

# Green Human Resource Planning and Organizational Sustainability of Manufacturing Firms in Anambra State

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**Abstract:** *The study examined the green human resource planning and organizational sustainability of manufacturing firms in Anambra State. The objectives of the study are as follows to: Determine the co-relationship effect between green performance management/ appraisal and pro-environmental/eco-friendly practices of manufacturing firms in Anambra State. Identify the co-relationship effect between green culture policies and pro-environmental/eco-friendly practices of manufacturing firms in Anambra State. Percentage table and ANOVA were used for the analysis in the study. Questionnaire was used to collect data from the workers as it concerns green human resource planning. The population of the study was 5,625 of the sample manufacturing firm staff, while the sample size is 360 were gotten through the use of krejuie and Morgan (1970) formular. The research adopted proportional allocation technique. From the analyses tested, the study found that; green performance has positive significant effect on pro-environmental and eco-friendly practices of manufacturing firms in Anambra state. Green culture has positive significant effect on pro-environmental and eco-friendly practices of manufacturing firms in Anambra state. The study recommended that Green performance management appraisal should be absorbed in all manufacturing firms in Anambra State Nigeria; as it also showed a high and moderate coefficient which pre-supposes a high influence on the dependent variable (pro-environmental and eco-friendly practices). Management and stake holders of manufacturing firms in Anambra State are advised to accommodate green cultures and practices in order to, Nigeria practices in order to curb carbon footprints, climate catastrophes etc and to abolish completely the use of fossils, while embracing New and most reliable technology in their manufacturing process.*

**Key words:** *green human resource planning, organizational sustainability, green performance, green culture*

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## 1.INTRODUCTION

Sustainability has gained greater attention from policy makers; shareholders, corporate bodies and corporate managers in recent decades, most especially from United Nations sustainable developmental goals, (UNSDGS) and United Nations Cap 26 which addresses serious environmental issues. The focus on human resource planning is all about formulating ideas to manage people but green human resource planning is an idea that tends to develop a culture, where an employee and employers key into environmental productivity trying to save our environment (climate), reduce pollution; and carbon emissions in our day to day activities in organizations. Organizations have realized that sustaining their businesses is dependent greatly

on the preservation of pro-environment and eco-friendly practices. It is obvious that organization's slovenliness towards eco-friendly practices will definitely disturb not only organizational sustainability but also their financial sustainability. Nevertheless, organizations have recognized the value of integrating sustainability of environmental, social and financial decisions into their business model and operations resulting to a growing interest of scholars in greening organizations in recent years.

Sustainable development is centered on meeting the needs of people today without compromising the ability of future generations to meet their own needs. Organizations are responsive to developing a powerful social conscience and green sense of responsibility where corporate responsibility is valuable to have but also doubled as a business imperative. The human resource planning and function will entail the motivator of environmental performance within the organization by outlining its planning, practices and policies with operational performance goals reflecting an Eco. Focus.

The human resources planning strategy must reflect impact and inspire the ambitions (focus) of the human resources planning team and other employees aligning with the organizations' strategy, values and culture, deliver sustainable returns to stakeholders, owners of equity/funds etc. address customer needs, identity and respond to emerging societal trends, respond to governmental, regulatory procedure and influence the public policy agenda. Thus, creating a green world where consumers and employees are forced to change. In fact, the Human Resource Planning Function can be termed people and society.

Economic performances of various organizations have other sides to it, the ecological imbalance; recently organizations have been experiencing greater shareholders/equity holders pressure on the need to minimize environmental impact created out of their business activity (Longoni, Luzzini, & Guerce, 2018; Yu, w., Ramanathan, & Nath, 2017).

Many literatures proposed that organizations venturing into green practices; must be endowed with green manpower, which have positively and remarkably affected the organizations successfully thereby enhancing individual green values of the employees (Kumari 2012). Nonetheless, the present study attempts to empirically test and explore how businesses can enhance their green values through green human resource planning and pro-environmental and eco-friendly practices.

Last two decades of this country has witnessed a tremendous and unanimous consensus for the need for a realistic organizational sustainability through environmental management drive. As the corporate world becomes more dynamic and adapts to the shift from a conventional business practices, green human resource planning has become a key business strategy for organization pro-environmental and eco-friendly

Stakeholders have pressured many organizations to adopt sustainable practices to enhance environmental performance but beyond compliance with regulation. Research has shown that organization sustainability through the prisms of pro-environmental and eco-friendly practices has become increasingly recognized as essential to firm's competitive advantages.

Research has shown that organizations who consider the reduction of ecological footprints and give importance to not only financial and economic values but great interest/importance to social and environmental factors have successfully improved organizational success and attainment of profit by shareholders (Nailiyah, 2016). The adoption of green management practices has shown

a diverse of advantages to firms which has benefited the firms and led to the emergence of “green and competitive” mantra, improvement that are related to organization’s operational performance, promotion of teamwork, improvement in the organizational culture as well as reduction in overall cost (Naliyah,2016; Aboramadan,2020).

