



The Influence of Employee Engagement and Big Five Personality on Employee Performance

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Abstract. This study aims to analyze the influence of Employee Engagement and Big Five Personality on Employee Performance at PT. Geo Dipa Energi (Persero) Soreang. The research employs descriptive and verification methods, involving 80 employees as respondents. Pearson product-moment correlation and multiple linear regression analysis were used to test the hypotheses, with t-tests and F-tests for statistical validation. The findings reveal that both Employee Engagement and Big Five Personality have a significant and positive impact on Employee Performance, both individually and collectively. The regression analysis shows that these factors influence 57.3% of employee performance, while the remaining 42.7% is affected by other variables. Employee Engagement enhances motivation and work commitment, while the Big Five Personality—especially Conscientiousness—positively contributes to performance consistency. The study concludes that organizations must focus on fostering employee engagement and recognizing personality traits to improve performance. Companies can optimize productivity and achieve business objectives by strengthening supervision, communication, and job satisfaction. This research provides valuable insights into human resource strategies at PT. Geo Dipa Energi (Persero) Soreang and similar industries.

Keywords: Big Five Personality, Employee Engagement, Employee Performance.

1 Introduction

From 2018 to 2021, PT. Geo Dipa Energi (Persero) Soreang experienced a decline in production and failed to meet revenue targets, raising concerns about employee performance. As seen from Table 1, the declining trend is clearly seen across the years. An interview with a General Affairs employee revealed key factors affecting performance, including job dissatisfaction, lack of supervision, low confidence, poor initiative, ineffective communication, and weak work discipline.

Additionally, unstructured supervision has led to inefficiencies in employee productivity. To achieve optimal company goals, addressing these employee-related challenges and improving work efficiency and effectiveness is essential. Aside from employee engagement, the Big Five Personality is another factor influencing employee performance. According to McCrae and Costa (as cited in [1]), the Big Five Personality

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is an approach used to analyze human personality through traits classified into five personality dimensions, identified using factor analysis.

Table 1. Company Target and Realisation

Year	Production (kWh) Nett PLTP Dieng Unit I		Production (kWh) Nett PLTP Patuha Unit I		(%) Realization /Target
	Target	Realization	Target	Realization	
	2018	366.175.002	375.892.257	460.747.236	
2019	343.753.007	361.340.755	460.765.535	439.396.534	93,72%
2020	358.269.000	314.626.290	432.792.027	439.396.539	98,79%
2021	423.273.600	310.526.396	437.682.898	410.903.716	91,39%

Source: Geo Dipa Energi

In Indonesia, [2] found that the Big Five Personality dimensions significantly positively impact employee performance in several companies in Surabaya, both individually and collectively. Employees with strong personalities who believe in their capabilities are likelier to put in the necessary effort and face fewer obstacles in achieving optimal performance. Conversely, employees with low self-confidence may struggle to succeed, regardless of how hard they try, due to difficulties managing their work environment.

Based on these issues, the research questions that arise are as follows:

1. What is the impact of employee engagement on employee performance at PT. Geo Dipa Energi (Persero) Soreang?
2. What is the impact of the Big Five personalities on employee performance at PT. Geo Dipa Energi (Persero) Soreang?
3. Is there a positive influence of both employee engagement and the Big Five personality on employee performance at PT. Geo Dipa Energi (Persero) Soreang?

1.1 Employee Engagement

Reference [3] define work engagement as an employee’s active involvement in work, characterized by enthusiasm, resilience, and focus. They identify three key dimensions of employee engagement. The first is Vigor, who demonstrates high energy and persistence when completing tasks. Dedication reflects emotional commitment, enthusiasm, and a sense of purpose in work. Absorption represents deep concentration, focus, and enjoyment in work.

These dimensions highlight that employee engagement plays a crucial role in enhancing job performance, as committed employees demonstrate more significant effort and productivity. According to Kahn (cited in [4]), engaged employees are psychologically present feeling connected to their jobs and workplace, which enhances focus and productivity. Employee engagement encompasses relationships with the job, company, managers, and colleagues, ultimately contributing to achieving organizational goals.

1.2 Big Five Personality

McCrae and Costa (as cited in [1]) describe the Big Five Personality as a framework for analyzing human personality based on five key traits: extraversion, agreeableness, conscientiousness, neuroticism, and openness. Research by [5] in China found that these traits significantly impact performance, with conscientiousness having the strongest positive effect and neuroticism showing a negative correlation. Similarly, [2] in Indonesia confirmed that the Big Five Personality traits positively influence employee performance in Surabaya-based companies, individually and collectively.

