



EFFECTS OF ORGANISATIONAL FACTORS ON EMPLOYEE GREEN BEHAVIOUR

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ABSTRACT

The primary purpose of this study was to explore the relationship between environmentally specific transformational leadership, green human resource management, and employee green behaviour (EGB). In addition, the moderating role of environmental awareness was also examined in the relationship of all other variables. More so, in this study SmartPLS 2.0 program was applied for path and moderation effect analysis of surveys collected among 382 employees working across selected diverse industry sectors in the north-central and north-west geo-political zones of Nigeria. Results showed that both environmentally specific transformational leadership and green human resource management were significantly and positively related to EGB. Furthermore, results revealed that environmental awareness moderated the relationship between environmentally specific transformational leadership and EGB, as well as between green human resource management and EGB. Implications and suggestions for future research were discussed

KEYWORDS: *Environmentally specific transformational leadership, Green human resource management, Employee Green behaviour, Environmental awareness, PLS-SEM*

1.1. INTRODUCTION

In recent years the occurrence of natural disasters such as flooding due to global climate change has become an issue of great concern to the extent that environmental sustainability has become an important subject of discourse in society and organisations (Markey, Mcivor, Brien, & Wright, 2019; Yong, Yusliza, Ramayah, Jabbour, Sehnem & Mani, 2019). The excessive release of carbon monoxide into the environment due to human and organisational activities are hugely the reasons for the dire situation of the environment today. Such that flooding caused by global climate change is not just an environmental problem, but, rather it is inextricably linked to nearly everything we do as a society. Extant literature has linked global climate change to increasing frequency and intensity of extreme weather events especially floods, as one of the most serious with wide-reaching impacts (Aja & Olaore 2014; Satterthwaite 2017). For example, in South America, the number of people threatened by flooding is expected to rise from 6 million to 12 million, in Africa from 25 to 34 million, and in Asia from 70 to 156 million. Similarly, such that in the coming years, we are likely to see more flooding that disrupt the operations of businesses and cause them

extreme financial and physical damage (Iyalomhe, 2018; Okoye, 2019).

More so, flooding linked to climate change could cost trillions of dollars and affect hundreds of millions of people in the United States of America and around the world by the end of the century (Ebru, Ian, Roshanka, Sanne, Robert, Daniel & Jochen, 2020). In fact, it has been estimated that flooding could threaten assets worth up to \$14.2 trillion worldwide, which is one-fifth of the global gross domestic product (Emma, 2020). In Nigeria, the pattern is similar with the rest of world. Flooding in various parts of Nigeria have forced millions of people from their homes, destroyed businesses, polluted water resources and increased the risk of diseases. More so, it has been reported that the 2012 floods in Nigeria cost Organisations US \$10Billion in damage (Olalekan,2018). Further, it has been found that in Nigeria both public and private organizations are vulnerable to the threat of flood caused by global climate change. In particular, the most significant impact of flooding due to global climate change on organizations include extensive damage of the industrial installations, rising electricity and transportation expenses (Aja, Fodeke, Gardner & Ujor, 2008).

Given the significant cost implications of flooding to organizations and the blunt realization of the effect of our day-to-



day activities on the environment has triggered, not just, individuals to go green but also organizations. The globally increasing concern for environment compels organisations to propel towards sustainable operations and develop green policies. In fact, several have adopted environmental management systems aimed at promoting green processes and practices to address the challenges of flooding due to global climate change (Gotschol, De Giovanni & Esposito Vinzi, 2014). But, focusing primarily on these systems is not sufficient enough to address the threat of flood events caused by climate change (Robertson & Barling, 2013). To overcome these effects, governments (public and private), most especially those of developing countries, have made pledges to global movements such as AGENDA 2030 to encourage organisations to pursue environmental friendly practices, as a result more and more organisations begin to pay attention to and participate in the management practices of environmental problems (Ahmad, 2015) that include the promotion of environmental sustainability, such as emission reduction, process reengineering, energy conservation, green innovation, and the adoption of environmental management among others (Molina-Azorín, Tarí, Pereira-Moliner, López-Gamero, & Pertusa-Ortega, 2015; Liu, Tian, Chen, Lu, & Gao, 2016). However, the effectiveness of organisations' environmental management practices is dependent upon employees' perception and behavior for environmental problems (Boiral, Talbot, & Paillé, 2015).

However, the effectiveness of organisations' environmental management practices is dependent upon employees' behaviour and perception towards environmental problems (Boiral, Talbot, & Paillé, 2015). When organisational members understand the seriousness and importance of environmental issues and thus, perform corresponding environmental protection actions, the intuitive goal is save operating costs, reduce resource wastage, and the ultimate goal is to enhance the organization's environmental performance and obtain competitive advantages (Boiral et al., 2015). Considering these widespread effects, it is rarely surprising that several researchers have acknowledged and called for empirical research on organisational factors to encourage employees green behaviour within organizations (Norton et al., 2017; Robertson and Carleton, 2018). Unfortunately, there is paucity research on this issue in the Nigerian context where environmental issues are specifically salient to organizations today.

