscedasticity test

Figure 3 shows a heteroscedasticity graph where the data points appear to be scattered randomly both above and below the horizontal line on the Y-axis with a reference value of 0. Because there is no pattern that converges, narrows, or widens regularly, the regression model used does not experience heteroscedasticity problems. The model can be declared valid for use in the prediction process for the Work Productivity variable. After ensuring that the model was free from heteroscedasticity, the testing stage continued with an autocorrelation check. The results of the autocorrelation test are presented as follows.

Table 4. Autocorrelation test

Model Summary					
Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate	Durbin-Watson
1	.724 ^a	.524	.509	1.29861	2.001
a. Predictors: (Constant), Ability, Organizational Climate, Employee Engagement					
b. Dependent Variable: Work Productivity					

This study uses the Durbin-Watson (DW) test to test for autocorrelation. This test aims to detect whether there is a relationship or correlation between the residual values in one observation and the residuals in other observations that are close in time or data position. The calculation results show that the Durbin-Watson value was 2.001. This value was compared with the decision criteria shown in the Durbin-Watson table. With a sample size of $n = 99$ and $k = 3$ independent variables, the lower limit (dL) was 1.6108, while the upper limit (dU) was 1.7355. The criterion used to indicate the absence of autocorrelation is when the DW value is in the range $dU \leq DW \leq 4 - dU$. In this study, the range limit was $1.7355 \leq DW \leq 2.264$. This means that the residuals from the model are independent; therefore, the model is suitable for further analysis and prediction. This study uses a model feasibility test (F-test), and the results are as follows in Table 5.

Table 5. Model feasibility test analysis

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	543.123	3	181.041	42.534	.000 ^b
	Residual	404.357	95	4.256		
	Total	947.480	98			

The results of the model feasibility analysis, also known as the F-test, show that the significance value obtained was 0.000. This value is much lower than the research error tolerance limit of 0.05. In addition, the F-count value was recorded at 42.534, which was significantly greater than the F-table value of 2.70. Based on the decision criteria of the F-test, H_0 was rejected and H_a was accepted. In other words, the regression model that combines the variables of employee engagement, organizational climate, and ability has a significant impact on the dependent variable, namely, work productivity. Using this method, we can determine which variables contribute the most to increasing productivity. This method also provides a more accurate picture of the effectiveness of the built model.

Table 6 Multiple linear regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.118	1.443		4.241	.000
	Employee Engagement	.191	.091	.198	2.096	.039
	Organizational Climate	.235	.101	.217	2.327	.022
	Ability	.441	.099	.440	4.439	.000

The regression equation obtained is:

$$Y = 6.118 + 0.191 X_1 + 0.235 X_2 + 0.441 X_3 + e \quad (1)$$

Based on the analysis results, the regression model constant obtained was 6.118, with a positive sign. This indicates that when all independent variables (Employee Engagement, Organizational Climate, and Capability) have a value of zero (0), Work Productivity will still occur. The regression coefficient for Employee Engagement (X_1) was recorded at 0.191 in a positive direction, indicating that an increase in Employee Engagement will be followed by an increase in Work Productivity. Furthermore, the regression coefficient for Organizational Climate (X_2) is 0.235, which is also positive, meaning that the more conducive the organizational climate, the higher the Work Productivity. The regression coefficient for the Ability variable (X_3) is 0.441 with a positive sign, indicating that an increase in employee ability will have an impact on an increase in Work Productivity. The residual value (e) represents the level of error or deviation in predicting the sample data conducted by the researcher. The results of the coefficient of determination analysis are presented below Table 7.

Table 7. Coefficient of determination analysis

Model		Correlations		
		Zero-order	Partial	Part
1	(Constant)			
	Employee Engagement	.478	.174	.142
	Organizational Climate	.465	.183	.150
	Ability	.529	.295	.250

The results of the coefficient of determination analysis show that Employee Engagement contributes 22.8% to work productivity, Organizational Climate contributes 21.6%, and capability contributes 28%. The results of the hypothesis test (t-test) are as follows in Table 8.

Table 8. T-test analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.118	1.443		4.241	.000
	Employee Engagement	.191	.091	.198	2.096	.039
	Organizational Climate	.235	.101	.217	2.327	.022
	Ability	.441	.099	.440	4.439	.000

The results show that the dependent variable is significantly influenced by each independent variable according to the hypothesis test (t-test). Based on the calculations, the t-values for the Employee Engagement, Organizational Climate variable is 2.327, and competence variables were 2.096, 2.327, and 4.439, respectively. At a significance level of 5%, all these values were greater than the t-table.

