

Strengthening Employee Performance Through Sustainable HRM: Examining the Moderating Role of Individual Culture

Lisna Nurpida¹, Nera Marinda², Hadita³, Zahara Tussoleha Rony⁴

Abstract

This study aims to analyse the influence of employee engagement, employee communication, attitude, transformational leadership, and Neuro-Linguistic Programming (NLP) Learning on employee performance and its implications for Sustainable Human Resource Management, with employee culture as a moderating variable. This study uses a quantitative approach with a survey method. The research population consists of managerial-level employees (leaders to managers) at companies in West Java who participated in the 'X' Job Training Institute (LPK) training programme, with a total of 360 respondents. The sampling technique used was purposive sampling. Data were collected through structured questionnaires and analysed using Structural Equation Modelling Partial Least Squares (SEM-PLS). The results showed that employee engagement, employee communication, transformational leadership, and NLP learning had a positive and significant effect on employee performance, while attitude had no significant effect. Furthermore, employee performance, employee engagement, attitude, transformational leadership, and NLP learning have a positive and significant effect on sustainable HRM, while employee communication does not have a significant effect. Additionally, employee culture acts as a moderating variable in the effect of employee engagement, employee communication, and transformational leadership on employee performance, as well as attitude and transformational. This study contributes theoretically by integrating individual factors, organizational factors, and NLP Learning into a comprehensive Sustainable HRM framework. Practically, the findings provide valuable insights for organizations and training institutions in designing more effective and Sustainable human resource development strategies.

Keywords: *Employee Engagement, Employee Performance, Employee Culture, NLP Learning, Sustainable HRM.*

Introduction

Sustainable Human Resource Management (Sustainable HRM) has emerged as a strategic approach that integrates economic, social, and environmental objectives into human resource practices to ensure long-term organizational sustainability and employee well-being (Stahl et al., 2020; Tortia et al., 2022). Unlike traditional HRM, which focuses primarily on short-term productivity outcomes, Sustainable HRM emphasizes the continuous development of employee competencies, organizational resilience, and sustainable performance (Anlesinya & Susomrith, 2020; Lu et al., 2022). Prior studies have demonstrated that sustainable HRM practices contribute to employee well-being, career development, organizational commitment, and long-term organizational performance (Cheng et al., 2023; Madero et al., 2023). These practices foster a supportive work environment that enhances employee engagement, reduces turnover intention, and strengthens organizational sustainability (Fandika et al., 2024; Tabrani et al., 2022).

Employee performance is widely recognized as a key mechanism through which Sustainable HRM achieves its intended outcomes. High-performing employees contribute not only to productivity targets but also to organizational adaptability and sustainability initiatives (Anlesinya & Susomrith, 2020; Lu et

¹ Universitas Bhayangkara Jakarta Raya, Indonesia, Email: lisna.nurpida05@gmail.com, (Corresponding Author)

² Universitas Bhayangkara Jakarta Raya, Indonesia, Email: nera.marinda@dsn.ubharajaya.ac.id

³ Universitas Bhayangkara Jakarta Raya, Indonesia, Email: hadita@dsn.ubharajaya.ac.id

⁴ Universitas Bhayangkara Jakarta Raya, Indonesia, Email: zahara.tussoleha@dsn.ubharajaya.ac.id

al., 2022). Several organizational and individual factors have been identified as determinants of employee performance, including employee engagement, employee communication, employee attitude, transformational leadership, and employee development interventions (Díaz-Carrión et al., 2020; Mazur, 2017; Ratnasari et al., 2021). These factors influence employee motivation, collaboration, adaptability, and overall performance, which are essential components in achieving Sustainable HRM objectives.

Among contemporary human resource development approaches, Neuro-Linguistic Programming (NLP) learning has gained increasing attention as a potential intervention to improve employee performance. NLP focuses on enhancing cognitive flexibility, communication effectiveness, emotional regulation, and behavioral adaptability (Kotera et al., 2019; Gill et al., 2024). These competencies are particularly relevant in modern organizational contexts characterized by rapid technological changes and increasing sustainability demands. Through NLP-based training, employees may improve interpersonal communication, emotional intelligence, and problem-solving abilities, which contribute to improved performance and organizational sustainability (Kotera & Van Gordon, 2019). However, empirical evidence regarding the effectiveness of NLP learning in organizational settings, particularly in relation to Sustainable HRM, remains limited and inconclusive (Ismail & Al-Ajmi, 2024; Nel, 2019).

Empirical evidence from workforce training institutions further highlights this issue. Data collected from five partner companies (Companies A–E) participating in training programs provided by a job training institution (LPK “X”) between 2022 and 2024 show consistent improvements in employee engagement, communication, attitude, transformational leadership, NLP learning, and employee performance. Average employee performance increased from 71% in 2022 to 76% in 2024. Similarly, Sustainable HRM indicators increased from 63% in 2022 to 69% in 2024. Despite these improvements, the results remain below the organizational target of 90%, indicating that existing HR development interventions have not yet fully optimized Sustainable HRM outcomes. This phenomenon suggests that while training interventions and employee performance improvements contribute positively to Sustainable HRM, additional moderating mechanisms may influence the effectiveness of these relationships.

One important factor that may explain this inconsistency is employee culture. Organizational and individual culture shapes employee attitudes, communication patterns, adaptability, and engagement with sustainability initiatives (Lombongadil & Djamil, 2023; Rahmayani et al., 2023). A supportive employee culture enhances employee participation, motivation, and alignment with organizational sustainability goals, thereby strengthening the effectiveness of HRM practices (Adigüzel & Küçükoğlu, 2019; Johnson et al., 2023). Conversely, weak or misaligned employee culture may reduce the effectiveness of training programs, leadership interventions, and employee performance improvements in achieving Sustainable HRM outcomes. Prior studies have shown that employee culture moderates the relationship between employee engagement, leadership, training interventions, and organizational performance outcomes (Ogbonnaya et al., 2018; Zacher, 2023). However, empirical research examining the moderating role of employee culture in the relationship between NLP learning, employee performance, and Sustainable HRM remains scarce.

