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GREEN MARKETING PRACTICES AND ENVIRONMENTAL SUSTAINABILITY BY FAST MOVING CONSUMERS' GOODS COMPANIES IN CALABAR, NIGERIA.

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Abstract
The study was on green marketing practices and environmental sustainability by fast moving consumers' goods companies in Calabar Metropolis. The main objective was to determine the effect of green marketing practices on environmental sustainability by fast moving consumers' goods companies in Calabar. The study used cross sectional survey research and the sample size was 440. The study used stratified sampling technique with simple random sampling method to administer the instrument randomly on the respondents. The study used multiple regression analysis to test the stated hypotheses. The findings of the study indicate that both green products and green packaging were associated with environmental sustainability while it was surprising to note that green promotions was not significant to environmental sustainability. This could be attributed to high level of low awareness and lack of knowledge on environmental issues and sustainability approach among consumers in Calabar. The study recommended among others, the strengthening of aggressive green promotional campaign to create awareness and enlightenment among consumers in the Calabar area.

Keywords: Green Marketing, Green Packaging, Green Promotion, Green Product, Environmental Sustainability.

Introduction

The growing concern on environmental issues has ignited an agenda that has earned global attention as environmental consciousness is heightening worldwide. Governments and corporate bodies are seriously involved at addressing these environmental challenges such as climate change, greenhouse gas emission, depletion of natural resource and environmental degradation. Gupta et al. (2013) comment that environmental issues have attracted the attention of the corporate world and beyond. These environmental issues and their consequences are directly or indirectly associated with the production of goods and services. This directional change has caused a paradigm shift from conventional marketing which takes

a techno-economic market perspective to a marketing philosophy that adopts a broader environmental approach. Sharma and Trivedi (2016) submit that currently, successful marketing involves the identification of trends and the of goods and services that will positively appeal to consumers and with the perception to be sensitive to the environment. This is what gave rise to the green marketing concept.

Green marketing is a new and modern of marketing that focus on environmental friendliness and identifies concerns with environmental implications for the variety of marketing activities in the marketing of goods and services to avoid the harmful consequences on the environment (Mukhopadhyay, 2023). Sharma and Trivedi (2016) posit that green marketing transforms and direct consumers' attitude and behaviour toward the environment to purchase green goods and services that has direct relationship with the population as ecofriendly products. De-Jesus *et al.* (2021) state that green marketing has become an essential marketing concept in recent years and it has be viewed to be effective in the promoting and reinforcing the concept of environmental conservation and sustainable development for both organizations and consumers. Green marketing is not only changing the behaviour and attitudes of consumers to become more concerned with the environmental issues but motivating the consumers to become more informed on environmental issues.

Green marketing variables such as green products, green promotions and green packaging are given attention in this study. Green products focuses on goods and services that do not harm the natural resources and cause damage to the environment. They can be recycled or reused for the benefit of the society. Green promotions involve persuasive communication on a product's environmental benefits through credible sources to build brand trust among the target market. Green packaging focuses on the principles of applying reusable, biodegradable and recyclable materials for wrappers and containers of products, shipment and methods that mitigate pollution during the manufacturing process (Luan *et al.*, 2023).

On the other hand, environmental sustainability deals with the use of renewable and non-renewable resources in a manner that can satisfy current needs of consumers and preserving these resources for oncoming generations without negative impact on the society. Environmental sustainability is future driven and friendliness to the environment. The environment need to be sustained because the environment is external to human and man solely depend on environment (Kajang, *et al.*, 2025).

Statement of the problem

Although many organizations are adopting green marketing approach because green marketing combines economic and environmental goals, there are emerging issues on green marketing philosophy. The low level of awareness and inadequate knowledge on green products among consumers is suspected to be high among developing countries. De Jesus *et al*, (2022) report that market awareness of green goods and services in emerging economies is still at its nascent stage and underappreciated. This could be due to lack of exposure to green marketing promotional campaigns. It is further suspected that due to non -promotional campaigns, the market for green consumers could be exposed to exploitation, as the lack environmental knowledge or information on green product attributes and environmental issues.

