

Innovations

Green Human Resources Practices and Green Work Engagement of Manufacturing Firms in South-East Nigeria

Chukwu Benjamin Ibe¹, Oghenerhiakporohwo Deman Moroh¹

¹Department of Management, Faculty of Business Administration, University of Nigeria Enugu Campus

Abstract: *This study aims to examine the effect of green HRM practices on green work engagement (GWE) of manufacturing firms in South East Nigeria. This study adopted a descriptive survey design to enable the researchers to establish the relationship between variables. The quantitative analysis of the study was conducted using descriptive and inferential statistics. Findings showed that green recruitment practices have a significant positive effect on employee commitment in manufacturing firms across Southeast Nigeria. Green training practices play an important role in affecting employee emotional involvement, emphasizing the crucial integration of sustainability principles into HR and training strategies. The research findings also highlight the potential for green reward practices to drive positive behavioral changes among employees. The study highlights the transformative potential of incorporating sustainability into HR practices, enabling firms to not only attract and retain environmentally conscious talent but also drive positive change towards a more sustainable future.*

Keywords: *Green Human Resource Practices, Green Work Engagement, Green Recruitment Practices, Green Training Practices, Employee Emotional Involvement, Green Reward Practices*

Introduction

Green Human Resource Management (Green HRM) is a concept that is steadily gaining importance in organizations worldwide, particularly in the face of increasing environmental challenges and the need for sustainable business practices. As Yong, Yussliza, Ramayah, and Chiappetta (2020) point out, businesses are no longer solely focused on efficiency and effectiveness; they are also increasingly concerned with environmental protection. This shift has led to the adoption of environmental and human resource practices by manufacturing firms, which are seen as valuable contributions to the green agenda (Chacko & Conway, 2019). Global issues such as climate change, pollution, deforestation, wildfires, and rising temperatures necessitate

immediate action to address these urgent environmental crises (Naz et al., 2020). In response to these challenges, policymakers, governments, and marketers are recommending practices to be integrated into business operations to reduce carbon footprints, leading to the emergence of green businesses. Green businesses are now considered a global trend due to their ability to enhance competitive advantage, brand image, increase margins, reduce operational costs, and provide long-term benefits such as reduced dependence on virgin materials (Kane, 2018). The incorporation of sustainable environmental practices has become critical for organizations looking to maintain a competitive edge and positive image (Paillé et al., 2014; Tang et al., 2018). This shift towards sustainability has influenced various aspects of businesses, including marketing, operations management, accounting, and management (Ziegler & Seijas, 2019).

Human Resource Management (HRM) is a key division within organizations that is responsible for managing human resources, which are considered essential assets. Consequently, HRM has also been impacted by the trend towards sustainability and green practices (Chen, 2019). As organizations strive to adopt green management methods, HRM managers are required to restructure their goals and practices to align with environmentally friendly initiatives, which can lead to improvements in basic HRM methods (Alshaabani & Rudnak, 2020; Ángel Del Brío et al., 2008). Research by Pham et al. (2019) suggests that HRM can influence employee behaviors related to sustainability, including attitudes, motivation, and awareness, thereby facilitating the development of effective eco-friendly practices (Renwick et al., 2018).

Green HRM practices play a crucial role in promoting environmental management within organizations through functions such as green recruitment, green rewards, green performance appraisal, and green training (Dumont et al., 2017; Renwick et al., 2018; Tang et al., 2018). Studies have shown that employee involvement in green practices is essential for environmental management initiatives and can contribute to improved competitive advantage and environmental performance (Chacko & Conway, 2019; Kim et al., 2019). Green HRM is believed to influence work engagement related to environmental aspects, focusing on enhancing workers' abilities, information, and behaviors to achieve environmental objectives (Chaudhary, 2020). By fostering collaboration between operational employees and leaders on environmental procedures, organizations can reduce waste, save energy, and resources, thereby promoting sustainability (Chung, 2020).

The concept of Green Work Engagement (GWE) is gaining attention as a measure of employees' energy, willingness, and absorption in green work-related tasks (Aboramadan, 2020). Green HRM practices are instrumental in

fostering GWE, leading to improved work efficiency, increased employee engagement, and reduced costs (Ranasinghe & Welmilla, 2020). While there is limited research on the relationship between green HRM practices and GWE, studies have shown that green HRM can predict distinct green behaviors among employees, including environment-friendly actions, green official behavior, and organizational citizenship behavior (Opatha et al., 2021; Kim et al., 2019). Therefore, exploring the impact of green HRM practices on GWE is crucial for organizations seeking to enhance employee engagement and environmental performance.