Notably also the international standards for environment protection and preservation has drawn the attention of organisations to devise environment-friendly strategies by becoming more and more environment-conscious, thus, Green Human Resource Management (referred as green HRM or GHRM) is emerging as a significant topic in an attempt to overcome environmental depletion, referred to as all the activities involved in development, implementation and on-going maintenance of a system that is targeted at making employee of

an organization green i.e. environment-friendly. It is the component of HRM that is geared at transforming normal employee into green (i.e. environment-friendly employee) so as to attain environmental goals of the organization and subsequently to make a significant contribution to environmental sustainability (Opatha & Arulraja, 2014). With the growing call for corporate bodies to adapt to environment-friendly behaviour, the green HRM function (Prasad, 2013) is likely to become the possible contributor in bringing about the requisite organizational change needed environmentally.

Furthermore, effective leadership in organizations not only exert influence on several traditional organizational outcomes, such as employee behaviours, attitudes, and safety performance (Hannah, Avolio, Luthans, & Harms, 2008), but also influences some emerging outcomes, such as the environmental performance. Organisational greening depends to a large degree on the commitment and leadership of the organisations who are in a position to implement policies and practices that can enhance environmental performance (Revell, Stokes, & Chen, 2010). From this perspective, the environmental commitment of organisations is often quite limited and cannot adequately develop without the support of the leadership. Notably, effective leadership in organizations not only exert influence on several traditional organizational outcomes, such as employee behaviours, attitudes, organizational financial, tax, and safety performance (Hannah, Avolio, Luthans, & Harms, 2008), but also influences some emerging outcomes, such as the environmental performance. Organisational greening depends to a large degree on the commitment and leadership of the organisations who are in a position to implement policies and practices that can enhance environmental performance (Revell, Stokes, & Chen, 2010). From this perspective, the environmental commitment of organisations is often quite limited and cannot adequately develop without the support of the leadership. The leadership styles which leaders typically display toward environment have been found to be effective in motivating the green behaviours of employees (Graves, Sarkis, & Zhu, 2013; Afsar, Badi, & Kiani, 2016; Raineri & Paillé, 2016; Robertson & Carleton, 2018). But, among the numerous leadership styles, transformational leadership has received greater recognition and attention in the field of organizational management and has been found that it could effectively predict various employee attitudes and behaviors (Nohe & Hertel, 2017).

Additionally, understanding the fundamental interactive process how organisational members engage in green behaviour at work has become imperative. As a result, calls for further research have been suggested, particularly on the interactive process through which green HRM, environmentally specific transformational leadership are likely to influence employee green behaviour. The purpose of this study is fundamentally to explore the likely interactive effect of environmental awareness on the link between green HRM, environmentally specific



transformational leadership and employee green behaviour. The rest of the paper is structured as follows. First, we present the theory and hypotheses development. Next, we outline the methodology and data analyses and later present discussions with implications for theory and practice as well as conclusions of the study.

2. HYPOTHESES DEVELOPMENT

2.1. Environmentally Specific Transformational Leadership and Employee Green Behaviour

Empirically, employee green behavior, as a type of pro-environmental behaviour at work has in the past few years become an important subject of discussion among scholars and researchers (Norton, et al., 2017; Wang, Zhou, & Liu, 2018) as a notably important concept for organizations to achieve their goal of environmental sustainability. In order to promote the demonstration of green behaviour by employees within organisations, it becomes fundamental to understand what antecedents influence such green behaviours and how these effects can be determined. "Green behaviour has been defined as 'a broad set of environmentally responsible activities such as learning more about the environment, developing and applying ideas for reducing the company's environmental impact, developing green processes and products, recycling and reusing, and questioning practices that hurt the environment'" (Graves, et al., 2013, p. 81). Both empirical and theoretical findings indicate that a reasonable number of antecedents can influence the plausibility of employees engaging in green behaviour at the workplace. For example, some past studies have investigated the precursors of employees' green behavior at the workplace, such as green psychological climate (Norton, et al., 2017), Person-Organization fit (Mi, Sun, Gan, Yang, Lv, Shang, Qiao, Jiang, 2020), Corporate support for employee volunteering (AlKerdawy, 2018) among others.

More importantly, in an environmentally-friendly organization, the behavior and characteristics of a leader hugely exerts some level of influences on the behavior of his/her followers (Bass, 1985). Thus, several studies have highlighted the significant role of an environmentally-friendly leadership style, especially a style demonstrating specific transformational leadership characteristics that aims to motivate subordinates to demonstrate in green behaviors (Chen & Chang, 2013; Robertson & Barling, 2013; Kura, 2016; Mittal & Dhar, 2016).

