

# EFFECT OF GREEN HUMAN RESOURCES MANAGEMENT ON PERFORMANCE OF SELECTED MANUFACTURING FIRM IN NORTH-CENTRAL NIGERIA

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## ABSTRACT

*Despite the growing recognition of the importance of environmental sustainability, manufacturing sector in North-Central Nigeria faces significant challenges related to environmental sustainability, including high levels of waste, inefficient resource use, and substantial carbon emissions. This study therefore examined the effect of green training and development and green recruitment and selection elements of green human resources management on performance of selected manufacturing firm in North-Central Nigeria. The study adopted a survey research design whereby structured 5-point likert scale questionnaire was administered to a sample of four hundred and thirty-three (433) employees of selected manufacturing firm in North-Central Nigeria. Partial Least Square (PLS-SEM) statistic was employed to test the hypotheses formulated of which the study found a positive and significant effect of green training and development on performance of selected manufacturing firm in North-Central Nigeria, while green recruitment and selection has positive and insignificant effect on performance of selected manufacturing firm in North-Central Nigeria. The study recommends that Manufacturing firms should increase investment in green training programs to ensure that employees at all levels are equipped with knowledge on sustainable practices, energy efficiency, waste reduction, and resource conservation, which can lead to improved operational performance. Firms should refine their recruitment strategies to prioritize candidates with strong commitments to sustainability and environmental practices, ensuring these attributes are given greater weight in the selection process.*

**Keywords:** Sustainability, Performance, Green training and development, green recruitment and selection, North-Central Nigeria

## INTRODUCTION

Organizational performance, reflecting how effectively an organization meets its goals, increasingly incorporates sustainability metrics alongside traditional indicators such as financial outcomes and operational efficiency. This shift, driven by global environmental concerns and regulatory pressures, has led many organizations to adopt green practices to enhance environmental performance and overall effectiveness (Kaplan & Norton, 1996; Hsu et al., 2022). In this context, Green Human Resources Management (GHRM) has emerged, integrating environmental considerations into HR practices to promote eco-friendly behaviors among employees, in alignment with standards like the Global Reporting Initiative and the United Nations Sustainable Development Goals (GRI, 2020; UN, 2015).

In Nigeria, GHRM is gaining traction, especially within the manufacturing sector, which plays a crucial role in the economy yet faces significant environmental challenges, such as pollution and resource depletion (Akinlo, 2019). The sector is increasingly adopting green practices to enhance performance while addressing these issues (Ogunyemi & Ogundele, 2018). Efforts in GHRM involve green recruitment and training programs that build a workforce with a strong commitment to sustainability, enhancing the sector's environmental and operational outcomes (Ojo, 2019). North-Central Nigeria, with its diverse manufacturing activities, provides a valuable context for examining the impact of GHRM, especially given the unique socio-economic and environmental conditions affecting the effectiveness of these practices (Ogunyemi et al., 2022).

This study investigates GHRM's impact on performance among manufacturing firms in North-Central Nigeria, aiming to provide insights into how green HR practices can enhance environmental and operational performance. By examining dimensions like green recruitment, training, and performance appraisals, the research addresses current knowledge gaps and offers practical recommendations for firms seeking to integrate sustainable HR practices. This study contributes to GHRM literature and offers

actionable strategies for fostering sustainability within Nigeria's manufacturing sector, positioning HR as a driver of sustainable development in the region.

Despite the growing recognition of the importance of environmental sustainability, manufacturing sector in North-Central Nigeria faces significant challenges related to environmental sustainability, including high levels of waste, inefficient resource use, and substantial carbon emissions. Research shows that companies often struggle to integrate environmental goals into HR policies due to a lack of awareness, insufficient training, and inadequate government incentives (Adeleke et al., 2022). This gap is especially evident in North-Central Nigeria, where rapid industrialization and urbanization have led to environmental challenges that require urgent attention.

While there is a growing body of literature on Green HRM and its impact on environmental performance globally, a notable gap exists in research focusing on specific contexts such as North-Central Nigeria. Most studies have been conducted in developed countries or have centered on large multinational corporations. For instance, research by Renwick et al. (2018) and Jabbour et al. (2019) highlights the benefits of Green HRM practices in developed economies, but these findings may not fully translate to the unique socio-economic and regulatory environment in North-Central Nigeria. Studies like Rao and Pearce (2016) and Azevedo et al. (2020) have explored the implementation of Green HRM in various settings but have not sufficiently addressed the challenges and opportunities specific to emerging economies or local contexts.