Objectives of the Study

The broad objective of the study is to examine the effect of green human resource practices on green work engagement of manufacturing firms in South East Nigeria. However, the specific objectives of the study are to:

- i. determine the effect of green recruitment practices on employee commitment of manufacturing firms in South East Nigeria.
- ii. ascertain the extent to which green training practices affect employee emotional involvement of manufacturing firms in South East Nigeria.
- iii. establish the effect of green reward practices on employee dedication of manufacturing firms in South East Nigeria.

Review of Related Literature

Conceptual Review

The concept of 'Green HRM' was introduced in 1996 by Wehrmeyer in his book 'Greening People', emphasizing the importance of sustainability through human resources. Green HRM involves implementing policies to promote environmentally sustainable practices, educating employees on the significance of these practices, and rewarding those who adopt green initiatives. It integrates environmental considerations into the human resource management processes of organizations, focusing on sustainability, environmentalism, non-violence, and social justice. Various researchers have provided insights into the definition and scope of Green HRM. Rana and Jain (2019) view GHRM as an employment model designed to retain and develop talent for future business initiatives. Prasad (2020) underscores the contribution of HR policies to the broader corporate environmental agenda, while Opatha (2021) and others highlight the role of GHRM in structuring policies and practices for the benefit of individuals, society, the environment, and businesses.

GHRM practices aim to reduce employees' carbon footprints through initiatives such as flexible work schedules, telecommuting, and energy-efficient office spaces. It is crucial in creating a green workforce that understands and practices environmentally friendly behaviors throughout the HRM process.

Green HRM aligns HR policies and practices, such as recruitment, training, compensation, and employee relations, with environmental objectives. Green HRM plays a significant role in promoting environmental sustainability within organizations. It involves collaborating with top management to implement eco-friendly processes and practices, reflecting the organization's commitment to environmental protection. Studies have shown the positive effect of GHRM on innovation in production and the importance of hiring individuals with environmental values and providing green training to enhance green skills.

Green human resources management practices are related to creation of green workforce which are able to better understand and can implement green culture in the organization. This green culture exists in at all levels of HRM practices from recruiting, training, and learning. The HRM department is very vital for developing and sustaining green culture within the organization (Altinay et al., 2019). Human resource functions can be used to implement green practices within the organization and are used to achieve organizational objectives regarding going green. Chacko, and Conway (2019) identified that HRM practices ranging from selection, compensation, performance management and employee involvement are crucial factors for organizational success.

HRM is an important variable for organizational change and for strategic issue. It is important to highlight that HRM practices, sustainability, and environmental issues are growing and developing rapidly, and is not discussed in detail in the body of writings. Chung (2020) identified that HR practices need to be aligned with environmental and sustainability issues in order to achieve organizational goals and to implement strategy. Chacko, and Conway (2019) concluded that HRM practices such as recruiting, selection, training, motivation, and compensation are important elements in implementing green HRM. In order to achieve green performance, HRM must ensure green process in order to select green employee and deliver green performance (Opatha & Arulrajah, 2021). In this section we will describe the HRM activities with reference to environmental issues and sustainability.

Green recruitment is a crucial challenge for HR in attracting top talent due to the rising environmental awareness. Companies with a green reputation attract employees who align with their values, especially the younger generation. Green HRM practices are being adopted to build this image. Green recruitment involves hiring individuals with environmental knowledge and skills, focusing on three categories: green employer branding, candidates' green awareness, and green measures to attract applicants. It ensures that new employees support effective environmental management within the organization.

Studies show that green recruitment positively impacts organizational agility, leading to faster decision-making and better outcomes (Alavi & Aghakhani, 2021). Organizations should consider implementing green recruitment processes to enhance performance and reduce costs. Green recruitment aligns with environmental policies and is more cost-effective than providing environmental training to existing employees. It is essential for organizations to adopt optimal green recruitment practices to attract environmentally-conscious employees. The recruitment and selection process involves screening candidates based on job specifications and conducting evaluations to ensure the right fit for the job. Negligent hiring poses legal risks, emphasizing the importance of a robust selection system to select suitable candidates (Chacko & Conway, 2020).

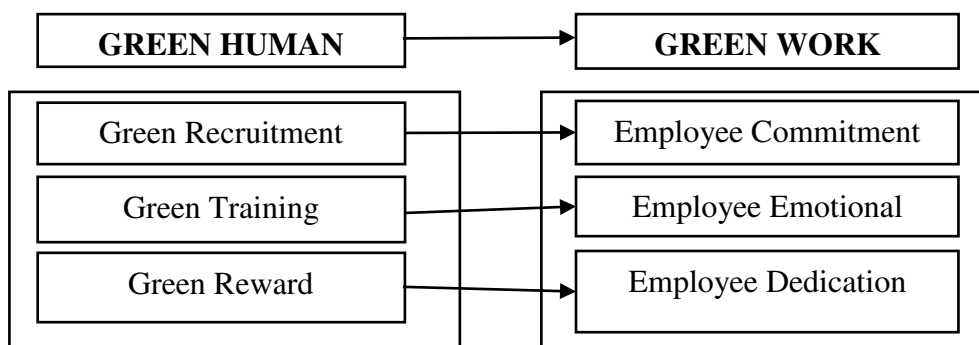
Green training is essential for organizations to develop employees' skills, knowledge, and attitudes related to environmental management (Ari et al., 2020). It aims to prevent the deterioration of environmental management-related knowledge and skills by educating employees on the value of environmental management and training them in energy conservation and waste reduction methods (Ari et al., 2020). Green training also plays a crucial role in changing employees' attitudes and behaviors towards sustainability (Rana, 2019), fostering green behavior among employees (Ari et al., 2020), and preparing them for workplace challenges (Aktar & Islam, 2019).