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Another pertinent green marketing issue is that of "green washing". This is the concept that companies present their goods and services with green claims while in the actual practice these goods and services are not green. Green washing has caused many consumers to be skeptical and question the rationale of green claims made by unsuspecting companies. Maheshwari (2014) as cited in Sharma and Trivedi (2016) highlights that every product bears some degree of impact on the environment at some point in the product life cycle. They stressed that not a single product in the market that is completely environmental friendly and does not exert negative impact on the environment. Thus, consumers could be of aware of green products, but may not patronize the green products except where the product is well known in the market. Most studies reviewed reveal that majority of the studies in were carried Asian countries and Europe. However, few of these exist in Nigeria but none on green marketing and Calabar. Hence the gap in literature. Thus, the study seeks to examine the effect of green marketing on environmental sustainability in Calabar Metropolis in Cronn River State, Nigerian.

Objectives of the Study

The major objective of the study is to examine the effect of green marketing practice and environmental sustainability by Fast Moving Consumers Goods companies in Calabar Metropolis. The specific objectives are; to,

i. determine the effect of green products on environmental sustainability by fast moving 1.3consumers' goods companies in Calabar Metropolis, Nigeria.
ii. examine the effect of green packaging on environmental sustainability by fast moving consumers goods companies in Calabar Metropolis, Nigeria.
iii. determine the effect of green promotions on environmental sustainability by fast moving consumers goods companies in Calabar Metropolis, Nigeria.

Research hypotheses

The following hypotheses were formed to guide the study:

i. Green products have no significant effect on environmental sustainability by fast moving consumer goods companies in Calabar Metropolis.
ii. Green packaging has no significant effect on environmental sustainability by fast moving consumer goods companies in Calabar Metropolis.
iii. Green promotions has no significant effect on environmental sustainability by fast moving consumer goods companies in Calabar Metropolis.

Theoretical Framework

The study adopts the Extinction Avoidance Theory of Sustainable Development developed by Peterson K. Ozili (2025), drawing on earlier works by Tsur and Zemel (1994) and Stephan and Wissel (1999). The theory argues that sustainability is primarily concerned with preventing the permanent loss of essential natural and artificial resources needed by present and future generations. It emphasizes resource conservation, reduced wastage, and responsible utilization. Ozili (2025) maintains that sustainable resource management ensures both quantity and quality of resources over time. The theory is relevant to green marketing

because it encourages manufacturers to use resources responsibly and protect the environment during production.

Conceptual Review: Green Marketing Philosophy

Green marketing focuses on environmental protection, resource conservation, and sustainable consumption. It has evolved from ecological concerns to broader sustainability issues and fair socio-economic practices (Hakim & Shafi, 2021). Nath *et al*. (2014) and the American Marketing Association (n.d.) describe it as the marketing of products and services that are environmentally safe. Mukhopadhyay (2023) views it as the design, development, and delivery of products that minimize environmental harm. Green marketing discourages products that damage health, waste energy, or contribute to pollution and environmental degradation.

Goals of Green Marketing

The major goal of green marketing is to support sustainability by improving product safety and reducing environmental and health risks (Belz & Peattie, 2010). It promotes responsible production and consumption, efficient energy use, and reduced reliance on toxic materials. Ogbidi (2005) notes that it integrates economic, social, and environmental interests while emphasizing global environmental concerns.

Characteristics of Green Marketing

According to Mukhopadhyay (2023), green marketing promotes biodegradable packaging, organic products, recyclable materials, product repair and reuse, energy efficiency, low carbon emissions, and renewable energy adoption.

Importance of Green Marketing

Green marketing encourages environmentally friendly production, distribution, and consumption practices. It creates awareness of eco-friendly brands, reduces resource wastage, lowers carbon footprints, and promotes recyclable products (Mukhopadhyay, 2023). Jamal et al., (2021) add that it strengthens consumers' willingness to purchase environmentally responsible products, while Nath *et al.,* (2014) highlight its role in environmentally conscious product design and recycling initiatives.

