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The Influence of Green HRM Practices, Green Behavior, and Green Lifestyle on Employee Performance through Green Innovation and Shared Green Values in the Banking Industry of North Sumatra

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Abstract

The present study seeks to explore the impact of implementing green HRM practices, together with the adoption of pro-environmental behaviors and sustainable lifestyle choices, on the overall performance of employees, by considering green innovation and the integration of shared environmental values as mediating factors within the banking sector in North Sumatra. The research problem is based on the critical significance of incorporating sustainability-oriented principles into human resource management practices and organizational culture to promote performance improvement that focuses not only on productivity but also on environmental responsibility. This research uses a quantitative research design employing surveys as the primary means of data collection. The sample selection was carried out through the application of purposive sampling techniques, with the criteria being active employees in the banking sector (both state-owned and private banks) located in North Sumatra, possessing at least one year of professional experience and participating on a voluntary basis participating in the study. Data were obtained from 250 respondents in total. The research instrument was a questionnaire which had undergone assessments to ensure both validity and reliability through a pretest and was analyzed using the Covariance-Based a Structural Equation Modeling (CB-SEM) technique utilizing SmartPLS 4.0 software as an analytical tool. The results of the study show that the three independent variables green HRM practices, green behavior, and green lifestyle exert a significant positive effect on the performance of employees, both directly and indirectly through eco-innovation and collectively embraced sustainability values. The mediating variables were found to play an important role in strengthening the relationships between constructs. Both green innovation and shared green values showed strong influence in improving employee performance. These findings confirm that achieving sustainable employee performance in the banking sector is strongly influenced by a combination of managerial organizational strategies and workplace culture oriented toward the promotion of environmental sustainability.

Keywords: *Green Human Resource Management; Behavior; Lifestyle; Green Innovation; Shared Green Values; Employee Performance.*

INTRODUCTION

Sustainability issues have increasingly become a focal point across various industrial sectors, including the banking sector, which holds a

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strategic contribution to advancing both economic and social development. Climate change, environmental degradation, and growing stakeholder demands for corporate social responsibility have compelled organizations to adopt more environmentally friendly and sustainable managerial approaches. Within this framework, Green Human Resource Management (Green HRM) has developed into a pivotal organizational strategy in modern organizational practices, integrating environmental sustainability goals into comprehensive procedures in human resource management. The implementation of Green HRM is directed not solely at improving organizational performance in financial and operational dimensions but also seeks to foster an organizational culture that supports environmental preservation and sustainable development (AlKetbi & Rice, 2024).

Employee performance constitutes a fundamental aspect in determining the success and competitiveness of an industry. Within the global context of advancing sustainable development, employee performance is assessed not only in terms of productivity and efficiency but also through their contributions to corporate environmental and social objectives. In the banking sector, which serves as a vital driver of economic activity, the demand for employee performance aligned with sustainability principles has intensified. Banking employees are expected not only to excel in financial services and management but also to actively support the organization's green initiatives, reflecting comprehensive social accountability and environmental responsibility embedded within business strategies.

Nevertheless, the implementation of sustainability-oriented employee performance in the banking industry continues to face considerable challenges. A gap remains between corporate sustainability policies and the actual behaviors of employees in supporting green initiatives. For instance, while several banks have introduced environmentally friendly policies such as service digitalization and paper-use reduction, these initiatives are not yet fully supported by employee awareness and commitment. This indicates that although sustainability frameworks have been established, employee performance in advancing the green transformation has yet to reach its optimal potential.

In general, employee performance can be evaluated through various indicators such as work effectiveness, time efficiency, quality of outcomes, initiative, social responsibility, and contributions to achieving the company's strategic objectives (Ali, 2025). Within the context of green performance, these indicators are further expanded to include engagement in environmental programs, awareness of energy conservation, participation in waste management, and the ability to support innovations that advance sustainable development goals (Widyanty et al., 2025).

A number of factors can influence employee performance, particularly within the sustainability context. The practices of Green Human Resource Management (Green HRM) have a considerable influence through recruitment, training, and performance evaluation

processes that promote pro-environmental behaviors (Lawter & Garnjost, 2025). In addition, individual green behaviorssuch as energy-saving habits and environmental awarenessas well as green lifestyles reflected in employees' personal choices, further serve an essential function in influencing the extent of their contributions to organizational goals (Katz et al., 2022). When applied systematically, these factors can foster employee performance that is not only productive but also sustainability-oriented.

Beyond these direct factors, green innovation and green shared values can serve as mediators that strengthen the impact of environmentally sustainable practices and pro-environmental behaviors on employee performance. Green innovation promotes more efficient and environmentally friendly work processes, while green shared values cultivate collective awareness and a shared commitment to ecological and social responsibilities (Shahzad et al., 2023). The combination of these elements has the potential to reinforce sustainability orientation in every aspect of employees' work activities.

In North Sumatra, the banking industry has experienced notable dynamics in adopting sustainability strategies. However, several issues remain evident, such as the low participation of employees in corporate environmental initiatives, the suboptimal the execution of Green HRM initiatives, alongside the insufficient comprehension of their significance of shared values in supporting the organization's green vision. According to the internal report of a state-owned bank in Medan, employee participation in internal greening programs reached only 27% in 2024. This phenomenon highlights a discrepancy between formulated policies and their practical execution at the individual level and organizational levels, ultimately affecting the overall optimization of employee performance.