Notably, extant literatures suggest that activities performed by people in organizations are the major reason for environmental degradation (Plourde, 2017). Thus, the ability to achieve success towards environmental efforts and the capacity to shift the behavior of employees, is contingent upon the behaviors of the leaders. Since individuals tend to get influenced to exhibit a behaviour that they see others exhibiting hence, green behaviours can be encouraged in employees through an environmentally specific transformational leadership because a

ESTL is seen as someone who expands and raises the interest of his/her followers and convince them to achieve more than initially anticipated (Boiral, 2009; Daily, Bishop, & Govindarajulu, 2009; Graves et al., 2013). For instance, researchers have suggested that the behavior of a transformational leader that specifically focuses on environmental sustainability within the organization may likely serve as a role model for his/her follower, who is likely to repeat the same environmentally friendly behavior (Graves et al., 2013; Robertson & Barling, 2013). Hence when ESTL style, which is defined as "a manifestation of transformational leadership in which the content of the leadership behaviors is all focused on encouraging pro-environmental initiatives" (Robertson & Barling, 2013, p. 177) has a close relationship with his/her subordinates he/she can encourage and inspire them to participate in green behaviors at the work place.

In accordance with the transformational leadership theory, it is assumed that when a leader exhibits green behaviour at the place work, the likelihood of a follower emulating such behaviours is plausible because a leader serves as a subordinate's role model by copying his/her environmental values, and advancing and adopting ideas for addressing the environmental effects (Bass, 1988, 1995; Graves et al., 2013; Robertson & Barling, 2013). Consequent upon the findings from extant literature, we thus, hypothesised that:

H1: Environmentally specific transformational leadership has a positive association with employee green behaviour

2.2. Green Human Resource Management and Employee Green Behavior

As it is organisational members that are the agents that carry out organizational green policies, it is important for firms to encourage and invariably change employee behavior so that such behavior is in tandem with organizational green objectives (Daily, et al., 2009; Ones & Dilchert, 2012). Scholars and researchers have noted the significant contributions of employees' green behaviors towards environmental sustainability, such that a progressing body of findings have begun to emerge (Norton et al., 2015; Paillé, Chen, Boiral, & Jin, 2014). In spite of the numerous assertions of prior studies, several issues are still misunderstood. Increasingly, firms are adopting green HRM practices, that is, "HRM aspects of green management," to advance the green behaviour of employees in the workplace (Renwick, Redman, & Maguire, 2013, p.1).

Green HRM is described as HRM policies and practices that attempts to avoid damage that may arise from anti-environmental activities in the firms (Yusoff, Nejati, Kee, & Amran, 2020). Put differently, GHRM can be explained as a set of policies, strategies, approaches, and methods that encourage employees to engage in green behavior and produce an environmentally compatible workplace that is resource-efficient and socially responsible (Ren, Tang, & Jackson, 2018). Even



though it is a new approach and still under-researched, (Yong, Yusliza, Ramayah, & Fawehinmi, 2019; Pham, Thanh, Tučková, & Thuy, 2020), nonetheless, past literature has recognized its role in helping to create a workplace that is environmentally friendly (Kim, Kim, Choi, & Phetvaroon, 2019). However, despite growing levels of results from previous work, hence, conceptualizing the links between green HRM and EGB in the organisation has of yet not been adequately and empirically investigated (Renwick et al., 2013).

Due to the paucity of studies on the link between GHRM and EGB, Dumont, Shen, and Deng (2017) have argued on the need to further explore the contributions of green human resource management (HRM) in order to encourage employees to engage in green behaviors. Even though the findings of their study offer initial highlights into the contribution of green HRM practices in explaining employees' green behaviors, but, it did not offer an extensive and clearer understanding of the interactive processes through which green HRM practices influences such behavior (Dumont et al., 2017). Therefore, one of the goals of this study is to fill the identified gaps by exploring the influence of green HRM on EGB.

Contemporarily, the globally increasing concern for the environment makes organizations to adapt green HRM practices, that is, "HRM aspects of green management," to encourage employee to engage in green behavior in the work environment (Renwick et al., 2013). Green HRM is defined by Renwick et al. (2013) as "HRM activities, which enhance positive environmental outcomes" (p. 4). Green HRM aid firms to produce a workforce that is able to appreciate, understand and engage in green initiatives. Mishra (2017) states that green human resource management is applied essentially in the HRM process of planning, recruitment and selection, appraisal and compensation, training and development, targeted to achieve green objectives. Expectedly, GHRM can promote employee green behaviors for several reasons. First, by providing information on the firm's preference for green initiatives during recruiting exercise and such could increase employee green awareness and understanding (Renwick et al., 2013). Second, employee involvement in the carrying out of green initiatives and offering green training are likely to increase employee level of awareness, capabilities and skills, and make them more psychologically ready to engage in green behaviors. Third, the theories of HRM presumes that effectiveness of HRM strategies in improving right workplace behavior is dependent upon employee comprehension of need and urgency to apply such strategies (Nishii, Lepak, & Schneider, 2008). Therefore, adopting GHRM practices could play a huge role in upholding the firm's commitments toward environmental conservation that perspective is likely to compel employee work toward realization of firm's green initiatives. Lastly, job roles and responsibilities that acknowledge and appreciate employee green performance encourages them to partake in and contribute to green activities (Renwick et al., 2013).