From the above discussion, researchers have identified the ideal importance to adoption of pro-environmental and eco-friendly practices as a key objective to organizational sustainability. However, the realities in business practices has shown uncertainty and debates in green human resource planning principles, lack of synchronization with management strategies to green culture practices, lack of adapting and modifying HRM planning principles to green recruitment training, employee’s motivation, reward dimensions in the implementation of green management principles (Ojo, Raman & Downe,2019). These problems have led to low adoption of green practices and principles, thus, the lack of pro- environmental and eco-friendly practices of manufacturing firms.

Research on GHRM has flourished in the past years with studies conducted in different industries such as tourism and hospitality (Luu,2017), information and technology (Ojo & Raman,2019) and automobile industry (chaudary,2019). Nevertheless, research on green human resource planning (GHRP) in manufacturing firms especially in pharmaceutical firms, plastic firms, and fast-moving consumer goods firms is limited.

Therefore, to advance the literature of green, HRP in general and in manufacturing firms in particular, this study aimed to propose a model of the effects of GHRP on organizational sustainability of manufacturing firms, specifically, green reward/compensation, green training/development, green performance management/appraisal, green culture policies, and green recruitment/selection on pro-environmental /eco-friendly practices. Also, this study improves our understanding of the mechanisms that underpins the relationship between GHRM, GHRP and employees pro-environmental /eco-friendly practices (Ojo & Raman,2019; Ojo et al,2019; Aboramdadam,2020)

### **1.1 Objectives of the Study**

The main objective of this study is to understand the effect of green human resource planning on organizational sustainability with focus on the pro-environmental/eco-friendly practice dimension of manufacturing firms in Anambra State; while the specific objectives are to:

- i. Determine the co-relationship effect between green performance management/ appraisal and pro-environmental/eco-friendly practices of manufacturing firms in Anambra State.
- ii. Identify the co-relationship effect between green culture policies and pro-environmental/eco-friendly practices of manufacturing firms in Anambra State.

## **2. REVIEW OF RELATED LITERATURE**

### **2.1 Theoretical Framework**

The zest in quest of green human resource planning practices has resulted in the improvement of many theories and models. Consequently the study is based on two theories of Green Human Resource Management viz the resource based view theory (Barney 1991) and the Ability – Motivation – Opportunity Theory (AMO).

According to the Resource base view theory, an organization resources are the tangible and intangible assets that are tied, permanently, to the organization. Examples include brand names, in-house knowledge, skilled manpower, efficient policies, organization procedures, machinery and trade contracts. These resources are modern, efficient, valuable, rare, and cannot be easily imitated by others. Projecting such resources allows strategic competitive advantage over competitors in the market place (Wernerfelt, 1984). However, researchers have identified the imminent need of internal resources as sources of competitive advantage and, of people in particular, as internal resources that are strategically needful to organization success (Wright, Dunford, & Snell, 2001). Studies on strategic policies and practices, the applications and acceptance of Resource base view theory have led to an improved study of strategic Human Resource Planning and Strategic Planning in general (Wright et al., 2001). Huselid (1995) opined that policies, practices, Human Resource Planning and particularly those aligned with a company's competitive strategy, can help create competitive advantage. Similarly, Koch and McGrath (1996) argues the relationship between Human Resource planning, recruitment, staffing practices, and labor productivity. They imply that "a highly productive workforce is likely to have meaningful impact that makes an important asset to the organization" (Koch & McGrath, 1996).

Researchers opined that prioritizing sustainable strategy has reinforced the need for Human Resource practices and Economic Performance. Jabbour and Santos (2008) suggests a linkage between Human Resource Planning practices and Economic Performance through the Resource base view theory lens. Consequently, Jackson and Seo (2010) states that those organizations that implement or consent to greening their human resources will be more productive, resulting in overall competitive advantage. The impact of Human Resource Planning in the search for sustainable organizations. Institutional and societal pressures, evolutionary processes, regeneration, organizational competitiveness (Bombiak & Marciniuk - Kluska, 2018), and the desire to optimize natural resources whenever possible (Sehnm, Vazquez - Brust, Pereira, & Campos, 2019) focus managers on human- attributes that contribute to organization's economic performance (Macke & Genari, 2019). Human Resource departments are set up with stringent measures in terms of natural resources (Renwick, Jabbour, Muller-Camen, Redman, & Wilkinson,. (2015). The overall achievements and benefits resulting from the implementation of green human resource planning practices include an increase in staff ecological awareness, which in turn necessitates the organization's Economic Performances (Bombiak & Marciniuk - Kluska, 2018).

Stakeholders can be seen as organizational resources that can leverage management strategies and plans for Economic Performance (Yong, Yusliza, Ramajah, & Famehinmi, (2019). Business models that extend the product value chain Sehnm, Vazquez-Brust, Pereira, and Campos, 2019) eco focused principles, and eco-doctrine (Sehnm, Vazquez - Brust, et al., 2019) are all necessary tools for Economic Performance. Furthermore, the use of big data systems and satisfying the desire to increase consequently ambiguous profits with eco consciousness as well as valuing human potential and regulating the basic social needs of specific ethnic groups, communities, and regions (Singh, 2018), are all integral factors in environmental Performance. However, to identify the association between green Human Resource Planning Practices and Economic Performance, this research paper employs an Resource Base View perspective, which will replicate/study how Human Resource Planning greening efforts help to achieve economic performance and strategic competitive advantage. This research will employ an approach similar

to that of Gholami, Rezaei, Samon, Sharif, Zakuan, (2016), Gloet (2006), Jabbour and Santos (2008), Jabbour (2011), Jabbour and Jabbour (2016), Jackson, S.E, Renwick, Jabbour, Muller-Camen, (2011). Renwick et al. (2015), Singh (2018), Yong et al. (2019), in order to build an empirical model using data from large Nigerian manufacturing organization; especially in Anambra State.

