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Green Marketing: The Distribution and Physical Evidence Practices Required by Polythene Manufacturing Companies for Consumer Sustainability in South Nigeria

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Abstract: The main aim of this study was to articulate the green distribution and physical evidence practices required by polythene manufacturing companies for consumers' sustainability in South-South Nigeria. The descriptive survey research design was adopted for the study. The study was conducted in the six States of South Nigeria. The population for the study was 323, comprising 35 marketing lecturers, 60 managers of polythene manufacturing companies, and 223 polythene consumers in South Nigeria. Due to the manageable size of the population, no sample was drawn. A structured questionnaire and Focus Group Discussion (FGD) guide were used to collect data. Five experts validated the research instruments. The use of the Cronbach Alpha reliability method ascertained the reliability of the instruments. The total reliability yielded a co-efficient of 0.89, which indicated that the instruments were highly reliable. The questionnaire was administered directly to the respondents with the help of five research assistants. The data collected for this study were analyzed using mean, standard deviation and Analysis of Variance (ANOVA) statistics. The study found 18 green distribution and 17 green physical evidence practices that polythene manufacturing companies highly require for consumers' sustainability. Based on the study's findings, it was concluded that polythene manufacturing companies highly require green distribution and physical evidence practices to ensure consumers' sustainability. It was recommended, among others, that polythene manufacturing companies maintain high ethical standards in their marketing practices to ensure sustainable consumption of green products.

Keywords: Green marketing, green distribution and physical evidence practices, consumer sustainability, polythene manufacturing companies

1. Introduction

The development of modern marketing started in the early 20th century and has become an evolving concept. Marketing has evolved into several concepts, such as service marketing, relationship marketing, international marketing, one-to-one marketing, realistic marketing, symbolic marketing, and others. These marketing concepts are expected to satisfy the consumers, maximize profit for the organization, as well as be socially responsible. However, most activities of businesses in Nigeria cause land degradation and environmental pollution, such as waste, air, noise, and water pollution (Abanyam, 2019). As a result, regulations have been passed to ensure that the public is not uncomfortable with irresponsible marketing practices (Abanyam et al., 2020). Hence, there is a renewed call for integrating environment-friendly practices into their marketing philosophy, which has again given rise to another concept known as green marketing.

According to Abanyam and Uwameiye (2019), green marketing is a holistic concept that refers to all activities involving the idea conception, manufacturing and consumption of products which are less of a detrimental effect on the environment. Polanski (2014) referred to green marketing as all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that satisfying these needs and wants occurs with minimal

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detrimental impact on the natural environment. These perspectives make green marketing different from other marketing concepts, which do not consider the impact of their products on the environment.

The researchers observed that one main cradle of ecological deprivation in South Nigeria originates from polythene manufacturing companies. Amarasinghe and Fernando (2014) posited that consumers' spread of indecomposable polythene products in landfill sites has led to environmental degradation. At the same time, consumers' insolence in poorly disposing of polythene wastes encourages the degradation of the environment. The damage done to the environment by polythene waste can be reduced through waste minimization, such as maintaining suitable means of waste disposal, recovery, conversion, control and reuse. These practices can be achieved if the companies have articulated green pricing and promotion into their overall green marketing philosophy framework to ensure consumers' sustainability.

According to Abanyam (2019), consumer sustainability refers to the simultaneous optimization of the social, environmental, and economic concerns of using and disposing of polythene materials in ways that will not jeopardize both the needs of the present and later generations. According to Phipps et al. (2013), sustainable consumption has become an essential global focus of interest. The authors further stated that one of the biggest factors of change for individual consumers is the call to save the planet by buying green goods from companies. Companies that integrate green, sustainable practices into their marketing philosophy have a differential competitive advantage over companies that do not. Hence, the adoption of green marketing strategies such as green distribution and physical evidence practices would create new business opportunities, present strong potential for making a profit and satisfy stakeholders who have significant influence in providing financial, human and other resources for companies (Biloslavo & Trnavčevič, 2009; Jones et al., 2008).

