Mediating Effect of Green Reward on Green Training and Environmental Performance in Nigerian Food and Beverages

Abstract

This study examines the mediating effect of the green reward system on the relationship between green training, and environmental performance in the Nigerian Food and Beverages Industry. A purposive random sampling technique was used to select 10 food and beverages industries located in Southwest Nigeria. a sample size of three hundred and forty-seven using a simple random sampling technique was selected for the study from the total population of Two thousand six hundred and forty-seven (2647). A structured questionnaire was adopted to collect the required data. Data were analyzed with the aid of structural equation modeling (SEM) using STATA version 15. The results show that green training ($\beta = 0.429$; $p<.05$) has a direct relationship with environmental performance. The findings of the study show that the green reward system ($\beta =.489$; $p<.05$) has a significant influence on environmental performance. Result confirms that a positive and significant relationship exists between green training and the green reward system. It was also revealed that green reward ($\beta =.334$; $p<.05$) partially mediates between green training and environmental performance. Consequently, the study recommends that the management of the food and beverages industry should continuously engage their staff members in green training. Moreover, compensation packages should be adapted to reward individual employees with a spectrum of green skills and environmental sustainability achievements. This will serve as a motivational tool that assists employees to perform environmental desire behaviors and committing to the organization.

Keywords: Environmental performance, Food and Beverage, Green reward, Green training, Nigeria

Introduction

The food and beverages industry plays a significant role in the global economy and researchers, economists, scholars and practitioners have acknowledged its contributions to the Gross Domestic Product (GDP) globally [1]. Evidently, the United Nations [2] posits that the rapid growth of foods and beverage industry has increased its contribution to the world GDP tremendously. In Nigeria, the sector has been recognized as a major employer of labour and its contribution to the Gross Domestic Product (GDP) is enormous [1]. Paradoxically, this sector is

associated with many serious environmental problems, such as land reclamation and degradation. Use of unsafe chemicals; acidic drainage from mining sites; loss of biodiversity; intensive water consumption; and pollution with poorly disposed waste [3].

In recent times, environmental protection and sustainable development have been the major concern of scholars, researchers, and environmentalists across the globe. The current operational activities of the food and beverages industry in developing nations have bedeviled the environment in the form of air pollution, water pollution, greenhouse gasoline emissions, biodiversity loss, and employees' hazard [4]. This has resulted to poor performance. Folorunso and Sajuyigbe [1] also attested that the sector has failed to meet stakeholders' expectations in terms of financial performance, and environmental performance. This scenario has forced managers to device environmental-friendly strategies to bring the sector to the limelight of environmental performance. Green training has been acknowledged by scholars as one of the most effective human resources management practices that promote superior environmental performance [5]. Stefanelli et al., [6] reported that green training empowers participants with a spectrum of environmental skills such as energy conservation and minimization of carbon footprint. Shaban [7] also aligned with previous studies that green training creates environmental recognition in personnel with the intention of converting their behavior to fit environmental attitudes at work and in their personal lifestyles. Yusoff et al., [4] argued that the environmental performance of a firm is greatly influenced by the level of green training in the workforce. Green training, therefore, instills environmental knowledge and skills in employees, which are important for achieving environmental sustainability.

The green reward system is another human resource management practice that has been acknowledged as a compensation package to reward individual employees with a spectrum of

green skills and environmental sustainability achievements. A green reward system could be in form of fringe benefits, bonuses, pay increases, recognition, promotion, and appreciation based on green efforts [6]. Evidence proves that green reward for environmental performance has a link with green training [8]. Numerous studies have been carried out on the relationship between green training, green reward, and environmental performance [9, 10, 11, 12]. However, no available studies examined the mediating effect of green reward systems on the relationship between green training, and environmental performance in Nigeria. It is on this premises that this current study intends to fill the identified gap in human resource management literature by examining the mediating effect of the green reward system on the relationship between green training, and environmental performance in the Nigerian Food and Beverages industry.