Green Marketing Challenges

Major challenges include greenwashing, where firms make false environmental claims (Sharma & Trivedi, 2016; De-Jesus *et al.,* 2021); lack of standardization for verifying green claims (Hakim & Shafi, 2021); exaggerated promotional messages that reduce consumer trust (Chan *et al.,* 2006, cited in Nath *et al.,* 2014); and low consumer awareness and understanding of eco-labels, especially in developing countries (Babu & Kumar, 2020; Mukhopadhyay, 2023).

Green Marketing Strategies

Key strategies include the use of recyclable materials to reduce pollution and greenhouse gas emissions (Mukhopadhyay, 2023), support for environmental campaigns through donations and grants, and the use of social media marketing, which reaches large audiences at low cost with minimal environmental impact.

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Prospects of Green Marketing

Growing concern about climate change, pollution, and environmental degradation is expected to increase demand for green products and sustainable consumption (Jamal *et al.*, 2021; Zhang *et al.*, 2018). Increased environmental awareness, government pressure, stakeholder expectations, and advances in renewable technologies will further strengthen green marketing practices (Mukhopadhyay, 2023). Chang (2023), Saxena and Siddharth (2025), and Priti (2021) note that sustainability is becoming central to corporate strategies and brand reputation.

Environmental Sustainability

Environmental sustainability involves managing natural resources responsibly to satisfy present needs without compromising future generations (SNITU, 2020). Khan *et al.*, (2023) and Tennakoon and Janadari (2021) describe it as actions and policies aimed at resource conservation and sustainable development. IPCC (2021) emphasizes preventing resource depletion and ecological damage. Environmental sustainability spans sectors such as agriculture, manufacturing, energy, transportation, and urban planning, with goals including emission reduction, waste minimization, and ecosystem protection (Kar *et al.*, 2022; Ozsari, 2025a; Ozsari, 2025b).

Green Products and Environmental Sustainability

Environmental challenges such as climate change and ozone depletion have encouraged businesses to adopt green products. Green products are environmentally safe, recyclable, reusable, biodegradable, and produced through green technologies (Mukhopadhyay, 2022; Hashim & Shabing, 2021). Their production, packaging, and eco-labelling support environmental sustainability by reducing pollution and conserving resources.

Green Packaging and Environmental Sustainability

Green packaging uses biodegradable, recyclable, and reusable materials to reduce waste and environmental pollution (Dantas, 2023). It contributes to public health, conserves resources, and minimizes carbon footprints. Mellita et al. (2020) note that green packaging promotes sustainability throughout sourcing, production, transportation, and reuse, while Luan et al. (2023) emphasize its role in reducing manufacturing pollution.

Green Promotions and Environmental Sustainability

Green promotion involves communicating the environmental benefits of products through eco-labelling and eco-branding (Fauzlyn & Gracious, 2018). It increases awareness of environmental issues and encourages sustainable purchasing behaviour. Saxena and Siddharth (2025) stress the value of integrated promotional strategies, while Babu and Kumar (2020) note that green promotion educates consumers about environmental problems. It also enhances environmental knowledge, which positively influences attitudes toward green products (Khan et al., 2020; Khan et al., 2021; Mishra & Rath, 2022). Effective green promotion should remain transparent and credible to prevent greenwashing.

Methodology

The study adopted a cross-sectional survey design to obtain quantitative data at a specific point in time. The study area was Calabar Metropolis, Nigeria. The sample size was 440. Six

major locations of Calabar Metropolis were selected due to busy commercial activities, namely; Eta Agbor and Ekpo Abasi where University of Calabar and Cross River University are located respectively. Other areas include Marian, Mobil, 8 Miles, and Watt Market. The respondents include staff of Golden Penny, Dangote Distribution Centers, and different categories of consumers in these locations. The response rate was 94.32 percent, representing 415 valid responses out of 440 copies of questionnaires distributed. The remaining 5.68 percent of responses were invalid due to incorrect information and cancellations of writings. The questionnaire of the study required the respondents to rate (1 = strongly disagree, 5 = strongly agree, 3 = neutral). Statements on green marketing variables were measured from items adapted from Nath et al. (2014) and Jamel et al. (2021).The focus of the study was on green marketing practices and environmental sustainability. The variables had high reliability with Cronbach's Alpha ranging from 0.79 to 0.88.