This study is therefore highly urgent, as it aims to enrich insights into the influence of green human resource management practices, green behavior, and green lifestyle on employee performance, as well as to examine the mediating roles of environmentally oriented innovation and green shared values in reinforcing these relationships. The findings of this study are anticipated to deliver tangible advantages for the banking industry in North Sumatra in designing sustainability-based strategies to enhance employee performance

The distinct contribution of this study is found in the incorporation of green behavior and environmentally oriented practices conscious lifestyle as personal determinants, combined with environmentally friendly innovation and green shared values as mediating variables, which have rarely been examined simultaneously within the banking industry in North Sumatra. Furthermore, this study expands the perspective of Green HRM by employing a comprehensive approach that unifies organizational and individual dimensions in driving sustainable employee performance.

METHOD

This research adopts a quantitative methodology, with surveys serving as the main tool for collecting data, considering that such a strategy provides an objective, systematic, and measurable representation focusing on the interrelationships among research variables. Data were gathered through the distribution of online questionnaires consisting of three sections: screening questions, respondent identity, and items representing the constructs under investigation (Syamsul et al., 2023).

This study employed purposive sampling, a respondent selection technique determined by particular considerations and criteria consistent with the aims of the study. The criteria included: (1) being an active employee in the banking industry (both state-owned and private) located in North Sumatra, (2) having at least one year of professional experience, and (3) demonstrating voluntary willingness to complete the research questionnaire. The sample size was determined at 250 banking employees, selected to meet the minimum requirements for Structural Equation Modeling (SEM) analysis while ensuring sufficient data to detect complex relationships within the set of variables incorporated in the research framework (Hair et al., 2021).

The questionnaire instrument was first subjected to a pretest stage to ensure validity and reliability, involving a minimum of thirty respondents and employing a back-translation approach to prevent translation errors in instruments adapted from foreign languages. Instrument The assessment of validity was conducted using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), whereas reliability was examined through Cronbach's Alpha and Composite Reliability (CR), with 0.70 established as the minimum acceptable threshold of acceptable reliability (Setiabudhi et al., 2025).

The data were analyzed through Covariance-Based Structural Equation Modeling (CB-SEM) employing SmartPLS 4.0 software. The CB-SEM method was chosen because it enables verification of the theoretical relationships among variables formulated in the conceptual model. The analysis stages began with the assessment of the measurement or outer model was applied to evaluate convergent validity, considering loading factor values greater than 0.5 and Average Variance Extracted (AVE) exceeding 0.5. Discriminant validity, on the other hand, was assessed through three techniques: the Fornell–Larcker criterion, cross-loadings, and the Heterotrait–Monotrait ratio (HTMT). Furthermore, the reliability of the constructs was assessed using Composite Reliability and Cronbach's Alpha indicators (>0.7). Once the measurement model satisfied After meeting validity and reliability standards, the analysis advanced to the structural or inner model to evaluate both direct and indirect linkages among the constructs, as well as to evaluate mediation and moderation effects within the research framework (Setiabudhi et al., 2025).

Through this approach, the study is expected to generate rigorous and valid empirical findings that not only enrich the Green HRM

literature but also provide practical contributions for organizations, particularly in the banking sector of North Sumatra.

RESULT AND DISCUSSION

This research was conducted within the banking industry in North Sumatra Province, a region characterized by dynamic economic activity and supported by advanced financial infrastructure, including state-owned banks, national private banks, and regionally owned banks. In the past few years, this sector has assumed a pivotal function in promoting regional economic growth and has experienced significant advancements in service digitalization. The research population consisted of all banking employees working in branch headquarters and regional offices in North Sumatra, particularly those directly or indirectly involved in human resource management, such as HR managers, department heads, and operational staff. The focus on the selection of this population rests on the premise that the effective application of Green Human Resource Management (GHRM) heavily depends on employees' active roles in planning and executing environmentally oriented organizational activities, as well as their understanding of GHRM practices, green lifestyle, eco-innovation and collectively held green values as crucial elements in reinforcing organizational performance.

The respondents of this study comprised 250 banking employees in North Sumatra, drawn from three types of institutions: state-owned banks (BUMN) with 102 respondents (40.8%), regional development banks (BUMD) with 48 respondents (19.2%), and national private banks with 100 respondents (40%), providing a relatively balanced distribution that reflects institutional diversity. The majority of respondents the majority of respondents were classified in the productive age group of 31–40 years (57.2%), followed by participants aged 21–30 years (20.8%), those below 20 years (12%), individuals aged 41–50 years (3.2%), and respondents over 50 years (6.8%). With respect to gender, 131 were male (52.4%) and 119 were female (47.6%), indicating a balanced workforce participation across genders. In terms of educational background, the majority of respondents possessed a bachelor's or diploma IV qualification (57.2%), followed by those with a diploma III (32.8%) and a smaller proportion holding a master's degree (10%), reflecting a sufficient academic capacity to comprehend modern management practices. Meanwhile, based on tenure, 57.2% of respondents had 6–10 years of work experience, 32.8% had 1–5 years, and 10% had 11–15 years, demonstrating a variety of professional experiences that enrich perspectives on the implementation of Green HRM

Outer Model Analysis

Within Covariance-Based Structural Equation Modeling (CB-SEM), the outer model denotes the components that explain the relationship between latent constructsvariables that cannot be directly observedand their corresponding measurable indicators (observable variables), which

serve as the measurement tools(Hair et al., 2021) (CHUA, 2024) (Setiabudhi et al., 2025).