The distinct socio-economic conditions and regulatory environments in North-Central Nigeria, as highlighted by Olubiyi and Ojo (2022), present a markedly different context from that of developed nations. This study aims to address these disparities by investigating the impact of Green Human Resource Management (GHRM) practices on performance of selected manufacturing firm in North-Central Nigeria. The objective is to shed light on the role of human resources in advancing sustainability initiatives and to identify obstacles that may impede the successful integration of environmental objectives into corporate strategies. Additionally, the research will examine strategies for overcoming challenges such as insufficient training, regulatory hurdles, and cultural attitudes towards environmental management. By doing so, the study seeks to offer practical recommendations for improving environmental performance through effective GHRM practices.

### **Objectives of the Study**

The main objective of this study is to examine the effect of green human resources management on performance of selected manufacturing firm in North-Central Nigeria. However, the specifics are to:

- i. examine the effect of green training and development on performance of selected manufacturing firm in North-Central Nigeria.
- ii. investigate the effect of green recruitment and selection on performance of selected manufacturing firm in North-Central Nigeria.

## **LITERATURE REVIEW**

### **Concept of Green Human Resource Management**

Renwick et al. (2018) define Green HRM as the utilization of HRM policies and practices to facilitate the development of a sustainable business strategy. This approach aims to achieve the dual goals of promoting employee well-being and attaining organizational environmental objectives. Essentially, Green HRM involves integrating environmental considerations into HRM practices to foster sustainability and align the interests of employees and the organization with environmental goals. This definition highlights the pivotal role of HRM in driving both employee well-being and environmental performance.

Green Human Resource Management (GHRM) can be defined as the policies, practices, and systems that encourage green behavior among employees in order to create an environmentally conscious, resource-efficient, and socially responsible workplace and organization as a whole (Islam et al., 2022).

This study adopts the definition by Islam et al (2022) who define Green Human Resource Management (GHRM) as the policies, practices, and systems that encourage green behavior among employees in order to create an environmentally conscious, resource-efficient, and socially responsible workplace and organization as a whole.

### **Green Training and Development**

Green training refers to the process of equipping employees with the knowledge, skills, and awareness needed to adopt and implement environmentally sustainable practices in the workplace (Jiang & Bansal, 2023). This type of training focuses on fostering eco-friendly behaviors, reducing the environmental impact of business operations, and aligning organizational practices with sustainability goals (Jiang & Bansal, 2023).

Green development refers to a sustainable approach to growth and development that balances economic, social, and environmental objectives. It emphasizes the responsible use of natural resources, reduction of environmental impacts, and promotion of long-term ecological stability while fostering economic growth and improving quality of life (Renwick et al., 2018).

According to Renwick et al. (2018), Green Training and Development refers to the process of equipping employees with the necessary knowledge, skills, and attitudes to enable them to effectively contribute to the achievement of organizational environmental objectives. This definition emphasizes the role of training and development initiatives in enhancing employees' understanding of environmental sustainability and equipping them with the necessary capabilities to support the organization's environmental goals. Similarly, Jiang and Bansal (2023) define Green Training and Development as the systematic process of building employee competencies and awareness in relation to environmental issues and sustainable practices. This definition highlights the systematic nature of Green Training and Development, emphasizing the need for structured programs that enhance employees' competencies and raise their awareness of environmental issues and sustainable practices.

This study adopts the definition by Sharma (2018) who defines green training and development as training and development activities that focus on developing competencies necessary for employees to understand and implement environmentally sustainable practices.

### **Green Recruitment and Selection**

According to Renwick et al. (2018), Green recruitment is the process of attracting, selecting, and hiring candidates who are not only qualified for the job but are also committed to environmental sustainability and aligned with an organization's eco-friendly values and goals. This approach integrates sustainability principles into the recruitment process to foster a workforce that supports green initiatives and practices. Green selection refers to the process of incorporating environmental sustainability criteria into the evaluation and hiring of candidates. It focuses on choosing individuals whose skills, values, and behaviors align with the organization's eco-friendly initiatives and sustainability goals. This approach ensures that the workforce actively contributes to reducing the organization's environmental impact (Jabbour et al., 2018).

Jabbour et al. (2018) define Green Recruitment and Selection as the deliberate efforts made by organizations to identify, recruit, and select individuals who demonstrate environmental values, possess green competencies, and have a genuine interest in driving sustainability within the organization. This definition emphasizes the deliberate efforts made by organizations to identify and select individuals who align with environmental values, possess green competencies, and exhibit a genuine interest in promoting sustainability within the organization.

