

GREEN PRODUCT DEMAND AND BRAND PERFORMANCE: A FAST MOVING CONSUMER GOODS PERSPECTIVE

EMIESEIFA JAMES AGAMA¹, MURITALA ADEWALE TAIWO² and

HADIZA SAIDU ABUBAKAR³

^{1, 2, 3} Business Administration Department, Nile University of Nigeria. Email: ¹jamesagama@yahoo.com, ²muritala.adewale@nileuniversity.edu.ng, ³saidu.abubakar@nileuniversity.edu.ng

Abstract

Green product demand increases as consumers become more conscious of the world's worsening environmental problems. This study investigates the impact of green product demand on brand performance. Despite the attention paid by FMCG firms in Nigeria to green product demand (green product design and green promotion), brand reputation still needs to improve. The study used a descriptive survey approach, using 121 workers from the identified firms as participants. The total sample size for the research was 121. A systematic questionnaire was used to obtain information from respondents using primary data. In addition, Cronbach's alpha and the Statistical Package for Social Sciences (SPSS) version 20.00 were used in this study to regress the data obtained from the respondents. The results show that green product demand [green product design (.01+2.24) and green advertising (.01+1.41)] had a positive and significant impact on FMCG brand performance (brand reputation) in Nigeria. Based on this finding, the study recommends that the chosen FMCG's managers and quality control department continue to use green product demand to improve brand performance. This is the new method of getting product consumers to be more patriotic by helping build a better brand reputation for the organisation. Furthermore, FMCG in Nigeria should continue to improve their green design and use green advertising to attract more customers to their product since it is favourably associated with it.

Keywords: Green Product Design, Green Advertising, Brand Performance and Brand Reputation.

INTRODUCTION

Contemporary society is plagued with various environmental issues like climate change and global warming as a result of industrial development and evolution. The operations of Multinational brands have the most negative impact on the environment due to their large carbon footprints, resource consumption and waste (Niu *et al.* 2020). The digital world has seen consumers become more aware of the impact that these brands have on the environment and want such brands to be more responsible with their actions towards the environment. Consumers and clients have become environmentally aware and are looking for products and services that align with their lifestyles and beliefs (Berger, 2019). As consumers are becoming more aware of environmental issues, green products are getting all the attention and value in the market. Green products are defined as products that are developed or manufactured to reduce their environmental impact during the entire life cycle i.e from manufacture to use and final disposal (Nekmahmud & Fekete-Farkas, 2020).

The shift of consumers towards green products has led to many brands developing green products in order to thrive in the international market. The development of green products is also something that is quite important for addressing environmental issues in the most





appropriate manner. Consumers are more likely to avoid products that have a negative impact on the environment. Customers also believe that green products are healthy, authentic and safe to use (Woo & Kim, 2019). On the other hand, governments across the globe have made the protection of the environment their first priority with the development of various environmental laws and policies. All of these have led to brands starting to consider the development of green products as an important part of business strategy to survive in the long run (Guo *et al.* 2020). There are numerous examples of multinational brands making changes to their product development process to integrate it with green practices.

Apple, in 2019, made a declaration during the launch of their products MacBook Air and MacBook Mini that the products were made from aluminium which is 100% recyclable (Barley *et al.* 2020). With this, Apple has started working towards the goal of developing products that reduce waste and have a positive impact on the environment. Nike is another example of a brand that is committed towards the development of green products for the betterment of the environment. Nike offers footwear options and running shoes that are sustainable which means that they are made with at least 20% recyclable materials by weight (Almiya *et al.* 2020). Hence, the changing attitude of the consumer and market trends have led to the research and development of green products. However, the development of green products can be a costly endeavour for a brand and would lead to high pricing of the same in the market (de Marco *et al.* 2019).

Nonetheless, people are looking to make a shift towards green products and are willing to spend extra if necessary to ensure that their actions have a positive impact on the environment (Tandon *et al.* 2020). There are numerous reasons for the development of green products for a business since their demand has increased in the market. However, the availability of green products is quite low in the market and there are very few outlets selling them across various markets. Developing a green product must be in line with the needs of the consumer and provide them with better options than the previous ones (Dong *et al.* 2019). Providing customers with the right products in a sustainable manner can significantly improve the performance of the brand in the market. Hence, the purpose of this research is to evaluate and investigate the impact that the demand for green products can have on the performance of the brand in the market. Other related objectives include evaluating the impact of Green Product Design on brand reputation of Fast Moving Consumer Goods in Nigeria.