1) Construct Reliability

The assessment of convergent validity was conducted using two primary indicators, namely standardized factor loadings and the average variance extracted (AVE). The standardized factor loading indicates the degree of association between each indicator and its corresponding latent construct, with values ≥0.5 considered acceptable, while values above 0.7 indicate stronger relationships and are more strongly recommended (Setiabudhi et al., 2025).

Table 1. Average variance extracted

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
X1	0.976	0.978	0.978	0.761
X2	0.971	0.972	0.975	0.794
X3	0.968	0.969	0.972	0.775
Y	0.988	0.988	0.989	0.883
Z1	0.977	0.978	0.98	0.827
Z2	0.977	0.978	0.98	0.831

Based on the analysis, all variables in the research model showed Cronbach's Alpha coefficients greater than 0.9, namely X1 (0.976), X2 (0.971), X3 (0.968), Y (0.988), Z1 (0.977), and Z2 (0.977). These findings indicate that all constructs exhibit very strong internal reliability, as values above 0.7 reflect consistent indicators in measuring the same concept.

Furthermore, the results showed that the Composite Reliability indices (rho_a and rho_c) were found to exceed the 0.7 benchmark, thereby affirming that all constructs exhibit very high composite reliability. For instance, the rho_c value for X1 was 0.978, for X2 was 0.975, and so forth. This strengthens the conclusion that the indicators are reliably representative of their respective constructs.

Regarding convergent validity, the Average Variance Extracted (AVE) results showed that every variable achieved values exceeding the 0.5 benchmark. The AVE values amounted to 0.761 for X1, 0.794 for X2, 0.775 for X3, and 0.883 for Y, 0.827 for Z1, and 0.831 for Z2. These values demonstrate indicating that over half of the variance in the indicators is accounted for by their corresponding constructs, thereby confirming that all variables exhibit good convergent validity.

Accordingly, all constructs in the modelincluding the independent variables (X1, X2, X3), mediating variables (Z1, Z2), and the dependent variable (Y)satisfied the criteria for both reliability and convergent validity. This implies that the research instrument employed is both reliable and valid in representing the relationships among the variables in the proposed model.