As described by Tseng et al. (2019), green distribution is the sustainable distribution of goods and services. According to Abanyam (2019), green distribution practices are related to conveying and storing products that improve the firm's environmental performance. In this study, green distribution refers to those practices that reduce the amount of fossil fuels and greenhouse gases used in distributing polythene products to consumers. Polythene production requires a lot of movement of both raw and finished materials in and out of the organization. In doing this, most polythene companies use vehicles powered by gasoline and diesel, emitting carbon dioxide, which causes global warming and acid rain. However, sustainable distribution practices such as bio-fuels, rail and others can be used to transport both human and material resources. Polythene manufacturing companies adopting green distribution can decorate their vehicles with green captions to differentiate their green polythene products from competitors. The branded and well-packaged distributed polythene products provide physical evidence to consumers of the practices of green marketing by polythene manufacturing companies.

According to Malini (2019), green physical evidence refers to using natural and sustainable materials for products and facilities decoration. As posited by Abanyam (2019), green physical evidence is an element of service marketing that enables the consumer to evaluate a firm and its products. Green physical evidence includes aspects such as the company's building/facilities and staff appearance, personal hygiene and uniforms that add value and promote the image of an organization. In addition, promotion materials and branding strategies are all elements of physical evidence that provide tangible evidence offerings to customers. As it concerns the manufacturing industry, green physical evidence is viewed in terms of ambience, packaging, and branding (Asiegbu & Powei, 2012). The Chartered Institute of Marketing (2015) maintained that choosing an unfamiliar product or service is risky for the consumer because they only know how good the products will be after purchase. Hence, polythene manufacturing companies can reduce this uncertainty by helping potential customers use samples of what they buy. This can be done through well-shot video testimonials and reviews on independent websites, which would add authenticity. Green physical evidence adoption has shown how beneficial it can be for companies to incorporate this line of thought into their business philosophy, as this is an open gateway for gaining goodwill among consumers and stakeholders.

According to Financial Times (2017), marketing stakeholders refer to those actors that operate in the business domain, the environment, and society in general to design, implement, and evaluate marketing initiatives to maximize benefits for all stakeholders. They include customers, employees, and shareholders. Marketing stakeholders in this study refer to those with marketing knowledge and skills in teaching, producing, and utilizing polythene materials in South Nigeria. They include marketing lecturers in the universities, managers of polythene manufacturing companies, and the consumers of such polythene products.

Marketing stakeholders are becoming more aware of the harmful effects of polythene products; Polythene is a potentially harmful substance that promotes endocrine disruption (Barnes et al., 2009). Consumers are exposed to chemicals such as phthalates through the nose, mouth, or skin. Some of the chemicals used in polythene production can cause cancer of the lungs and dermatitis upon contact with the human body (Groff, 2010). There is, therefore, an increase in the demand for environmentally friendly products (Clem, 2008). Kumar and Ghodeswar (2015) observed that these stakeholders' ideologies regarding green marketing adoption and consumption have raised concerns over the environmental impact of polythene marketing. This improved consciousness and thoughtfulness of marketing stakeholders to the environmental concerns places some responsibility on polythene manufacturing companies to adopt green practices. Hence, the demand for green strategies is to be put in place by polythene manufacturing companies to decrease the negative effects of indecomposable polythene waste products on the environment. The researchers'

interaction with polythene manufacturers in South Nigeria indicated a willingness to adopt green distribution and physical evidence practices in polythene manufacturing; however, their greatest challenge in going green is their inability to know where to start and how this can be achieved. In bridging this gap, this study seeks to determine the green distribution and physical evidence practices required by polythene manufacturing companies for consumer sustainability in South Nigeria.

The following research questions guided the study: 1) what green distribution practices are required by polythene manufacturing companies for consumer sustainability in South Nigeria? and 2) what do polythene manufacturing companies require the green physical evidence practices for consumer sustainability in South Nigeria?

The following null hypotheses formulated for the study were tested at a 0.05 level of significance:

a) There is no significant difference in the mean ratings of the responses of marketing lecturers, managers and consumers on the green distribution practices required by polythene manufacturing companies for consumer sustainability in South Nigeria.
b) There is no significant difference in the mean ratings of the responses of marketing lecturers, managers and consumers on the green physical evidence practices required by polythene manufacturing companies for consumer sustainability in South Nigeria.