The hypotheses of the study are stated in null forms and tested from the objectives of the study:

- Ho1: Green Product Design has no significant impact on brand reputation of Fast Moving Consumer Goods in Nigeria
- Ho2: Green Advertising has no significant impact on brand reputation of Fast Moving Consumer Goods in Nigeria





Green Product Demand

Green product demand is strongly related to the broader idea of sustainable consumption, which refers to adopting consumption patterns that reduce negative environmental and social consequences while increasing positive ones (Peattie & Peattie, 2003). Recycling, utilising energy-efficient appliances, and purchasing environmentally friendly items exemplify sustainable consumerism (Luchs et al., 2010).

Various factors are driving the demand for green products. Environmental concern is one of the most significant, reflecting consumers' increased knowledge of the harmful effects of human actions on the environment (Mohr et al., 2001). Environmentally conscious consumers may be more likely to seek out green items to lessen their ecological footprint. Social norms, which relate to the unwritten standards that govern conduct in a specific social group, are another driver of green product demand. As more customers adopt environmentally friendly habits, such as using reusable bags or purchasing locally produced goods, these behaviours become more normalised, resulting in a rise in demand for environmentally friendly items (Tukker, 2004).

Individual values play a crucial role in driving green product demand. Green goods may appeal more to consumers prioritising sustainability and social responsibility (Luchs et al., 2010). Furthermore, customers driven by health and well-being may be more inclined to purchase ecologically friendly items devoid of dangerous chemicals or created from natural materials. The rise in demand for green products has far-reaching ramifications for companies and the economy. Companies that provide eco-friendly solutions may gain a competitive edge as customers grow increasingly interested in sustainable goods (Kotler & Armstrong, 2010). Green goods help a company's reputation and brand image and improve consumer loyalty and sales. Companies must be upfront about the environmental effect of their goods and engage in research and development to produce more sustainable products and processes to successfully capitalise on green product demand (Peattie & Peattie, 2003).

Various obstacles and possibilities are also related to the need for green products. Transparency is one of the most critical problems. Consumers are becoming more interested in learning about the environmental effects of their purchases. Businesses must be prepared to provide this information to preserve consumer trust and loyalty (Luchs et al., 2010). Furthermore, there may be a trade-off between environmental sustainability and economic development since businesses emphasising sustainability may suffer more significant short-term expenses. However, there are several possibilities linked to green product demand, such as innovation and new markets for sustainable goods and services (Demirel & Kesidou , 2019).

Green Product Design

Product design encompasses the integration of customer satisfaction, the marketplace, and environmental considerations in the development of products. The field of product design has gained importance in marketing research due to the need to update product form and function to align with sustainability requirements. The form of a product pertains to its design, addressing consumers' hedonic needs, while the function relates to the engineering aspects and





addresses utilitarian needs (Luchs & Swan, 2011). Form and function are crucial in product design, influencing consumer attraction and ultimately leading to marketplace success (Luchs & Swan, 2011). To achieve this, some leading companies collaborate with lead users, such as green consumers, during the early stages of product design (Hippel, 2006).

Lead users are highly demanding consumers, and involving them helps capture the voice of the customer, understand consumer perceptions and needs, and meet challenging product requirements, ultimately benefiting regular consumers. However, translating consumer needs into product design can be challenging, as consumers may need to know their latent needs (Rosenthal & Capper, 2006).

The design and development of green products present unique challenges compared to their unsustainable counterparts and require more clarity in this area (Albino et al., 2009; Dangelico & Pujari, 2010; Nidumolu et al., 2009). Product design integrates form, function, and sustainability considerations. Collaborating with lead users and addressing latent consumer needs is essential to creating successful green products.

Green advertising

Green advertising is a growing marketing approach that promotes a product's or brand's environmental sustainability. With consumer concern for the environment rising, green advertising may have a substantial influence on customer brand choice. This paper investigates the notion of green advertising, how it influences customer behaviour, and how it influences brand choice. Green advertising refers to marketing methods that promote the eco-friendliness of a product or brand. It includes a variety of communication platforms such as television, print media, internet ads, and social media. Green advertising has been demonstrated in studies to have a considerable influence on consumer behaviour, notably brand choice. Tran et.al (2002) discovered, for example, that environmentally aware customers are more likely to acquire items from firms that promote eco-friendly practises. Similarly, according to David-Ignatieff et al. (2023), green advertising promotes customer behaviour by improving brand trust and lovalty. Furthermore, by influencing their environmental beliefs, green advertising may affect consumer brand choice. According to research conducted by Shin et al (2017), consumers exposed to green advertising have more favourable views towards eco-friendly items and are more inclined to make environmentally conscious decisions. Similarly, Sharma (2021) found that green advertising may influence customer attitudes and inclinations to buy environmentally friendly items. It is important to highlight, however, that not all green advertising positively impacts consumer brand choice. According to the findings of Santa and Drews' (2023) research, the believability of green advertising messages is essential in determining their success. Consumers are more likely to believe green advertising claims made by reputable organisations. Furthermore, the substance of green advertising messaging is important in influencing client brand choice. According to Nguyen-Viet (2023).), the precision and clarity of the message have a major impact on the perceived trustworthiness of green advertising messaging.