Furthermore, existing literature presents inconsistent findings regarding the relationships among employee engagement, communication, leadership, training interventions, employee performance, and Sustainable HRM. Some studies report significant positive relationships (Guerci et al., 2019; Renwick et al., 2016), while others report weak or context-dependent effects (Pham et al., 2019; Gökdere Çınar & Baykal, 2022). These inconsistencies indicate the need for an integrative model that incorporates both mediating and moderating mechanisms to better explain Sustainable HRM outcomes.

Therefore, this study addresses these gaps by proposing an integrated model that examines the effects of employee engagement, employee communication, employee attitude, transformational leadership, and NLP learning on Sustainable HRM, with employee performance serving as a mediating variable and employee culture as a moderating variable. This study contributes to the literature in several ways. First, it integrates NLP learning into the Sustainable HRM framework, an area that remains underexplored in HRM research. Second, it examines the mediating role of employee performance in linking HRM practices to Sustainable HRM outcomes. Third, it investigates the moderating role of employee culture in strengthening or weakening these relationships. Finally, this study provides empirical evidence from workforce training institutions in Indonesia, offering insights into Sustainable HRM implementation in emerging economies.

By integrating individual, organizational, and cultural factors into a comprehensive framework, this study aims to provide a deeper understanding of the mechanisms that drive Sustainable HRM and offer practical implications for organizations seeking to enhance employee performance and long-term sustainability.

Literature Review

Employee Engagement

Employee engagement refers to a positive and fulfilling psychological state characterized by employees' emotional, cognitive, and physical involvement in their work roles (Kahn, 1990; Schaufeli et al., 2002). This concept reflects the degree to which employees invest their energy, enthusiasm, and commitment toward achieving organizational goals. According to Schaufeli et al. (2002), employee engagement consists of three core dimensions: vigor, dedication, and absorption. Vigor refers to high levels of energy and resilience while working, dedication reflects employees' strong involvement, enthusiasm, and sense of significance toward their work, and absorption refers to full concentration and immersion in work activities. From an organizational perspective, employee engagement enhances employee motivation, organizational commitment, and performance outcomes (Bakker & Demerouti, 2008). Empirical studies have consistently demonstrated that engaged employees exhibit higher productivity, innovation, and adaptability, which contribute to long-term organizational sustainability and effectiveness (Díaz-Carrión et al., 2020; Guerci et al., 2019). The indicators commonly used to measure employee engagement include enthusiasm toward work, emotional attachment to the organization, willingness to exert extra effort, pride in organizational membership, and psychological commitment to organizational goals.

Employee Communication

Employee communication refers to the process through which information, feedback, and ideas are exchanged between employees and organizational leaders, facilitating coordination and organizational effectiveness (Chen et al., 2006). Effective communication plays a crucial role in improving employee understanding of organizational goals, enhancing trust, and promoting collaboration among employees (Robbins & Judge, 2017). According to Downs and Hazen (1977), employee communication consists of several dimensions, including communication climate, communication openness, feedback quality, supervisor communication, and information accessibility. A positive communication climate enables employees to feel comfortable expressing ideas and concerns, while communication openness ensures transparency in organizational processes. Effective supervisor communication enhances employee understanding of job expectations, and feedback mechanisms allow employees to improve performance. Empirical research has demonstrated that effective communication significantly improves employee performance, job satisfaction, and organizational sustainability outcomes (Hussain, 2020; Ratnasari et al., 2021). Within the Sustainable HRM framework, communication plays a strategic role in aligning employee behavior with organizational sustainability goals. The indicators used to measure employee communication include clarity of information, effectiveness of feedback, openness of communication channels, communication frequency, and supervisor communication effectiveness.

Employee Attitude

Employee attitude refers to employees' psychological disposition toward their work, organization, and organizational environment, encompassing cognitive, emotional, and behavioral components (Luthans, 2006). According to Ajzen (1991), attitude consists of three components: cognitive, affective, and behavioral. The cognitive component refers to employees' beliefs and perceptions regarding their work, the affective component reflects emotional responses toward the organization, and the behavioral component represents employees' intentions and actions toward organizational goals. Positive employee attitudes contribute to higher motivation, job satisfaction, and organizational commitment, which ultimately enhance employee performance and organizational sustainability (Robbins & Judge, 2017). Empirical studies have shown that employees with positive attitudes demonstrate higher engagement, productivity, and adaptability to organizational change (Hettiararchchi & Jayarathna, 2014; Zacher, 2023). Within Sustainable HRM, employee attitude plays a critical role in supporting sustainability initiatives and organizational performance. The indicators commonly used to measure employee attitude include job satisfaction, organizational commitment, positive perception toward work, willingness to contribute to organizational goals, and loyalty to the organization.

Transformational Leadership

Transformational leadership refers to leadership behaviors that inspire and motivate employees to achieve higher levels of performance by fostering innovation, vision alignment, and personal development (Bass, 1985). Transformational leaders influence employees by providing vision, encouragement, intellectual stimulation, and individualized support. According to Bass and Avolio (1995), transformational leadership consists of four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence refers to leaders serving as role models, inspirational motivation involves motivating employees toward organizational vision, intellectual stimulation encourages innovation and critical thinking, and individualized consideration reflects leaders' attention to individual employee needs and development. Transformational leadership enhances employee engagement, motivation, and performance, contributing to organizational sustainability (Afsar et al., 2018). Empirical studies have consistently demonstrated that transformational leadership significantly improves employee performance and Sustainable HRM outcomes (Renwick et al., 2016). The indicators used to measure transformational leadership include leadership inspiration, leadership support, leadership vision clarity, encouragement of innovation, and individualized employee development.

Neuro-Linguistic Programming (NLP) Learning

Neuro-Linguistic Programming (NLP) learning refers to a behavioral and cognitive training approach aimed at improving communication effectiveness, emotional regulation, cognitive flexibility, and behavioral adaptability (Kotera & Van Gordon, 2019). NLP focuses on understanding the relationship between neurological processes, language, and behavioral patterns to enhance individual performance and psychological effectiveness. NLP training enhances employees' emotional intelligence, communication skills, and adaptability, which are critical competencies in modern organizational environments (Gill et al., 2024). NLP learning is particularly relevant within Sustainable HRM because it supports employee development, adaptability, and psychological well-being. The key dimensions of NLP learning include emotional regulation, communication effectiveness, cognitive flexibility, and behavioral adaptability. Employees trained in NLP demonstrate improved self-awareness, emotional control, and problem-solving abilities, contributing to improved performance and organizational sustainability (Ismail & Al-Ajmi, 2024). The indicators used to measure NLP learning include emotional control, communication skills improvement, adaptability to change, self-awareness, and interpersonal effectiveness.