This study adopts the definition by Diri (2021), who defines Green Recruitment and Selection as a strategic talent management process that seeks to attract, select, and retain individuals with specific green skills and a genuine commitment to environmental responsibility

## **Performance**

Performance refers to the ability of an organization or individual to achieve desired outcomes with a combination of efficiency (minimizing resources) and effectiveness (achieving goals) (Lee, 2022). Performance is defined as the extent to which individuals or organizations meet or exceed their objectives, focusing on the accomplishment of specific goals or tasks within a given time frame (Smith & Gupta, 2021).

Performance refers to the execution or accomplishment of a task, particularly in relation to established criteria or standards. Performance can be described as the sum of an individual's or organization's behaviors and actions that contribute to achieving desired outcomes and improving overall success (Johnson & Brown, 2020).

This study define performance as the ability of an organization or individual to achieve desired outcomes with a combination of efficiency (minimizing resources) and effectiveness (achieving goals) (Lee, 2022).

## **Empirical Review**

### **Green Training & Development and Performance**

Rana and Arya (2024) assessed the effect of the green training and development on performance. For this study, data of 579 respondents were collected from employees working in the manufacturing industry in India. In all, 579 employees from the manufacturing sector in India participated in the study. The proposed model was tested using SMART PLS 3.3. The findings of this study stated that training and development was found positively and significantly affect the performance of Indian manufacturing industry. As this study is limited to manufacturing organizations in India, the results of this study cannot be generalized.

Emeh (2024) examined the effect of green training and development on Employee Performance in manufacturing firms in South Nigeria. The specific objectives are to examine the effect of communication skills on employee performance and evaluate the effect of time management skills on employee performance in manufacturing firms in South Nigeria. A descriptive research design was adopted for the study. A structured questionnaire design with a five-point Likert scale was used to collect primary data for the study. Data collected were analyzed using both descriptive and inferential statistics with the aid of the Statistical Package for Social Sciences (SPSS). The result revealed that green training and development have an insignificant effect on employee performance in Manufacturing firms in South Nigeria. The study is focused on manufacturing firms in South Nigeria. It would be useful to discuss whether these findings can be generalized to other regions or industries, or if there are specific contextual factors that may limit generalizability.

### **Green Recruitment & Selection and Performance**

Evina et al (2024) investigated the influence of the green recruitment, and green selection on performance at self-service retail in Yogyakarta, Indonesia. The study was carried out with a quantitative methodology, application of a quantitative research strategy, specifically by giving respondents questionnaires. There are 214,000 responders in this research population, while with the slovin formulation a sample of 178 respondents was obtained. The Cluster Sampling technique is applied in Probability Sampling to take the sample. Utilizing the Variance Based Structural Equation Modeling (SEM) methodology, the SmartPLS program version 4.0 was tested for validity and reliability using an analytical tool. The research results show that Green Recruitment has a significant positive effect on Performance. The finding of this study may only be applicable in Indonesia.

Saputra et al. (2024) investigated the effect of green recruitment and selection on organisational performance in Indonesia. The data collection method used in this research is to look for observation, interviews, and the distribution of questionnaires. Structural Equation Modeling is used to be an analysis method with SmartPLS assistance. Within the SEM model, this research predominantly employs the Partial Least Squares (PLS) technique, a component-based or variance-based structural equation

modeling approach. PLS enables the testing of theories or theory development for predictive purposes based on experimental results. Based on the results of this study, green recruitment and selection have insignificant and positive effect on organisational performance in Indonesia. The findings of the study may only be applicable in Indonesia.

### **Theory of Green Economy**

The Theory of Green Economy was primarily propounded by the United Nations Environment Programme (UNEP) in 2011. In 2011, UNEP released a report titled "Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication," which laid out the foundational principles and frameworks for the concept of the Green Economy.

The term green economy was first coined by the Government of the United Kingdom in 1989 and encompasses the society integrating with the ecosystem, and markets and economies as social systems that should adapt to social and environmental goals. The theory covers a wide range of topics, including the interwoven interaction between humans and the environment. Green economists argue that all economic decisions should be based on the environment in some way, and that natural capital and ecological services have monetary value. A green economy is one that attempts to reduce environmental dangers and ecological scarcities while also pursuing long-term development that does not harm the environment.

The inception of the Theory of Green Economy by the United Nations Environment Programme (UNEP) in 2011 stemmed from several key motivations. These included the acknowledgment of escalating environmental challenges globally, such as climate change, biodiversity loss, resource depletion, and pollution. These challenges were identified as pressing issues necessitating a fundamental restructuring of economic models. The Theory of Green Economy was conceived with the intention of realigning economic growth and development with the principles of sustainable development, as articulated in the 1987 Brundtland Commission report "Our Common Future". Additionally, the Theory of Green Economy aimed to confront issues of poverty, inequality, and social inclusion, recognizing that environmental degradation disproportionately impacts vulnerable populations.