#### Ability – Motivation – Opportunity Theory (AMO)

Subsequently the impact of green human resource planning on Environmental Performance with stakeholders can be viewed from an ability-motivation – opportunity theory (AMO) perspective. Arguably, citing the AMO theory; we imply that green human resource planning should be considered using three sets of human resource planning practices, which includes Green training/development, Green employee motivation and Green employee involvement.

Green Human Resource Planning contributes to environmental performance by developing green employee “Ability” (A) through Green/selecting and training high-performing employees and improving them; Green employee “motivation” (M) by encouraging involvement, commitment through green initiatives; and providing “opportunities” (O) for employees and stakeholders to get involved in environmental management initiatives (Renwince, Redman, Maguire, 2013). Subranmanina, Abdulrahman, Wu, & Nath, (2016). Green training essential for positive employees’ capacity to integrate and cooperate with stakeholders, suppliers and customers. However, training can possibly increase commitment level. (Haddock-Millar, J., Sanyal, C., Muller-Camen, M., 2016; Yu, W., Chavez, R., Feag, M., 2017). On the job training does not transcend into motivation and participation in environmental cooperation; trained workers can be encouraged by Green encouragement, Eco-performance appraisal and the perceived experienced ease of actually getting involved (Martinez-Del-Rio, Cespedes-Lorente, Carmon-Moreno, 2012).

## **2.2 Empirical Review**

Series of studies have been conducted to explain Green human resource management practices and organizational sustainability in manufacturing firms.

Farheen Javed and Sadia Cheema (2017) conducted a study in an empirical investigation on the impact of the adoption of Green human resource management in the Agricultural industry in Pakistan using a quantitative resource method. 300 questionnaires were distributed for this study out of which 263 questionnaires were used. The results were calculated by SPSS 24, different tests were applied 15 measure reliability and validity, to analyze the variables. Simple linear research identified various ways that green human resource management practices are improving agriculture now and in future. The finding of this research was that there is very little understanding of Green human resource management practices in Pakistan. Therefore, more effect manners should be applied to collect appropriate data and learning employee behavior towards change can make major difference in this field.

Muhammad Khsan Hadjri, Badia Perizade, Juaaidah, and Wita Farla (2019) conducted a study on green human resource, green organizational culture, and environmental performance: An empirical study at state hospitals of Palembang. The population in this study was 2,270 employees at state hospital in Palembang city. By using the solving formular and proportional stratified random sampling method, a sample of 146 employees was obtained. The instrument used to measure the research variable was a questionnaire measured by a five-point Linkert scale (1-5); Data that have been obtained from the questionnaire will be processed using the SPSS

program. An instrument test consisting of validity and reliability tests will be conducted, followed by a normality test. The Analysis technique used in multiple linear regression analysis. The findings of this study showed that there were positive effects of all Green human resources management variables consisting of Green Recruitment and Selection (GRS) Green training (GTR) Green Compensation (GCO).

Monicah Wanjiku Kuria, Dr. Thomas Mose (2019) conducted a study on Effect of Human Resource Management Practices on Organizational effectiveness of Universities in Kenya. The study employed descriptive research design targeting a study population of ten Universities in Kenya. The study used purposive sampling, therefore the sample size was 120 respondents. Semi structured questionnaires were used to collect primary data. The numerical data was analyzed using descriptive statistics and inferential statistics using SPSS version 20. The data were then presented through tables, charts and graphs. The study revealed that green recruitment and selection, green human resource performance management, green training and development, green pay and reward recorded a positive and significant relationship with organizational effectiveness of Universities in Kenya.

Edyta Bombiak (2019) conducted a study on green human resource management: The latest trend or strategic necessity. The study was conducted based on a Source Literature Inquiry and a diagnostic survey method involving a questionnaire survey. The survey was conducted in 2018 on a random representative population of 300 medium and large enterprises with their seat in Poland. This study was conducted with the application of LATI technique. The empirical studies confirm the thesis that pro-environmental actions undertaken in the area of Green human resource management have an impact on sustainable development. The study therefore concludes that Green human resource management is the basis for the development of a continued competitive advantage for organizations.

Atif Ali Gill, Riaz Husaan Ansari, Samra Malik, Nasreen Akhtar, (2021) conducted a research to examine the influence of Green Human Resource Management on Environmental Performance: Mediating Role of organizational Focused citizenship behavior towards the environment. The Survey method was used for data collection from the academic staff of public sector universities in Punjab, Pakistan. Convenience sampling technique was used and a partial least square structural equation modeling technique was used to analyze data statistically. Convenience sampling was used to distribute 360 questioners to faculty universities personally at their premises. Two hundred and forty of the questioners were successfully collected back from the respondents. It represented the acceptable response rate of (77%). Out of those questioners, 22 were partially filled. After screening questioners, 218 were further processed for Analysis. The study findings provide numerous theoretical and practical implications by extending the AMO theory and guiding universities' administration to train the academic staff and increase the reward to improve public sector universities environmental performance.