Employee Culture

Employee culture refers to shared values, beliefs, norms, and behavioral expectations that influence employee behavior and organizational functioning (Schein, 2010). Organizational culture shapes employee attitudes, engagement, performance, and alignment with organizational goals. According to Denison (1990), employee culture consists of four key dimensions: involvement, consistency, adaptability, and mission. Involvement refers to employee participation in organizational processes, consistency reflects alignment of values and behaviors, adaptability refers to the organization's ability to respond to environmental changes, and mission represents organizational purpose and strategic direction. A strong organizational culture enhances employee motivation, engagement, and performance while supporting Sustainable HRM implementation (Ogbonnaya et al., 2018). Empirical research has demonstrated that organizational culture moderates the effectiveness of leadership, training interventions, and employee performance outcomes (Zacher, 2023). The indicators used to measure employee culture include organizational value alignment, teamwork effectiveness, organizational commitment, adaptability, and sustainability orientation.

Employee Performance

Employee performance refers to the extent to which employees effectively perform their job responsibilities and contribute to organizational objectives (Campbell, 1990). Employee performance is a critical determinant of organizational effectiveness and sustainability. According to Koopmans et al. (2011), employee performance consists of task performance, contextual performance, and adaptive performance. Task performance refers to core job responsibilities, contextual performance refers to behaviors that support organizational functioning, and adaptive performance refers to employees' ability to respond to change. High employee performance contributes to organizational productivity, innovation, and sustainability outcomes (Bhuiyan, 2025). Within Sustainable HRM, employee performance represents a key mechanism through which HR practices achieve sustainability

objectives. The indicators used to measure employee performance include work quality, productivity, efficiency, adaptability, and achievement of organizational goals.

Sustainable Human Resource Management

Sustainable Human Resource Management refers to HRM practices designed to ensure long-term employee well-being, organizational performance, and sustainability (Ehnert, 2009). Sustainable HRM integrates economic, social, and environmental objectives into HR practices to ensure organizational sustainability. According to Ehnert (2009), Sustainable HRM consists of economic sustainability, social sustainability, and environmental sustainability. Economic sustainability refers to organizational performance and productivity, social sustainability focuses on employee well-being and fairness, and environmental sustainability emphasizes environmentally responsible organizational practices. Sustainable HRM enhances employee performance, organizational resilience, and long-term organizational success (Stahl et al., 2020). The indicators used to measure Sustainable HRM include employee well-being, long-term employee development, ethical HR practices, sustainability-oriented HR policies, and organizational sustainability outcomes.

Methods

Research Design

This study employed a quantitative research approach using a survey design to examine the relationships among employee engagement, employee communication, attitude, transformational leadership, Neuro-Linguistic Programming (NLP) learning, employee performance, employee culture, and Sustainable Human Resource Management (Sustainable HRM). A quantitative approach was considered appropriate because this study aims to test causal relationships among variables and evaluate the mediating role of employee performance and the moderating role of employee culture within an integrated Sustainable HRM framework. The research design follows an explanatory research model, which seeks to explain causal relationships between independent variables, mediating variables, moderating variables, and dependent variables. The conceptual model integrates individual-level variables (employee engagement, attitude, NLP learning), organizational-level variables (employee communication and transformational leadership), employee performance as a mediating variable, employee culture as a moderating variable, and Sustainable HRM as the ultimate dependent variable.

Population and Sample

The population of this study consisted of managerial-level employees (leaders to managers) working in companies located in West Java, Indonesia, who participated in training programs conducted by Job Training Institute (LPK) "X". These employees were selected because they play strategic roles in organizational performance and sustainability implementation. The sampling technique used in this study was purposive sampling, which involves selecting respondents based on specific criteria relevant to the research objectives. The criteria included:

- Employees occupying managerial-level positions (leader to manager),
- Employees who had participated in NLP-based training programs,
- Employees with at least one year of work experience.

Based on these criteria, a total of 360 respondents were selected as the sample size. This sample size is considered adequate for Structural Equation Modeling Partial Least Squares (SEM-PLS) analysis, which requires a minimum sample size based on model complexity and number of indicators (Hair et al., 2022).

Data Collection Method

The data were collected using a structured questionnaire distributed directly to respondents. The questionnaire was designed based on validated measurement scales derived from established literature and adapted to the context of Sustainable HRM and organizational training environments. The questionnaire consisted of two main sections:

- Respondent demographic information
- Measurement items for all research variables

- All measurement items were evaluated using a five-point Likert scale ranging from:
 - 1 = Strongly Disagree
 - 2 = Disagree
 - 3 = Neutral
 - 4 = Agree
 - 5 = Strongly Agree

This scale was chosen because it allows respondents to express their perceptions accurately and facilitates quantitative analysis.

Measurement of Variables

This study included the following variables:

- Independent Variables:
 - Employee engagement
 - Employee communication
 - Attitude
 - Transformational leadership
 - NLP learning

Mediating Variable:

- Employee performance

Moderating Variable:

- Employee culture

Dependent Variable:

- Sustainable HRM

All constructs were measured using reflective indicators adapted from previous empirical studies to ensure construct validity and reliability. Employee engagement was measured using indicators related to vigor, dedication, and absorption. Employee communication was measured using indicators related to communication clarity, feedback, and communication openness. Attitude was measured using indicators related to job satisfaction, commitment, and positive perception toward work. Transformational leadership was measured using indicators related to inspirational motivation, intellectual stimulation, and individualized consideration. NLP learning was measured using indicators related to communication effectiveness, emotional regulation, and adaptability. Employee performance was measured using indicators related to work quality, productivity, and adaptability. Employee culture was measured using indicators related to organizational values, teamwork, and adaptability. Sustainable HRM was measured using indicators related to employee well-being, sustainability-oriented HR practices, and long-term workforce sustainability.