Past studies have shown that supportive workplace characterized by green HR procedures associate positively with employees' willingness to support the creation and implementation of environmentally- friendly ideas. This assertion was confirmed by Dumont et al. (2017) in a research work that was carried out among Chinese workers where GHRM was found to have influenced the green behaviors of the employees. Similarly, in a recent investigation, Saeed, Afsar, Hafeez, Khan, Tahir, and Afridi, (2019), established a positive relationship between GHRM and environmentally friendly behaviors among employee from different industries in Pakistan. Equally, GHRM has been recognized to trigger the behaviours of the employees towards environmental preservation and promotion of environmental friendly activities by engaging workers in greener initiatives (Cherian & Jacob, 2012). For example, Nishii, et al., (2008) contend that if a firm includes green initiatives in its HR procedures and policies, employees would likely display behaviors that are in accordance with the organization's green initiatives. GHRM within a firm influences green behaviors among employees at the workplace (Dumont et al., 2017).

In sum, here are recognized causes why workers in organisation that implement GHRM are more likely to produce an environmentally-friendly workplace than those that do not (Fawehinmi, Yusliza, Mohamad, Faezah, and Muhammad, 2020), as such, the hypothesis below is proposed:

H2: Green HRM has a positive association with Employee green behaviour

2.3. Environmental Awareness as a Moderator

According to Bower, (1990) awareness is subjectively described as the capacity to acknowledge and lay emphasis on the presence of an object and its characteristics. Similarly, Arboleda and Alonso, (2014) and Dijksterhuis and Aarts, (2010) claimed that awareness can be seen as a process that emerges due to the flow of learning and knowledge. In particular, environmental awareness describes the concern and knowledge of the influence of people's behaviors on the environment (Afsar, Badir, & Kiani, 2016). Environmental awareness is a construct that is perceived to influence peoples' attitudes, information, behaviors, knowledge, propensity, tendency, intentions actions, and attempts, (Wan, Chan, & Huang, 2017). Environmental awareness is conceptualised within the context of "4 R's", namely rethink, reuse, reduce, and recycle (Gabarda-Mallorquí, Fraguell, & Ribas, 2018). It is linked to the psychological antecedents that explains individual's tendency targeted at promoting pro-environmental activities, behaviours and attitudes (Zhang, Zhang, Zhang, & Cheng, 2014). For example, empirical investigations have arguably revealed that an environmentally-friendly environmentalist is one who engages in a wide variety of greening activities (Yeh, Ma, & Huan, 2016). More importantly, greater awareness of the environment and associated issues result in a better comprehension of the importance of environmental



protection for all. An environmentally aware- based training program enhances employee skills on how to protect their environment and heighten their emotional involvement in triggering the firms' environmental performance (Daily, et al., 2012). For example, results of a study affirm that recruiting individuals that are environmentally conscious, and then consistently and effectively training them, are more likely to promote environmental awareness in the organisations' various operations (Roscoe, Subramanian, Jabbour, & Chong, 2019). More so, it has been demonstrated that organisational members that are well aware of environmental problems and issues, are more likely behave in an environmentally friendly manner.

In general, environmental awareness is the extent of employees' environmental ability and knowledge, to help in bringing problems and about positive change in an environment by changing their green behavior, and the acknowledgement of environmental issues and their causes (Afsar, et al., 2016). Environmental awareness prompts people to engage in environmentally-friendly behaviors. Empirical results have demonstrated that if an employee is well aware of environmental problems, he/she may carry out green behaviors at work. Awareness of employees with respect to environmental issues are positively linked to EGB. For example, Safari, Salehzadeh, Panahi, and Abolghasemian, (2018) found that variety of environmental motivations, such as, awareness, concern and knowledge for others could play a huge role in one's green behavior. A variety of predictors stimulate people to demonstrate employee green behaviour, such as awareness regarding environmental issues, community concern, and moral responsibility. Notably, it has been argued that an employee whose level of environmental awareness is high can identify the benefits and costs related to environmentally-linked issues and in this instance is likely to become involved in ecologically-friendly behaviors at the workplace.

In addition, an environmentally aware employee focuses more on environmental challenges and tends to demonstrate sustainability-related behaviors at work (Afsar, Brem, & Gholami, 2019). More importantly, a person does not become engaged in situations about which he/she has little awareness, and he/she tries to keep away from such situations (Saeed, et al., 2019). For example, Chan, Hon, Chan and Okumus, (2014) opined that a consumer with an awareness and clear view about environmental issues is more likely to buy environmentally-friendly products such as recycled products. Similarly, people's awareness of the environmental motivates their engaging in protecting the environment Zsóka, Szerényi, Széchy, and Kocsis, (2013).