Yuris Danilwan, Dew, Budtiartini Yuli Isnaini, Ikbar Pratama, Dirhamsyah Dirhamsyah (2020) conducted a study on inducing organizational citizenship behavior through Green human resource management bundle; drawing implications for environmentally sustainable Performance. A case study: An online survey-based quantitative data collection method is used where 402 participants data are considered to apply the SPSS test i.e. structural equation

modeling. The study an informative approach for the Indonesian health care sector and its management to make some efficient changes in its human resource policies and also this data will add value in the decision-making process of this state policy makers and other research fellows. The KMO and Bartlett's test is used to identify the model fitness and the structural equation modeling-based SPSS statistical test is used to derive a constructive outcome (center, 2018; Prasad, Rao, and Vaidya, 2019). This online data-based quantitative research depicts that if the healthcare management sector in Indonesia made some productive and Green human resource related strategies, then more favorable outcomes will be generated in the future that enhances the sustainable growth rate of this industry.

Huma Ali, Urooj Islam, Shabnam Parveen (2017) conducted a study on the impact of green human resource management practices on Job seekers' Attraction in a developing economy like Pakistan. A sample of 300 students attending the final year of a Master's Degree in Business Administration at three Universities of Southern Punjab was studied using survey design. This study used hierarchical moderated multiple regression analysis to check hypotheses. The study concludes that young generation of Pakistan is more conscious about environment friendly activities and policies of the companies. The study concludes that Green human resource management practices have a significant positive influence on Job seekers' intention to pursue for Job in specific organization.

Mohammed Aboramadan (2020) conducted a study on the effect of green human resource management on employee green behaviours in higher education. The mediating mechanism of green work engagement. Data were collected from employees /208 employees working in Palestinian higher education organizations using a self-administered questionnaires. The partial least squares-structural equation modeling was the primacy statistical technique adopted to examine the study's hypotheses. The results suggest that green human resources management (GIWB) was a significant predictor of employee in-role green behavior, extra-role green behavior and GIWB. Furthermore GWE demonstrated to be a significant intervening mechanism to explain the above – mentioned relationships.

Yusliza, Tanveer, Ramayah, Kumar Suputra Noor & Faezah (2021) presented a study on perceived green human resource management among employees in manufacturing firms. This study was designed using a quantitative approach through a self-administered questionnaire. A total of 202 employees have participated and data collected by using snowball sample procedure. The data analyzed by using partial least squares-structural equation modeling and assisting the smart Pls-3. Drawing on the social exchange theory, the results revealed that the effect of perceived Green human resource management on both outcome variables is mediated by employee engagement. The findings of this study further advocate that manufacturing industry must pay greater attention to Green human resource management practices as employees treat them as the reciprocal process which helps organizations to escalate employees engagement level and decreases voluntary turnover rate.

### 3. METHODOLOGY

#### 3.1 Research Design

The study adopted descriptive research survey strategy to understand the effect of green human resource planning practices on organizational sustainability which was measured through pro-environmental & eco-friendly practices in Anambra State. The choice and justification for adopting survey descriptive research strategy is that it is an appropriate choice when the research aim is to identify characteristics, frequencies, trends & categories. It also allows the researcher to collect large volumes of data that can be analyzed for frequencies, averages and pattern. (baconshona, 2022)

#### 3.2 Area of Study

Anambra State was created in 1976 from the then of East Central State by the regime of General Murtala Mohammed with capital at Enugu. A further state creation exercise by the then regime of General Ibrahim Babangida on 27th August 1991 divided Anambra into two states, Anambra and Enugu. The capital of present day Anambra State is Awka.

Anambra state is bounded by Delta and Edo States to the west, Imo and Rivers States to the south, Enugu State to the east and Kogi State to the north. Anambra State derives it's name from Anambra River that traverses the state.

The main towns of Anambra state are Awka, Onitsha, Nnewi, Obosi, Ihiala, Aguata, Uli, Abagana, Alor, Atani, Nkpor, Umuoji, Umunachi, Umudioka, Unubi, Umunya, Umuleri, Aguleri, Oba, Ojoto, Eziowe, Igbukwu, Ichi, Ichida, Oraifite, Ozubulu, Akwaukwu, Uke, Ukpo, Ogidi, Okija, Oraukwu, Otu-ocha, Nnobi, Adazi Nnukwu, Adazi Enu, Adazi Ani, Nanka, Nnewi

The study was carried out in Anambra State Nigeria. Fifteen (15) major manufacturing companies were used for study.