Furthermore, the development of the Theory of Green Economy was driven by the imperative to support the attainment of the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015. The theory sought to foster a conducive environment for technological innovation, promote green investment, and facilitate the transition of traditional economic sectors towards more sustainable practices.

Critics have pointed out the ambiguity surrounding the Green Economy concept, noting its lack of a clear and universally accepted definition, which has resulted in varying interpretations and applications (Loiseau et al., 2016). Furthermore, the continued emphasis on economic growth within the Theory of Green Economy has faced criticism, with some arguing that such a focus may not align with the broader objectives of sustainability and environmental protection (Spash, 2012). In addition, critiques have been raised regarding the theory's inadequate attention to social equity, inequality, and the unequal distribution of costs and benefits associated with transitioning to a Green Economy (Hickel, 2019).

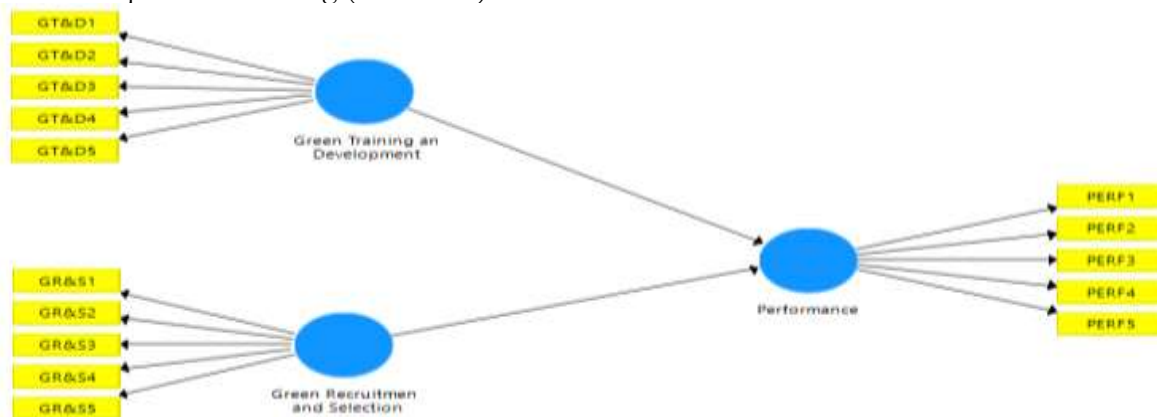
Moreover, the heavy reliance on technological solutions within the Theory of Green Economy has been criticized for potentially overlooking the underlying structural and systemic issues contributing to environmental degradation (Bina, 2013). Lastly, the limited scalability and replicability of success stories and pilot projects highlighted in the Theory of Green Economy have raised doubts about the broader applicability of the concept (Death, 2015).

By embracing the principles of the Theory of Green Economy, firms in North Central can enhance their environmental performance, reduce their environmental impact, and contribute to the overall sustainability of the city and the region. The study aligns with the Theory of Green Economy by

emphasizing the need for businesses to adopt sustainable practices that promote economic, environmental, and social sustainability.

## METHODOLOGY

The research utilized a survey research approach, involving the collection and analysis of data from participants relevant to the study. The population of the study consisted of 25,108 tops, middle and lower-level staff of selected firms (Dangote Cement Plc., Obajana, Kogi State; Flour Mills of Nigeria (Golden Penny Foods), Niger State; Olam Rice Farm, Nasarawa State; Nigerian Breweries Plc., Abuja; NASCO Group Nigeria, Jos, Plateau State, and Benue Breweries Limited, Makurdi, Benue State). These companies were selected based on their large number of employees, industry reputation, and market share. The study employed Taro Yamane (1967) formula for determining the minimum sample size: Thus, the sample size for the is 433. Purposive sampling technique was adopted for this study. The study utilized primary source of data to collect data for the study. The study employed the use of well-structured five-point likert scale (SA = Strongly Agree 5, A = Agree 4, U = Ucondedced 3, D = Disagree 2, SD = Strongly Disagree 1), close-ended questionnaire was used to obtain data from employees` of selected firm in North Central, Nigeria. The data collected were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the aid of SmartPls3.



**Figure 3.2 Structural model for direct relationship between green human resources management and performance**

## RESULTS AND DISCUSSIONS

A total of 433 copies of questionnaire distributed (which is a 10% increase in the initial sample size to provide for attrition), only four hundred and sixteen (416) was retrieved giving a response rate of 96%. 17(4%) were not properly filled but returned. All further analyses were carried out using 416 responses.