Data Analysis

Table 1: Frequencies of demographic characteristics of the sample

Variable	Categories	Frequencies (415)	Percentage
Gender	Male	202	48.7
	Female	166	40.0
	No indication	47	11.3
Age	18 – 24	41	9.8
	25-34	62	14.9
	35-44	119	28.9
	45-44	131	31.6
	55 and above	62	14.9
Education	ND/NCE	189	45.6
	B.Sc/HND	92	22.2
	M.Sc	84	20.2
	Ph.D	50	12.0

Table 2: Descriptive statistics for green products items

		N	Min	Max	Mean	SD
a.	Green products are made from natural raw materials	415	1	5	3.32	1.220
b.	Green products decompose easily into nature	415	1	5	3.10	1.231
c.	Green products not pollute the environment	415	1	5	3.01	1.295
	Overall means (ẋ)				3.10	

Data obtained in Table 2 show consumers moderate to positive perception of green products across all measured dimensions with an overall means score (ẋ = 3.10). The item that green products are made from natural materials has the highest means score (ẋ = 3.23), this is followed by the item that green products decompose easily into nature with a means score (ẋ = 3.10) while green products do not pollute the environment has a means score (ẋ = 3.10).
Also, the response consistency is reflected in the standard deviations on all the items ranging from 1.220 to 1.295. This analysis implies that majority of the respondents surveyed have the perception that green products are environmentally friendly.

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Table 3: Descriptive statistics for green packaging items

		N	Min	Max	Mean	SD
a.	Packages that can be reuse will reduce garbage in the environment	415	1	5	3.05	1.284
b.	Biodegradable packages will reduce pollution in the environment	415	1	5	3.16	1.225
c.	Eco-labelled packages assist consumer to identify green products	415	1	5	3.10	1.285
	Overall means (x)			3.10		

Data obtained in table 3 reveal consumers' moderate to positive perception of green packaging across all measured dimensions with an overall mean score (3.10). The item of biodegradable packages will reduce pollution has the highest mean score (3.16), this is followed by the item that re-usable packages will reduce garbage in the environment has a mean score (ẋ=3.05) while the item that eco-labelled packages assist in the identification of green products had a mean score (3.10). The responses consistency is also reflected in the standard deviations on all the items from 1.225 to 1.285 display consistent vibration with responses among the items.

Table 4: Descriptive statistics for green promotion items

		N	Min	Max	Mean	SD
a.	Green promotion by companies assist consumers awareness of green products and environment	415	1	5	3.52	.995
b.	Green promotions assist to increase consumers knowledge on product environment benefits	415	1	5	3.59	.946
c.	Green promotion enable consumers to differentiate green products from non-green products	415	1	5	3.57	.993
	Overall means (ẋ)			3.56		

Data obtained from Table 4 reveal perception of consumers on green promotions across all measured items or dimensions with an overall means score (ẋ = 3.56). green promotions has the most positive perception among green marketing practice in the study. Green promotions assistance to increase consumers knowledge on products environmental benefits has the highest means score (ẋ =3.59). This is followed by green promotions enable consumers to differentiate green products from non-green products with means score (ẋ - 3.57) while item on green promotion awareness creation on green products has a means score (ẋ = 3.52). The lower standard deviations (ranging from 0.946 to 0.995) compared to other green marketing practices indicate a more consistent positive responses across participants. These results show that green promotion is essential in green marketing practices as green marketing is a new emergence in the current world.