#### 3.3 Population of the Study

The population of this study consist of the 15 selected manufacturing firms. Five (5) different categories of manufacturing firms (Pharmaceutical firms, Fast-moving consumer goods firms, and plastic firms). While the element in the population of interest was made up of 5,625. The categories of the selected manufacturing firms are listed in table 3.1

**Table 3.1 Population Distribution of the Select**

S/NO	NAME OF MANUFACTURING FIRM	STATE	NUMBERS OF EMPLOYEES
	Category A: Pharmaceutical Firms		
1.	KP Pharmaceuticals Ogidi	Anambra	398
2.	Gauze Pharmaceuticals Awka	Anambra	390
3.	Chazmax Pharmaceuticals Nkpor	Anambra	372
4.	Pal Pharmaceuticals Ogidi	Anambra	180
5.	Juhel Pharmaceuticals Awka	Anambra	400
	Category B: Plastic Firms		
6.	Afro-Asia plastic Nnewi	Anambra	250
7.	Millennium plastic industries Awka	Anambra	248
8.	Destiny Poly plastics (ENT) Obosi	Anambra	195



9.	NY-Wood (plastics) Ekwulobia	Anambra	200
10.	Alpha Poly plastic industries Onitsha	Anambra	296
	Category C: Fast-Moving Consumer Goods(FMCG).		
11.	Jolly Jolly beverages Oraifite	Anambra	190
12.	Tiger Foods/ beverages Nkpor,	Anambra	1067
13.	Tummy-Tummy foods/beverages Nnewi	Anambra	1017
14.	KP Beverages Ogidi	Anambra	197
15.	Intafact beverages Onitsha	Anambra	225
	Total		5,625

Source: Human Resource Department of Respective Manufacturing Firms

### 3.4 Justification for the Selection

To have a representative of the manufacturing firms in Anambra State. The research was able to categorise the manufacturing firms that feasibly operating in Anambra State into three categories: Pharmaceuticals, Plastics and Fast-moving Consumer Goods(FMCG). The selection process was transparent. All the manufacturing in each categoris was listed in a piece of paper and was randomly picked from a big carrier bag. This process were repeatedly carried out for each firms that made it to the list of manufacturing firms that were used for the study.

**Table 3.2 List of Manufacturing Firms used for the Study**

S/NO	NAME OF MANUFACTURING FIRM	ADDRESS
	Category A: Pharmaceutical Firms	
1.	KP Pharmaceuticals Ogidi	Anambra
2.	Gauze Pharmaceuticals Awka	Anambra
3.	Chazmax Pharmaceuticals Nkpor	Anambra
4.	Pal Pharmaceuticals Ogidi	Anambra
5.	Juhel Pharmaceuticals Awka	Anambra
	Category B: Plastic Firms	
6.	Afro-Asia plastic Nnewi	Anambra
7.	Millennium plastic industries Awka	Anambra
8.	Destiny Poly plastics (ENT) Obosi	Anambra
9.	NY-Wood (plastics) Ekwulobia	Anambra
10.	Alpha Poly plastic industries Onitsha	Anambra
	Category C: Fast-Moving Consumer Goods(FMCG).	
11.	Jolly Jolly beverages Oraifite	Anambra
12.	Tiger Foods/ beverages Nkpor,	Anambra
13.	Tummy-Tummy foods/beverages Nnewi	Anambra
14.	KP Beverages Ogidi	Anambra
15.	Intafact beverages Onitsha	Anambra
	Total	

Source: author's compilation

**3.5 Sample Size Determination and Sampling Technique**

The Krejcie and Morgan (1970) sampling technique was used to determine sample size for the study. The formula is denoted below:

Krejcie and Morgan

$$n = \frac{X^2 NP (1-P)}{e^2 (N-1) + X^2 P (1-P)}$$

Where n = Sample size

N = Population size

e = acceptable sampling error

x<sup>2</sup> = chi-square degree of freedom 1 and confidence 95% = 3.841

P = Proportion of population (if unknown, 0.5)

$$S = \frac{3.84 (5625) (0.5) (1-0.5)}{(0.05)^2 (5625-1) + (3.841) (0.5) (1-0.5)}$$

$$= \frac{5,402.25}{15.0204}$$

$$n = 359.66 \approx 360$$

To obtain the sample size for each of the company, the Rangan Kamaison proportional allocation technique was used to ensure that more of the company was checked.

$$ns = \frac{NP \times n}{N}$$

Where ns = sample size allocated to each company

NP = Population size of each company

n = total sample size

Therefore :- N = total population size

**Table 3.3: Determination of Sample Size**

S/N	FIRMS	FORMULA	SIZE
1	KP Pharmaceuticals Ogidi	$\frac{398 \times 360}{5625}$	25.472
2	Gauze Pharmaceuticals Awka	$\frac{390 \times 360}{5625}$	24.96
3	Chazmax Pharmaceuticals Nkpor	$\frac{372 \times 360}{5625}$	23.808
4	Pal Pharmaceuticals Ogidi	$\frac{180 \times 360}{5625}$	11.52
5	Juhel Pharmaceuticals Awka	$\frac{400 \times 360}{5625}$	25.6
6	Afro-Asia plastic Nnewi	$\frac{250 \times 360}{5625}$	16
7	Millennium plastic industries Awka	$\frac{248 \times 360}{5625}$	15.872
8	Destiny Poly plastics (ENT) Obosi	$\frac{195 \times 360}{5625}$	12.48

9	NY-Wood (plastics) Ekwulobia	$\frac{200 \times 360}{5625}$	12.8
10	Alpha Poly plastic industries Onitsha	$\frac{296 \times 360}{5625}$	18.944
11	Jolly Jolly beverages Oraifite	$\frac{190 \times 360}{5625}$	12.16
12	Tiger Foods/ beverages Nkpor,	$\frac{1067 \times 360}{5625}$	68.288
13	Tummy-Tummy foods/beverages Nnewi	$\frac{1017 \times 360}{5625}$	65.088
14	KP Beverages Ogidi	$\frac{197 \times 360}{5625}$	12.608
15	Intafact beverages Onitsha	$\frac{225 \times 360}{5625}$	14.4
TOTAL (sampling Size)		360	

**Source:** author's compilation

### 3.6 Source of Data Collection

The researcher used both primary and secondary sources for data collection. The primary sources consist of structured questionnaire while secondary source consist of textbooks, published journals and company bulletin.