The demographic features of the target population also influence the efficiency of green advertising in influencing client brand choice. According to research conducted by Kang and Hustvedt (2014), younger consumers are more responsive to green advertising themes and are more inclined to make environmentally responsible decisions. The survey also discovered that women are more ecologically sensitive than men and are more inclined to react to green advertising messaging.

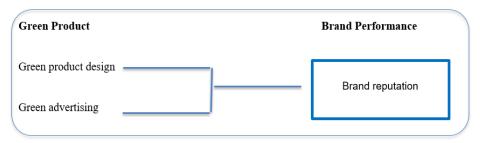


Fig 1: Conceptual framework

Source: Authors compilation (2023)

Figure 1 explains how green product dimensions influence brand performance. In this competitive environment, consumers are seeking sustainable product which are driven by how the product is designed and the quality of information that is available through green advertising. Brand performance is proxy by brand reputation. Brand reputation is the degree to which a consumer is willing to recommend a product.

everal empirical studies have been undertaken to investigate the link between different elements and their impact on green product development success. Luan, Doan, and Nguyen (2022) used a survey questionnaire to gather data from over 1000 individuals who are informed and actively engaged in environmental conservation. Their study discovered that green creativity, green dynamic capabilities, green transformational leadership, reactive green innovation, and proactive green innovation all influence outstanding green product development performance. The research used SPSS 20 and AMOS 24 tools to test the hypotheses. It sought to provide essential data and increase awareness of innovation in development models for companies and organisations.

In another study, Narges and Armin (2015) conducted a descriptive survey to investigate the relationship between brand-perceived quality, green brand image (GBI), brand value, and green brand-perceived value (GBPV) in the context of low-power electronic and electric products in Guilan Province. The research included 384 users chosen at random using cluster sampling. Confirmatory factor analysis and structural equation modelling were used to analyse the data. The data revealed a substantial link between brand-perceived quality, GBI, and brand value. However, no significant association was seen between GBPV and brand value. The research also discovered that brand credibility has a substantial link with GBPV and GBI; however, the relationships with GBPV and GBI varied in type. Chang (2014) used structural equation modelling (SEM) to investigate the beneficial impacts of corporate environmental commitment and green human capital on green product innovation performance. The research focuses on





the function of green adaptive capacity as a mediator. The sample consisted of 136 Taiwanese industrial firms. The results emphasised the significance of corporate environmental commitment and green human capital as predictors of green adaptive capacity and green product innovation. The findings suggested that corporate environmental commitment promotes green product innovation performance directly and indirectly through green adaptable capacity. On the other hand, green human capital has no direct impact on the performance of green product innovation. Green adaptable ability was discovered to be a complete mediator between green human capital and green product innovation performance but only partially between corporate environmental commitment and green product innovation performance. Overall, these studies contribute to a better understanding of the linkages between numerous elements and their influence on green product development success. They provide insights for companies and organisations wanting to understand the relationship between economics and the environment and vital data to support innovation in development models.

Ajzen's Theory of Planned Behaviour (TPB) (2002) provides a theoretical foundation for rigorously assessing people's perceptions and intentions of conduct while acquiring green products and services. The primary aspect of the theory is an individual's desire to conduct a specific activity; however, in the present research, situational variables were examined to help explain why customers with green product awareness do not buy. As a result, the person's behaviour is determined by his or her willingness (intention) to carry out that behaviour (Tavousi, 2009). Motives are thought to capture the motivating variables that drive conduct, which frequently represent how tough individuals are prepared to try and how much work they anticipate putting in to execute the activity (Ajzen, 2002). According to this notion, behavioural accomplishment depends on motivation (intention) and competence (behavioural control). According to the hypothesis, customers consider purchasing green-promoted items when presented with beneficial situational variables, influencing their purchase behaviour.