Previous studies have notably established the assertion that awareness about an issue significantly influences one's decision-making. Further an individual could keep himself/herself away from the situations which he/she does not much knowledge about. For example, it has been stated that a person that has a great deal of data about environmental problems, tend to spend more funds on ecologically friendly products because their level of awareness regarding the environmental is high (Chan et al., 2014). heightening knowledge concerning environmental problems may add to one's awareness (Zsoka et al., 2013). Notably, the more the individual awareness regarding environmental management, the more they perform sustainable green initiatives and behaviour (Tudor, Stewart, & Andrew, 2007). A related research work also suggested that awareness as an outcome of environmental programs hugely plays a fundamental role in employees' green behaviors (Tudor et al., 2007). Past studies have also shown that when an employee is aware of environmental problems and issues, he/she is likely to demonstrate environmentally-friendly behaviors (Crossman, 2011).

In sum, Afsar et al., (2016) stated that an employee's level of environmental awareness determines his/her propensity to engage in green behaviors. More so, Chan, et al., (2014) asserted that environmental awareness is so relevant that if absent may result in employees not engaging in green behaviour. Hence, the link between green HRM and environmentally specific transformational leadership and EGB becomes stronger when employees' level of environmental awareness is high. This is because when employees see an environmentally specific transformational behavior being demonstrated by their leaders then they are more likely to be environmentally more aware. Similarly, if the level of their perceptions and understanding of their organization's green HRM are glaring then such a position is also likely to further increase their willingness to adopt green behaviour with respect to their organisations' environmental sustainability. Thus, employees are more likely to perform green behavior. Accordingly, this study hypothesizes that:

H3: Environmental awareness moderates the association between environmentally specific transformational leadership and employee green behavior and the impact is greater when the level of environmental awareness is high rather than when it is low

H4: Environmental awareness moderates the association between green HRM and employee green behavior and the impact is greater when the level of environmental awareness is high rather than when it is low.

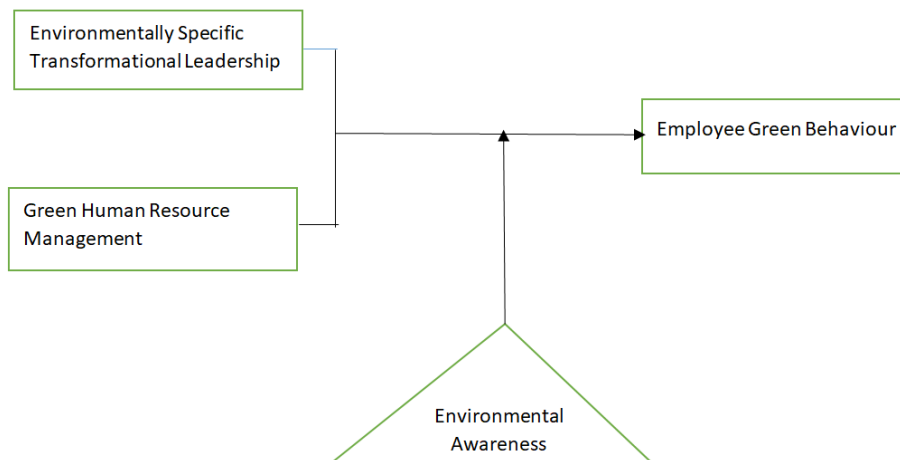


Figure 1. Theoretical Framework.

3.METHODOLOGY

3.1 Participants

This cross-sectional study obtained a sample-frame of participants from a broadly- diverse industry sector in the North-central and north- west geo-political zones of Nigeria. We contacted the human resource departments of these organisations and informed to them the aim of our data collection process. In addition, and following Huang, Robertson, Lee, Rineer, Murphy, Garabet, and Dainoff, (2014)'s suggestion, participants were given the assurances of confidentiality of their responses, as we explained to the target population that our survey was for academic research purposes only. Accordingly, 534 copies of questionnaires were administered, but, because of irregular responses, missing values, and outliers, the final study size was reduced to 382 samples, which were later subjected to data analysis, resulting in a response rate of 71%. Of these valid responses, 262 respondents (68%) were male while 140 (32%) were female. Regarding length of service, 31% had spent less than 5 years in service, 43% had spent between 5 and 10 years in service, and 26% had spent over 10 years in service. In terms of age, 18 to 25 age category represented 23%, whilst, 20% of the participants were aged from 25 to 32. 45% of the respondents were aged from 32 to 50; 12% out of the total number of participants were aged 51 and above. Additionally, 10.1% completed primary school education and below, 21.4% have secondary education, 43% attained undergraduate education, and 26.5% possess graduate degree and above. Overall, the sample was made up of 31.4% management position and other employees. accounted for 68.6%.

3.2 Research instruments

A 7-point Likert scale rated from 1 depicting strongly disagree and 7 depicting strongly agree was used to score and measure all items for this research work.