Green training focuses on waste reduction, resource efficiency, energy conservation, and environmental preservation. In Nigeria, it helps develop employees' green skills for environmental sustainability (Fawehinmi, 2020). Seminars and workshops need provide knowledge and skills for effective environmental management, fostering pro-environmental behaviors (Afsar & Umrani, 2020; Darban et al., 2022). Training needs prioritize energy, safety, recycling, and waste management education (Aktar, 2019), ensuring new employees are committed to environmental protection through comprehensive induction programs.

Rewards are essential in attracting, retaining, and motivating employees to achieve optimal performance and organizational goals (Faisal & Naushad, 2020). They serve as tools to align corporate interests with individual interests and inspire employees to focus on key job aspects (Yusoff et al, 2020). Green job performance appraisals can lead to the implementation of green rewards and pensions, fostering green performance management (Aktar & Islam, 2019). Green rewards incentivize employees to engage in environmentally friendly behaviors, enhancing environmental management activities (Jyoti, 2019). Studies have shown that monetary and nonmonetary rewards play a significant role in supporting environmental management efforts. Green rewards

positively impact employee engagement and promote eco-friendly initiatives (Renwick et al., 2013). Implementing green reward systems in HRM processes can cultivate preferred green behaviors and increase employee engagement (Ahmad, 2015). Reward management, including green rewards, is crucial for motivating employees and promoting environmental sustainability in organizations (Ramus, 2002). Customized reward packages, including monetary, nonmonetary, and recognition-based rewards, can incentivize green skill acquisition and achievements by employees (Prasad, 2020). Incorporating green elements into compensation programs can foster a green culture and encourage employees to contribute to environmental management practices.

Figure 1 Conceptual Framework



Source: Researcher, 2024

Green Recruitment and Employee Commitment

Green recruitment is a dynamic method organizations adopt to utilize their environmental consciousness as a fundamental criterion for hiring. It is the process of getting potential candidates and makes the importance of the environment as a criterion in the recruitment process. It involves using a paperless approach to minimize the potential ecological impact. Online platforms such as email, online job application forms, and a global talent pool are utilized to solicit applications. The GR process involves conducting video or telephone interviews to mitigate any potential ecological impact associated with travel. In contrast to conventional media such as brochures or newspaper advertising, online recruitment enables recruiters to disseminate more information simultaneously, thereby reducing the adverse ecological impact. Jayabalan (2020) asserted that GR advocates for the adoption of a recruitment strategy that prioritizes individuals who exhibit a strong commitment for working in an environmentally conscious organization that is committed to upholding ecological sustainability. To facilitate the recruitment of individuals who align with an organization’s sustainability program, the company must develop job descriptions that are in line with the program’s objectives. The

company's website and other research tools that are accessible to candidates should provide a clear outline of their environmental sustainability initiatives, as suggested by Genty, (2021). Organizations can utilize various strategies to enhance their GHRM practices during recruitment processes. According to Ari et al, (2020) recruiters can develop a workplace training program for newly hired employees that emphasize disseminating information regarding the sustainable protection practices, priorities, and ecological objectives of the organization. Green recruitment is influenced by environmental criteria, company commitment to the environment during the recruitment process; in job advertisements include elements that contain knowledge about the environment, and looking for prospective candidates who has competence in environmental management.