METHODOLOGY

The study adopted the survey research design and this is because the information or data needed for the study required the use of structured questionnaire that was administered to the respondents who are the managers and product quality designers of the Fast-Moving Consumer Goods with reference to Nestle food and beverages, Coca-Cola and Nigeria Breweries in Nigeria. Also, the population of the study consists of all the 121 managers and heads of quality product in Nigeria. Hence, a primary method of data collection has been used in the study to gather the required information. An online survey involving 121 participants was conducted to gain their views and opinions on green products demands and brand performance. A self-developed questionnaire was used to conduct the online survey where the questionnaire had a total of 10 questions (2 demographic questions and 8 topic-related questions).

The 5-point Likert Scale was used to gather the responses of the participants regarding the 8 research-oriented questions. A 5-point Likert Scale is an analytical tool that is used to measure the level of agreeableness of a person towards a particular statement (Alabi & Jelili, 2020). The 5-point scale used in this context had the following measure- (1)- Strongly Disagree, (2)-





Disagree, (3)- Neutral, (4)- Agree and (5)- Strongly Agree. Further, the IBM SPSS software was used to analyse the collected data and gain the results for making the required interpretation. The study findings was summarized by the help of the SPSS analysis tool. Hence, the software has been used to perform descriptive analyses to gain the frequency results and mean value. A reliability test of the collected data has also been performed of the two variables to understand the relationship between the two for the sake of the research

Reliability test

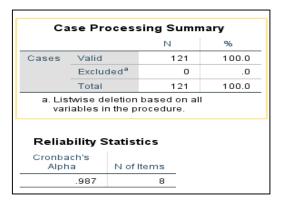


Figure 2: Reliability test

The Cronbach alpha is the most common measure of reliability for the questionnaire used for the survey method with multiple Likert questions. The consistency of the score is measured with the help of the reliability test in SPSS. The questionnaire can be said to be consistent and reliable if the score of Cronbach's alpha is more than 0.70. The results of the Cronbach alpha have been provided in the below image which clearly highlights that the value is 0.987. It is clearly evident that the value of the Cronbach alpha is more than 0.7 in this case and this further leads to the inference that the questionnaire used is highly reliable and the values generated are consistent.

Model Specification

In carrying out this work, the researcher adopted the model of influence of green product development performance to enhance enterprise effectiveness and innovation, which was examined by Luan, et. al., (2022). with a slight modification to suit the adaptability of this study.

$$Y = \alpha + \beta_I x$$

Where y = dependent variable, $\alpha =$ intercept, β_I is coefficient and x is the independent variable. However, the above model is expressed as:

$$BP = \alpha + \beta_I GPD + \beta_2 GAD + \mu$$

Where: BP = Brand Performance (measured as brand reputation), β = Coefficient, α = Intercept, μ = Error terms, GPD = Green Product Design and GAD = Green Advertising.





DATA ANALYSIS AND RESULTS

Table 1: Assessment of Green Product Design

Items	5(SA)	4 (A)	3(UN	2(SDA)	1(DA)
The green product design by FMCG in Nigeria,	47	35	3	15	21
improved the market value of the product.	(38.84)	(28.93)	(2.48)	(12.40)	(17.36)
Green product design is a conscious effort by the organisation so as to make consumer rethink the product or service.	53 (43.80)	38 (31.40)	5 (4.13)	11 (9.09)	14 (11.57)
The FMCG in Nigeria uses green product design to provide consumers a feel of the standards the company has to offer through its products.	40 (33.06)	52 (42.96)	4 (3.31)	12 (9.92)	13 (10.74)

Source: Survey, 2023

In table 1, it was discovered that majority of the respondents strongly agreed (38.84%) and agreed (28.93%) to the statement that the green product design by FMCG in Nigeria, improved the market value of the product. 12.40% strongly disagreed and 17.63% disagreed with the said statement while only 2.48% were undecided. It was also observed that the majority of the respondents, 43.80% and 31.40% strongly agreed and agreed respectively that green product design is a conscious effort by the organisation so as to make consumer rethink the product or service. While 9.09% and 11.57% strongly disagreed and disagreed respectively, while only 4.13% were undecided.

From the table 1 also, the majority of the respondents 33.06% and 42.96% strongly agreed and agreed respectively that the FMCG in Nigeria uses green product design to provide consumers a feel of the standards the company has to offer through its products. 9.92% and 10.74% strongly disagreed and disagreed respectively, while 3.31% were undecided.