2. Literature Review

Green marketing aims at integrating a wide spectrum of activities, including product distribution, product packaging, as well as evidential ambiance. D'Souza et al. (2015) observed that green marketing offers products which cause minimal harm to the environment but rather protect it. The reasons for these kinds of practices are to reduce pollution and cost and increase the preservation of limited resources. The company's role in achieving green distribution and physical evidence management includes providing product designs with features such as energy saving, local sourcing, and a lot more.

Green Marketing has a lot of important benefits for companies to leverage on. It increases revenue, reduces cost, and builds brand value. A manufacturing company practising green marketing asserts a strong impression of the brand value in the minds of the consumers of such products. As posited by Chabowski et al. (2011), companies that adopt green marketing get tax holidays, loans, and other incentives from the government due to their creative approaches to bearing uncertain risks. Besides, FuiYeng and Yazdanifard (2015) stated that green practices save the nation's environment and health so they receive government subsidies. Also, green marketing has the advantage of disposing and treating waste, which protects the environment. This is made possible since companies, during the production process, reduce the rate of discharges of greenhouse gases that aid the changes in global climate. This can cause the greenhouse effect. By adopting green practices, the companies could save the world by saving the health of people and the environment (Rajeshkumar, 2012). Therefore, green marketing, which is concerned with waste recycling, has created an avenue for companies to mutually align their products to avoid environmental waste. Manufacturing companies in Nigeria play an important role in the growth and development of the economy. They are involved in fabricating, processing, or transforming materials into finished or intermediate goods. Polonsky (2011) states that manufacturing companies use components or raw materials to make finished goods. These finished goods can be sold directly to consumers or other manufacturing businesses that use them to make other products. One of the significant groups of manufacturing companies in South Nigeria is the polythene manufacturing companies. Although these companies create employment and generate revenue for the government, they have been criticized for poorly handling environmental-related issues, resulting from poor management of waste materials such as those generated from plastics/polythene products. This has become a major worry for polythene companies that intend to flourish under the façade of rigid marketing competition.

Polythene is a type of plastic material, generally organic and natural polymers involving higher molecular mass, most frequently produced from petrochemicals. Plastic can be considered a broad category, in which polythene is a subtype of the main category. Many other polymers, such as Bakelite and melamine, are types of plastic. Polythene materials, according to Ukpong and Peter (2011), are those materials made from a chemical compound known as polyethene (C-Hn) and are manufactured from the polymerization of ethylene (C-H). Polyethene is an odourless and translucent solid, commercially available in pellet form but convertible to derivative products such as polythene bags, wrapping sheets, and lots more. Polyethylene materials are products of the polymers industry and possess certain qualities and properties which make them readily usable. Ukpong and Peter (2011) observed that polythene's high physical strength and other properties make them reproducible and predictable. They also retain their physical and chemical properties over various environmental conditions such as heat, cold and chemicals. They can resist mechanical stress for a very long period, resulting in environmental pollution in the South zone and Nigeria.

South, one of Nigeria's geopolitical zones, consists of Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and River States and is surrounded by water and other natural resources that provide the country's economic mainstream. This zone is faced with environmental challenges caused by oil exploration, waste including those generated by polythene materials and more. Environmental pollution created by polythene includes soil, water and air contamination and blockage of drains and sewage lines in and around cities (Aziegbe, 2007). Polythene, which is non-biodegradable, remains intact for several years without decomposing. Liu (2010) stated that polythene can resist mechanical stress for

30-40 years. Its presence in the soil is counter-productive. The persistent open burning of polythene dumps in South Nigeria is common. Burned polythene products emit harmful toxins which can threaten air quality. Some toxic substances released include pops such as hazardous dioxins (UNEP, 2002).

Furthermore, South Nigeria has been polluted by indecomposable polythene waste in the form of gases, liquid (sludge) and solids, which affect both the surface and underground water. In addition, polythene waste destabilizes the characteristics of water and affects its temperature, taste, odour, colour, turbidity, amount of suspended solids, and electrical conductivity of water. It has been observed that fish and other marine species in the waterways mistake polythene material for food items, swallow them and die (Wada & Bierkens, 2014; Jones & Van der Walt, 2004). This scenario has become of interest to stakeholders in this part of Nigeria, especially to keep the environment friendly, healthy and clean.