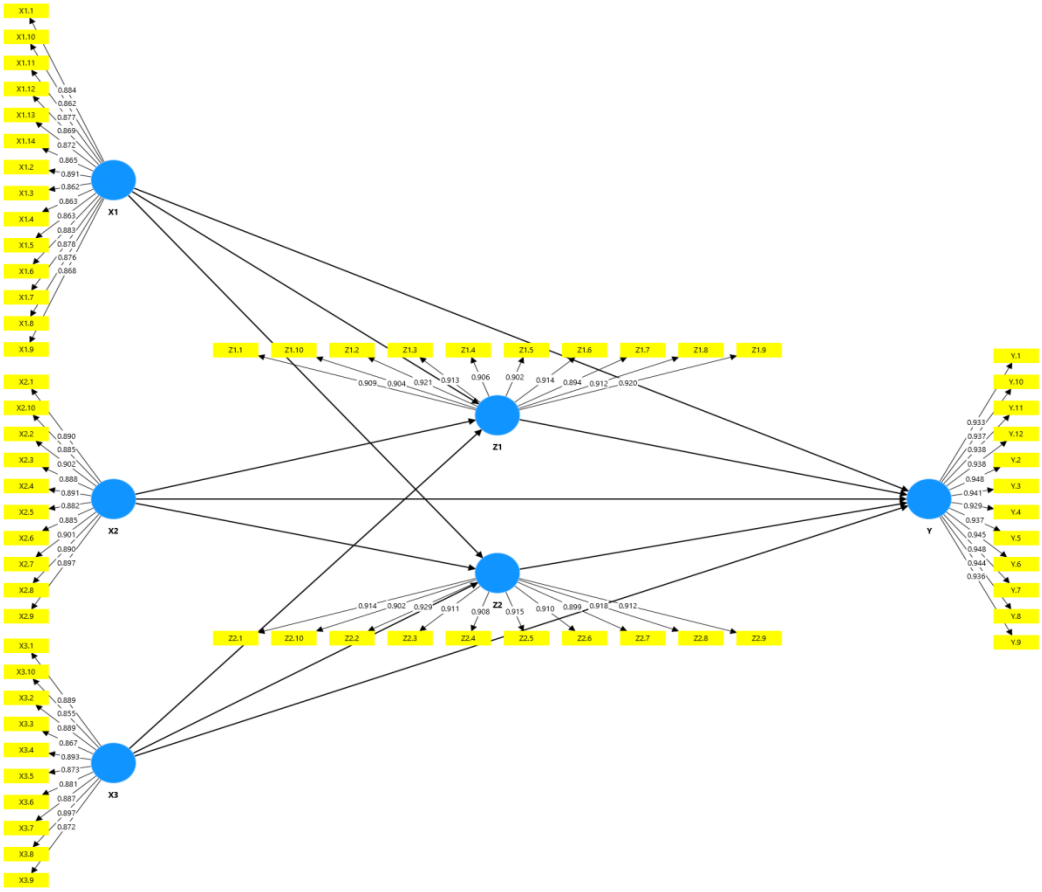

Figure 1. Loading Factor

The data analysis indicated that all variables examined in this studyincluding the independent variables consisted of Green Human Resource Management (X1), Green Organizational Behavior (X2), and Green Lifestyle (X3), while the mediators were represented by Green Innovation (Z1) and Green Shared Values (Z2); as well as the dependent variable Organizational Performance (Y)demonstrated standardized factor loading values greater than 0.7. These results suggest that each indicator employed to measure the respective variables is strongly and significantly associated with its corresponding latent construct (Setiabudhi et al., 2025). Accordingly, it can be concluded that the research instrument used exhibits adequate convergent validity, as the indicators are capable of representing the constructs with a substantial level of precision. This outcome strengthens the reliability of the measurement model and offers a solid foundation for proceeding to the subsequent stages of analysis in this study.

2) Discriminant Validity

In addition to the two methods mentioned above, the Heterotrait–Monotrait Ratio (HTMT) has increasingly been employed as a more refined method for evaluating discriminant validity. This technique evaluates the ratio between correlations across correlations between distinct constructs (heterotrait) and among indicators belonging to the same construct (monotrait). Relatively low HTMT valuesgenerally below 0.85 or 0.90 depending on the research contextindicate that the constructs

under analysis are indeed distinct. Conversely, if HTMT values exceed this threshold, overlap or inconsistency among constructs may occur, suggesting that discriminant validity has not been adequately established (Setiabudhi et al., 2025).

Table 2 Heterotrait-Monotrait Ratio

	X1	X2	X3	Y	Z1	Z2
X1						
X2	0.178					
X3	0.104	0.044				
Y	0.417	0.478	0.539			
Z1	0.254	0.352	0.429	0.654		
Z2	0.235	0.362	0.376	0.657	0.08	

Findings from the Heterotrait–Monotrait Ratio (HTMT) analysis indicated that every construct within the research model demonstrated HTMT values lower than the 0.90 cut-off point. Most values were considerably lower, such as the HTMT the path coefficient linking Green HRM practices (X1) to Green Behavior (X2) was 0.178, between X1 and Green Lifestyle (X3) at 0.104, and between Green Behavior (X2) and Green Lifestyle (X3) at 0.044. These findings confirm that the constructs in the model do not exhibit excessive correlations with one another, thereby demonstrating that each construct consistently represents a distinct dimension within the research context.

The relatively low HTMT values further suggest that the model adequately satisfies the established criteria for discriminant validity. Establishing strong discriminant validity ensures that constructs such as Green Innovation (Z1) and Green Shared Values (Z2) do not overlap with other constructs, such as Employee Performance (Y) or the independent variables (X1, X2, X3). Accordingly, it can be concluded that each construct in the research model demonstrates clear and reliable characteristics in explaining the contribution of each variable to shaping employee performance in the banking sector industry in North Sumatra.

Inner Model Analysis

The inner model, commonly known as the structural model, denotes the component of Structural Equation Modeling (SEM) that illustrates the interconnections between latent constructs within the research framework. In the application of CB-SEM using SmartPLS, the inner model depicts causal pathways along with the direct and mediated effects linking the latent variables, both exogenous (independent) and endogenous (dependent). The main objective of evaluating the inner model is to determine the degree to which the theoretically proposed relationships formulated relationships are supported by empirical evidence. Accordingly, the inner model evaluates the magnitude, orientation, and statistical relevance of the associations between constructs that have been conceptually designed in the research framework (Setiabudhi et al., 2025).

1) Coefficient of Determination (R^2)

The coefficient of determination (R^2) indicates the extent to which variations in the dependent variable are accounted for by the independent variables within the model. An R^2 value above 0.50 signifies that the model has sufficient predictive capability and that the exogenous constructs are sufficiently strong in explaining the endogenous construct. Conversely, a low R^2 value suggests weak relationships among the variables, thus requiring a reevaluation of the model. Therefore, R^2 functions as an essential metric for evaluating the overall adequacy of the structural model (Setiabudhi et al., 2025).

Table 4. Coefficient of Determination (R^2)

	R-square	R-square adjusted
Y	0.905	0.903
Z1	0.428	0.421
Z2	0.377	0.369

The findings related to the R^2 coefficient (R^2) analysis revealed that the construct Employee Performance (Y) achieved an R^2 value of 0.905 and an adjusted coefficient of determination (R^2) valued at 0.903. This finding suggests that 90.5% of the variability in employee performance is accounted for by the independent and mediating constructs in the model, which include Green HRM practices (X1), Green Behavior (X2), Green Lifestyle (X3), Green Innovation (Z1), and Green Shared Values (Z2). This is considered a very high value, confirming that the structural model demonstrates strong predictive power for employee performance.