Items	5(SA)	4(A)	3(UN	2(SDA)	1(DA)
Green advertising is a credible source of knowledge on the efficacy and consistency of FMCG in Nigeria	60 (49.57)	20 (16.53)	8 (6.61)	14 (11.57)	19 (15.70)
In most green advertising by FMCG in Nigeria,	30	42	4	22	23
we believe in giving the truth about the product	(24.79)	(34.71)	(3.31)	(18.18)	(19.01)
Green advertising influence consumers to buy	55	41	5	10	10
FMCG product in Nigeria	(45.45)	(33.88)	(4.13)	(8.26)	(8.26)

Table 2: Assessment of Green Advertising

Source: Survey, 2023

In table 2, it was discovered that majority of the respondents strongly agreed (49.57%) and agreed (16.53%) to the statement that Green advertising is a credible source of knowledge on the efficacy and consistency of FMCG in Nigeria. 11.57% strongly disagreed and 15.70% disagreed with the said statement while only 6.61% were undecided. It was also observed that the majority of the respondents, 24.79% and 34.71% strongly agreed and agreed respectively that in most green advertising by FMCG in Nigeria, we believe in giving the truth about the





product. While 18.18% and 19.01% strongly disagreed and disagreed respectively, while only 3.31% were undecided. From the table 2 also, the majority of the respondents 45.45% and 33.88% strongly agreed and agreed respectively that green advertising influence consumers to buy Fast-Moving Consumer Goods with reference to Nestle food and beverages, Coca-Cola and Nigeria Breweries in Nigeria product in Nigeria. 8.26% and 8.26% strongly disagreed and disagreed respectively, while 4.13% were undecided.

Items	5(SA)	4(A)	3(UN	2(SDA)	1(DA)
FMCG in Nigeria usually have increase in output as a result of green product design applied on its item	50 (41.32)	31 (25.62)	2 (1.65)	25 (20.66)	13 (10.74)
FMCG in Nigeria frequently utilized its green advertising to obtain desired result	46 (38.01)	34 (28.10)	4 (3.31)	20 (16.53)	16 (13.22)
The FMCG in Nigeria use brand performance (reputation) to ensure increase of their input based on green product demand	31 (25.62)	21 (17.36)	10 (8.26)	27 (22.31)	32 (26.45)

Table 3: Assessment of Brand	Performance (Reputation)
------------------------------	---------------------------------

Source: Survey, 2023

In table 3, it was discovered that majority of the respondents strongly agreed (41.32%) and agreed (25.62%) to the statement that FMCG in Nigeria usually have increase in output as a result of green product design applied on its item. 20.66% strongly disagreed and 10.74% disagreed with the said statement while only 1.65% were undecided. It was also observed that the majority of the respondents, 38.01% and 28.10% strongly agreed and agreed respectively that their FMCG in Nigeria frequently utilized its green advertising to obtain desired result. While 16.53% and 13.22% strongly disagreed and disagreed respectively, while only 32.25% were undecided. From the table 3 also, the majority of the respondents 25.62% and 17.36% strongly agreed and agreed respectively that the FMCG in Nigeria use brand performance (reputation) to ensure increase of their input based on green product demand. 22.31% and 26.45% strongly disagreed and disagreed respectively, while 8.62% were undecided.

Descriptive Statistics

 Table 4: Descriptive Statistics of the Variables

	Statistics										
		What is your age	What is your gender?	My actions towards the environment will help in saving the planet for the future generations	It is the duty of brands/comp anies to solve environmenta I issues and have a positive impact on society	Consumers must consider the environmenta l impact of the products that they buy	l am ready to switch to brands that sell green products and are environment friendly	Green products are good for health and reduce environmenta I pollution	l am willing to pay slightly more to use green products for a change	Green products are authentic and safe to use	Green products are not widely available and have very few outlets selling them
Ν	Valid	121	121	121	121	121	121	121	121	121	121
	Missing	0	0	0	0	0	0	0	0	0	C
Mean		.81	.44	2.60	2.54	2.77	2.55	2.57	2.44	2.09	2.67
Mediar	ı	1.00	.00	3.00	3.00	3.00	3.00	3.00	3.00	2.00	3.00
Mode		1	0	3	3	3	3	3	3	3	3
Std. Deviation		.722	.498	1.201	1.155	1.138	1.040	1.023	1.102	1.183	1.350





Statistics is used for the summarization of the entire dataset and for gaining a better understanding of the way in which the data are structured. The various measures to understand the characteristics of the dataset in this particular context are mean, median, mode and standard deviation. The below image outlines the value for these measures for each of the questions. It is visible that the mean value for all of the research-related questions is close to 3 while the median value for the same is 3. The mode has also been 3 indicating that the number 3 has appeared the most number of times in the entire dataset.