Table 5: Descriptive statistics for environmental sustainability items

		N	Min	Max	Mean	SD
a.	Green products can affect on environmental sustainability perception of consumers	415	1	5	3.16	1.232
b.	Green packaging can affect environmental sustainability perception of consumers	415	1	5	3.21	1.248
c.	Green promotion can affect environmental sustainability perception of consumers	415	1	5	3.43	1.004
	Overall means (ẋ)			3.27		

This Table 5 reveal the varying levels of perceived impact from green marketing practices on environmental sustainability. Green promotions emerged as having the strongest perceived effect on environmental sustainability with Mean score (x=3.43), with a notable lower standard deviation = 1.004, indicating more consistent agreement among respondents. Green packaging revealed the second highest effect with a Mean score (x=3.21) while green products has a mean score (x=3.16). These results indicate that although all the green marketing practices contribute to environmental sustainability, their perceived effects vary with green promotions having the strongest effect and association with environmentally friendliness.

Test of hypotheses

$H0_1$: Green products do not significantly affect environmental sustainability by Fast Moving Consumers' goods companies in Calabar Metropolis.

$H0_2$: Green packaging does not significantly affect environmental sustainability by Fast Moving Consumers' goods companies in Calabar Metropolis.

$H0_3$: Green promotions has no significant effect on environmental sustainability by Fast Moving Consumers' goods companies in Calabar Metropolis.

Table 6: Multiple regression analysis showing the effect of green product, green packaging and green promotions on environmental sustainability

Model	R	r-square	Adjusted R-square	Std error
1	.583	.340	.331	.41234

a. Predictors (constant) green products, green packaging and green promotions

Table 7: ANOVA RESULTS

Model	Sum of squares	Df	Mean square	f.	Sig
Regression	35.427	3	7.08	41.673	.000
Residual	68.873	409	.170		
Total	104.300	412			

a. Dependent Variable: Environmental Sustainability.
b. Predictors (Constant) green products, green packaging and green promotions.

Table 8

Model	Understandized b	Std error	β	t	Sig
(constant)	1.247	0.187		6.668	.000

Green products	.284	.043	.276	6.605	.000
Green packaging	.392	0.044	.381	8.909	.000
Green promotions	.024	0.047	.021	0.511	.610

Dependent variable: Environmental sustainability

The regression analysis reveals several significant findings about the relationship between green marketing practices and environmental sustainability. The regression model explains 34 percent of the variance in environmental sustainability ($R^2 = 0.340$), Adjusted ($R^2 = 0.331$) indicating a moderate level of predictive power. The F-statistic ($F = 41.673$, $p < 0.001$) confirms that the model is statistically significant. Green packaging emerges as the strongest predictor ($\beta = 0.381$, $p < 0.001$) followed by green products ($\beta = 0.276$, $p < 0.001$). Notably, green promotions shows no significant effect on environmental sustainability ($\beta = 0.021$, $p = 0.610$).

Thus, the first hypothesis examined whether green products affects environmental sustainability by companies of fast moving consumer goods in Calabar. The analysis of regression coefficient for green products from the multiple regression model to test this relationship. Based on the regression results, green products shows a significant positive effect on environmental sustainability ($\beta = 0.276$, $t = 6.605$, $p < 0.001$) with a standard beta coefficient of 0.276, every one standard deviation increase in green products effectiveness leads to a 0.276 standard deviation increase in environmental sustainability, holding other variables constant, the unstandardized coefficient (β=0.284) indicates that for each unit increase in green products effectiveness, environmental sustainability increases by 0.284 units. Given that the p-value (0.000) is less than the significance level of 0.05. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted that green products significantly affects environmental sustainability by companies of Fast Moving Consumer Goods in Calabar.

The second hypothesis which examined the effects of green packaging on environmental sustainability. The relationship was evaluated using the regression coefficient for green marketing from the Comprehensive Model. Green packaging demonstrated the strongest positive effect on broad environmental sustainability among all marketing green marketing practices (β=0.381, t=8.909, p<0.001). The standard coefficient of 0.381 indicates that a one standard deviation improvement in green packaging effectiveness leads to a 0.381 standard deviation increase in environmental sustainability while controlling for other variables. The unstandardized coefficient (β=0.392) shows that each unit increase in green packaging effectiveness corresponds to a 0.392 unit increase in environmental sustainability. With a p-value of 0.000, which is less than the 0.05 significance level, we reject the null hypothesis and accept the alternative hypothesis that green packaging significantly affect environmental sustainability by companies of fast moving consumers' goods in Calabar.