3. Methodology

The descriptive survey research design was adopted for this study. Abanyam et al. (2020) stated that in descriptive survey research, views and facts are collected through questionnaires, interviews and observations, which are used to analyze data and answer research questions. Survey design is considered suitable for this study because this study made use of a structured questionnaire and focus group discussion (FGD) to obtain data from the respondents on green marketing practices required by polythene manufacturing companies for consumer sustainability in South Nigeria.

The population for the study is 323, comprising 35 marketing lecturers, 60 managers of polythene manufacturing companies, and 228 polythene consumers in South Nigeria. The population of the Marketing Lecturers was obtained from the Personnel Department of the Universities of Calabar, Uyo, Port Harcourt and Benin. These universities were selected because they offer marketing programmes and, as such, have lecturers teaching marketing courses. The population of the Managers of polythene manufacturing companies was, however, obtained from the Manufacturing Association of Nigeria (MAN), while the population of the Polythene consumers was obtained from the registered members of Table Water Associations in the six states of South Nigeria. The choice of the lecturers was borne out of the fact that they are knowledgeable and skilled in teaching and are advocates for the utilization of consumers' friendly marketing practices, including green marketing. Thus, their expertise in marketing practices was needed to achieve the objectives of this study. The managers of polythene manufacturing companies were also chosen for this study because they are the ones to utilize the green marketing practices to be articulated in this work and, as such, are direct beneficiaries of this study. The Table Water Producers were chosen to represent the consumers of polythene products because they have an organized association, which enhanced data collection. They were also considered useful for this study because they are the middlemen connecting the polythene manufacturers and final consumers; hence, they are better placed to provide the necessary information to validate the study.

A focus group discussion (FGD) guide and a structured questionnaire were the instruments used for data collection. A structured questionnaire tagged Green Distribution and Physical Evidence Practices Required by Polythene Manufacturing Companies for Consumers Sustainability (GDPPRPMCCSQ) with 35 items developed by the researchers was used for data collection. The questionnaire is divided into parts I and II. Part I elicited information on the personal characteristics of the respondents. Part II, on the other hand, is divided into two sections: A and B. Section A, with 18 items, elicited information on the green distribution practices required by polythene manufacturing for consumers' sustainability, and Section B, with 17 items, elicited information on the green physical evidence practices required by polythene manufacturing companies for consumers sustainability. Each of the sections (A-B) was structured on a four-point scale of Very highly required (VHR), Highly required (HR), Slightly required (SR), and Not required (NR) with values of 4, 3, 2, and 1 respectively.

Focus Group Discussion (FGD) guide was also used for data collection. The discussants were workers in polythene manufacturing companies and tableware factories to obtain the required data to enrich the findings. Five members comprised a group, and there were six groups, one for each of the six states in South-South Nigeria. The FGD, according to Abanyam and Onimawo (2020), is an interview conducted by a moderator among a small group of respondents informally and naturally, where the respondents are free to express their views on various topics of interest.

The research instruments were validated by seven experts in Environmental Studies, Delta Plastic and Business Education. This was done to ensure the clarity and appropriateness of the language and coverage and to correct missing information or any other observed errors. It was also done to determine the suitability of every instrument item or question to elicit the desired responses. The observations and inputs of the experts were captured to help the researcher make necessary corrections, adjustments and modifications, which improved the final copies of the instruments.

The internal consistency of the questionnaire items was determined using the Cronbach alpha reliability method. The questionnaire was administered to a sample size of 30 respondents, comprising five (5) marketing lecturers, 10 managers of polythene manufacturing companies, and 15 polythene consumers in Anambra state, which is outside the study area but has similar features to the studied area. The questionnaire was retrieved and analyzed using Statistical Package for Social Sciences (SPSS) version 20 to determine the reliability coefficients of each section and the total coefficient, following the Cronbach alpha reliability formula. The analysis yielded a reliability coefficient of 0.58, 0.83 and 0.62 for sections A and B, respectively. The overall reliability for the instrument was 0.89, indicating that the questionnaire is highly reliable.