The value '3' is something that has been assigned to the 'agree' option of the Likert Scale and this further highlights that most of the participants have agreed to all the statements that were part of the survey. The value of standard deviation is also very low in this particular context which indicates the dataset is closely surrounded around the mean of the study. Further, a more appropriate idea and required inference can be drawn from the frequency analysis that would be performed in the next part of this section.

Test of Hypotheses

					Model S	ummary	,				
Model R R Square Adjusted R Square Std. Error of the Estin											
	1	.974 ^a	0.51378								
a. l	Predic	tors: (Co	onstant), GP	D, GAD							
					ANC)VA ^a					
	Mo	del	Sum of S	Squares	df	Mea	n Square	F	;	Sig.	
	Regression		732.	753	2	13	31.461	1886.212	2	000 ^b	
1	Resid	Residual 54.644		199	0.317						
Total		511.	223	120							
a. l	Depen	dent Va	riable: BR								
b .]	Predic	tors: (Co	onstant), GP	D, GAD							
					Coeffi	cients ^a					
			Unsta	ndardized	l	Standa	ardized				
	Mod	lel	Coe	fficients		Coefficients		t		Sig.	
			В	Std. Er	ror	Be	eta			_	
	(Con	stant)	0.017	0.03	0.037			-7.315		0	
1	GPD		2.245	0.045	5	0.7	731	10.531	(0.001	
GAD		1.41	0.04		0.693		8.318		0.02		
a. 1	Depen	dent Va	riable: BR								

Table 5: Regression Result

Source: SPSS output, 2023

Decision rule 5%

The $R^2 = 0.75$ indicates that only 75% of variation on green product demand can be used to explain the brand performance of Fast-Moving Consumer Goods with reference to Nestle food and beverages, Coca-Cola and Nigeria Breweries in Nigeria but 25% cannot be explained by other factors not noted in the regression model which is refer to as error term. The regression result shows that the model is fit for the study since the f-statistics is significant at 5% level of significant. The result implies that green product demand significantly affects the brand





performance of FMCG in Nigeria. Furthermore, the coefficient of green product design has a positive (.01+2.24) and significant impact on the brand reputation of FMCG in Nigeria, which indicates that brand performance (reputation) of FMCG in Nigeria product will increase by every 22% in every 1% increase.

Also, the coefficient of green advertising has a positive (.01+1.41) and significant impact on the brand performance of Fast-Moving Consumer Goods with reference to Nestle food and beverages, Coca-Cola and Nigeria Breweries in Nigeria indicated by the t-statistics of 8.31. Thus, we can accept the alternative hypotheses and conclude that green product demand (green product design and green advertising) has a positive and significant impact on brand reputation of Nestle food and beverages in Nigeria.

DISCUSSION OF FINDINGS

Based on the study's findings, it is evident that green product demand plays a significant role in shaping the brand performance of Fast-Moving Consumer Goods (FMCG) companies such as Nestle, Coca-Cola, and Nigeria Breweries in Nigeria.

These companies strategically utilize green products to stimulate increased sales, usage, and consumer experimentation. The study further establishes a strong positive relationship between green product demand and brand performance (reputation) of the FMCG companies, indicating that it has a favourable impact on their overall success.

Additionally, the results highlight the crucial influence of green product design and green advertising on the brand performance (reputation) of these organizations in Nigeria. Respondents from the companies expressed agreement that the introduction of well-designed and effectively advertised green products in the market was well-received by consumers, contributing to the companies' improved performance and the achievement of industry objectives.

Consequently, the study emphasizes the importance for FMCG managers and quality control teams to prioritize ongoing efforts in green design and green advertising to enhance brand performance over time.

These findings align with a study conducted by Narges et al. (2015), which explored variables such as brand-perceived quality and green brand image, revealing a positive effect between these variables. Moreover, the study draws support from Ajzen's theory of planned behaviour (TPB) (2002), which provides a theoretical framework for systematically analysing individuals' perceptions and behavioural intentions regarding the purchase of green goods and services.