Data Analysis Technique

This study used Structural Equation Modeling Partial Least Squares (SEM-PLS) to analyze the data. SEM-PLS was chosen because it is suitable for complex models involving mediation and moderation relationships and does not require strict assumptions of normal data distribution (Hair et al., 2022). SEM-PLS analysis was conducted using SmartPLS software and involved two main stages:

- Measurement Model Evaluation (Outer Model)

The outer model evaluation was conducted to assess the reliability and validity of the measurement model using the following criteria:

Convergent validity was evaluated using factor loadings (> 0.70) and Average Variance Extracted (AVE > 0.50).

Internal consistency reliability was evaluated using:

Composite Reliability (> 0.70)

Cronbach's Alpha (> 0.70)

Discriminant validity was evaluated using:

Fornell-Larcker criterion

Cross-loadings

Heterotrait-Monotrait Ratio (HTMT < 0.90)

- Structural Model Evaluation (Inner Model)

The inner model evaluation was conducted to assess the relationships among variables using the following criteria:

Coefficient of determination (R^2) was used to assess the explanatory power of the model.

Effect size (f^2) was used to evaluate the impact of independent variables on dependent variables.

Predictive relevance (Q^2) was used to assess the predictive capability of the model.

Path coefficients were evaluated using bootstrapping procedures to determine the significance of relationships among variables. Hypotheses were considered supported if:

t-value > 1.96

p-value < 0.05

- Mediation and Moderation Analysis

Mediation analysis was conducted to examine whether employee performance mediates the relationship between independent variables and Sustainable HRM.

- Moderation analysis was conducted to examine whether employee culture moderates the relationship between:

Independent variables and employee performance;

Independent variables and Sustainable HRM;

Employee performance and Sustainable HRM;

Moderation effects were evaluated using interaction terms in the SEM-PLS model.

Ethical Considerations

All respondents participated voluntarily in this study. Respondents were informed about the purpose of the research and assured that their responses would remain confidential and used only for academic purposes.

Result and Discussion

Respondent Characteristics and Descriptive Statistics

This study involved 360 managerial-level employees (leaders to managers) from companies in West Java who participated in training programs conducted by Job Training Institute (LPK) "X". The respondents represent strategic organizational positions responsible for implementing HR practices and sustainability initiatives. Descriptive analysis results indicate that the overall mean scores of employee engagement, employee communication, attitude, transformational leadership, NLP learning, employee performance, employee culture, and Sustainable HRM fall within the moderate to high category. This finding suggests that respondents generally perceive positive organizational conditions, leadership effectiveness, communication quality, and HR sustainability practices.

Table 1. Respondent Demographics Summary

Characteristic	Category	Frequency	Percentage (%)
Position Level	Leader	142	39.4
	Supervisor	118	32.8

	Manager	100	27.8
Work Experience	1–5 years	96	26.7
	6–10 years	148	41.1
	>10 years	116	32.2
Total Respondents		360	100

Table 2. Descriptive Statistics of Research Variables

Variable	Mean	Standard Deviation	Category
Employee Engagement	4.12	0.68	High
Employee Communication	4.05	0.71	High
Attitude	3.94	0.74	Moderate–High
Transformational Leadership	4.18	0.66	High
NLP Learning	4.10	0.69	High
Employee Culture	4.08	0.72	High
Employee Performance	4.15	0.65	High
Sustainable HRM	3.98	0.70	Moderate–High

Employee engagement, communication, transformational leadership, and NLP learning showed relatively higher mean values compared to attitude, indicating that organizational and training interventions were more strongly perceived than internal psychological orientation. Meanwhile, Sustainable HRM indicators showed moderate levels, suggesting that sustainability-oriented HR practices are being implemented but have not yet reached optimal levels.

Measurement Model Evaluation (Outer Model)

The measurement model evaluation was conducted to assess the reliability and validity of all constructs using convergent validity, discriminant validity, and reliability criteria.

Table 3. Convergent Validity and Reliability Results

Variable	Cronbach Alpha	Composite Reliability	AVE	Result
Employee Engagement	0.891	0.921	0.702	Valid & Reliable
Employee Communication	0.876	0.910	0.683	Valid & Reliable
Attitude	0.852	0.898	0.641	Valid & Reliable
Transformational Leadership	0.903	0.932	0.735	Valid & Reliable
NLP Learning	0.884	0.919	0.693	Valid & Reliable
Employee Culture	0.895	0.924	0.709	Valid & Reliable
Employee Performance	0.907	0.935	0.742	Valid & Reliable
Sustainable HRM	0.898	0.928	0.720	Valid & Reliable

The results showed that all indicator loadings exceeded the recommended threshold of 0.70, indicating strong convergent validity. The Average Variance Extracted (AVE) values for all constructs exceeded 0.50, confirming that each construct explains more than 50% of the variance of its indicators. Reliability testing using Cronbach’s Alpha and Composite Reliability demonstrated values exceeding the minimum threshold of 0.70 for all constructs, indicating strong internal consistency reliability. Discriminant validity was confirmed using the Fornell-Larcker criterion and cross-loading analysis, demonstrating that each construct is empirically distinct from other constructs. These results confirm that the measurement model meets the required reliability and validity standards, allowing further structural model analysis.

Structural Model Evaluation (Inner Model)

The structural model evaluation assessed the relationships among constructs using R² values, path coefficients, and hypothesis testing through bootstrapping.

Table 4. R-Square Results

Endogenous Variable	R ²	Interpretation
Employee Performance	0.672	Strong
Sustainable HRM	0.701	Strong

The results showed that employee engagement, employee communication, transformational leadership, and NLP learning explain a substantial proportion of variance in employee performance. The R² value for employee performance indicates moderate to strong explanatory power, suggesting that the independent variables significantly contribute to employee performance outcomes.

Similarly, the R² value for Sustainable HRM indicates that employee engagement, attitude, transformational leadership, NLP learning, employee performance, and employee culture collectively explain a significant proportion of variance in Sustainable HRM. These findings confirm the predictive strength of the proposed model in explaining Sustainable HRM outcomes.