1.3 Employee Performance

According to [6], employee performance represents an individual's or a team's commitment to fulfilling tasks and enhancing results based on assigned responsibilities. It can be evaluated through five primary dimensions: Work Quality, which refers to efficiency and precision in completing tasks per company standards; Work Quantity, which assesses the ability to achieve workload targets within a given timeframe; Collaboration, which involves teamwork and cooperation with colleagues and supervisors to reach objectives; Trust, which signifies mutual confidence among employees and between employees and supervisors in task execution; and Availability, which includes discipline, attendance, and readiness to fulfill work duties.

Reference [7] defines performance as an organization's success in achieving its objectives, while [8] emphasizes the importance of both quality and quantity in employee output. Reference [9] highlight performance as the level of success achieved within a given period, measured against set standards or targets. Two essential factors influencing group performance are team cohesion and the decision-making process at both individual and group levels. Effective leadership and management of these factors determine an employee's success in contributing to organizational goals.

The relationship between the previously described frameworks can be illustrated in the following diagram shown in Figure 1.

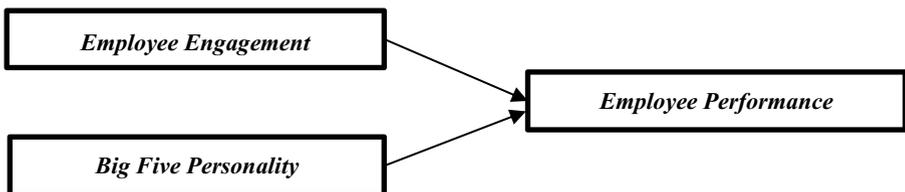


Fig. 1. Framework.

Based on the theoretical framework and the identified issues on the existing problems, the hypothesis proposed in this research are:

- H1: Employee engagement has a positive influence on employee performance.
- H2: The Big Five personality has a positive influence on employee performance.

- H3: There is a positive combined influence of employee engagement and the Big Five personalities on employee performance.

2 Methods

This study applies descriptive and verification methodologies, involving 80 employees as respondents. The analysis techniques used include Pearson product-moment correlation and multiple linear regression, with hypothesis testing carried out through t-tests and F-tests. The findings reveal that both employee engagement and Big Five personality traits significantly and positively impact employee performance, both individually and collectively. The research was conducted at PT. Geo Dipa Energi, located at Jl. Akses Tol Soroja Parungserab Blok Sukamanah No. 22, Kec. Soreang, Kab. Bandung, Jawa Barat, 40914.

3 Results and Discussion

The researcher used SPSS 24.0 for Windows software to conduct normality tests in this study. Prior to this, the data initially measured on an ordinal scale were transformed into interval-scale data using the Successive Interval Method (MSI). Table 2 shows the histogram and p-plot graphs, which depict the statistical processing results of the data successfully processed by the researcher.

Table 2. Correlations output.

		Correlations		
		Employee Engagement	Big Five Personality	Employee Performance
Employee Engagement	Pearson	1	.575**	.491**
	Sig. (2-tailed)		0,000	0,000
	N	80	80	80
Big Five Personality	Pearson	.575**	1	.593**
	Sig. (2-tailed)	0,000		0,000
	N	80	80	80
Employee Performance	Pearson	.491**	.593**	1
	Sig. (2-tailed)	0,000	0,000	
	N	80	80	80

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author’s work, 2024.

Based on Table 2, the Pearson correlation coefficient between Employee Engagement and Employee Performance is 0.491, which exceeds 0.268, indicating a connection between Employee Engagement and Employee Performance. The correlation is statistically significant since the significance value (0.000) is below 0.05. Thus, it can be concluded that Employee Engagement has a significant relationship with Employee Performance.

Similarly, the Pearson correlation coefficient between Big Five Personality and Employee Performance is 0.593, also greater than 0.268, demonstrating a relationship between Big Five Personality and Employee Performance. The significance value (0.000) is less than 0.05, confirming that Big Five Personality is significantly related to Employee Performance.

The multiple linear regression analysis results in the equation:

$$\text{Employee Performance} = 16.448 + 0.418\text{Employee Engagement} + 0.655\text{Big Five Personality} \quad (1)$$

Where Employee Engagement and Big Five Personality positively influence Employee Performance. The constant value (16.448) indicates that if both independent variables remain at 0%, Employee Performance will be 16.448. The regression coefficients show that:

- A 1-unit increase in Employee Engagement raises Employee Performance by 0.418, assuming Big Five Personality remains constant.
- A 1-unit increase in Big Five Personality increases Employee Performance by 0.655, assuming Employee Engagement remains constant.