3.2.1 Environmentally specific Transformational Leadership

Environmentally specific transformational leadership was measured using Robertson's (2018) adapted 12-item scale. An example item from the measure of ESTLF included "our leader acts as an environmental role model" (Cronbach's $\alpha = .96$).

3.2.2 Environmental Awareness

To measure environmental awareness, we used 12-items developed Gatersleben, Murtagh, and Abrahamse, (2014) on a 7-point Likert response format scoring from 1 = very low to 7 = very high. Sample item for this scale is, "a better environment starts with myself" and "People who do not take the environment into account try to escape their responsibility."

3.2.3. Employee green Behavior

A 13-item scale developed by Graves et al., (2013) was used to measure Employee green behavior. All items were scored on the 7-point scale, ranging from 1 =not at all and to 7 =frequently if not always). An example of the items included "I recycle and reuse materials" and "I try to reduce my energy use."

3.2.4. Green HRM

This study used 6- items from Dumont, Shen, and Deng's scale (2017) to determine green HRM. Each item was measured scored using a 7-point Likert scale rated that ranged from 1 to represent strongly disagree to 7 to represent strongly agree. Sample item for this scale is "My company sets green goals for employees".

4. RESULTS OF ANALYSES

In order to validate the study measures and test our hypotheses, PLS-SEM (partial least square to structural equation modeling) technique with SmartPLS 2.0 software was used (Ringle, Wende, & Becker, 2015). In tandem with Anderson and Gerbing's (1988), Chin's (1998), and PLS SEM-specific guidelines (Henseler, Ringle, and Sinkovics, 2009), this study as



well adopted the two-step approach in which at first measurement model was tested then thereafter proceeded to consider the structural model. This was followed by the supplementary analysis of the PLS-SEM (i.e., moderator analysis).

4.1. Measurement Model Assessment

The study measurement model involved a total of four key constructs (i.e. green HRM, environmentally specific transformational leadership, environmental awareness and employee green behaviour). This study assessed the measurement model by considering, Cronbach's alpha, loadings, AVE and composite reliability as recommended in PLS-SEM literature

domain (e.g., Hair, Sarstedt, Ringle, & Mena, 2012). Elaborately, the assessment of the measurement model includes the determination of validity (i.e., discriminant and convergent validity) and construct reliability (i.e. internal consistency and indicator reliability) and in relation to the latent constructs (Chin, 2010; Hair, Hollingsworth, Randolph, & Chong, 2017). This involves evaluating the relationship between their observed indicators and latent constructs. Accordingly, the indicator loadings should be more than 0.70, whereas loadings between 0.40 and 0.70 should be expunged only on the condition that their deletion can improve the composite reliability to its minimum cut-off value (Hair, et al., 2012).

Table 1. Outcome of Measurement Model.

Variable	Indicator	Loading	Composite reliability	Average variance extracted (AVE)			
Environmentally specific transformational leadership	TFL10	0.707	0.944	0.706			
	TFL11	0.836					
	TFL12	0.843					
	TFL6	0.901					
	TFL7	0.881					
	TFL8	0.897					
	TFL9	0.802					
	Green HRM	GHRM1			0.904	0.915	0.783
		GHRM2			0.895		
GHRM3		0.864					
Environmental awareness	EAW10	0.906	0.958	0.694			
	EAW11	0.818					
	EAW12	0.960					
	EAW3	0.838					
	EAW4	0.818					
	EAW5	0.869					
	EAW6	0.849					
	EAW7	0.750					
	EAW8	0.868					
	EAW9	0.845					
Employee green behaviour	EGB10	0.789	0.938	0.751			
	EGB6	0.896					
	EGB7	0.860					
	EGB8	0.920					
	EGB9	0.863					

The indicator loadings for this research work were above 0.70. Hence, the indicator loadings of our study satisfactorily fulfilled the recommended indicator reliability levels. Similarly, the evaluation of the composite reliability revealed that all variables had a value higher than 0.7, which demonstrates satisfactory internal consistency reliability (Hair et al., 2012) Ascertaining the discriminant and convergent validities was performed to determine the validity of the variables. The assessment shows that the AVE of all variables was more than the recommended cut-off

value of 0.50, which affirms the convergent validity. Furthermore, the study applied the Fornell-Lacker criterion, which is a more traditional technique than cross-loadings, to ascertain discriminant validity (Hair, Hult, Ringle CM, & Sarstedt, 2013). The results indicate that the discriminant validity is affirmed in view of the assertion that the square root of the AVE of each construct is greater than its correlation with all other constructs (see Table 1). In sum, the measurement model evaluation verified that all variables are reliable and valid.