The third hypothesis examined the effect of green promotions on environmental sustainability. This relationship is evaluated using the regression coefficient for green promotions from our

model. Surprisingly, green promotions shows no significant effect on environmental sustainability (β= 0.021, t = 0.511, p = 0.610). The standardized coefficient of 0.021 indicates a very weak relationship between green promotions and environmental sustainability. The unstandardized coefficient (β = 0.024) suggests that changes in green promotions effectiveness have minimal impact on environmental sustainability. With a p-value of 0.610, which is greater than the significance level of 0.005, the null hypothesis is therefore accepted and the alternative hypothesis is rejected that green promotions has no significant effect by companies of fast moving consumers goods in Calabar.

1.8 Discussion of Findings

Hypothesis One

The result of Hypothesis One revealed that green products have a significant positive effect on environmental sustainability among fast-moving consumer goods (FMCG) companies in Calabar. This finding supports the studies of Mishra and Rath (2022) and Hakim and Shafi (2021), which indicate that products developed through green technology are environmentally safe. Similarly, Sharma and Trivedi (2016) observed that green products are produced using eco-friendly materials and processes, including biodegradable, recyclable materials and renewable energy sources. According to Mukhopadhyay (2023), the use of recycled materials reduces raw material processing, thereby minimizing pollution, energy consumption, and greenhouse gas emissions. De-Jesus et al. (2021) further noted that green products promote waste reduction, resource conservation, and environmental protection through recycling and reuse.

Hypothesis Two

The result of Hypothesis Two showed that green packaging significantly influences environmental sustainability among FMCG companies in Calabar Metropolis. This finding aligns with Dantas et al. (2023), who reported that green packaging contributes to environmental protection and healthier living conditions. Mellita et al. (2020) emphasized that green packaging encourages the use of renewable, recyclable, and biodegradable materials throughout the product life cycle. Likewise, Luan et al. (2023) argued that such practices support recycling initiatives and reduce pollution associated with manufacturing, transportation, and disposal processes, thereby enhancing environmental sustainability.

Hypothesis Three

The result of Hypothesis Three indicated that green promotion does not significantly affect environmental sustainability among FMCG companies in Calabar Metropolis. This finding contradicts the studies of Saxena and Siddharth (2025), which reported that green promotional strategies enhance the adoption of environmentally friendly products. The disparity may be attributed to low public awareness of green marketing practices and limited environmental knowledge among consumers. De-Jesus et al. (2021) noted that awareness of green products remains relatively low in many emerging economies. Furthermore, Mukhopadhyay (2023) observed that greenwashing and exaggerated environmental claims often create skepticism and reduce consumer trust. Jayasinghe (2022) also suggested that ineffective promotional campaigns may contribute to doubts regarding the authenticity of

green products, thereby limiting the impact of green promotion on environmental sustainability.

Conclusion

Environmental issues are reasons of green marketing emergence and green marketing focuses on manufacturing and consumption of goods and services that do not harm the environment and humanity right from the production level to consumption. When the quality of goods and services goes down for the environment, the quality of life goes down for humanity. Man cannot exist without the environment. Hence, green marketing practices are essential to keep the environment fully protected and safe. Therefore the practice of green marketing is sine quo non for environmental safety.

Recommendations

The following the recommendations were put forward:

1. Companies must ensure the continuous adoption of natural, recyclable materials and the use of green energy technology in production of green products.
2. Since packaging is an essential components of a product, sustainable packaging practices such as biodegradable package, refill containers that can be reuse and recyclable materials be used for packages production.
3. Green Marketing promotion should be strengthened through the use of media such as social platforms, this will assist consumers become more aware and gain environmental knowledge on environmental sustainability. Government regulatory bodies should sanction any company involved in green washing.

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