### Indicator Reliability

When evaluating the measurement model, we initiate the process by examining the item outer loadings. Generally, it is recommended to consider loadings above 0.708, as they signify that the construct accounts for more than 50 percent of the variance in the indicator, ensuring acceptable item reliability (Hair et al., 2019). However, Hair et al. (2019) also suggest that low but statistically significant indicator loadings (below 0.50) may be included. Conversely, outer loadings below 0.4 should be eliminated, and in exploratory research, loadings between 0.4 and 0.7 may be retained if the average variance extracted is satisfactory (Hair et al., 2014). This justifies the decision not to exclude indicators with loadings below 0.70 and above 0.40 from the model.

**Table 1: Factor Loadings of the Constructs**

|       | Green Recruitment and Selection | Green Training and Development | Performance |
|-------|---------------------------------|--------------------------------|-------------|
| GR&S1 | 0.707                           |                                |             |
| GR&S2 | 0.731                           |                                |             |
| GR&S3 | 0.737                           |                                |             |
| GR&S4 | 0.843                           |                                |             |
| GR&S5 | 0.771                           |                                |             |

|       |       |       |
|-------|-------|-------|
| GT&D1 | 0.707 |       |
| GT&D2 | 0.781 |       |
| GT&D3 | 0.795 |       |
| GT&D4 | 0.846 |       |
| GT&D5 | 0.714 |       |
| PERF1 |       | 0.791 |
| PERF2 |       | 0.810 |
| PERF3 |       | 0.772 |
| PERF4 |       | 0.791 |
| PERF5 |       | 0.691 |

*Source: SMARP-PLS Output, 2024*

### Convergent Validity

Convergent validity gauges the degree to which a construct converges to elucidate the variance within its items. To evaluate convergent validity, the average variance extracted (AVE) should exceed 0.5. As depicted in Table 2, the AVE values for all constructs surpass 0.5, affirming that our constructs meet the criteria for convergent validity. This observation suggests that the entire construct accounts for 50 percent or more of the variance present in the items comprising the construct.

**Table 2: Construct Reliability and Validity of the Indicators**

|                                 | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|---------------------------------|------------------|-------|-----------------------|----------------------------------|
| Green Recruitment and Selection | 0.819            | 0.834 | 0.871                 | 0.576                            |
| Green Training and Development  | 0.829            | 0.840 | 0.879                 | 0.594                            |
| Performance                     | 0.831            | 0.840 | 0.880                 | 0.596                            |

*Source: SMART PLS Output, 2024*

**Table 3: Heterotrait-Monotrait Ratio (HTMT)**

|                                 | Green Recruitment and Selection | Green Training and Development | Performance |
|---------------------------------|---------------------------------|--------------------------------|-------------|
| Green Recruitment and Selection | 1.000                           |                                |             |
| Green Training and Development  | 0.782                           | 1.000                          |             |
| Performance                     | 0.646                           | 0.502                          | 1.000       |

*Source: SMART-PLS Output, 2024*

### Model Goodness of Fit (GoF)

To validate the PLS model, it is essential to evaluate its goodness of fit, as recommended by Hair et al. (2017). In this study, the standardized root mean square residual (SRMR) was employed for this purpose. The selection of this index was based on the fact that SRMR provides an absolute fit measure, where a value of zero signifies a perfect fit. Following Hu and Bentler's (1998) suggestion that a value below 0.08 represents a good fit when using SRMR for model assessment, the study's result revealed an SRMR value of 0.04. This indicates that the model fits well. Besides the chi-square, other measures corroborate the goodness of fit in the study's model.

**Table 4: Model of Goodness of fit Summary**

|            | Saturated Model | Estimated Model |
|------------|-----------------|-----------------|
| SRMR       | 0.04            | 0.04            |
| d_ULS      | 5.778           | 5.778           |
| d_G        | 5.452           | 5.452           |
| Chi-Square | 7438.713        | 7438.713        |
| NFI        | 0.397           | 0.397           |

*Source: SMART-PLS Output, 2024*

### Test of Hypotheses

The table below showed the path coefficients, t-values and p-values used to test the first four null hypotheses of the study:

**Table 5: Path Coefficient of the Model**

| Variables                                      | Beta  | T Statistics<br>( O/STDEV ) | P Values | Decisions | F2 Value |
|------------------------------------------------|-------|-----------------------------|----------|-----------|----------|
| Green Training and Development -> Performance  | 0.286 | 5.217                       | 0.000    | Rejected  | 0.126    |
| Green Recruitment and Selection -> Performance | 0.657 | 12.327                      | 0.102    | Accepted  | 0.667    |

Notes: \*\*\*( $P < 0.01$ ), \*\*( $P < 0.05$ ), \*( $P < 0.1$ )

Source: SMART-PLS Output, 2024

### Hypothesis One

$H_{01}$ : Green Training and Development has no significant effect on the performance of selected manufacturing firm in North-Central Nigeria.