Theoretical Framework

This study is anchored on the Ability, Motivation, and Opportunity (AMO) theory, because is a prominent theory that has been linked to environmental performance [12, 13, 14]. The theory was developed by Appelbaum, Bailey, Berg, and Kalleberg [15] with the aim to choose the best HRM practices that foster environmental performance. The theory argues that employee performance is a function of an individual's ability to expose to environmental skills, motivation, and opportunities to perform. Renwick, et al, [16] evident that the first core dimension of AMO theory develops green knowledge in employees through green training. The second core dimension is to motivate employees through green rewards, while the third core dimension is to stimulate employee retention through green employee empowerment strategies. Therefore, AMO theory advocates that environmental performance may be achieved if employees acquire the right green knowledge and skills, (ability), and induced by rewards to adopt green human resource

management (motivation), and, are permitted to involve and use their green knowledge and skills in the decision-making process [15].

Green Training Practice in Human Resource Management

Green training is very important for the organization to instill in employees about friendly environmental management (reference!). Research proves that green training exposes employees to environmental aspects of management of waste, the efficiency of energy, individual safety, and recycling [8]. Zoogah [10] also viewed green training as the process of educating employees about environmental sustainability and empowering employees to solve environmental problems. Hosain et al, [11] affirmed that green training and development have a potential link with environmental performance. In the same direction, Jabbar and Abid [17] attested that green training educates the employees about the company's environmental policies, and also builds a cordial relationship among the employees toward environmental sustainability. The study by Mwita [12] reiterated that green training exposes employees to different aspects of environmental values which empower them to solve different environmental issues. Khurshid and Darzi [18] also confirmed that green training is employed to generate awareness related to environmental issues such as reduction of carbon footprints, management of waste, and conservation of energy with the aim to achieve environmental sustainability. A study conducted by Ullah [19] concurred with previous studies that green training is the method of educating employees on waste reduction, effective utilization of resources, effective energy conservation, and reduction of environmental degradation to accomplish environmental sustainability. Pham, Tučkov, and Phan [20] also agree that green training is an environmental strategy to improve environmental performance.

Green Reward System

The green reward system is the compensation package adapted to reward individual employees with a spectrum of green skills and environmental sustainability achievements. According to Mandago [21], rewards are reinforcement to motivate and commit employees to be environmentally responsible. A Reward system is a motivational tool that assists employees to perform environmental desire behaviors and commitment to the organization [22]. A green reward system could be in form of fringe benefits, bonuses, pay increases, recognition, promotion, and appreciation based on green efforts. According to Deshwal [23], the green reward system is provided in the arrangement of the environmental-friendly workplace by the management to provide a green environment, pollution-free vehicles, and carbon credit equalizers for employees to enable them to engage in green agenda. Compensation packages have been customized to reward green skills acquisition and achievements by employees. Both monetary-based and non-monetary-based rewards have been employed for the green achievements of employees [24]. Empirical studies have linked the green reward system to green training, and environmental performance (reference!). For instance, Khurshid and Darzi [18] argued that a green reward system is designed to influence and modify employees' green behavior towards environmental sustainability. Sajuiyigbe et al. [25] also reiterated that a reward system has tremendous benefits in influencing staff interests towards environmental performance. A study conducted by Ooi, Amran, Goh, and Nejati [26] discovered that the green reward system has a significant relationship with green training and environmental performance. In the same perspective, Bratton [27] attested that a green reward system has a potential association with green training and environmental sustainability. Also, Uddin and Islam [28] concluded that a green reward system is significantly related to green training and environmental sustainability.