The questionnaire was administered directly to the respondents with the help of five research assistants. The research assistants were chosen based on their knowledge and proximity to the study area to facilitate the administration and return rate of the questionnaire. The researcher briefed the research assistants on how to administer the questionnaire to the respondents. The five research assistants covered Akwa Ibom, Bayelsa, Cross River, Delta, and Rivers states, while the researcher administered the questionnaire in Edo State. The 323 copies of the questionnaire were administered to the respondents, but 318 copies were retrieved, indicating a 98.5% return rate. The researcher personally moderated the FGD sessions to obtain qualitative data with the help of two research assistants. We used tape recorders to record information as the discussions progressed. At the end of each session of the FGD, the researchers crosschecked the written information obtained to guard against any form of misrepresentation of facts given by the respondents on the subject matter. Five (5) persons comprised a group, and there were six groups, one for each state.

The mean, standard deviation and Analysis of Variance (ANOVA) statistics were the tools used to analyze the data. In the decision rule, the real limit of number was used for interpreting the analyzed data for answering the research questions as follows: Very highly required (VHR): 3.50 – 4.0; Highly required (HR): 2.50 – 3.49; Slightly required (SR): 1.50 – 2.49; and Not required (NR): 1.00 – 1.49. A cut-off mark of 1.96 was used to make a decision on the standard deviation. Based on Fisher's rule in Abanyam (2019), a standard deviation below or close to 1.96 shows that the respondents' opinions are close to the mean and each other. At the same time, a standard deviation above 1.96 of any item indicated that the respondents' opinions were not close to the mean and to one another. The analysis of qualitative data obtained from FGD was reported and summarized as indicated by the respondents. The qualitative data helped to validate or invalidate the quantitative data collected.

4. Results

Research Question 1: What green distribution practices are required by polythene manufacturing companies for consumer sustainability in South Nigeria?

Table 1 presents the mean ratings of respondents on green distribution practices required by polythene manufacturing companies for consumer sustainability in South Nigeria. Items 1 and 13 recorded mean scores of 3.52 and 0.54, respectively, indicating very highly required. In contrast, items 2 to 12 and 14 to 18 recorded mean ratings ranging from 3.20 to 3.46, indicating that the items are highly required. Furthermore, the standard deviations ranged from 0.54-0.86, which was below 1.96, thus indicating that the respondents were not far from the mean and from each other in their opinions; as such, all 18 items were valid and reliable. Hence, with a grand mean of 3.34 and a standard deviation of 0.22, Table 1 indicates that polythene manufacturing companies highly require green distribution practices for consumer sustainability in South Nigeria.

The focus group discussion sessions on green distribution practices further revealed that in addition to using trains, hybrid vehicles, and trucks, it is important to pay attention to wheelbarrows and tricycles, as these are low-carbon emitters. Also, green storage facilities are necessary for any manufacturing company to claim green marketing compliance. As discussed by polythene manufacturers, this view provided more credibility to the quantitative data. This, therefore, helps to increase the reliability of the data collected to provide an answer to research question five, that all the 18 items listed in Table 1 are green distribution practices that polythene manufacturing companies require for consumer sustainability in South Nigeria.

Table 1: Mean ratings of respondents on green distribution practices

No	Items statement	$\bar{X}$	SD	Rmk
1	Develop a green transportation plan for effective delivery of green polythene products	3.52	.75	VHR
2	Encourage alternative modes of green transportation like carpooling for delivering green polythene products	3.20	.72	HR
3	Analyze logistics to find the best mode of making green polythene products available to the consumers	3.21	.70	HR
4	Ensure good vehicular transportation of green polythene products with less carbon emission	3.24	.72	HR
5	Offer delivery service where green polythene products cannot be transported without a vehicle	3.34	.75	HR
6	Combine green polythene product deliveries with customer follow-up service	3.35	.67	HR
7	Use couriers for local polythene product delivery	3.31	.75	HR
8	Use green courier’s shipping materials that include post-consumer waste recycled materials	3.38	.73	HR
9	Ship in used nylons materials until they are eventually recycled into green polythene products	3.39	.64	HR

Table 1: Mean rating of respondents on green distribution practices (Continued)

No	Items statement	$\bar{X}$	SD	Rmk
10	Establish a sustainable plan that minimizes the need for shipping unwanted raw materials for green polythene production	3.31	.86	HR
11	Limit distance travels for raw materials and finish green polythene products	3.30	.69	HR
12	Have a green building (multi-level warehouse) for storing polythene products	3.42	.60	HR
13	Use biofuels as fuel alternative in transporting green polythene products	3.53	.54	VHR
14	Establish an in-transit packaging point for effective distribution of green polythene products	3.36	.61	HR
15	Establish green polythene suppliers' partnerships to share warehouses and fleets	3.40	.57	HR
16	Use hybrid vehicles to distribute green polythene products to consumers	3.46	.54	HR
17	Provide green storage facilities to store green polythene products and production materials	3.38	.55	HR
18	Use train to transport green polythene products to distance locations	3.32	.70	HR
	Grand mean	3.34	.22	HR