Green Training and Employee Emotional Involvement

Green HRM Training helps to improving an organization's employee engagement. Continual improvement can be achieved through continuous green training practices and develop employee engagement (Kiran, 2023). Green Training can be used to prepare employee emotionally to meet some new challenges and organizational change to upgrade employee engagement to process and regenerate their skills and motivate them to performing well in their organization and create effective environmental awareness. Continual green training practices can improve them employee to get involve in various green activities, which developing the employee engagement system of the organization. Green training is extremely essential for employee motivation to participating in green initiatives (Kiran, 2023). Green training used to prepare employees to face the challenges and changes of the workplace and motivate them to employee engagement. Continuous improvement in continuous green training can achieve through green practicing and in alignment with environmental sustainability. To engage employees for motivation there is a highly need for green training (Cheng, Yang & Shew, 2020). It is very important for the employees so that training and development programmes based on green practices help employees to understand the consideration of health and safety issues, increase employee involvement and increase productivity of that organization (Mkheimer & Milae, 2020). Green practicing programmes for those employees who are newly hiring in the organization can play an essential part in the green training and development process and progress employee engagement (Mkheimer & Milae, 2020). Workers that are trained have the chance to feel personally connected to the job and the workplace can have a positive influence on retention and productivity. It would be an initiative step to auditing the existing training system to establish a green training system and developing the employee engagement system in the organization. Green Training helps to prepare employees to upgrade and refine their employee skills and inspire to execute well (Jayabalan, 2020).

Green Reward and Employee Dedication

When the area of green job performance shows the particular importance or attention of an employee, it rewarded that employee with some green reward and pay, which helps to established green performance. Green pay and reward conducted to the excessive level of job satisfaction and dedication. Green pay is outstandingly intensifying the green performance. Employees have been motivated through these symbolic impacts of green pay and reward (Renwick et al., 2013). Green Pay and rewards encourage and motivate employees to follow more HRM practices and therefore it creates a positive impact on employee engagement system in the organization. Green pay and reward system can be satisfactory used to persuade employees to progress their green performance so that both organization and employees can get better improvement from this. Green pay and reward system call attention to employees for green job performance (Mandip, 2019). Both green rewards and companion plays a noteworthy role on employee engagement system (Retwick et al., 2013). Afsar and Umrani, 2020 suggested that organizational green reward system could be systematically motivating employee engagement, so that both the organization and employees can be benefited. With good reward packages make employees are more dedicated and likely to stay with the company for the long term, reducing turnover and ensuring the retention of valuable talent. Their dedication also helps foster a positive company culture, attracting top talent and enhancing the company's reputation in the industry. Employees with a strong dedication to work are characterized with passion, adaptation, motivation, helpfulness, goal-oriented and proactive.

Methodology

This study adopted a descriptive survey design to enable the researchers to establish the relationship between variables. The data for this study was collected from primary. This involved the use of well-structured questionnaires. The focused on manufacturing firms in South-East region of Nigeria, specifically in Enugu State, Abia State, Imo State, Anambra State and Ebonyi state. The populations of the study was 3,180 employees of selected manufacturing firms in the five States. The sample is 355 employees of selected manufacturing firms in the states. The sample size was determined using Slovin's 1960 formula..

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{3180}{1+N(e)^2}$$

$$1 + 3180(0.05)^2$$

$$n = \frac{3180}{1 + 3180 (0.0025)}$$

$$n = \frac{3180}{1 + 7.95}$$

$$n = \frac{3180}{8.95}$$

$$n = 355.3073$$

$$n = 355$$

A multi-stage sampling technique was used to choose the samples in stages. The researcher divided the employees of the manufacturing firms in the selected states in the South East Nigeria into groups based on their activities in the first stage. The researcher classified the respondents in the second stage based on common features at the time of the study. The survey in the selected states was carried out in the third stage, which comprised choosing samples based on cadre, specialization, department and understanding of the subject matter among others. Attention was on first line and middle level managers. The questionnaire was validated using content validity.

The study adopted Cronbach alpha test in assessing the reliability of the instrument. Generally, reliability coefficients of 0.70 or more are considered high (Creswell, 2003), therefore, in this study items with Cronbach alpha coefficients of 0.70 and above were considered suitable for the scale.

Table 1 Reliability Statistics of Green Human Resource Management

S/N	Constructs	Cronbach's Alpha	N of Items
1	Green Recruitment	.725	4
2	Green Training	.738	4
3	Green Selection	.705	3
4	Green Reward	.790	4
5	Green Development	.709	3
6	Green Performance	.825	4

Source: SPSS Version 25

The Table 1 shows the Cronbach's Alpha results ranging from 0.705 to 0.825. This means all the items of the constructs of Green Human Resource Management have internal consistency.

Table 2 Reliability Statistics of Green Work Engagement

S/N	Constructs	Cronbach's Alpha	N of Items
1	Employee Commitment	.840	3
2	Employee Emotional Involvement	.815	3
3	Employee Dedication	.816	3
4	Employee Awareness	.880	3
5	Employee Vigor	.922	3
6	Employee Absorption	.910	3

Source: SPSS Version 25, 2023

Table 2 shows the Cronbach's Alpha results ranging from 0.815 to 922. This shows a good level of internal consistency among the items of the constructs that assess Green Work Engagement. In the quantitative analysis of the study, both descriptive and inferential statistics was used. Descriptive statistics such as mean and standard deviation was employed to analyze the responses obtained from the survey instrument. Furthermore, the study employed regression analysis to enable drawing of inferences.