### 3.7 Instrument for Data Collection.

A structured questionnaire was used for data collection. The survey instrument was administered for data collection. This was based on belief – Action-outcome (BAO) model (Melville, 2010; Ojo, Raman & Downe, 2019)

A five (5) point Likert scale structured questionnaires will be used in collecting the primary data. The Likert scale ranged from 5 (strongly Agree) to 1 (strongly disagree). The questionnaires consist of two sections, A and B.

Section A contains demographic data while section B consists of twenty eight (28) items which sought to explain the relationship between the independent variable and dependent variables.

### 3.8 Method for Data Collection

The researcher made use of one on one contact approach to administer the survey instrument. This is to ensure the attainment of an applicable number of respondents compared to other methods. The selected approach has an advantage of providing the researcher the opportunity of boosting the percentage of willing respondents and it reduces the number of non-response rate which is associated with other survey method. This method also affords the researcher the opportunity of stating the essence of the research and projecting the significant of its theoretical and practical aspect if the need arises to the respondents. In order to achieve non-response or to avoid eventualities in meeting up with the actual sample size the researcher administered extra forty copies of questionnaire to take care of these problems. Non-response of respondents, unreturned questionnaires or incomplete questionnaires.

### 3.9: Method of Data Analysis

The data generated from the study were analyzed through the following statistical tools: summary, statistics of percentages in frequency tables, descriptive statistics, and inferential

statistics of correlation, Chi-square statistical test and Regression Analysis Test. The data in ordinal and nominal form were transformed and computed into a useable scale for proper quantitative data analysis. All tests were conducted at 0.05 level of significant. SPSS software (version 23) was used to aid the data analysis. **ANALYSIS AND INTERPRETATION OF RESULT**

#### 4.1 Demographic Characteristics of the Respondents

Here, we analyzed the demographic features of the respondents to provide defaced information about the background of the respondents in the study. This will help in determining the categories of staff chosen for the study. It also provides the ground to access whether the respondents have the capacity to effectively discuss issues relating to Green human resource Planning and environmental sustainability in manufacturing companies.

**TABLE 4:1 Gender of the Respondents.**

S/N	GENDER	FREQUENCY	PERCENT	CUMULATIVE
1.	Male	227	59.42	59.42
2.	Female	155	40.58	100.00
	Total	382	100.0	

Source: Field Survey, 2022.

The analysis of Respondents' gender showed in Table 4.1 clearly stated that there are 227 male respondents in the study and it represents. 59.42 percent of the sample. The implication is that there are overwhelmingly more males than women in manufacturing firms.

**Table 4.2: Age Bracket of the Respondents**

S/N	AGE BRACKET	FREQUENCY	PERCENT	CUMULATIVE
1.	27-36	83	21.73	21.73
2.	37- 46	109	28.53	50.26
3.	47-56	122	31.94	82.2
4.	57 and above	68	17.80	100.0
	Total	382	100.0	

Source: Field Survey, 2022.

The analysis of the Respondence age showed that Respondents between Ages 47-56years has the highest number of Respondents 122 which represents 31.94% of the entire sample. This is followed by Respondents within the Ages of 37-46years with 109 respondents which represents 28-53% of the sample. Furthermore, Respondents between Ages 27 to 36 years with the frequency of 83 which represents 21.73% of the sample while respondents 17.80% of the entire sample.

From the data above the researcher deduced that most of the respondents are adults & young adults.

**Table 4:3: Educational Qualification of The Respondents.**

S/N	EDUCATIONAL QUALIFICATION	FREQUENCY	PERCENT	CUMULATIVE
1.	B.Sc/HND	159	41.62	41.62
2.	Master Degree	121	31.68	73.3
3.	Ph.D	33	8.64	81.94
4.	Professional Certification	69	18.06	100.00

Source: Field Survey 2022.

The Analysis of Educational qualification of the Respondents showed that the Respondents with B.Sc/HND has the highest frequency of 159 which represents with 41.62% of the entire B.Sc sample; while respondents with Master Degree with 121 respondents which represents 31.68% of the entire sample. Respondents respectively which represents 8.64% and 18.06% respectively. From the data above the researcher deduced that the sample is made up of literate people.

**Table 4:4: Respondents Organizational Tenure (in years)**

S/N	YEARS IN SERVICE	FREQUENCY	PERCENT	CUMULATIVE
1.	Below 5years	33	8.63	8.63
2.	5-10years	77	20.16	28.79
3.	11-15years	121	31.68	60.47
4.	16years and above	151	39.53	100.00
	Total	382	100.0	

Source: Field Survey, 2022.