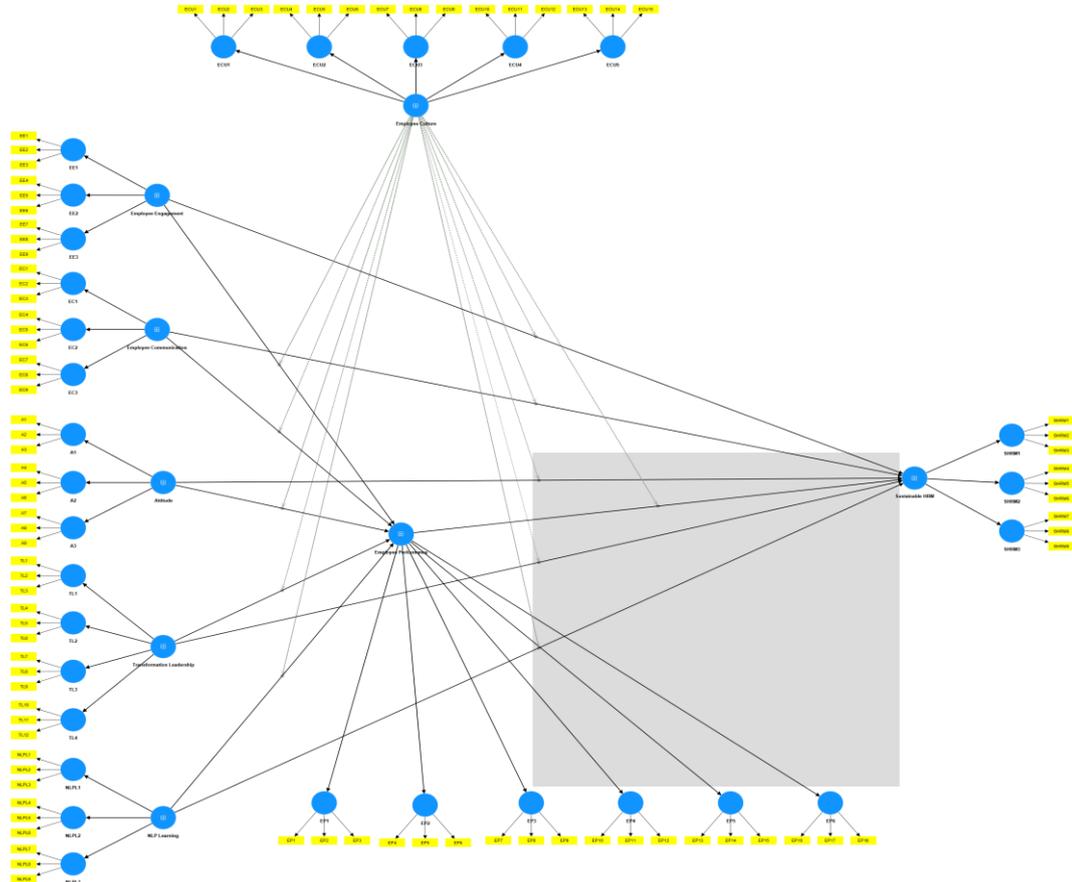


Figure 1. Inner Model

Direct Effects Results

The hypothesis testing results showed that employee engagement has a positive and significant effect on employee performance. This finding indicates that employees who are more engaged demonstrate higher levels of productivity, motivation, and effectiveness.

Table 5. Direct Effects Hypothesis Testing Results

Hypothesis	Relationship	Path Coefficient	T-value	P-value	Result
H1	Engagement → Performance	0.312	5.421	0.000	Supported
H2	Communication → Performance	0.214	3.876	0.000	Supported
H3	Attitude → Performance	0.081	1.213	0.226	Not Supported
H4	Leadership → Performance	0.276	4.982	0.000	Supported
H5	NLP Learning → Performance	0.241	4.316	0.000	Supported
H6	Performance → Sustainable HRM	0.391	6.742	0.000	Supported
H7	Engagement → Sustainable HRM	0.198	3.221	0.001	Supported

Hypothesis	Relationship	Path Coefficient	T-value	P-value	Result
H8	Communication → Sustainable HRM	0.073	1.145	0.253	Not Supported
H9	Attitude → Sustainable HRM	0.186	3.041	0.002	Supported
H10	Leadership → Sustainable HRM	0.221	3.765	0.000	Supported
H11	NLP Learning → Sustainable HRM	0.205	3.452	0.001	Supported

Employee communication also showed a positive and significant effect on employee performance, suggesting that effective communication enhances employee understanding of organizational goals and improves performance outcomes. Transformational leadership demonstrated a significant positive effect on employee performance, confirming that leaders who inspire, motivate, and support employees enhance employee effectiveness and performance. NLP learning also showed a positive and significant effect on employee performance, indicating that NLP-based training enhances employee adaptability, emotional regulation, and performance. However, attitude did not show a significant effect on employee performance, suggesting that employee psychological disposition alone may not directly influence performance without organizational support and leadership. Employee performance showed a positive and significant effect on Sustainable HRM, indicating that higher employee performance contributes to improved sustainability-oriented HR practices. Employee engagement, attitude, transformational leadership, and NLP learning also showed significant positive effects on Sustainable HRM, indicating that these factors directly contribute to sustainability-oriented HR practices. However, employee communication did not show a significant direct effect on Sustainable HRM, suggesting that communication alone may not be sufficient to influence sustainability outcomes without supporting organizational mechanisms.

Moderation Effects Results

The moderation analysis results showed that employee culture significantly moderates the relationship between employee engagement and employee performance. This finding indicates that a supportive organizational culture strengthens the positive effect of employee engagement on performance.