Table 3. F-Test.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3442,493	2	1721,246	24,173	.000 ^b
	Residual	5482,883	77	71,206		
	Total	8925,376	79			

a. Dependent Variable: Employee Performance
 b. Predictors: (Constant), Big Five Personality, Employee Engagement

Source: Author’s work, 2024.

Based on the data analysis results in Table 3, the calculated F-value is 24.173 with a significance level 0.000. Therefore, it can be concluded that the null hypothesis (H₀) is rejected, while the alternative hypothesis (H₁) is accepted. In other words, Employee Engagement and Big Five Personality have a simultaneous influence on Employee Performance. The next step is to examine the individual (partial) influence of Employee Engagement and Big Five Personality on Employee Performance, which can be determined through the following t-test analysis.

Based on the data analysis results in Table 4, the calculated t-value is 16.448, with a significance level 0.000. Therefore, it can be concluded that the null hypothesis (H₀) is rejected, while the alternative hypothesis (H₁) is accepted. This indicates that Employee Engagement and Big Five Personality each have a significant partial effect on Employee Performance.

Table 4. T-Test.

Model	Coefficients ^a		t	Sig.
	Unstandardized Coefficients	Standardized Coefficients		

		B	Std. Error	Beta		
1	(Constant)	16,448	6,127		2,684	0,009
	Employee Engagement	0,418	0,204	0,224	2,050	0,044
	Big Five Personality	0,655	0,154	0,465	4,254	0,000
a. Dependent Variable: Employee Performance						

Source: Author’s work, 2024.

3.1 Influence of Employee Engagement on Employee Performance at PT. Geo Dipa Energi (Persero) Soreang

The study results indicate a significant relationship between employee engagement and performance, with a correlation coefficient of 0.491, suggesting a moderate correlation. Hypothesis testing shows that employee engagement significantly impacts employee performance, as the t-value exceeds the t-table value, leading to the acceptance of the alternative hypothesis (H₁).

These findings align with previous studies, including [10], which confirmed the significant influence of employee engagement on performance at PT. Geo Dipa Energi (Persero) Soreang. Similarly, research by [11] found that the dimensions of employee engagement—vigor, dedication, and absorption—positively affect employee performance among air rifle manufacturers. Reference [12] also reported that employee engagement influences performance at PT. Sinar Kencana Multi Lestari, while [13] further validated the significant impact of employee engagement on employee performance.

3.2 Influence of Big Five Personality on Employee Performance at PT. Geo Dipa Energi (Persero) Soreang

The study results confirm a significant relationship between the Big Five Personality traits and employee performance at PT. Geo Dipa Energi (Persero) Soreang, with a correlation coefficient 0.593, indicates a moderate correlation. Hypothesis testing shows that the t-value exceeds the t-table value, concluding that the Big Five Personality traits positively and significantly influence employee performance. These findings align with previous research, including [14], who found that the Big Five Personality traits significantly impact the performance of village officials in Haruai District. Similarly, [15] highlighted that the Conscientiousness dimension of personality plays a crucial role in enhancing employee performance, further supporting the results found at PT. Geo Dipa Energi (Persero) Soreang.

3.3 The Influence of Employee Engagement and Big Five Personality on Employee Performance at PT. Geo Dipa Energi (Persero) Soreang

The study confirms that employee engagement and Big Five Personality traits significantly influence employee performance at PT. Geo Dipa Energi (Persero) Soreang. The analysis shows a strong correlation, with these factors contributing 57.3% to employee performance, while other factors influence the remaining 42.7%. The study's regression equation ($\text{Employee Performance} = 16.448 + 0.418\text{Employee Engagement} + 0.655\text{Big Five Personality}$) indicates a positive impact of employee engagement and personality traits on performance. These findings align with previous research by [16, 17] reinforcing the importance of engagement, personality, motivation, and interpersonal relationships in improving employee performance.

4 Conclusions

The research concludes that enhancing Employee Engagement and understanding employees' personality traits can significantly boost performance at PT. Geo Dipa Energi (Persero) Soreang. Organizations should create an engaging work environment and consider personality traits in their recruitment and development processes to optimize employee performance. Based on the research conducted on the employees of PT. Geo Dipa Energi (Persero) Soreang to determine the influence of Employee Engagement and Big Five Personality on Employee Performance, the following conclusions can be drawn:

1. Employee Engagement has a positive and significant effect on the performance of employees at PT. Geo Dipa Energi (Persero) Soreang.
2. Big Five Personality traits have a positive and significant effect on the performance of employees at PT. Geo Dipa Energi (Persero) Soreang.
3. Both Employee Engagement and Big Five Personality traits collectively have a positive and significant effect on the performance of employees at PT. Geo Dipa Energi (Persero) Soreang.

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