The result from table 5 shows that green training and development has positive and significant effect on the performance of selected manufacturing firm in North-Central Nigeria, with  $\beta = 0.286$  and  $p = 0.000$ . Thus, hypothesis one was not supported and therefore rejected at 5% level of significance. There is adequate evidence to reject the null hypothesis and the study therefore conclude that green training and development has positive and significant effect on the performance of selected manufacturing firm in North-Central Nigeria.

### Hypothesis Two

$H_{02}$ : Green Recruitment and Selection has no significant effect on the performance of selected manufacturing firm in North-Central Nigeria.

The result of the test as shown in table 5 revealed that green recruitment and selection positively and insignificantly affected the performance of selected manufacturing firm in North-Central Nigeria, with  $\beta = 0.657$  and  $p = 0.102$ . Thus, hypothesis two was supported and therefore accepted at 5% level of insignificance. There is adequate evidence to accept the alternative hypothesis and the study therefore conclude that green recruitment and selection have positive and insignificant effect on the performance of selected manufacturing firm in North-Central Nigeria.

**Table 6: R square Statistics**

|             | R Square | R Square Adjusted | Q <sup>2</sup> (=1-SSE/SSO) |
|-------------|----------|-------------------|-----------------------------|
| Performance | 0.683    | 0.682             | 0.484                       |

Source: Researcher's computation in Smart-PLS (2024)

The r-square statistics shows the level of determinism of the dependent variable by the independent variables of the study. Table 6 show that the study has an r-square value of 0.683 which indicates that the variables used for the study account for about 68.3% of the variability in the dependent variable. Other factors not captured in the model may account for the remaining 31.7%.

### Discussion of Findings

Green training and development have positive and significant effect on the performance of selected manufacturing firm in North-Central Nigeria, this indicates that integrating sustainable practices into employee training can lead to improved operational efficiency and productivity. The finding is in agreement with that of Rana and Arya (2024) who found that that training and development was found positively and significantly affect the performance of Indian manufacturing industry. However, the finding disagrees with the finding of Emeh (2024) who found that green training and development have an insignificant effect on employee performance in Manufacturing firms in South Nigeria.

On the other hand, green recruitment and selection showed a positive but insignificant impact on the performance of selected manufacturing firms in North-Central Nigeria, suggesting that while eco-friendly hiring practices align with sustainable goals, their direct influence on immediate performance outcomes may be limited in this context. This finding agrees with the findings of Saputra et al. (2024) whose finding revealed that green recruitment and selection have insignificant and positive effect on organisational performance in Indonesia, but the finding however, disagreed with that of Evina et al (2024) who found that Green Recruitment has a significant positive effect on Performance in Yogyakarta, Indonesia.

## CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the first findings indicate that green training and development significantly enhance the performance of selected manufacturing firms in North-Central Nigeria. This positive relationship suggests that investments in environmentally focused training programs and employee development initiatives are instrumental in driving organizational performance.

The finding that green recruitment and selection positively but insignificantly affected the performance of selected manufacturing firms in North-Central Nigeria suggests that while environmentally conscious hiring practices contribute to sustainability goals, their direct impact on performance may not yet be substantial. This could indicate that the benefits of green recruitment may emerge over a longer term or require stronger integration with other green practices to drive measurable improvements in firm performance.

1. Manufacturing firms should increase investment in green training programs to ensure that employees at all levels are equipped with knowledge on sustainable practices, energy efficiency, waste reduction, and resource conservation, which can lead to improved operational performance.
2. Firms should refine their recruitment and selection strategies to prioritize candidates with strong commitments to sustainability and environmental practices, ensuring these attributes are given greater weight in the selection process. This can help align the workforce with the company's green objectives and may eventually lead to a more noticeable impact on performance.