Key X= Mean, SD= Standard deviation, Rmks = Remarks, HR = Highly required, VHR = Very highly required

Hypothesis 1: There is no significant difference in the mean ratings of the responses of marketing lecturers, managers and consumers on the green distribution practices required by polythene manufacturing companies for consumer sustainability in South Nigeria.

Table 2 summarises the responses of marketing lecturers, managers and consumers on the green distribution practices required by polythene manufacturing companies for consumer sustainability in South Nigeria. Table 2 shows an F-value of 6.83 with a P-value of 0.00 at 317 degrees of freedom, which is less than 0.05 level of significance, indicating that there is a significant difference among the mean responses of marketing lecturers, managers, and consumers on the green distribution practices required by polythene manufacturing companies for consumer sustainability in South Nigeria. Hence, the null hypothesis of no significant difference was not upheld. To determine the source of difference. A post-hoc analysis test was carried out using the Bonferroni multiple comparisons method.

Table 2: Analysis of variance of the mean responses of marketing lecturers, managers and consumers on green distribution practices required by polythene manufacturing companies for consumer sustainability in South Nigeria

Source of square	Sum of square	Df	Mean-square	F-ratio	P-value (sig.)	Rmk
Between groups	.64	2	.32	6.83	.00	S
Within groups	14.70	315	.05			
Total	15.34	317				

Key: S= Significant

Fig. 1 presents the post-hoc analysis test using the Bonferroni multiple comparisons method. In comparing the mean ratings of marketing lecturers with polythene manufacturers and consumers, the post hoc analysis result indicated a probability value of 1.00, which is greater than 0.05 level of significance, for both the polythene managers and consumers, implying that the opinion of marketing lecturers differ significantly from those of polythene managers and consumers on the green distribution practices required by polythene manufacturing companies for consumer sustainability in South Nigeria. Hence, the source of difference lies between marketing lecturers and polythene consumers/polythene managers.

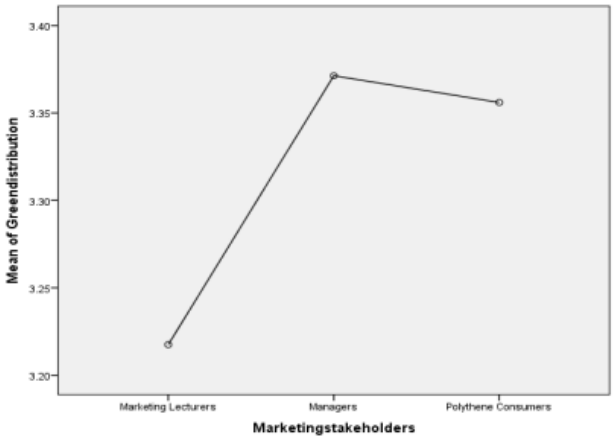

Fig. 1: Post-hoc analysis test for comparing the mean ratings of marketing lecturers, managers, and consumers on the green distribution practices required by polythene manufacturing companies for consumer sustainability

Research Question 2: What green physical evidence practices are required by polythene manufacturing companies for consumer sustainability in South Nigeria?

Table 3 presents the mean ratings of respondents on green physical evidence practices required by polythene manufacturing companies for consumer sustainability in South Nigeria.