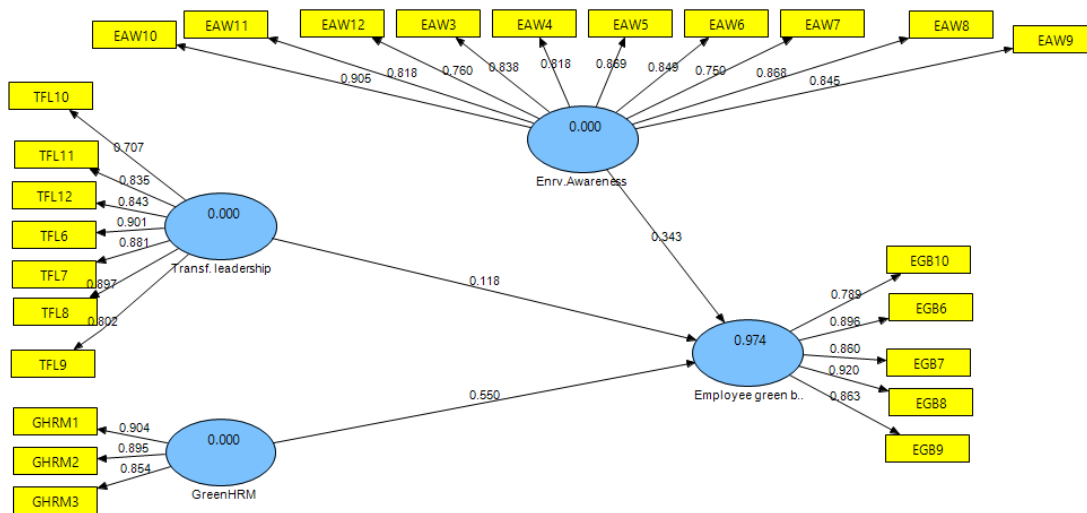


Figure 2. Measurement model.

4.2. Structural Model Assessment

Consequent upon the verification of our measurement model, this study proceeded with the assessment of our structural model. Structural model assessment was fundamentally on the basis of the magnitude and significance of the path coefficients. A step-by-step analysis was carried out to provide a comprehensive

analysis. First, we assessed the direct relationships, thereafter it was proceeded by the incorporation of moderating variable to ascertain its buffering strength. Results of the main effect model is presented in Figure 3 and table 2, while the result of the moderating effect model is depicted in Figure 4 and table 3

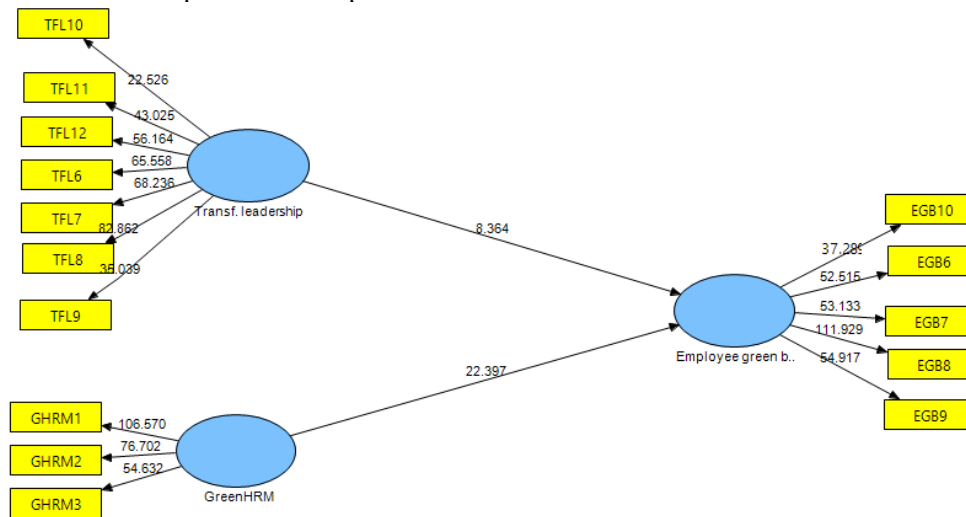


Figure 3. Structural model without interactions.

Table 2. Structural Results (Main effects without Interactions).

Paths	Relationship	Beta	SE	t-value	Decision
H1	Environmentally specific transformational leadership →EGB	0.192	0.0391	4.927**	Supported
H2	Green HRM →EGB	0.518	0.0561	9.230**	Supported

Note: ** Significant at 0.01 (1-tailed), EGB = Employee Green Behaviour

As expected, hypothesis 1, postulated that the positive association of environmental specific transformational leadership with EGB, was statistically supported in a significant way ($\beta = 0.19$, $p <$

0.001). Hypothesis 2 stated that there is an association between green HRM and EGB. Thus, lending support to H2 ($\beta = 0.52$, $p <$ 0.001).