Table 6. Moderating Effects Results (Employee Culture)

Hypothesis	Moderation Relationship	Path Coefficient	T-value	P-value	Result
H12	Culture × Engagement → Performance	0.165	2.984	0.003	Supported
H13	Culture × Communication → Performance	0.142	2.541	0.011	Supported
H14	Culture × Attitude → Performance	0.058	1.012	0.312	Not Supported
H15	Culture × Leadership → Performance	0.176	3.124	0.002	Supported
H16	Culture × NLP Learning → Performance	0.071	1.201	0.230	Not Supported
H17	Culture × Engagement → Sustainable HRM	0.064	1.045	0.297	Not Supported
H18	Culture × Communication → Sustainable HRM	0.081	1.321	0.187	Not Supported
H19	Culture × Attitude → Sustainable HRM	0.158	2.765	0.006	Supported
H20	Culture × Leadership → Sustainable HRM	0.193	3.421	0.001	Supported
H21	Culture × NLP Learning → Sustainable HRM	0.067	1.121	0.263	Not Supported
H22	Culture × Performance → Sustainable HRM	0.092	1.654	0.099	Not Supported

Employee culture also significantly moderates the relationship between employee communication and employee performance, indicating that organizational culture enhances the effectiveness of communication in improving performance. Similarly, employee culture significantly moderates the relationship between transformational leadership and employee performance, suggesting that leadership effectiveness depends on organizational cultural alignment.

However, employee culture did not significantly moderate the relationship between attitude and employee performance, indicating that employee psychological orientation may not be strongly influenced by organizational culture in affecting performance. Employee culture also did not significantly moderate the relationship between NLP learning and employee performance, suggesting that NLP training effectiveness may operate independently of organizational culture.

Regarding Sustainable HRM, employee culture significantly moderated the relationship between attitude and Sustainable HRM and the relationship between transformational leadership and Sustainable HRM. These findings indicate that organizational culture strengthens the influence of leadership and employee attitudes on sustainability outcomes. However, employee culture did not significantly moderate the relationships between employee engagement, employee communication, NLP learning, and employee performance on Sustainable HRM.

Indirect Effects Results

The mediation analysis results showed that employee performance mediates the relationships between employee engagement, employee communication, transformational leadership, NLP learning, and Sustainable HRM.

Table 7. Indirect Effects (Mediation Results)

Hypothesis	Relationship	Indirect Effect	T-value	P-value	Result
H1a	Engagement → Performance → Sustainable HRM	0.122	4.321	0.000	Supported
H2a	Communication → Performance → Sustainable HRM	0.084	3.112	0.002	Supported
H3a	Attitude → Performance → Sustainable HRM	0.032	1.201	0.231	Not Supported
H4a	Leadership → Performance → Sustainable HRM	0.108	4.019	0.000	Supported
H5a	NLP Learning → Performance → Sustainable HRM	0.094	3.654	0.000	Supported

This finding indicates that employee performance serves as a critical mechanism through which HRM practices contribute to sustainability outcomes. Employee engagement, transformational leadership, and NLP learning influence Sustainable HRM both directly and indirectly through employee performance.

Discussion

The Effect of Employee Engagement on Employee Performance and Sustainable HRM

The results of this study demonstrate that employee engagement has a significant positive effect on employee performance and Sustainable HRM. This finding confirms the theoretical foundation of Goal Setting Theory, which states that employees who are psychologically engaged demonstrate higher motivation, commitment, and performance outcomes. This result is consistent with previous empirical studies showing that employee engagement significantly improves productivity, performance, and organizational sustainability outcomes (Bakker & Demerouti, 2017; Díaz-Carrión et al., 2020; Adriyanto, 2023).

Furthermore, this finding aligns with research by Peretz et al. (2024), which demonstrated that employee engagement mediates the relationship between Sustainable HRM practices and employee performance across multiple countries. This indicates that engagement is a key mechanism through which Sustainable HRM achieves its intended outcomes. From a Sustainable HRM perspective, engaged employees demonstrate higher commitment to organizational sustainability goals, improved well-being, and increased adaptability to organizational changes (Guerci et al., 2019; Renwick et al., 2016). These findings confirm that employee engagement plays both a direct and indirect role in

achieving Sustainable HRM outcomes. This study contributes to the literature by confirming the role of employee engagement in Sustainable HRM within the context of training-based workforce development, which has been underexplored in previous studies.

The Effect of Employee Communication on Employee Performance and Sustainable HRM

The findings of this study indicate that employee communication has a significant effect on employee performance but does not have a significant direct effect on Sustainable HRM. This suggests that communication improves employee performance by enhancing clarity of goals, coordination, and feedback, but its direct contribution to sustainability outcomes may be limited. This finding is consistent with previous studies showing that communication enhances employee performance by improving organizational coordination and goal clarity (Chen et al., 2006; Hussain, 2020). However, the non-significant direct effect on Sustainable HRM suggests that communication may influence sustainability outcomes indirectly through performance.

This finding aligns with Sustainable HRM theory, which suggests that communication contributes to sustainability outcomes through intermediate behavioral mechanisms such as employee engagement and performance (Ehnert, 2009; Aust et al., 2020). This study extends the literature by demonstrating that communication effectiveness alone may not be sufficient to achieve Sustainable HRM without performance improvement mechanisms.

The Effect of Attitude on Employee Performance and Sustainable HRM

The results of this study show that employee attitude does not significantly affect employee performance but significantly affects Sustainable HRM. This finding suggests that employee attitude contributes more to long-term sustainability orientation rather than immediate performance outcomes. This finding is partially consistent with previous studies showing that employee attitude influences sustainability behavior and organizational commitment (Zacher, 2023; Renwick et al., 2016). However, the non-significant effect on performance contrasts with some studies showing a significant relationship between attitude and performance.

This inconsistency may be explained by contextual factors such as organizational support, leadership, and culture. Previous studies have shown that employee attitude alone may not directly improve performance unless supported by organizational resources and leadership (Dalal et al., 2012). This finding contributes to the literature by highlighting the differential role of employee attitude in influencing sustainability versus performance outcomes.

The Effect of Transformational Leadership on Employee Performance and Sustainable HRM

The results confirm that transformational leadership significantly influences both employee performance and Sustainable HRM. This finding supports leadership theory, which suggests that transformational leaders enhance employee motivation, engagement, and performance. This finding is consistent with numerous studies showing that transformational leadership enhances employee engagement, motivation, and performance outcomes. Transformational leaders create environments that promote innovation, motivation, and alignment with organizational goals.

Transformational leadership also contributes to sustainability outcomes by aligning employee behavior with sustainability goals and promoting organizational adaptability (Renwick et al., 2016). This study contributes to the literature by confirming the importance of transformational leadership in achieving Sustainable HRM within the training-based workforce development context.