Table 3: Mean ratings of respondents on green physical evidence practices required by polythene manufacturing companies for consumer sustainability in South Nigeria. N = 318

No	Items statement	$\bar{X}$	SD	Rmk
1	Adopt customer friendly staff dress code to bring out the green nature of the polythene manufacturing business	3.19	.75	VHR
2	Maintain a positive relationship with green polythene customers	3.19	.76	HR
3	Manufacture green polythene that are environmental friendly and attractive to the public	3.34	.76	HR
4	Use attractive symbols to brand green polythene that have environmental friendly features	3.24	.80	HR
5	Use a green background logo for polythene products in order to appear green and more environmental-friendly	3.30	.86	HR
6	Differentiate green polythene products from those of direct competitors to create a sustainable brand	3.39	.77	HR
7	Use green polythene to build positive public image of the brand	3.55	.62	VHR
8	Use eco-branding practice to educate consumers on the necessity to use green polythene	3.50	.70	VHR
9	Produce polythene products that meets specified environmental performance standard	3.51	.76	VHR
10	Maintain uniqueness of green polythene over other polythene products in the industry	3.31	.87	HR
11	Maintain adequate lighting system in the green polythene manufacturing company	3.51	.68	VHR
12	Take into consideration the literacy level of the target market when imprinting on the green polythene product	3.38	.78	HR
13	Carefully explained dangerous chemicals during packaging of green polythene products	3.47	.71	HR
14	Ensure the production environment is kept clean all the time	3.30	.87	HR
15	Make available a comfortable atmosphere for customers to relax while waiting to be attended to	3.42	.69	HR
16	Use navigation signs that are easily understood to help green polythene customers find their way around the factory	3.29	.85	HR
17	Listen to consumers opinion to ensure quality assurance of green polythene product is maintained	3.15	.89	HR
	Grand mean	3.35	.26	HR

Key X= Mean, SD= Standard deviation, Rmks = Remarks, HR = Highly required, VHR = Very highly required

Items 1-6, 10, and 12-17 recorded mean scores ranging from 3.15 to 3.47, indicating highly required. On the other hand, items 7-9 and 11 recorded mean ratings of 3.50 to 3.55, indicating that the items are highly required. Moreover, the standard deviations ranged from 0.62- 0.89, which were below 1.96, thus indicating that the respondents were not far from the mean or from each other in their opinions. The grand mean of 3.35 and standard deviation of 0.26 in Table 3 indicated that polythene manufacturing companies highly require all the green physical evidence practice items for consumer sustainability in South Nigeria.

The focus group discussion sessions on green physical evidence practices revealed, among other practices, that a clean production environment, product differentiation, branding, packaging, and decoration of the company's facilities are important green physical evidence practices required in green polythene marketing. As discussed by polythene manufacturers, this view provided more credibility to the quantitative data. Therefore, helps to increase the validity of the data collected to provide an answer to research question six, that all the 17 items listed in Table 3 are green physical evidence practices that polythene manufacturing companies require for consumer sustainability in South Nigeria.

Hypothesis 2: There is no significant difference in the mean ratings of the responses of marketing lecturers, managers and consumers on the green physical evidence practices required by polythene manufacturing companies for consumer sustainability in South Nigeria.

Table 4 presents the responses of marketing lecturers, managers and consumers on the green physical evidence practices required by polythene manufacturing companies for consumer sustainability in South Nigeria. Table 4 shows an F-value of 0.71 with a P-value of 0.49 at 317 degrees of freedom, which is higher than the 0.05 level of significance. This indicates no significant difference in the mean responses of marketing lecturers, managers, and consumers on the green physical evidence practices required by polythene manufacturing companies for consumer sustainability in South Nigeria. Hence, the null hypothesis of no significant difference was upheld.

Table 4: Analysis of variance of the mean responses of marketing lecturers, managers and consumers on green physical evidence practices required by polythene manufacturing companies for consumer sustainability in South Nigeria

Source of square	Sum of square	Df	Mean-square	F-ratio	P-value (sig.)	Rmk
Between groups	.09	2	.05	.71	.49	NS
Within groups	20.71	315	.066			
Total	20.80	317				

Key: NS= Not significant

5. Discussion

5.1 Green Distribution Practices

The study found 18 green distribution practices required by polythene manufacturing companies for consumer sustainability in South-South Nigeria. Some of the green distribution practices are to develop a green transportation plan for the effective delivery of green polythene products, use bio-fuels as fuel alternatives in transporting green polythene products, encourage alternative modes of green transportation like carpooling for delivering green polythene products, analyze logistics to find the best mode of making green polythene products available to the consumers; and ensure good vehicular transportation of green polythene products with less carbon emission. The findings supported the assertion of Abanyam (2019), who enumerated the following activities as best green distribution practices necessary for enterprises adopting green business to succeed in Nigeria: reducing long-distance trips for conveying raw materials and finished goods to their destinations; using green or multi-level warehouse to store products; partner with other suppliers to share warehouses and fleets; and ensuring good public transportation and non-vehicular access to stores or where product cannot be transported without a vehicle, delivery service is offered; these green business best practices of product distribution promotes small enterprises green business sustainability in Nigeria. Many small enterprises are itemizing and prioritizing the best distribution strategies and communicating these throughout the organization.