When t-count is greater than t table, H_0 is rejected and H_a is accepted in accordance with the t-test decision criteria. With these criteria being met for all variables, it can be stated that Employee Engagement, Organizational Climate, and Ability individually have a positive and significant effect on Work Productivity. This indicates that an increase in one of the independent variables, whether in terms of employee engagement, organizational climate quality, or individual ability, tends to be followed by an increase in work productivity ([Natasha Sharon Rose Tanamal, Christian Wiradendi Wolor, & Utari, 2025](#)).

4.2 Discussions

The results of this study demonstrate that ability serves as the most dominant factor influencing work productivity, with a contribution of 28 percent. This finding reinforces the Ability-Motivation-Opportunity (AMO) Model, which suggests that technical and intellectual competence forms the primary foundation of performance. In a high-output manufacturing environment, such as PT Kaldu Sari Nabati Indonesia, operational efficiency is heavily dependent on the proficiency of employees in handling machinery and solving technical problems rapidly. This is consistent with the research by [Kehista et al. \(2024\)](#) which indicates that in technology-driven industries, specific skills often outweigh motivational factors in determining daily output. The dominance of this variable suggests that strategic investments in technical training and competency development are the most effective methods for maintaining production stability in this sector.

Furthermore, Employee Engagement was found to have a significant positive impact on productivity, accounting for 22.8% of the influence. Theoretically, this validates the Social Exchange Theory and the Job Demands-Resources Model, which suggest that when employees are emotionally connected to their work through vigor and dedication, they are more likely to exert discretionary effort. These results imply that despite the pressures of strict production targets, maintaining psychological well-being and a sense of ownership among the workforce remains vital for minimizing human error and ensuring consistency.

Organizational Climate also contributed significantly to productivity by 21.6%, which aligns with the Person-Environment Fit Theory. This theory posits that productivity is optimized when there is a match between an employee's perception of their work environment and their professional needs. As explained by [Ariyani \(2012\)](#) supported by [Shanker et al. \(2017\)](#), a positive climate characterized by management fairness and social support serves as a system that reduces interpersonal friction on the production line. In the Majalengka Plant, a conducive organizational climate acts as a lubricant that ensures the relationship between management and operators remains harmonious, thereby supporting the consistent achievement of collective goals.

Ultimately, the simultaneous results from the f-test prove that engagement, climate, and ability work synergistically to enhance overall productivity. A critical synthesis of these findings suggests that productivity in the food and beverage industry cannot be achieved through a single factor in isolation.

While technical ability sets the ceiling for productive capacity, organizational climate and employee engagement ensure that this capacity is utilized to its fullest extent without causing burnout. These findings contribute to the human resource management literature by emphasizing that in the modern industrial era, a balance between technical and psychosocial factors is the primary key to operational sustainability.

5. Conclusions

5.1 Conclusion

This study concludes that Employee Engagement, Organizational Climate, and Ability collectively and significantly enhance Work Productivity at PT Kaldu Sari Nabati Indonesia, Plant Majalengka. The most critical finding is the dominance of ability as the primary driver of output, contributing 28% of the variance in productivity. This indicates that in a high-intensity manufacturing environment, technical and intellectual competence form the essential foundation upon which psychological factors operate. While Employee Engagement (22.8%) and Organizational Climate (21.6%) are vital catalysts for sustained effort, they cannot compensate for a lack of fundamental skills. Ultimately, peak productivity is achieved only through the synchronized synergy of a skilled workforce, emotionally committed staff, and a supportive organizational atmosphere.

5.2 Limitations and Future Research

Despite its contributions, this study is limited by its focus on a single manufacturing plant and reliance on self-reported data.

5.3 Suggestions and Directions for Future Research

Future research should consider a longitudinal approach to track how productivity fluctuates with technological upgrades over time. Additionally, exploring the mediating role of Work Discipline or the moderating effect of Technological Self-Efficacy would provide deeper insights into how emotional commitment translates into behavioral consistency in automated environments. Extending the scope to multiple plants within the F&B sector would enhance the generalizability of these findings across different industrial settings.

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Author Contributions

The author conceptualized the research framework and defined the study's objectives regarding the determinants of work productivity. The quantitative methodology, incorporating descriptive and verification methods, was developed by AQ, who also oversaw formal data analysis and hypothesis testing using SPSS 25. IO was responsible for the investigation and data collection phase, managing the distribution of questionnaires to the employee population at PT Kaldu Sari Nabati Indonesia Plant Majalengka. Both authors contributed significantly to the writing of the original draft, the visualization of statistical tests, and the final manuscript review to ensure academic rigor and alignment of findings with established theoretical frameworks.

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