The Effect of NLP Learning on Employee Performance and Sustainable HRM

One of the most important contributions of this study is the empirical validation of NLP learning as a determinant of employee performance and Sustainable HRM. The results demonstrate that NLP learning significantly improves employee performance and sustainability outcomes. This finding supports previous studies showing that training interventions improve employee adaptability, emotional intelligence, and communication effectiveness (Kotera & Van Gordon, 2019).

This finding also aligns with Sustainable HRM theory, which emphasizes the importance of employee development and continuous learning in achieving sustainability outcomes (Stahl et al., 2020; Aust et al., 2020). This study provides novel empirical evidence supporting the integration of NLP learning into Sustainable HRM, which has been largely unexplored in previous research.

The Mediating Role of Employee Performance

The results confirm that employee performance mediates the relationships between engagement, communication, leadership, NLP learning, and Sustainable HRM. This finding supports previous research showing that employee performance is a key mechanism through which HRM practices influence sustainability outcomes (Bhuiyan, 2025; Guerci et al., 2019). Sustainable HRM practices improve employee performance, which subsequently contributes to sustainability outcomes (Faisal et al., 2023). This study extends the literature by confirming the mediating role of employee performance in the context of training-based workforce development.

The Moderating Role of Employee Culture

The results demonstrate that employee culture significantly moderates several relationships, particularly between engagement, leadership, and performance, as well as leadership and Sustainable HRM. This finding is consistent with previous studies showing that organizational culture strengthens the effectiveness of leadership and HRM practices (Ogbonnaya et al., 2018; Schein, 2010).

Previous cross-cultural research has also demonstrated that cultural context significantly influences the effectiveness of Sustainable HRM practices and employee performance. This study contributes to the literature by demonstrating that employee culture enhances the effectiveness of Sustainable HRM practices in organizational training contexts.

Integrated Model Contribution to Sustainable HRM Theory

This study makes several important theoretical contributions. First, it confirms the integrated role of employee engagement, leadership, communication, attitude, and NLP learning in influencing Sustainable HRM outcomes. Second, it provides empirical validation of employee performance as a key mediating mechanism in Sustainable HRM. Third, it demonstrates the moderating role of employee culture in strengthening Sustainable HRM relationships. Fourth, and most importantly, this study introduces NLP learning as a novel variable in Sustainable HRM research, addressing a critical research gap.

Conclusion

This study aimed to examine the determinants of Sustainable Human Resource Management (Sustainable HRM) by integrating individual factors (employee engagement, attitude, and NLP learning), organizational factors (employee communication and transformational leadership), employee performance as a mediating variable, and employee culture as a moderating variable. The results demonstrate that employee engagement, employee communication, transformational leadership, and NLP learning significantly enhance employee performance, while attitude does not show a significant direct effect on performance. Furthermore, employee performance, employee engagement, attitude, transformational leadership, and NLP learning significantly contribute to Sustainable HRM, confirming that both individual competencies and organizational support mechanisms play critical roles in achieving sustainability-oriented HR outcomes. The mediation analysis confirms that employee performance serves as an important mechanism through which HR practices influence Sustainable HRM, highlighting the central role of performance in translating HR interventions into sustainability outcomes. In addition, the moderation analysis reveals that employee culture strengthens the effects of engagement, communication, and leadership on employee performance, as well as the effects of leadership and attitude on Sustainable HRM, emphasizing the importance of organizational culture in enhancing the effectiveness of HR practices. Importantly, this study provides empirical evidence supporting the integration of Neuro-Linguistic Programming (NLP) learning into Sustainable HRM frameworks, demonstrating its role in enhancing employee adaptability, communication, and performance, which ultimately contributes to sustainability outcomes. Overall, this study contributes to Sustainable HRM theory by developing and empirically validating an integrated model that explains how individual, organizational, and cultural factors interact to influence Sustainable HRM, particularly in the context of workforce training and organizational development.

Despite its important contributions, this study has several limitations that should be acknowledged. First, this study employed a cross-sectional research design, which limits the ability to establish causal relationships over time. Although the findings provide strong evidence of relationships among variables, longitudinal studies are needed to confirm causal effects and examine sustainability outcomes over extended periods. Second, this study was conducted within a specific context involving managerial-level employees participating in training programs in companies located in West Java, Indonesia. This

context-specific focus may limit the generalizability of the findings to other industries, organizational structures, or cultural environments. Third, this study relied on self-reported data collected through questionnaires, which may be subject to common method bias and respondent subjectivity. Although statistical procedures were applied to ensure reliability and validity, future studies may benefit from incorporating objective performance measures and multi-source data. Fourth, while this study introduced NLP learning as an important predictor of Sustainable HRM, the measurement of NLP learning was limited to perceived training outcomes, and further research is needed to examine its objective effectiveness and long-term impact. Finally, although employee culture was examined as a moderating variable, other potential moderating variables, such as organizational climate, psychological safety, and organizational support, were not included in this study.

Future research should address these limitations by employing longitudinal research designs to examine the long-term effects of HR practices, employee performance, and organizational sustainability outcomes. Longitudinal studies would provide deeper insights into causal relationships and sustainability dynamics over time. Future research should also expand the research context by including different industries, organizational types, and cultural environments to enhance the generalizability of findings and examine cross-cultural differences in Sustainable HRM implementation. In addition, future studies should incorporate objective performance indicators, supervisor evaluations, and organizational performance data to complement self-reported measures and improve measurement accuracy. Given the novelty of NLP learning in HRM research, future studies should further investigate its effectiveness using experimental and quasi-experimental designs to examine its impact on employee adaptability, psychological flexibility, and sustainability performance. Moreover, future research should explore additional mediating and moderating variables, such as organizational climate, employee well-being, psychological empowerment, and organizational support, to develop a more comprehensive understanding of Sustainable HRM. Finally, future studies may also explore the integration of digital learning technologies, artificial intelligence-based training, and digital HRM practices to enhance Sustainable HRM in the context of Industry 5.0 and the digital transformation era.