Similarly, the findings agree with Cheruiyot et al. (2014) who observed that green distribution practices span from reducing the amount of fossil fuels and greenhouse gases used in manufacture and distribution to increased emphasis on the environment during distribution. Similarly, the findings of this study affirmed the positions of Brodie (2020), Zhu and Sarkis (2014), and Dahlstrom (2011), who stated that green distribution programs involve actions related to monitoring and improving environmental performance in the firm's demand chain. Tactical efforts include working with channel partners to develop product reuse or disposal arrangements and ensuring customers can return recyclable materials. Strategically, firms may create policies requiring suppliers and distributors to adopt more environmentally responsible standards in fulfilling their respective marketing roles. Alternatively, firms may form eco-alliances with channel partners to improve the environmental impact of their joint activities, such as reconfiguring logistics arrangements to make them environmentally efficient.

Furthermore, a significant difference was found among the mean responses of marketing lecturers, managers, and consumers on the green distribution practices required by polythene manufacturing companies for consumer sustainability in South Nigeria. The source of the difference was found to be between polythene consumers and polythene managers. This difference in opinion results from the technical on-the-job experience of the managers in distributing products to the final consumers. However, their opinions agree that green polythene companies highly require 18 items to ensure the achievement of green product distribution in Nigeria.

5.2 Green Physical Evidence Practices

The study found adopting customer friendly staff dress code to bring out the green nature of the polythene manufacturing business, maintaining a positive relationship with green polythene customers, manufacturing green polythene that is environmentally friendly and attractive to the public, using attractive symbols to brand green polythene that have environmentally friendly features; and using a green background logo for polythene products to appear green and more environmental-friendly are green physical evidence practices that polythene manufacturing companies highly require for consumer sustainability in South Nigeria. These findings corroborate the claims by Dangelico and Vocalelli (2017) that green marketing aligns with the firm's actions in branding, designing, and distributing products that are friendly to humans and the environment. Customers need to gain more about brands that offer environmentally friendly products, although they want to consume them.

Similarly, the findings revealed that differentiating green polythene products from those of direct competitors to create a sustainable brand, maintaining the uniqueness of green polythene over other polythene products in the industry, taking into consideration the literacy level of the target market when imprinting on the green polythene product; carefully explained dangerous chemicals during packaging of green polythene products; and ensure the production environment is kept clean all the time; make available a comfortable atmosphere for customers. Also, no difference was found in the mean ratings of marketing lecturers, managers, and consumers on the green physical evidence practices required by polythene manufacturing companies for consumer sustainability in South Nigeria.

6. Conclusion

The study explores the green marketing practices required by polythene manufacturing companies to facilitate the degradation of the environment in South Nigeria. The environmental degradation is caused by the inability of polythene manufacturing companies and consumers to manage polythene waste. However, many green marketing practices required by polythene manufacturing companies for consumers' sustainability were identified by this study. Many of these practices are green distribution and physical evidence practices. Adopting these green practices in the marketing and production of green polythene products by polythene manufacturing companies will greatly improve the environment and sustain consumers and their use of the products.

In line with the findings of the study, it was recommended as follows: a) polythene manufacturing companies should maintain high ethical standards in their marketing practices to ensure sustainable consumption of green products; b) polythene manufacturing companies should adopt green distribution practices to reduce the amount of fossil fuels and greenhouse gases used in distributing polythene products to the consumers. This can be achieved through the use of bio-fuels, rail, bicycles and aircraft to transport both staff and material resources needed in polythene production; c) polythene manufacturing companies should adopt green physical evidence practices in polythene production to help reduce the number of uncertainties faced by consumers of green products. This can be achieved by helping potential customers use samples of the products they are purchasing as well as using well-shot video testimonials and reviews on independent websites to add authenticity. This practice will encourage polythene manufacturing companies to develop unique business practices to gain a competitive advantage in the market.

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