Data Analyses and Results

355 copies of questionnaire was distributed, but only 344 copies of questionnaire (96.91%) were returned. Thus, subsequent analyses was based on the data from 344 copies of questionnaire returned.

Table 3 Distribution of Respondents

Category	Response	Frequency	Percent
Gender	Male	196	57.0
	Female	148	43.0
Age Distribution	below 20 years	51	14.8
	20 – 29 years	97	28.2
	30 – 39 years	74	21.5
	40 – 49 years	67	19.5
	50 -59 years	33	9.6
	60 years and above	22	6.4
Marital Status	Single	104	30.2
	Married	134	39.0
	Widow(er)	57	16.6
	Divorced	49	14.2
Educational	FSLC	15	4.4

Qualification			
	SSCE/GCE	29	8.4
	NCE	53	15.4
	B.Sc	122	35.5
	MBA	71	20.6
	M.Sc / Ph.D	54	15.7
Position	Junior Staff	213	61.9
	Mgt/Senior Staff	131	38.1

Source: Survey Data, 2024.

Table 3 presents the gender distribution of respondents. It shows that 196 respondents (57.0%) were male, while 148 respondents (43.0%) were female. Majority of the respondents were male.

Table 3 illustrates that 51 respondents (14.8%) fall below the age of 20 years; 97 respondents (28.2%) were within the age range of 20- 29 years; 74 respondents (21.5%) were within the age range of 30- 39 years; 67 respondents (19.5%) were within the age range of 40-49 years; 33 respondents (9.6%) were within the age range of 50-59 years; and 22 respondents (6.4%) were 60 years and above. The majority of respondents fall within the age range of 20 to 29 years

Table 3 shows marital status among respondents. It reveals that 104 respondents (30.2%) were single; 134 respondents (39.0%) were married; 57 respondents (16.6%) were widow(er) and 49 respondents (14.2%) were divorced. It means that majority of the respondents were married.

Table 3 means the educational backgrounds of respondents. It shows that 15 respondents (4.4%) obtained First School Leaving Certificate (FSLC); 29 respondents (8.4%) obtained Senior Secondary Certificate Examination/General Certificate of Education (SSCE/GCE); 53 respondents (15.4%) obtained National Certificate in Education (NCE); 122 respondents (35.5%) obtained Bachelor of Science (B.Sc); 71 respondents (20.6%) obtained Master of Business Administration (MBA); and 54 respondents (15.7%) obtained either a Master of Science (M.Sc) or Doctor of Philosophy (Ph.D) degree. The findings indicate that a substantial proportion of respondents have a sufficient level of educational background conducive to understanding the subject matter.

Table 3 delineates the positions held by respondents within their respective firms. The majority of respondents, comprising 213 individuals (61.9%), occupy positions as Junior Staffs, while 131 individuals (38.1%) hold positions

categorized as Management/Senior Staffs. This shows that majority of respondents in the manufacturing firms were Junior Staffs.

Table 4 Regression on Green recruitment Practices and Employee Commitment

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.515810	0.093685	5.505781	0.0000
GRP	0.787655	0.032503	24.23355	0.0000
R-squared	0.631967	Mean dependent var		2.526163
Adjusted R-squared	0.630891	S.D. dependent var		1.328938
S.E. of regression	0.807388	Akaike info criterion		2.415771
Sum squared resid	222.9412	Schwarz criterion		2.438101
Log likelihood	-413.5127	Hannan-Quinn criter.		2.424665
F-statistic	587.2651	Durbin-Watson stat		1.550538
Prob(F-statistic)	0.000000			

Source: Author's Computation Using E-views

Model Line: $EMC = \beta_0 + \beta_1 GRP + \varepsilon$

Regression Line: $EMC = 0.515810 + 0.787655 GRP$

Where; *EMC* = Employee commitment, *GRP* = Green recruitment practices and ε = Stochastic error term.

Table 4 shows the results on the effect of green recruitment practices on employee commitment. The R-squared value of 0.631967 shows that green recruitment practices explains roughly 63.20% of the variance in employee commitment. This implies that the predictors and the result have a rather strong relationship. The remaining 36.8% unaccounted variation shows that other variables are also responsible for the variance in employee commitment. A slightly more cautious estimate of the model's explanatory power is given by the adjusted R-squared value of 0.630891, which accounts for the sample size, providing a slightly adjusted measure of the model's explanatory power. With a p-value of 0.01 and an F-statistic of 587.2651, the whole regression model is statistically significant, indicating that there is little possibility that the association between the green recruitment practices and employee commitment is the result of chance.