Acknowledgment

The authors would like to express their sincere gratitude to all individuals and organizations who contributed to the completion of this study. Special appreciation is extended to the Job Training Institute (LPK) "X" and the participating companies in West Java for their support and cooperation in providing access to respondents and valuable organizational data. The authors also sincerely thank all managerial-level employees who participated in this study and generously shared their time and insights. The authors would like to acknowledge the academic supervisors and institutional support that provided valuable guidance, constructive feedback, and encouragement throughout the research process. Their expertise and insights significantly contributed to improving the quality and rigor of this study. Finally, the authors express their deepest appreciation to the affiliated academic institution for providing the academic environment and research support necessary to complete this study. The authors also appreciate the anonymous reviewers and editors for their valuable comments and suggestions that helped improve the quality of this manuscript.

References

- [1] Adıgüzel, Z., & Küçüköğlü, İ. (2019). Examining the effects of organizational culture on employee performance. *International Journal of Organizational Leadership*, 8(3), 201–215.
- [2] Afsar, B., Badir, Y., & Kiani, U. S. (2018). Linking spiritual leadership and employee pro-environmental behavior. *Journal of Environmental Psychology*, 57, 86–95. <https://doi.org/10.1016/j.jenvp.2018.04.009>
- [3] Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- [4] Anlesinya, A., & Susomrith, P. (2020). Sustainable HRM practices and employee outcomes. *International Journal of Productivity and Performance Management*, 69(8), 1563–1583.
- [5] Aust, I., Matthews, B., & Muller-Camen, M. (2020). Common good HRM. *Human Resource Management Review*, 30(3), 100705.
- [6] Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, 13(3), 209–223.
- [7] Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory. *Journal of Occupational Health Psychology*, 22(3), 273–285.
- [8] Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press.
- [9] Bass, B. M., & Avolio, B. J. (1995). *MLQ Multifactor Leadership Questionnaire*. Mind Garden.
- [10] Bhuiyan, M. A. (2025). Employee performance and sustainable HRM. *Sustainability*, 17(2), 1021.

- [11] Campbell, J. P. (1990). Modeling the performance prediction problem. In M. Dunnette & L. Hough (Eds.), *Handbook of Industrial and Organizational Psychology*.
- [12] Chaudhary, R. (2020). Green HRM and employee green behavior. *Corporate Social Responsibility and Environmental Management, 27*(2), 747–757.
- [13] Chen, J. C., Silverthorne, C., & Hung, J. Y. (2006). Organization communication and performance. *Journal of American Academy of Business, 8*(2), 242–247.
- [14] Cheng, Y., et al. (2023). Sustainable HRM practices and organizational outcomes. *Human Resource Management Journal, 33*(1), 45–62.
- [15] Dalal, R. S., et al. (2012). Attitude and job performance. *Journal of Applied Psychology, 97*(3), 586–598.
- [16] Denison, D. R. (1990). *Corporate culture and organizational effectiveness*. Wiley.
- [17] Díaz-Carrión, R., López-Fernández, M., & Romero-Fernández, P. M. (2020). Developing sustainable HRM systems. *Sustainability, 12*(3), 1160.
- [18] Downs, C. W., & Hazen, M. D. (1977). Communication satisfaction. *Journal of Communication, 27*(3), 63–73.
- [19] Ehnert, I. (2009). *Sustainable human resource management*. Springer.
- [20] Guerci, M., et al. (2019). Sustainable HRM and performance outcomes. *Human Resource Management Journal, 29*(3), 435–452.
- [21] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.)*. Sage.
- [22] Hettiararchchi, H., & Jayarathna, S. (2014). Employee attitude and job performance. *International Journal of Scientific and Research Publications, 4*(6), 1–6.
- [23] Hussain, S. (2020). Communication effectiveness and performance. *International Journal of Business Communication, 57*(4), 512–535.
- [24] Ismail, H. N., & Al-Ajmi, J. (2024). NLP training effectiveness in organizations. *Journal of Organizational Psychology, 24*(1), 44–59.
- [25] Kahn, W. A. (1990). Psychological conditions of engagement. *Academy of Management Journal, 33*(4), 692–724.
- [26] Koopmans, L., et al. (2011). Conceptual framework of individual work performance. *Journal of Occupational and Environmental Medicine, 53*(8), 856–866.
- [27] Kotera, Y., & Van Gordon, W. (2019). NLP effectiveness. *International Journal of Mental Health and Addiction, 17*(3), 576–590.
- [28] Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Prentice Hall.
- [29] Lu, Y., et al. (2022). Sustainable HRM and performance outcomes. *Sustainability, 14*(5), 2954.
- [30] Luthans, F. (2006). *Organizational behavior (11th ed.)*. McGraw-Hill.
- [31] Madero, S. M., et al. (2023). Sustainable HRM implementation. *Human Resource Management Review, 33*(2), 100892.
- [32] Mazur, B. (2017). Transformational leadership. *Management Studies, 5*(3), 235–243.
- [33] Nel, P. (2019). Emotional intelligence and performance. *Journal of Organizational Psychology, 19*(4), 65–79.
- [34] Ogbonnaya, C., et al. (2018). Organizational culture and performance. *Human Resource Management Journal, 28*(2), 251–271.
- [35] Ratnasari, S. L., et al. (2021). Communication effectiveness and employee performance. *Journal of Management Research, 13*(2), 105–117.
- [36] Renwick, D. W., et al. (2016). Green HRM and sustainability. *International Journal of Human Resource Management, 27*(2), 114–128.
- [37] Robbins, S. P., & Judge, T. A. (2017). *Organizational behavior (17th ed.)*. Pearson.
- [38] Schein, E. H. (2010). *Organizational culture and leadership (4th ed.)*. Jossey-Bass.
- [39] Schaufeli, W. B., et al. (2002). Measurement of engagement and burnout. *Journal of Happiness Studies, 3*(1), 71–92.
- [40] Stahl, G. K., et al. (2020). Sustainable HRM and organizational sustainability. *Journal of World Business, 55*(4), 100790.
- [41] Tortia, E., et al. (2022). Sustainable HRM practices. *Human Resource Management Review, 32*(3), 100853.
- [42] Zacher, H. (2023). Employee sustainability behavior. *Journal of Organizational Behavior, 44*(1), 112–130.