Conceptual Model

Independent Variable Mediator Dependent variables

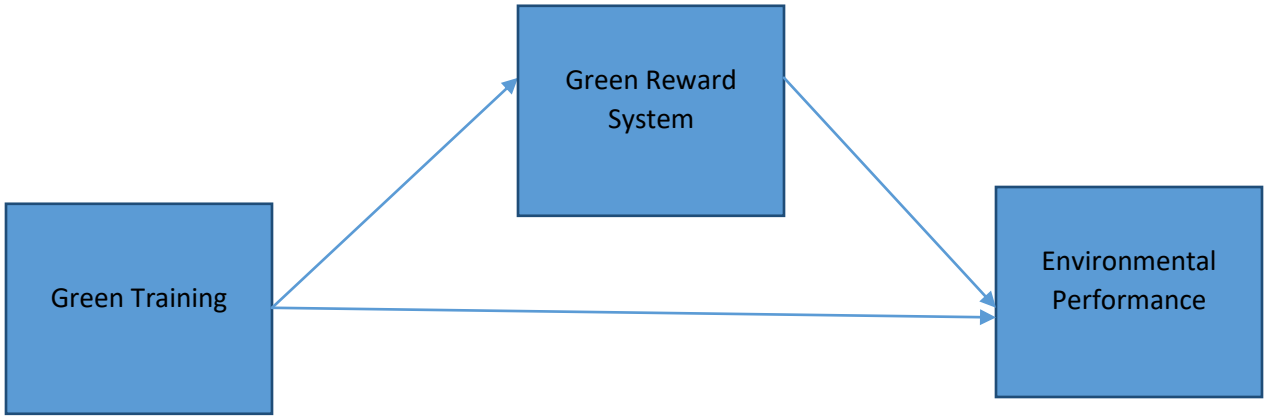

Figure 1: conceptual Model

Methodology

The study adopted a survey research design to examine the mediating effect of the green reward system on the relationship between environmental performance and employee retention. The study surveyed 10 food and beverages industries located within Southwest Nigeria. The population of the study comprises 2647 respondents, while a convenience sample technique was used to select three hundred and forty-seven (347) respondents as a sample size for this research work. The sample size was determined by the formula suggested by Mugenda and Mugenda [29]. The questionnaires were administered to randomly selected staff personally with the aid of two assistant researchers to ensure immediate attention and response from the respondents. All respondents were informed about the confidentiality of the data, and this information is strictly used for data analysis only.

Research Hypothesis

The study tested the following hypotheses to guide the study (see Figure 1):

H1: Green training has a positive and significant association with environmental performance

H2: Green training has a positive and significant association with green reward

H3: Green reward system has a positive and significant association with environmental performance

H4: Green reward system mediates between green training and environmental performance

Measures

Green Training Scale: This scale was developed and validated by Pinzone, Guerci, Lettieri, and Huisingh [8] and has a total of 4 items. The Likert 5-point scale was used ranging from 1 (strongly disagree) to 5 (strongly agree). The scale's internal consistency factor α was 0.91.

Green Reward System Scale: This scale was developed and validated by Kalyar, Ali, and Shafique, [24] and has a total of 4 items. The Likert 5-point scale was used ranging from 1 (strongly disagree) to 5 (strongly agree). The scale's internal consistency factor α was 0.88

Environmental Performance Scale: This scale was developed and validated by Mandago [21] and has a total of 4 items. The Likert 5-point scale was used ranging from 1 (strongly disagree) to 5 (strongly agree). The scale's internal consistency factor α was 0.89.

The scales were subjected to further item analysis to determine their psychometric soundness as indicated in Table1 below:

Table 1: Summary of Results of the Measurement Instruments Validation

Scale	No of Items	Meaning Bartlett	KMO	Eigenvalue of the principal Component	% of the Variance	α of Cronbach
Green Training	4	p = .000 (significant)	0.888	3.718	73.45%	0.81
Green Reward System	4	p = .000 (significant)	0.790	2.763	87.07%	0.79
Environmental Performance	4	p = .000 (significant)	0.867	3.208	89.51%	0.89

From Table 1 above, the factor loads for all indicators are higher than 0.5, indicating that the question highly explains the variance of those variables. This means that the factors in the measurement model are highly valid.

Data Presentation, Results and Discussion of Findings

Background Information of the Respondents

The result of the background information of the respondents showed that major respondents 38 (95%) were male while 2 (5%) were female. Based on their educational qualification, 3 (7.5%) had a Ph.D., 8 (20%) had a master's qualification, and 22 (55%) were a B.Sc/B.tech/B.eng holders and 7 (17.5%) had a Higher National Certificate (HND). The distribution of the respondents based on their status shows that 15 (32.5%) were structural engineers, 12(30%) were architects and 13(37.5%) were builders. The distribution of the respondents based on working experience shows that 2 (5%) have 1-5 years of work experience, 15 (37.5%) have worked between 6- 10 years, 14 (35%) have 11-15 years of working experience while 9 (22.5 %) have above 15 years working experience in the industry.

Table 2: Structural Equation Modelling without Mediator (Direct Effect)

Relationship between variables	**Coef.**	**Std. Err**	**t-value**	**p<.05**
GRT → EVP	.429	.5650	6.12	***
GRT → GRW	.678	.0473	14.31	***
GRW → EVP	.489	.0701	6.98	***

Note: GRT = Green training, EVP = Environmental performance, GRW = Green reward system, *** = significant at 5%.