The result shows that employee commitment increases by 0.515810 for every unit increase in the constant term, assuming all other parameters stay constant. This means that employee commitment is still positively affected even when some variables are ignored. Green recruitment practices have a coefficient of 0.787655. This shows that for every unit increase in the adoption of green

recruitment practices, there is a corresponding rise in employee commitment (given $\beta = 0.787655$; p-value < 0.01). This shows that the significant effect of green recruitment practices on employee commitment are unlikely to have occurred by chance.

The Akaike Information Criterion (AIC) is a statistical measure used for model selection among a set of candidate models. A lower AIC value means a better fit of the model to the data. In this case, the AIC value is reported as 2.415771, implying that the model provides a good balance between model complexity and goodness of fit. The Schwarz Criterion, also known as the Bayesian Information Criterion (BIC), is another measure for model selection that penalizes model complexity more heavily than AIC. With a reported value of 2.438101, it means a slightly higher level of complexity compared to the AIC-selected model. Durbin-Watson statistic is 1.550538, which measures the presence of autocorrelation in the residuals. A value around 2 shows no significant autocorrelation. Thus, there is no problem of autocorrelation in the results.

Table 5 Regression on Green Training Practices and Employee emotional Involvement

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.613772	0.097542	6.292403	0.0000
GTP	0.767755	0.035890	21.39219	0.0000
R-squared	0.572300	Mean dependent var		2.450581
Adjusted R-squared	0.571049	S.D. dependent var		1.310598
S.E. of regression	0.858367	Akaike info criterion		2.538228
Sum squared resid	251.9837	Schwarz criterion		2.560557
Log likelihood	-434.5752	Hannan-Quinn criter.		2.547121
F-statistic	457.6257	Durbin-Watson stat		1.521485
Prob(F-statistic)	0.000000			

Source: Author’s Computation Using E-views

Model Line: $EEI = \beta_0 + \beta_1 GTP + \varepsilon$

Regression Line: $EEI = 0.613772 + 0.767755 GRP$

Where; EEI = Employee emotional involvement, GRP = Greentraining practices and ε = Stochastic error term.

This regression analysis in Table 5 shows the effect of green training practices on employee emotional involvement. The result shows the R-squared value of 0.572300, and this implies that green training practices explain about 57.23% of the variance in employee emotional involvement. The remaining 42.77%

unaccounted variation shows that other variables are also responsible for the variance in employee emotional involvement. The adjusted R-squared value of 0.571049 provides a little more conservative assessment of the explanatory power of the model. Given the p-value less 0.01 and the F-statistic of 457.6257, it is likely that the association between green training practices and employee emotional involvement is not by chance. This shows that the regression model as a whole is statistically significant.

The constant term coefficient (C) of 0.613772 means that for every unit increase in the constant term, there is a 0.613772 rise in employee emotional involvement while all other factors are held constant. Comparably, the coefficient for green training practices ($\beta = 0.767755$; p-value < 0.01), means that, holding all other factors equal, putting these practices into effect is associated with an increase in employee emotional involvement of 0.767755 for every unit increase in the adoption of green training practices. Due to the low p-values (<0.01), both coefficients show strong statistical significance. As such, it is unlikely that the consistent term, green training practices, and employee emotional involvement developed by coincidence.

The Akaike information criterion (AIC) and Schwarz criterion (also known as the Bayesian information criterion or BIC) are measures used to evaluate the quality of statistical models. Lower values for these criteria generally indicate a better-fitting model. In this case, with AIC at 2.538228 and Schwarz criterion at 2.560557, both values are relatively low, implying that the model provides a good fit to the data. The Durbin-Watson statistic is 1.521485, which measures the presence of autocorrelation in the residuals. The Durbin-Watson statistic result means that there is no issue of autocorrelation.

Table 6Regression on Green Reward Practices and Employee Dedication

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.505262	0.082535	6.121770	0.0000
GPR	0.822866	0.032130	25.61080	0.0000
R-squared	0.657285	Mean dependent var		2.366279
Adjusted R-squared	0.656283	S.D. dependent var		1.238179
S.E. of regression	0.725912	Akaike info criterion		2.203021
Sum squared resid	180.2164	Schwarz criterion		2.225351
Log likelihood	-376.9197	Hannan-Quinn criter.		2.211915
F-statistic	655.9133	Durbin-Watson stat		1.527195
Prob(F-statistic)	0.000000			

Source: Author's Computation Using E-views

Model Line: $EMD = \beta_0 + \beta_1 GPR + \varepsilon$

Regression Line: $EMD = 0.505262 + 0.822866 GPR$

Where; *EMD* = Employee dedication, *GPR* = Green reward practices and ε = Stochastic error term.