The analysis of respondents years in service at their various organizations showed that 121 of them representing 31.68 percent of the sample and 151 workers representing 39.53 percent of the sample as well have worked in their various organizations from 11 to 15years and 16years and above respectively. However, it shows that 272 respondents representing 71. 21 percent of the entire sample have worked in that organization for upward of 11years and above. It seemed evident that the respondents are in a position 15 efficiently discuss issues relate to Green human Resource Planning & environmental sustainability of manufacture firms in Anambra State.

## 4.2: Data analysis

**Table 4.2.1: Effect of green Performance Management on Pro-environmental and eco-friendly practices**

S/N	ITEMS	SD	D	N	A	S.A	TOTAL
PM 1.	Employees know their specific green targets goals and responsibility	20 5.2%	89 23.3%	90 23.6%	113 29.6%	68 17.8%	
PM 2.	Environmental targets and contributions to environmental management are assessed and induced in performance	21 5.5%	62 16.2%	166 30.4%	126 33.0%	56 14.7%	

	indicators/appraisal and recorded						
PM 3.	The roles of in achieving green outcomes are included in the appraisals	15 3.9	66 17.3	108 28.3	127 35.2	65 17.0	
PM 4	Managers provide regular feedback to the employees or teams to achieve environmental goals or improve their environmental performance.	23 6.0	62 16.2	95 24.9	137 35.9	64 16.8	
PM 5	Environmental management objectives and targets are incorporated into the performance evaluation system of the organization	19 5.0	71 18.6	109 28.5	123 32.2	59 15.4	

Source: Field Survey, 2022.

**Question 2**

To what extent do green culture policies affect Pro-environmental and eco-friendly practices in manufacturing firms in Anambra State? The response of the respondents are shown in Table 4.7 below

Table 4.2.2 : Effect of green culture policies on Pro-environmental and eco-friendly practices

S/N	ITEMS	SD	D	N	A	S.A	TOTAL
GC 1.	Our top management actively Supports environmental practices.	17 4.5	84 22.0	81 21.2	113 29.6	86 22.5	
GC 2.	Our organizational vision/mission statements include environmental concern.	9 2.4	69 18.1	101 26.4	115 30.1	88 23.0	
GC 3.	Our top management clarifies Information and values of environmental management throughout the organization.	12 3.1	52 13.6	103 27.0	36 35.6	79 20.7	
GC 4.	Our top management develop punishment systems and penalties for noncompliance in environmental management	18 4.7	73 19.1	102 26.7	111 29.1	77 20.2	

GC 5	Our team/departmental budgets Cover environmental impact.	23 6.0	88 23.0	97 25.4	106 27.7	68 17.8	
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Source: Field Survey, 2022.

**4.3: Regression Analysis**

Regression technique is used to access the strength of a relationship between independent variables (GPMA, GCP,) and dependent variables (Pro-environmental & Eco-friendly Practices). It helps in predicting value of a dependent variable from one or more independent variables. Regression analysis helps in predicting how much variance is being accounted in a single response. Dependent variable by a set of independent variables understands their link (that is prediction and explanation) and helps to make inferential causation decision.

**Table 4.14: Model Summary, Regression Analysis Result.  
Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.768 <sup>a</sup>	.589	.584	2.71944	.589	105.675	5	368	.000	1.878

a. Predictors: (Constant), Green Culture, Green Performance

b. Dependent Variable: Employee Ecofriendly

The result from table 4.14 which show the model summary and the overall fit statistics indicated that the adjusted  $R^2$  of our model is 0.584 with  $R^2 = 0.589$  that means that the linear regression explained 58.9% of the variance in the data. The Durbin-Watson = 1.878, which is between two critical values of  $1.5 < d < 2.5$  and therefore we can assume that there is no first order linear auto correlation in the data.

**Table 4.15: Coefficient of the Productors Variables, T-Values And Collinearity**

**4.3.1: Interpretation of test /regression results**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	1.599	.717		2.231	.026	.190	3.009		
Green_Performance	.327	.053	.324	6.152	.000	.222	.431	.402	2.486
Green_Culture	.135	.050	.132	2.688	.008	.036	.233	.465	2.151

a. Dependent Variable: Employee\_Ecofriendly

Here we analyzed and interpreted the coefficient of beta ( $\beta$ ), t-value and other parameters of validations in the model in other to take a firm decision for the hypotheses. Considering table **4.15 above**, the values of the independent variables represented by  $\beta$  show the relative influence of each green human resource planning practices on organizational sustainability of manufacturing firms as specified in the model.

Consequently, the coefficient of the green performance management & appraisal represented by  $\beta = 0.327$  which translates that an increase by one unit will necessitate that pro-environmental and eco-friendly practices will increase by 32.7% whereas other factors in the model are not allowed to change. The t-value and its corresponding probabilities of 6.152 and p 0.000 respectively will be described as significant because  $p \leq 0.05$  is greater than  $p0.000$ . Again, the null hypothesis was rejected while the alternate hypothesis which states that green performance management and appraisal has positive significant effect on pro-environmental and eco-friendly practices of manufacturing firms in Anambra state was accepted.