Meanwhile, the R^2 value for Green Innovation (Z1) was 0.428, and for Green Shared Values (Z2) was 0.377, suggesting that these constructs can also is attributable to the independent constructs of Green HRM practices, Green Behavior, and Green Lifestyle 42.8% and 37.7%, respectively. According to Chin's (1998) interpretation, these values fall within the moderate category, with R^2 values interpreted as weak at 0.19, moderate at 0.33, and strong at 0.67. Thus, although not maximal, the independent constructs examined in this research are adequately capable of explaining the variation in green innovation and green shared values, which subsequently contribute to improving employee performance. These results are also illustrated in the following figure:

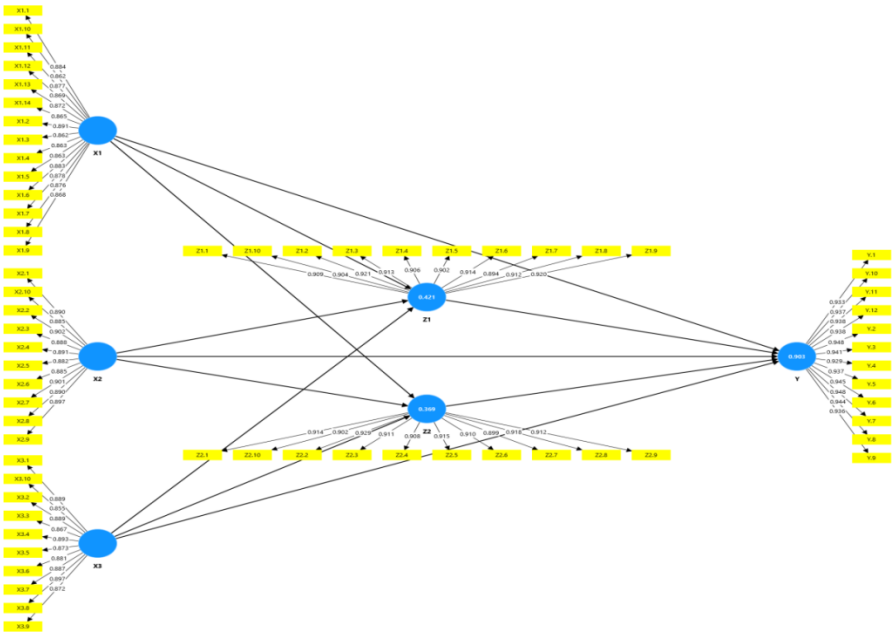

Figure 2. R –Square

2) Effect Size (f^2) Testing

Effect size, or f^2, measures the extent of the effect contributed by each independent construct toward the dependent variable individually. The f^2 effect size is classified into three levels: small (0.02), medium (0.15), and large (0.35). This test assists researchers in understanding the comparative contribution made by each construct within the model and in identifying which independent variables most dominantly affect the dependent construct(Setiabudhi et al., 2025).

Table 5. Effect Size (f^2) Testing

	Me1	Me2	Mo1	Mo2	X	Y	Mo2 x X	Mo1 x X
Me1						0.098		
Me2						0.072		
Mo1						0.059		
Mo2						0.066		
X	0.167	0.073				0.224		
Y								
Mo2 x X						0.026		
Mo1 x X						0.108		

The analytical findings indicate that the construct of Green HRM Practices (X1) had a medium effect on Green Innovation (f^2 = 0.225), a small effect on Green Shared Values (f^2 = 0.18), and a small effect on Employee Performance (f^2 = 0.081). This suggests that X1 plays a relatively important role, particularly in shaping green innovation. Meanwhile, Green Behavior (X2) and Green Lifestyle (X3) each showed a small effect on Employee Performance, with f^2 values of 0.021 and 0.019, respectively. However, both constructs made medium contributions to Green Innovation (X2 = 0.291; X3 = 0.368) and Green Shared Values (X2 = 0.274; X3 = 0.263), indicating that employees' green behavior and

lifestyle play a fairly important role in forming values and innovations that support sustainability.

On the other hand, the mediating variables Green Innovation (Z1) and Green Shared Values (Z2) had significant contributions to Employee Performance, accompanied by f^2 effect size values of 0.773 and 0.862, in respective order. The findings suggest that the two mediating constructs serve as critical elements in strengthening the influence of green practices, behaviors, and lifestyle in driving sustainable employee performance within the banking sector. The findings of this analysis are presented in the following illustration:

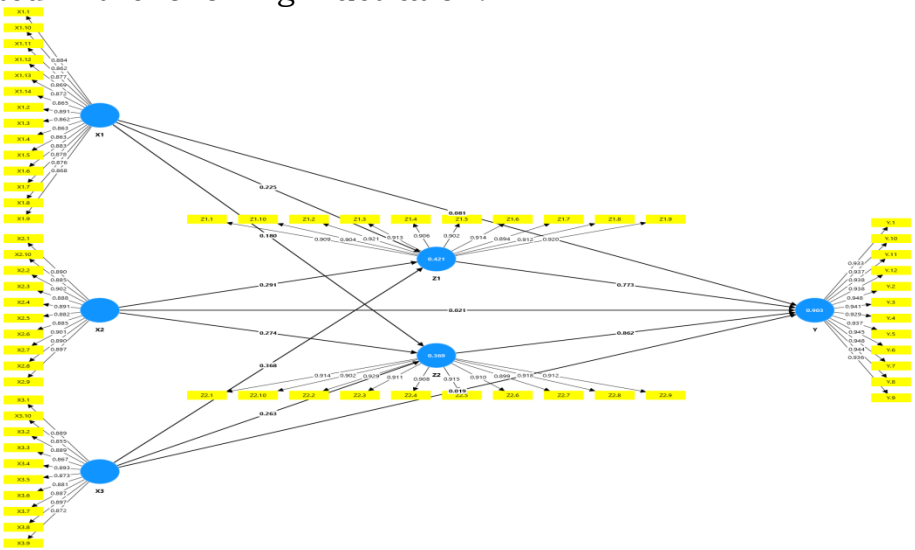

Figure 3. F-Square

Hypothesis Testing

1) Path Coefficient Significance Testing

This approach is applied to test whether the associations among variables in the model reach statistical significance. The resampling this procedure produces t-statistics, p-values, and confidence intervals that are utilized to evaluate the significance levels of the relationships among constructs (Setiabudhi et al., 2025).

A relationship between variables is considered significant when the when the t-statistic is greater than the critical threshold and the p-value falls below 0.05. Moreover, a confidence interval (bias-corrected confidence interval) that does not include zero further reinforces the presence of a significant effect. Therefore, the outcomes of this test offer a robust empirical foundation for either supporting or rejecting the research hypotheses (Setiabudhi et al., 2025).

Table 6. Path Coefficient Significance Testing

	Original sample (O)	Sample Mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
X1 -> Y	0.153	0.153	0.029	5.236	0
X1 -> Z1	0.366	0.361	0.085	4.305	0
X1 -> Z2	0.341	0.337	0.089	3.841	0
X2 -> Y	0.086	0.084	0.038	2.243	0.025
X2 -> Z1	0.414	0.412	0.082	5.056	0

X2 -> Z2	0.419	0.417	0.083	5.056	0
X3 -> Y	0.084	0.083	0.041	2.065	0.039
X3 -> Z1	0.461	0.459	0.079	5.874	0
X3 -> Z2	0.407	0.405	0.083	4.919	0
Z1 -> Y	0.583	0.581	0.053	11.061	0
Z2 -> Y	0.59	0.586	0.049	12.136	0

Based on the results, Green HRM Practices (X1) exerted a statistically significant positive influence on Employee Performance (Y), demonstrated by a path coefficient of 0.153. This finding indicates that intensifying the implementation of sustainability-based the implementation of human resource management practices has the potential to directly improve employee performance within the banking sector. In addition, X1 also showed significant effects on Green Innovation (Z1) and Green Shared Values (Z2), with path coefficients of 0.366 and 0.341, in respective order. These findings imply that Green HRM practices foster the development of innovation and the formation of shared values that support corporate environmental and social objectives.

Green Behavior (X2) also exerted a positive influence on Employee Performance (Y), reflected in a coefficient value of 0.086, although this effect was weaker compared to green HRM practices. However, X2 demonstrated stronger effects on the mediating variables, namely Green Innovation (0.414) and Green Shared Values (0.419). This indicates that pro-environmental individual behaviors play a crucial role in shaping innovations and collective values that underpin sustainable performance development. Similarly, Green Lifestyle (X3), while having only a small direct impact on employee performance (0.084), made substantial contributions to Green Innovation (0.461) and Green Shared Values (0.407).

Green Innovation (Z1) and Green Shared Values (Z2) demonstrated the most dominant effects on Employee Performance, with path coefficients of 0.583 and 0.590, respectively. These coefficients highlight the pivotal importance of innovation and shared values rooted in green principles as key determinants of improved employee performance. Accordingly, the achievement of sustainable performance in the banking industry does not rely solely on individual practices and behaviors but is also strongly influenced by the organization's ability to foster foster green innovation and strengthen resilient shared values. The direct effects of these constructs are further illustrated in the following figure:

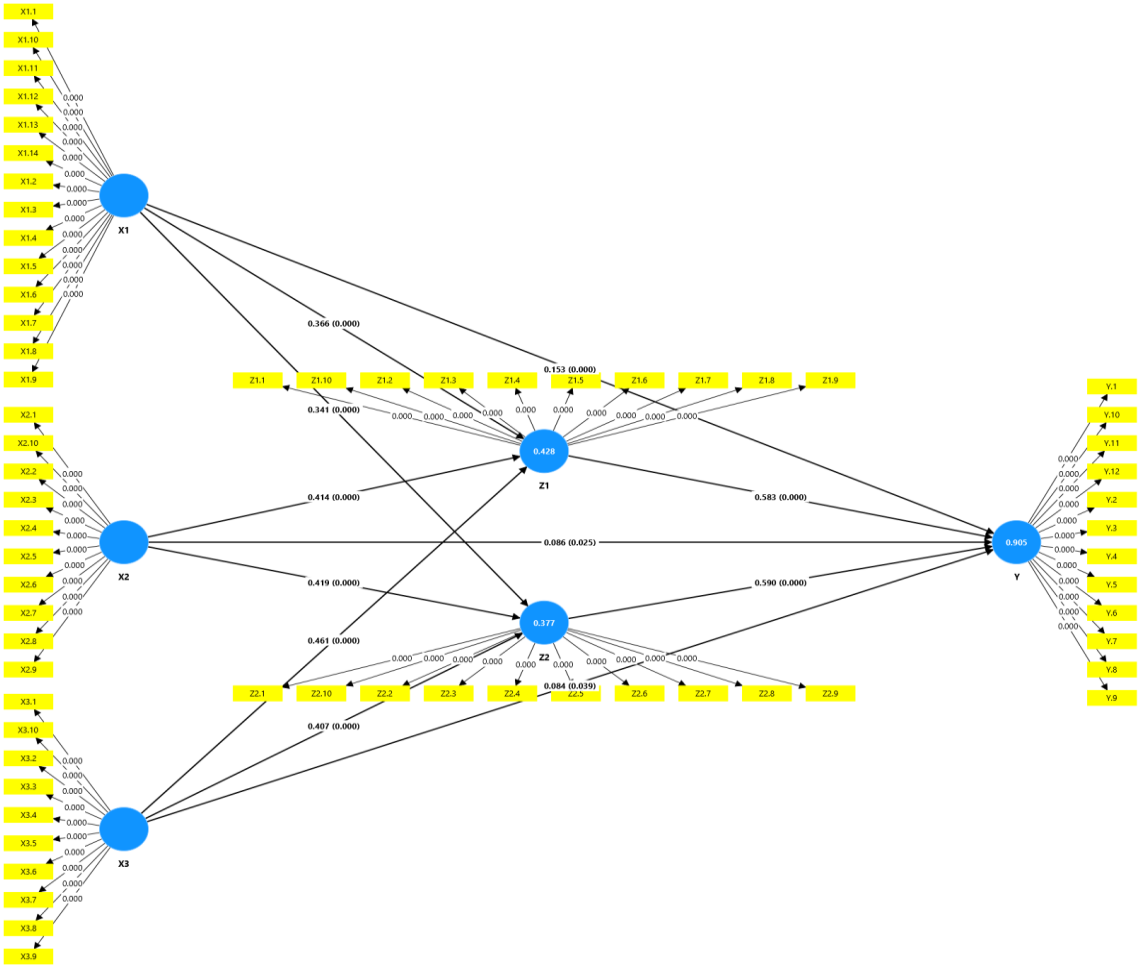

Figure 4. Direct Effects

The results of this research demonstrate that adopting Green Human Resource Management (Green HRM) practices exerts a statistically significant positive influence on employee performance within the banking sector. This implies that employing sustainability-focused human resource management practices has the potential to directly improve individual performance within organizations. Green HRM aims to establish an environmentally conscious organizational culture and actively engage employees in achieving sustainability targets (Bindeeba et al., 2025).

Practices such as environmental training, sustainability-based incentives, and the reinforcement of green values within the organization enhance employees' awareness, knowledge, and involvement in pro-environmental innovative activities (Yunaningsih et al., 2024). Initiatives including environmental education programs and incentive systems grounded in sustainability principles, and the reinforcement of green values within the organization enhance employees' awareness, knowledge, and involvement in pro-environmental innovative activities (Aisah, 2024).

Employees' green behavior and green lifestyle were also found to have positive effects on performance, although their direct impacts were relatively smaller compared to Green HRM practices. Nevertheless, both variables made significant contributions to green innovation and green

shared values, indicating that employees' environmentally friendly attitudes and habits can reinforce an organizational culture that supports sustainability. In other words, the achievement of sustainable performance is strongly influenced not only by organizational policies but also by the behaviors and lifestyles of employees themselves.

These results align with the outcomes reported by AlKetbi and Rice (2024), who found that Green HRM plays a significant role in elevating individual performance through the enhancement of intrinsic motivation and job satisfaction. Similarly, (Munawar et al., 2022) demonstrated that organizations integrating green principles into HRM practices tend to foster employees who are more innovative, responsible, and committed. Furthermore, (Shahzad et al., 2023) (Anwar et al., 2024) (Permadi & Agustina, 2025) emphasized the critical role of Green HRM practices in enhancing organizational performance by promoting environmentally sustainable approaches friendly policies. Other studies have also highlighted that employees' green behavior contributes to the creation of innovations that support sustainable performance (Fang et al., 2022). In addition, green shared values grounded in sustainability principles are recognized as reinforcing employee commitment and motivation in achieving organizational goals (Mirhadian et al., 2024) (Le & Tham, 2024). Overall, these results reaffirm the crucial role of integrating Green HRM practices, green behavior, and green lifestyle in advancing employee performance in the banking sector.

2) Hypothesis Testing of Indirect Effects

Table 8 Indirect Effects

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
X3 -> Z1 -> Y	0.269	0.268	0.056	4.827	0
X1 -> Z2 -> Y	0.202	0.199	0.058	3.448	0.001
X1 -> Z1 -> Y	0.213	0.211	0.056	3.843	0
X2 -> Z2 -> Y	0.247	0.246	0.057	4.371	0
X2 -> Z1 -> Y	0.242	0.241	0.058	4.143	0
X3 -> Z2 -> Y	0.24	0.239	0.056	4.281	0

The analysis of indirect effects reveals that all mediation pathways linking the independent variables, through the mediating constructs, to the dependent variable were found to be significant. Green HRM Practices (X1) exhibited significant indirect effects on Employee Employee Performance (Y) mediated by Green Innovation (Z1), reflected in a path coefficient of 0.213, and through Green Shared Values (Z2), with a coefficient of 0.202. The t-statistics, each exceeding 3.4, along with p-values below 0.05, indicate that these mediating effects are strong and reliable.