Table 6 explored the effect of green reward practices on employee dedication. The R-squared value of 0.657285 means that approximately 65.73% of the variability in employee dedication can be explained by green reward practices in the model. The remaining 34.27% unaccounted variation shows that other variables are also responsible for the variance in employee dedication. The adjusted R-squared value of 0.656283 provides a slightly adjusted measure of the model's explanatory power. The F-statistic of 655.9133, coupled with a p-value less than 0.01, shows that the overall regression model is statistically significant, indicating that the effect of green reward practices on employee dedication is highly unlikely to be due to random chance.

The coefficient for the constant term (C) being 0.505262 shows that when all other variables remain unchanged, there is a 0.505262 increase in employee dedication for every one-unit increase in the constant term. Similarly, the coefficient for green reward practices, at 0.822866, means that with all other variables constant, implementing these practices leads to a 0.822866 increase in employee dedication ($\beta = 0.822866$; p-value < 0.01). That is, for every one-unit increase in the adoption of green reward practices. The coefficient has low p-values (<0.01), indicating high statistical significance, meaning the effect of green reward practices on employee dedication is unlikely to have occurred by chance. This shows a significant association between the implementation of green reward practices and increased employee dedication, highlighting the importance of environmentally friendly reward strategies in fostering employee commitment within firms.

The Akaike information criterion (AIC) and Schwarz criterion are measures used to assess the quality of statistical models. Lower values for these criteria generally indicate a better-fitting model. In this case, with the AIC at 2.203021 and the Schwarz criterion at 2.225351, both values are relatively low, implying that the model provides a good fit to the data. The Durbin-Watson statistic (1.527195) is used to detect the presence of autocorrelation in the residuals. It is close to 2, indicating that there is no significant autocorrelation.

Discussion of Findings

Findings showed that green recruitment practices have a significant positive effect on employee commitment in manufacturing firms in Southeast Nigeria. This agrees with finding of Diri (2021) that green recruitment significantly relates with corporate engagement. It advances the finding of Alavi and Aghakhani (2021) that there is a significant relationship green recruitment and organizational agility. The finding offers insights for both manufacturing firms

and potential employees. Green recruitment practices, which focus environmental sustainability throughout the hiring process, can attract candidates who share similar values. This alignment between personal values and manufacturing firms' culture can lead to a stronger sense of commitment among employees. Manufacturing is an industry with a substantial environmental impact. Jerónimo et al. (2019) posits that employees who are attracted to firms with strong green practices might be more likely to stay with the firm for the long term, reducing recruitment and training costs. Implementing green recruitment showcases a firm's commitment to environmental responsibility, which can enhance its employer brand. This may attract a wider pool of qualified candidates, particularly those from younger generations who prioritize sustainability. Knowing that employees work for a firm that prioritizes the environment may motivate employees and increase their engagement. Employees who feel their work aligns with a broader purpose beyond just profit might be more likely to go the extra mile and contribute positively to the firm's success.

Finding showed that green training practices have a significant positive effect on employee emotional involvement in manufacturing firms in Southeast Nigeria. This highlights a crucial link between sustainability efforts and employee engagement. This supports the finding of Nisar et al. (2021) green training is a significant predictor of pro-environmental behavior. It also aligns with the assertion of Genty (2021) that green training practices are veritable tools for promoting employees' consciousness. Green training equips employees with the knowledge and skills to contribute to a more environmentally friendly workplace. This can enhance a sense of purpose and pride, leading to a stronger emotional connection to their work. Employees may believe they are making a positive impact beyond just production. Employees might feel more empowered and self-assured to contribute to the firm's environmental goals through understanding sustainable practices and the effect that their work has on the environment. They may become more creative and driven to look for approaches to cut waste and increase efficiency as a result of their increased understanding. Employers who fund green training show their dedication to sustainability, which appeals to employees who care about the environment. Employees and the firm can develop a stronger link due to this shared value system, which encourages emotional involvement and a sense of belonging. Employees are more inclined to go beyond and above, show initiative, and positively affect the performance of the firm when they feel emotionally invested in their work. This supports the finding of Naga (2023) that there is relationship between green employee involvement and non-financial corporate performance. Increased performance, problem-solving skills, and productivity can result from this.

Finding revealed that green reward practices have a significant positive effect on employee dedication in manufacturing firms in South East Nigeria. This implies that incorporating environmentally friendly practices into the reward system can positively affect employee dedication. This supports the finding of Atinuke, and Omoseni, (2022) that reward system has a significant influence on environmental performance. This finding of Grobelna (2019) aligns with the growing recognition of the importance of sustainability and corporate social responsibility in today's business environment. By rewarding employees for their commitment to green practices, manufacturing firms not only contribute to a healthier environment but also enhance employee motivation and engagement. The research finding also highlights the potential for green reward practices to drive positive behavioral changes among employees. By linking rewards to environmentally friendly actions, firms may encourage employees to adopt more sustainable behaviors both at work and in their personal lives. This can lead to a more environmentally conscious workforce and contribute to a culture of sustainability within the manufacturing firms. This has implications for talent management and recruitment in manufacturing firms. Employees are increasingly seeking employers who are committed to sustainability and social responsibility. By implementing green reward practices, firms will attract and retain top talent who are motivated by a sense of purpose and a commitment to making a positive impact on the environment.