Table 2 depicts the direct relationship between variables using a standardized coefficient. The beta-value of 0.429 and t-value of 6.12 indicates that green training has a direct relationship with environmental performance. This connotes that green training has a significant relationship with environmental performance. This implies that green training and development have a potential link with environmental performance. The study is consistent with Zoogah [10] that green training empowers employees to solve environmental problems and achieve environmental performance. In another study, Hosain [11affirmed that green training has a potential influence on environmental performance. In the same direction, Jabbar and Abid [17] attested that green training educates the employees about the company's environmental policies, and also builds a cordial relationship among the employees toward environmental sustainability. Thus, $\mathbf{H_1}$ is confirmed.

The beta-value of 0. 678 and t-value of 14.31 reveal that green training has a positive and significant association with a green reward system. This implies that green training is significantly associated with a green reward system. This study is in line with Ooi, Amran, Goh, and Nejati [26]'s assertion that the green reward system has a significant relationship with green training. In the same perspective, Bratton and Gold [27] reported that a green reward system has a potential association with green training. Hence, $\mathbf{H_2}$ is confirmed.

Evidence shows that the green reward system has a significant influence on environmental performance with a beta-value of .489 and a t-value of 6.98. This indicates that rewards are reinforcement to motivate and commit employees to be environmentally responsible. This study is in agreement with Mandago [21] that a reward system is a motivational tool that assists

employees to perform environmental desire behaviors and commitment to the organization. Thus, **H_3** is supported.

Table 3: Structural Equation Modelling with Mediator (Indirect Effect)

Relationship between variables	Coef.	Std. Err	t-value	p-value
GRT $\rightarrow GRW \rightarrow EVP$	.334	.0618	5.40	***

Table 3 reveals the indirect relationship between variables. The indirect beta-value of 0.334 and t-value of 5.4 shows that green reward partially mediates between green training and environmental performance with p-value less than 5%. Furthermore, the indirect beta-value of 0.334 and t-value of 5.4 connotes that green reward partially mediates between green training and environmental performance with p-value of 0.000. Hence, **H_4** is supported.

Discussion of Findings

The results of the path analysis proved that green training has a direct linear relationship with environmental performance. This means that employee participation in environmentally friendly workshops, seminars and conferences has a significant impact on environmental performance. This study is consistent with previous studies that green training empowers employees to solve environmental problems and increase environmental performance [10, .16, 17]. In addition, green training has been shown to be significantly associated with the green reward system. This study is consistent with Ooi, Amran, Goh, and Nejati [26]'s claim that the green reward system has important implications for green training. From the same point of view, Bratton and Gold [27] reported that the green reward system is potentially associated with green training. Evidence shows that the green reward system has a significant impact on environmental performance.

This shows that compensation is an enhancement to motivate and commit employees to act responsibly for the environment. This study agrees with Mandago [21] that the reward system is a motivational tool that helps employees carry out environmentally desirable behaviors and commitments to the organization. Current research also confirms that Green Rewards partially mediates green training and environmental performance. This suggests that the adoption of green training has a significant impact on environmental behavior and performance.

Conclusion and Recommendations

The current operational activities of the food and beverages industry in developing nations have bedeviled the environment in the form of air pollution, water pollution, greenhouse gasoline emissions, biodiversity loss, and employees' hazard, which have resulted in poor performance and high turnover. This study, therefore, examines the mediating effect of the green reward system on the relationship between green training, and environmental performance with particular reference to the Nigerian Food and Beverages Industry. The study establishes that engaging staff in green training has a direct relationship with environmental performance. This connotes that green training has a direct link with environmental performance. Evidence shows that a green reward system has a significant influence on environmental performance. This indicates that rewards are reinforcement to motivate and commit employees to be environmentally responsible. Also, the study confirms that a positive and significant relationship exists between green training and the green reward system. It was also discovered that green reward partially mediates between green training and environmental performance.

Therefore, the study strongly recommends that Foods and Beverage industry management continue to engage employees in green training. This allows employees to become

familiar with environmental aspects such as waste management, energy efficiency, personal safety, and recycling. We also educate our employees about the company's environmental policies and build warm relationships between them regarding environmental sustainability. In addition, compensation packages need to be tailored to reward individual employees with a variety of green skills and achievements related to environmental sustainability. It serves as a motivational tool to help employees demonstrate environmentally responsible behavior and commitment to the organization.

Consent

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

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