Furthermore, the coefficient, green culture practices represented by  $\beta_2$  in the model is 0.135 and when the value is increased by one percent or by any one more unit the dependent variable (pro-environmental & eco-friendly practices ) will increase by 13.5% assuming all other variables remains constant. Similarly that the t-value of 2.688 and its corresponding probability level of p 0.008 is an indication that the coefficient is significant. Therefore, we rejected the null hypothesis and affirm that green culture practices have positive significant effects on the pro-environmental & eco-friendly practices of the manufacturing firms in Anambra state.



### **4.3.2: Discussion of Research Findings**

The discussion of research results carried out in this section of the analysis was based on the results of the various tests of hypotheses carried out in this research, and findings of other studies in related field.

#### **4.3.2.1 Green Performance Management Appraisal (GPMA) and Pro-Environmental & Eco-Friendly Practices**

The result of test of hypothesis in this area states that green performance management appraisal has significant positive effect on pro-environmental and eco-friendly practices of the firm. Green performance management and appraisal comprises a system of evaluating the activities of employee's goals in the process of environmental planning (Jabbour et al, 2008). Studies have focused on certain aspects of green performance management such as; delivering feedback and balancing metrics (Jackson, S.E, Renwick, D.W.S, Jabbour, C.J.C, & Muller-Camen, M, 2011; Zibarras & Coan 2015). Nonetheless these methods of measuring green performance are not effective. many organizations have different structural attributes and resources that can employ same measurement within the organizations (Jasch 2000; Kuo, Yeh & Yu, 2012). Manufacturing industries need to identify a comprehensive routine of developing green performance management, aligning with an acceptable green performance management standard is key for most organization. Green performance planning and management creates green performance indicators highlighting a series of green criteria for all employees in performance appraisals. Recent programs such as environmental incident, environmental responsibilities, reduction of carbon emissions and communicating of environmental concerns and policies is key towards achieving performance evaluation. Kroeze, and Jawjit (2000) opined that for both shareholders and stakeholders, the most important aspect of green performance management is the performance appraisal which will affect the process and effectiveness of subsequent rewards and compensation. Clear green performance indicators are therefore indispensable in performance management system. Green evaluation by supervisors (shareholders) & green outcomes emphasizes their roles in environmental planning which creates more sensitivity towards environment management performance. This makes it necessary for audacious imperative towards itemizing green outcomes and encourage shareholders to be accountable for pro-environmental and eco-friendly practices.

#### **4.3.2.2 Green culture and pro-environmental and ecofriendly practices.**

The result of the fourth test of hypothesis revealed that green culture practices has significant positive effect on pro-environmental and eco-friendly practices of manufacturing firms in Anambra state.

Like other test before this, the result is consistent with Renwick et al, (2013) who opined that stakeholders can be provided with opportunities to participate in environmental management as it will enable them to support the reduction of carbon footprints and identify environmental opportunities. A great deal of research has shown that employees' green involvement is crucial in improving the performance of the environmental planning and management systems such as reducing waste & pollution in workplaces, making full use of resources (Tseng, Tan & Siriban-Manalang, 2013). Renwick et al, (2013) opined that a number of processes of employee green involvement form an integrated perspective, he further identified five aspects for measuring green involvement. They include clear vision, green planning and management, politics and

learning climate, culture various communication channels offering green practices and encouraging green involvement. a green learning climate and various communications channels enable employees to be knowledgeable about environmental issues in their workplace. A mutual learning climate encourages stakeholders to be concerned about each other green initiative to create an atmosphere of supervision, enhancement of knowledge, acceptance and adequate awareness of environmental issues. Several formal or informal communication channels among employees can spread green cultures and provide an opportunity to improve their pro-environmental & eco-friendly awareness. Stakeholders can be motivated or coaxed into participation in green education; which will necessitate green planning and management activities such as writing green newsletters, develop green problem -solving groups or settings up green teams (Vailaster,2017).

## **5. CONCLUSION AND RECOMMENDATIONS**

### **5.1: Conclusion**

The study examined the effect of green human resource planning and Organizational sustainability of manufacturing firm in Anambra State. From the findings made from the study, some conclusions were made.

Subsequently Green performance management appraisal, and Green culture practices also showed a high and moderate coefficient, an expression of their imminent positive significant effect on the dependent variable (pro-environmental and eco-friendly practices). The Beta weight tables reveal the independent variables as  $R_c = 0.053$ ,  $GPMA = 0.327$ , &  $GCP = 0.135$ ; this x-rays the obvious relative importance of these independent variable (GPMA, GCP) on the dependent variable (pro-environmental & eco-friendly practices). This means that these variables are key in achieving firm's organizational sustainability when properly adapted and employed judiciously.

### **5.2: Recommendations**

The study has showed that Green human resource planning leads to enhanced performance of the firm. In view of this assertion; the following recommendations were made:-

1. Green performance management appraisal should be absorbed in all manufacturing firms in Anambra State Nigeria; as it also showed a high and moderate coefficient which pre-supposes a high influence on the dependant variable (pro-environmental and eco-friendly practices).
2. Management and stake holders of manufacturing firms in Anambra State are advised to accommodate green cultures and practices in order to, Nigeria practices in order to curb carbon footprints, climate catastrophes etc and to abolish completely the use of fossils, while embracing New and most reliable technology in their manufacturing process.

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