Conclusion

This study has shown that green recruitment practices have a significant effect on employee commitment in manufacturing firms. Aligning recruitment practices with environmental values not only enhances employee commitment but also contributes to broader sustainability goals and fosters a more socially responsible organizational culture. Firms that prioritize green recruitment practices actively engage in shaping a workforce that is dedicated to sustainability, thereby promoting a culture of environmental responsibility and ethical conduct. Such strategic alignment between recruitment processes and sustainability objectives not only strengthens employee loyalty and engagement but also reinforces the firm's commitment to environmental stewardship. Ultimately, this study emphasizes the transformative potential of incorporating sustainability principles into HR practices, enabling firms to not only attract and retain environmentally conscious talent but also drive positive change towards a more sustainable future.

Green training practices play a significant role in affecting employee emotional involvement, emphasizing the crucial integration of sustainability into HR and training strategies. Firms that offer green training opportunities can enhance employees' skills and knowledge while also nurturing a deeper emotional connection and commitment to the firm's sustainability goals. Through these initiatives, organizations empower employees to actively

participate in environmental initiatives and contribute to a culture of sustainability within the workplace. By incorporating sustainability principles into training programs, manufacturing firms do not only equip employees with the necessary tools to support green practices but also instill a sense of purpose and alignment with the firm's environmental objectives. This proactive approach to integrating sustainability into training strategies not only strengthens employee engagement and emotional involvement but also reinforces the firm's dedication to environmental responsibility. This study highlights the effect of green training practices in fostering a workforce that is emotionally invested in sustainability and committed to driving positive environmental change within manufacturing firms.

This study reveals that green reward practices have a significant effect on employee dedication in manufacturing firms across Southeast Nigeria. This shows the importance of integrating sustainability into organizational reward systems. Recognizing and rewarding employees for their contributions to environmental goals can make firms achieve a double win; boosting employee dedication and fostering a more environmentally conscious workforce. When employees are recognized and rewarded for environmentally friendly behaviours, like reducing waste or proposing sustainable production methods, it strengthens their commitment to the firm and its values. This dedication can result into improved performance, increased innovation, and a more positive work environment. Additionally, green reward systems can incentivize positive behavioural changes that directly benefit the environment.

Recommendations

The study makes the following recommendations:

- i. Firms should implement green recruitment practices to foster stronger employee commitment. These practices not only show a firm's dedication to environmental stewardship, but they also convey a progressive philosophy that appeals to staff members, increasing their commitment and loyalty. Employers may develop a motivated workforce that is in line with sustainable values by incorporating eco-conscious principles into their recruitment strategies. This will ultimately lead to organisational success.
- ii. Firms should embrace green training practices to profoundly foster employee emotional involvement. Firms should enable employees to feel emotionally invested in their work and its wider environmental impact by providing training programmes centred on sustainability and environmental stewardship. This emotional involvement creates a feeling of purpose and raises morale, which in turn drives productivity and the success of the firm.

- iii. HR managers, executives, and decision-makers should adopt green reward practices to enhance employee dedication. Firms can encourage a culture of sustainability and commitment among staff members by implementing reward programmes that identify and promote environmentally friendly actions and accomplishments. These policies not only support international environmental goals, but they also strengthen the resolve of employees to effect positive change both inside and outside the firm.

Contribution to Knowledge

This study contributes to knowledge by demonstrating the significant effect that green recruitment practices have on employee commitment. Practically speaking, manufacturing firms can utilise the research findings to guide their HR and recruitment practices. Firms should give priority to integrating green practices into their recruitment processes. Some examples of this include emphasising sustainability goals in job advertisements, including environmental questions in interviews, and providing opportunity for sustainability-related training and development.

From a practical standpoint, manufacturing firms in South East Nigeria can use this research finding to enhance their training and development strategies. They can prioritize the implementation of green training programs that educate employees about environmental sustainability, green technologies, and the firm's sustainability initiatives. Manufacturing firms can foster a more engaged and emotionally involved workforce by offering training opportunities that align with employees' values and interests, and this will ultimately lead to improved performance and organizational outcomes.

Manufacturing firms can improve their incentive and recognition programmes by utilising the research findings off this study. They might give top priority to putting in place green reward systems that encourage eco-friendly conduct and honour staff members for their sustainability initiatives. This study contributes to knowledge by establishing that firms can encourage staff to actively participate in green initiatives and show commitment to the firm's environmental goals by matching rewards with sustainability targets

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