## References

- Adeleke, A., Adeola, O., & Olamide, S. (2022). Barriers to green human resource management practices in Nigeria. *Journal of Environmental Management*, 285, 112105.
- Adeyemi, A. Z., Olasupo, S. F., Johnson, A. A., Adegun, E. A., & Sajuyigbe, A. S. (2024). Impact of Green Finance on Environmental Performance with the Mediation of Financial Innovation: Evidence from Nigerian Bank.
- Akinlo, A. E. (2019). Environmental challenges in Nigeria's manufacturing sector. *Environmental Policy and Management*, 41(2), 119-134.
- Alqudah, M. K., & Yusof, Y. (2024). Improving Environmental Performance Through Innovative Academic Citizenship Behaviour: Green Training and Development, Green Recruitment And Selection As Antecedents In Jordanian Government University. *Economics*.
- Arya, V. & Rana, G. (2024). Green human resource management and environmental performance: mediating role of green innovation—a study from an emerging country. *foresight*, 26(1), 35-58.
- Azevedo, S. G., Carvalho, H., & Pereira, J. (2020). Environmental Management and Corporate Performance: A Study in the Portuguese Context. *Journal of Cleaner Production*, 276, 124-134.
- Bina, O. (2013). The green economy and sustainable development: an uneasy balance? *Environment and Planning C: Government and Policy*, 31(6), 1023-1047.
- Death, C. (2015). Four discourses of the green economy in the global South. *Third World Quarterly*, 36(12), 2207-2224.
- Diri, A. (2021). Green recruitment practices: Ensuring environmental consciousness in the hiring process. *Journal of Sustainable HRM*, 10(1), 45-60.
- Emeh, N. C. (2024). Green Administrative Skill Management and Employee Performance In Manufacturing Firm South Nigeria. *Top American Journal of Marketing and Management*, 9(3), 1-17.

- Evina, E., Saputra, A. R. P., & Nuvriasari, A. (2024). Green Training, Green Recruitment, and Green Transformational Leadership on Employee Performance in Retail Store. *International Journal of Management, Knowledge and Learning*, 13.
- GRI. (2020). *Global Reporting Initiative Standards*. Retrieved from [https://www.globalreporting.org] (https://www.globalreporting.org)
- Hickel, J. (2019). The contradiction of the sustainable development goals: Growth versus ecology on a finite planet. *Sustainable Development*, 27(5), 873-884.
- Hsu, A., Zomer, A., & Emerson, J. (2022). 2022 Environmental Performance Index. Yale Center for Environmental Law & Policy. Retrieved from https://epi.yale.edu/
- Islam, M. A., Jantan, M. D., & Nor, M. K. (2022). Green Human Resource Management (GHRM): An exploration of practices and impact on organizational performance. *International Journal of Sustainable Development & World Ecology*, 29(3), 320-330.
- Jabbour, C. J. C., Teixeira, A. A., & Jabbour, A. B. L. S. (2019). Green Human Resource Management, Green Supply Chain Management, and Green Innovation: Links and Effects on Organizational Performance. *Business Strategy and the Environment*, 28(1), 33-50.
- Jabbour, C. J.C., & Santos, F. C.A. (2018). The central role of Human Resource Management in the search for Sustainable Organizations. *The International Journal of Human Resource Management*, 19(12), 2133-2154.
- Jiang, H., & Bansal, P. (2023). Green Compensation and Reward: Linking Environmental Performance to Employee Incentives. *Journal of Business Ethics*, 181(2), 345-362.
- Jiang, K., Lepak, D.P., Han, K., Hong, Y., Kim, A., & Winkler, A.-L. (2020) Clarifying the construct of human resource systems: Relating human resource management to employee performance. *Hum. Resour. Manag. Rev.* 22, 73–85.
- Johnson, P., & Brown, L. (2020). *Performance management: Strategies for improving productivity*. Sage Publications.
- Kaplan, R. S., & Norton, D. P. (1996). *The Balanced Scorecard: Translating strategy into action*. Harvard Business Review Press.
- Lee, R. (2022). *Organizational behavior and performance: Contemporary approaches*. Oxford University Press.
- Loiseau, E., Saikku, L., Antikainen, R., Droste, N., Hansjürgens, B., Pitkänen, K., & Thomsen, M. (2016). Green economy and related concepts: An overview. *Journal of Cleaner Production*, 139, 361-371.
- Ogunyemi, M. O., Omole, K., & Olufemi, A. (2022). Challenges and prospects of green human resource management in developing economies: Evidence from Nigeria. *Sustainability*, 14(10), 6123.
- Ogunyemi, O., & Ogundele, O. (2018). Green manufacturing practices in Nigeria: Opportunities and challenges. *African Journal of Environmental Science and Technology*, 12(3), 145-159.
- Ojo, O. (2019). The role of Green Human Resources Management in achieving sustainability in Nigeria. *Journal of Human Resources Management Research*, 22(4), 102-118.
- Olubiyi, T., & Ojo, A. (2022). Challenges and Opportunities for Green HRM in Emerging Economies: Evidence from Abuja. *African Journal of Business Management*, 16(1), 12-21.
- Rana, G. & Arya, V. (2024). Green human resource management and environmental performance: mediating role of green training and development – a study from an emerging country, *Foresight*, 26(1), 35-58. https://doi.org/10.1108/FS-04-2021-0094
- Rao, P. S., & Pearce, J. A. (2016). Green HRM: A Global Perspective. *International Journal of Human Resource Management*, 27(1), 26-42.
- Renwick, D. W., Redman, T., & Maguire, S. (2016). Green Human Resource Management: A review and research agenda. *International Journal of Management Reviews*, 15(1), 1-14.
- Renwick, D. W., Redman, T., & Maguire, S. (2018). Green training and development management: A review and research agenda. *International journal of management reviews*, 15(1), 1-14.
- Rutherford, R. (2021). Green Training and Development: Equipping Employees for Environmentally Sustainable Practices. *Journal of Environmental Management and Education*, 15(2), 112-127.
- Saputra, A., Apriyan, M., & Subarjo, S. (2024). The effect of green recruitment and selection, green training, and green intellectual capital on employee performance in Indonesia. *Management Science Letters*, 15(1), 1-10.