In conclusion, the study's findings underscore the significant impact of green product demand on brand performance for FMCG companies in Nigeria. The integration of well-executed green product design and effective green advertising processes emerges as a key factor in achieving favorable brand reputation. By considering and consistently implementing these aspects, FMCG managers and quality control teams can drive improved brand performance and align with consumer preferences and industry objectives.





CONCLUSION AND RECOMMENDATIONS

In summary, the study concludes that the demand for green products in Nigeria is primarily driven by the efforts of Fast-Moving Consumer Goods (FMCG) companies, such as Nestle, Coca-Cola, and Nigeria Breweries, in terms of green product design and green advertising for brand reputation. The research findings indicate significant relationships between green product demand, including design and advertising, and brand reputation. These findings have important implications for FMCG companies in Nigeria, suggesting the need to continue improving consumer awareness of their green products, establishing trust in green demand, and enhancing the perceived value of green advertising to increase consumer intention to use green products.

Based on these conclusions, the study recommends that managers and quality control departments of FMCG companies, specifically Nestle, Coca-Cola, and Nigeria Breweries, should continue leveraging green product demand to enhance brand performance. This approach represents a new method of fostering consumer loyalty by actively contributing to a better brand reputation for the organization. Additionally, it is advised that these companies persist in their efforts to improve green product design and utilize effective green advertising strategies to attract more consumers to their products, given the positive relationship found in the study.

By following these recommendations, FMCG companies in Nigeria can capitalize on the growing demand for green products, strengthen their brand reputation, and ultimately achieve better business outcomes

References

- 1) Ajzen, I. (2002). Attitudes, personality and behaviour (2nd ed.). New York, USA: Open University Press
- 2) Alabi, A. T., & Jelili, M. O. (2022). Clarifying likert scale misconceptions for improved application in Urban Studies. *Quality & Quantity*, 57(2), 1337–1350. https://doi.org/10.1007/s11135-022-01415-8
- 3) Albino, V., Balice, A., & Dangelico, R. M. (2009). Environmental strategies and green product development: an overview on sustainability-driven companies. *Business strategy and the environment*, *18*(2), 83-96.
- 4) Almiya, M. S., Kee, D. M., Bin Haron, M. Z., Bin Nasharudin, M. I., Bin Mohd Nasruddin, M. M., & Bin Mohd Johari, M. E. (2020). Consumption of plastic and sustainability efforts of Nike towards green environment. *International Journal of Applied Business and International Management*, 5(1), 60–73. https://doi.org/10.32535/ijabim.v5i1.768
- 5) Barley, B., Kitamura, A., Loar, T., Ramon-Samayoa, E., Yuzon, J., & Daim, T. U. (2020). An investigation of the motivations and strategies behind Apple's Product Design. *Science, Technology and Innovation Studies*, 3–27. https://doi.org/10.1007/978-3-030-58301-9_1
- 6) Berger, J. (2019). Signaling can increase consumers' willingness to pay for green products. theoretical model and experimental evidence. *Journal of Consumer Behaviour*, *18*(3), 233–246. https://doi.org/10.1002/cb.1760
- 7) Chang, C. (2014). The determinants of green product innovation performance. Corporate Social Responsibility and Environmental Management Journal, 23(2), 65-76 https://doi.org/10.1002/csr.1361
- 8) Cone, C. (2017). Cone communications CSR study.