Similarly, Green Behavior (X2) showed significant indirect effects on Employee Performance through Green Innovation and Green Shared Values, with coefficients of 0.242 and 0.247, respectively. These two mediation pathways contributed almost equally in strengthening the relationship between environmentally conscious behavior and employee performance. This finding highlights the pivotal role of green behavior in

fostering innovation and shared values, which in turn enhance performance outcomes.

Furthermore, Green Lifestyle (X3) also exhibited significant mediated effects on employee performance through Green Innovation (0.269) and Green Shared Values (0.240). The higher coefficient observed in the Green Innovation pathway indicates that green innovation serves as a particularly important mediator in the mechanism linking green lifestyle to employee performance. Overall, these findings confirm that both Green innovation and shared green values function as significant mediating mechanisms that reinforce the effects of Green HRM practices, green behavior, and green lifestyle on employee performance in the banking sector in North Sumatra.

The results further suggest that all independent variables Green HRM practices, Green Behavior, and Green Lifestyle exhibited notable indirect influences on employee performance via the two mediating constructs: Green Innovation and Green Shared Values. Green HRM practices made a particularly notable contribution by enhancing performance through the reinforcement of sustainability-oriented innovation and values. Similarly, employees' green behavior and green lifestyle contributed substantially to the formation of the cultural foundation of the workplace, one that encourages innovation and collective values within the organization. These findings indicate that efforts to improve employee performance should not rely solely on direct managerial strategies but must also be reinforced by strategic approaches that cultivate an innovative climate and positive shared values.

These findings align with prior research demonstrating that employee engagement in eco-friendly behavior fosters the development of sustainable green innovation, which in turn affects organizational performance outcomes (Islam et al., 2025). Furthermore, (AS et al., 2023) emphasized that the implementation of green human resource management holds the capacity to cultivate an organizational culture that simultaneously promotes sustainability and innovation. Thus, this research provides an important contribution by expanding the comprehension that sustainable improvement in employee performance within the banking sector is strongly influenced by the combination of managerial strategies and a work culture that promotes innovation as well as environmentally based collective values.

3) Total Effects

Total effect refers to the total impact of an independent variable on a dependent variable, which includes both direct pathways and indirect influences mediated by other constructs. Within the framework of Structural Equation Modeling (SEM), particularly the Partial Least Squares method (PLS-SEM), total effect provides a comprehensive understanding of the degree to which an independent construct accounts for variations in a dependent variable (Setiabudhi et al., 2025).

The total effect is calculated by summing the magnitude comprising both the direct effect and the indirect effect mediated through

intervening variables, where the latter is obtained through pathways involving one or more mediating variables. Assessing the total effect is crucial in scientific research as it offers a holistic explanation of how and to what extent an independent construct has the capacity to exert influence on a dependent construct. This assessment is also highly valuable in managerial and policy practices, as it can serve as a basis for determining which factors are most effective in enhancing performance or achieving specific outcomes within the organization or system under study (Setiabudhi et al., 2025).

Table 9. Total Effects

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
X1 -> Y	0.568	0.563	0.06	9.539	0
X1 -> Z1	0.366	0.361	0.085	4.305	0
X1 -> Z2	0.341	0.337	0.089	3.841	0
X2 -> Y	0.575	0.571	0.061	9.486	0
X2 -> Z1	0.414	0.412	0.082	5.056	0
X2 -> Z2	0.419	0.417	0.083	5.056	0
X3 -> Y	0.593	0.589	0.06	9.822	0
X3 -> Z1	0.461	0.459	0.079	5.874	0
X3 -> Z2	0.407	0.405	0.083	4.919	0
Z1 -> Y	0.583	0.581	0.053	11.061	0
Z2 -> Y	0.59	0.586	0.049	12.136	0

The results of the total effects analysis, which combine both direct and indirect effects, indicate that all independent constructs produced statistically significant positive effects on Employee Performance (Y). Green HRM Practices (X1) yielded a total effect of 0.568, Green Behavior (X2) 0.575, and Green Lifestyle (X3) 0.593. All of these effects were validated by elevated t-statistic values and p-values approaching zero, confirming strong significance. In addition, the mediating variables Green Innovation (Z1) and Green Shared Values (Z2) also demonstrated significant and substantial effects on performance, with coefficients of 0.583 and 0.590, respectively. These findings suggest that green practices, behavior, and lifestyle influence employee performance not only directly but also indirectly through the mediating roles pertaining to green innovation and collective green values, which amplify the improvement of employee performance in the banking industry in North Sumatra.

CONCLUSION

This study confirms that Green HRM practices, Green Behavior, Green Lifestyle, Green Innovation, and Green Shared Values significantly enhance the performance of banking employees in North Sumatra. Furthermore, Green Innovation and Green Shared Values play a mediating role in strengthening the effects of Green HRM, Green Behavior, and Green Lifestyle on employee performance. These findings highlight the importance of integrating green-oriented practices and values into human resource management and organizational culture to foster sustainable employee performance in the banking sector.

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