- Sharma, K. (2018). Green Human Resource Management: Strategies for Developing Environmentally Sensitive Employees. Springer.
- Smith, J., & Gupta, K. (2021). Measuring performance in dynamic work environments. *Journal of Business and Management Studies*, 45(3), 215-228.
- Spash, C. L. (2012). Green economy, red herring. *Environmental Values*, 21(2), 95-99.
- United Nations Environment Programme. (2011). Towards a green economy: Pathways to sustainable development and poverty eradication. UNEP. [https://sustainabledevelopment.un.org/content/documents/126GER\\_synthesis\\_en.pdf](https://sustainabledevelopment.un.org/content/documents/126GER_synthesis_en.pdf)
- United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. United Nations.

### Research questionnaire

**Key: SA= Strongly Agree, A= Agree, U= Undecided, D= Disagree, SD= Strongly Disagree**

| S/N                                    | Statement                                                                                                                                               | SA<br>5 | A<br>4 | U<br>3 | D<br>2 | SD<br>1 |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|--------|--------|---------|
| <b>Green Training and Development</b>  |                                                                                                                                                         |         |        |        |        |         |
| GT&D1                                  | Participation in green training programs positively impacts both my personal and professional commitment to environmental stewardship                   |         |        |        |        |         |
| GT&D2                                  | I feel empowered to implement environmentally friendly practices in my day-to-day work responsibilities due to the knowledge gained from green training |         |        |        |        |         |
| GT&D3                                  | Investing in green training and development is essential for improving our overall environmental performance                                            |         |        |        |        |         |
| GT&D4                                  | The green training initiatives offered by our organization have positively influenced my understanding of environmental issues                          |         |        |        |        |         |
| GT&D5                                  | I have noticed a positive change in the organization's environmental performance since participating in green training activities                       |         |        |        |        |         |
| <b>Green Recruitment and Selection</b> |                                                                                                                                                         |         |        |        |        |         |
| GR&S1                                  | The environmental values and initiatives of potential candidates are adequately assessed during the recruitment process                                 |         |        |        |        |         |
| GR&S2                                  | Recruitment process effectively identifies candidates who are aligned with our organization's commitment to environmental sustainability                |         |        |        |        |         |
| GR&S3                                  | The recruitment and selection procedures prioritize candidates with a demonstrated interest or experience in environmental conservation                 |         |        |        |        |         |
| GR&S4                                  | The recruitment and selection process adequately considers the potential environmental impact of the roles being filled                                 |         |        |        |        |         |
| GR&S5                                  | The recruitment and selection practices of our organization contribute to building a workforce that is committed to environmental stewardship           |         |        |        |        |         |
| <b>Performance</b>                     |                                                                                                                                                         |         |        |        |        |         |
| PERF1                                  | I consistently meet the goals and targets set for my role                                                                                               |         |        |        |        |         |
| PERF2                                  | I believe my performance contributes positively to the success of the team/department/organization                                                      |         |        |        |        |         |
| PERF3                                  | I take initiative in identifying and implementing solutions to improve work processes                                                                   |         |        |        |        |         |
| PERF4                                  | I receive constructive feedback on my performance that helps me grow professionally                                                                     |         |        |        |        |         |
| PERF5                                  | I effectively prioritize tasks to ensure timely completion of assignments                                                                               |         |        |        |        |         |

Source: Rana and Arya, (2024); Evina et al., (2024); Das and Dash (2024); Nazneen et al., (2024).