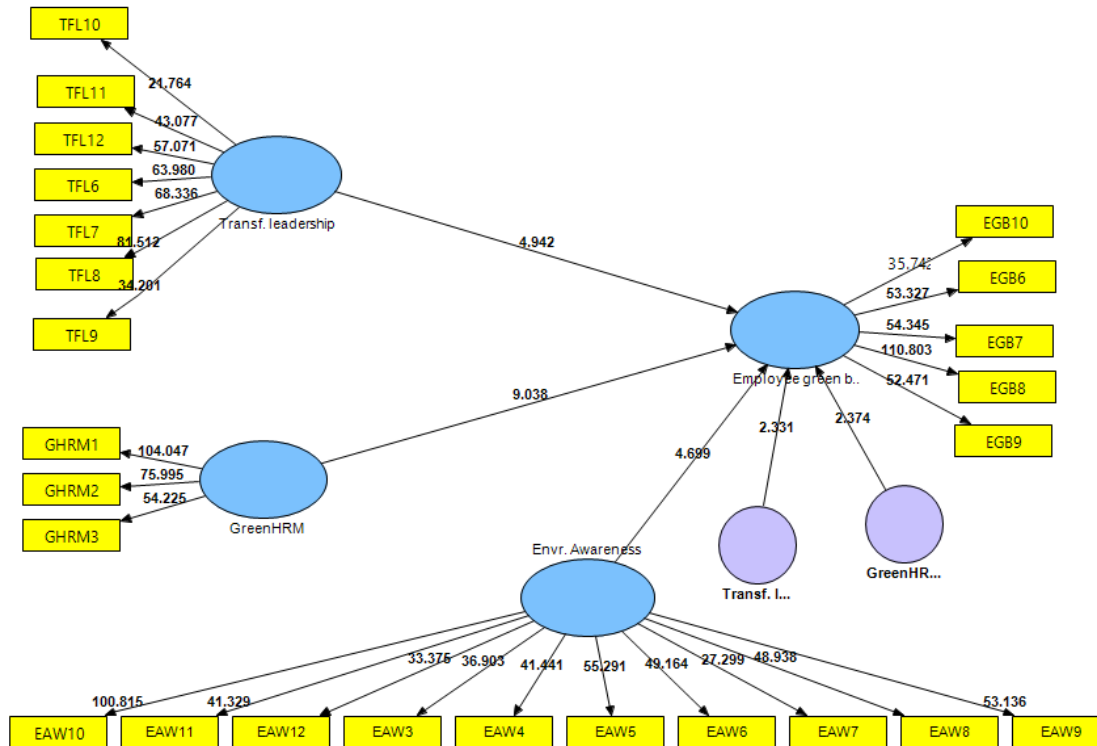


Figure 4. Structural model with interactions.

Table 3. Structural Results (Moderation effects with Interactions).

Paths	Relationship	Beta	SE	t-value	Decision
H3	Environmentally specific transformational leadership * EAW → EGB	0.171	0.0741	2.331	Supported
H4	Green HRM * EAW → EGB	0.177	0.0750	2.374	Supported

Note: ** Significant at 0.01 (1-tailed), EGB =Employee green behaviour, EAW=Environmental awareness

A moderation analysis test was performed in this research work to establish the role of environmental awareness as a moderator in the relationships between environmentally specific transformational leadership, green HRM and employee green behaviour. We applied the bootstrapping procedure to measure moderation effect. Table 3 shows the results of the moderation analysis. As depicted in Table 3, environmental awareness moderates significantly between environmentally specific transformational leadership and EGB. Therefore, H3 is accepted ($\beta = 0.17$, $p < 0.001$). Equally, environmental awareness also moderated the association between green HRM and EGB. Thus, H4 is confirmed ($\beta = 0.18$, $p < 0.001$). Collectively, environmentally specific transformational leadership, Green HRM and environmental awareness explained 97% of the variance in employee green behaviour. (shown as figure 2).

5.1. Practical Implication

The tested model discovered some ways that leadership could influence employees' greening activity in organisations, which has numerous practical implications for organizations' environmental management. First, environmentally specific transformational leadership plays huge role in facilitating employees 'green behaviour. Noting the trainability of transformational leadership, it is recommended that employers can include green human resources management initiatives into leadership advancement programmes to aid leaders advance their capacity targeted at solving environmental issues, leading to motivating employees' green behaviour. Additionally, leaders can incorporate the environmental value into the self-construction of individual work by emphasizing the severity of environmental issues, in order to remold the employees' behaviour regarding greening. Finally, from the human resource management perspectives, organizations should recognize the importance of



the evaluation of individuals' environmental values in the recruitment and selection process. Persons with high level of environmental awareness and values are more likely to be motivated to engage green behaviour at work than those with low level of environmental awareness.

5.2. Limitations and Future Directions

Many outcomes of this study calls for further and future research. First, the adoption of cross-sectional data used in this study precludes any causal inferences. Thus, in order to allow for causal inference, to future research should exceed beyond the shortcomings of the cross-sectional data and incorporate longitudinal data. Second, this study only tested the moderating role linking environmental specific transformational leadership and green HRM with employee green behaviour, ignoring its mediating conditions. Nonetheless, future research should simultaneously incorporate both moderators and mediators into the research framework.

Data collected in this study are limited to the context of employee who works in public organization. Thus, future research may involve other private organizations. Outcomes of this research study may offer itself as a guideline for other government organization in other geo-political zones of Nigeria to increase their leader behavior which will impact green behaviour of employees.

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