- 9) Dangelico, R. M., & Pujari, D. (2010). Mainstreaming green product innovation: Why and how companies integrate environmental sustainability. *Journal of business ethics*, 95, 471-486.
- 10) David-Ignatieff, A., Buzeta, C., De Pelsmacker, P., & Ben Dahmane Mouelhi, N. (2023). This embodied conversational agent looks very human and as old as I feel! The effect of perceived agent anthropomorphism and consumer-agent age difference on brand attitude. *Journal of Marketing Communications*, 1-29.
- de Marco, B. A., Rechelo, B. S., Tótoli, E. G., Kogawa, A. C., & Salgado, H. R. (2019). Evolution of green chemistry and its multidimensional impacts: A Review. *Saudi Pharmaceutical Journal*, 27(1), 1–8. https://doi.org/10.1016/j.jsps.2018.07.011
- 12) Demirel, P., & Kesidou, E. (2019). Sustainability-oriented capabilities for eco-innovation: Meeting the regulatory, technology, and market demands. *Business Strategy and the Environment*, 28(5), 847-857.
- 13) Dong, C., Liu, Q., & Shen, B. (2019). To be or not to be green? strategic investment for green product development in a supply chain. *Transportation Research Part E: Logistics and Transportation Review*, *131*, 193–227. https://doi.org/10.1016/j.tre.2019.09.010
- 14) George, D., & Mallery, P. (2021). An overview of IBM® SPSS® statistics. *IBM SPSS Statistics 27 Step by Step*, 1–7. https://doi.org/10.4324/9781003205333-1
- 15) Guo, S., Choi, T.-M., & Shen, B. (2020). Green product development under competition: A study of the fashion apparel industry. *European Journal of Operational Research*, 280(2), 523–538. https://doi.org/10.1016/j.ejor.2019.07.050
- 16) Kang, J., & Hustvedt, G. (2014). Building trust between consumers and corporations: The role of consumer perceptions of transparency and social responsibility. *Journal of Business Ethics*, *125*, 253-265.
- 17) Lemke, F., & Luzio, J. (2014). Exploring Green Consumers' Mind-Set toward Green Product Design and Life Cycle Assessment. *Journal of Industrial Ecology*, 18.
- 18) Luchs, M., & Swan, K. S. (2011). Perspective: The emergence of product design as a field of marketing inquiry. *Journal of Product Innovation Management*, 28(3), 327-345.
- Luan, N. T., Doan, N. D. H., & Nguyen, T. A. T. (2022). The influence of green product development performance to enhance enterprise effectiveness and innovation. *Economies*10: 113. https://doi.org/ 10.3390/economies10050113
- 20) Narges, D., & Armin, G. (2015). The factors affecting the green brand equity of electronic products: Green marketing, Cogent Business & Management, 2:1, 1079351, DOI: 10.1080/23311975.2015.1079351
- Nekmahmud, M., & Fekete-Farkas, M. (2020). Why not green marketing? determinates of consumers' intention to green purchase decision in a new developing nation. *Sustainability*, 12(19), 7880. https://doi.org/10.3390/su12197880
- 22) Nguyen-Viet, B. (2023). A Study on the Influence of Eco-Labels and Green Advertising on Green Brand Equity in Emerging Market. *Journal of Promotion Management*, 29(2), 205-227.
- 23) Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (2009). Why sustainability is now the key driver of innovation. *Harvard business review*, 87(9), 56-64.
- 24) Niu, B., Xie, F., Mu, Z., & Ji, P. (2020). Multinational firms' local sourcing strategies considering unreliable supply and environmental sustainability. *Resources, Conservation and Recycling*, 155, 104648. https://doi.org/10.1016/j.resconrec.2019.104648
- 25) P. Kotler & G. Armstrong (2010), "Principles of Marketing", New Jersey: Pearson Prentice Hall.
- 26) Peattie, S., & Peattie, K. (2003). Ready to fly solo? Reducing social marketing's dependence on commercial marketing theory. *Marketing theory*, *3*(3), 365-385.





- 27) Rosenthal, S. R., & Capper, M. (2006). Ethnographies in the front end: Designing for enhanced customer experiences. *Journal of Product Innovation Management*, 23(3), 215-237.
- 28) Santa, J. C., & Drews, S. (2023). Heuristics processing of green advertising: Review and policy implications. *Ecological Economics*, 206, 107760.
- 29) Sharma, A. P. (2021). Consumers' purchase behaviour and green marketing: A synthesis, review and agenda. *International Journal of Consumer Studies*, 45(6), 1217-1238.
- Shin, S., Ki, E. J., & Griffin, W. G. (2017). The effectiveness of fear appeals in 'green'advertising: An analysis of creative, consumer, and source variables. *Journal of Marketing Communications*, 23(5), 473-492.
- 31) Tandon, A., Dhir, A., Kaur, P., Kushwah, S., & Salo, J. (2020). Why do people buy organic food? the moderating role of environmental concerns and Trust. *Journal of Retailing and Consumer Services*, 57, 102247. https://doi.org/10.1016/j.jretconser.2020.102247
- 32) Tran, K., Nguyen, T., Tran, Y., Nguyen, A., Luu, K., & Nguyen, Y. (2022). Eco-friendly fashion among generation Z: Mixed-methods study on price value image, customer fulfillment, and pro-environmental behavior. *Plos one*, *17*(8), e0272789.
- 33) Von Hippel, E. (2006). Democratizing innovation (p. 216). the MIT Press.
- 34) Woo, E., & Kim, Y. G. (2019). Consumer attitudes and buying behavior for Green Food Products. *British Food Journal*, *121*(2), 320–332. https://doi.org/10.1108/bfj-01-2018-0027

