EFFECT OF GREEN MARKETING PRACTICES ON CONSUMER BUYING BEHAVIOUR: A STUDY OF SELECTED SMALL AND MEDIUM ENTERPRISES IN ABUJA, NIGERIA

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Abstract
The increasing demand for sustainable products presents a challenge for businesses. The aim of this study is to investigate the effect of green marketing practices on consumer buying behaviour with a study of small and medium enterprises in Abuja, Nigeria. The study utilized a survey research method to collect data from SME managers engaged in promoting eco-friendly products. The total population of SMEs in Abuja was 613,492, with a sample size of 400 determined using Slovin's formula (1960). Additionally, using the purposive sampling technique, 150 questionnaires were administered to respondents. Data collected was analyzed using multiple regression analysis and correlation techniques. The results revealed that green product development is statistically significant and has a positive relationship with consumer buying behaviour. More also, green pricing has positive and statistically significant relationship with consumer behaviour. Findings also shows that green distribution has positive and significant impact on consumer buying behaviour. The study finally concluded on the premise that green marketing practices has significant effect on consumer buying behaviour. It is recommended that businesses invest in sustainable product innovation, adopt competitive pricing strategies, and prioritize eco-friendly distribution channels to enhance consumer engagement with green products.

Keywords: Green marketing practices, consumer buying behavior, small and medium enterprises (SMEs), green product development, green distribution, green pricing

1. Introduction

Firms seeks to align their operations with green marketing practices in order to comply with environmental practices which is more sustainable. The concept of green marketing advocates for products that has environmental importance. Green marketing involves the promotion of environmentally friendly products and sustainable business practices to meet customer interest in environmentally friendly options. This includes approaches like creating green products, pricing them in an eco-friendly manner, ensuring sustainable distribution, and promoting them responsibly. The aim of green marketing is to minimize environmental impact while enhancing brand reputation and consumer trust. As environmental awareness grows, businesses adopting green marketing acquire a competitive advantage and play a role in sustainable development. As consumer awareness and regulatory demands rise, businesses, particularly Small and Medium Enterprises (SMEs), are implementing green marketing strategies to sway consumer behavior and improve their market standing (Kumar et al., 2023). A key aspect of green marketing is the development of eco-friendly items, encompassing the stages of designing, developing, and promoting products that reduce environmental harm over their entire lifespan, while meeting consumer needs. It involves using sustainable raw materials, energy-efficient production methods, eco-friendly packaging, and waste reduction strategies (Kumar & Polonsky, 2023).

Green pricing is another dimension of practicing green marketing, it refers to the strategy of setting prices for environmentally friendly products that reflect their sustainability benefits while remaining competitive in the market. It involves considering the costs of eco-friendly raw materials, sustainable production processes, and ethical sourcing, ensuring that consumers perceive value in paying a premium for greener alternatives

Green distribution focuses on sustainability in the logistics and delivery process of products. It involves adopting eco-friendly practices in the distribution network to reduce carbon emissions, minimize waste, and optimize resource use. Companies can implement green distribution strategies by selecting environmentally responsible transportation methods, such as using electric vehicles or optimizing routes to reduce fuel consumption.

Consumer behavior is significantly impacted by a company's dedication to sustainable practices is evident. Research shows that consumers who prioritize environmental issues tend to favor brands that showcase their commitment, social responsibility through green initiatives (Joshi & Rahman, 2022). Green marketing strategies like eco-labeling, sustainable packaging, and green advertising affect buying choices by building brand trust and loyalty (Leonidou et al., 2023). Small and medium-sized enterprises (SMEs), which are essential to Nigeria’s economy, need to effectively incorporate green marketing to appeal to environmentally aware consumers and achieve a competitive edge (Adeyemi & Salako, 2023). The choices and behaviors people make when buying and utilizing goods or services are referred to as consumer buying behavior. Personal tastes, cultural considerations, prevailing economic situations, and marketing initiatives all have an impact. Consumer decisions in green marketing are influenced by sustainability pledges, product benefits, and environmental consciousness. Businesses that function on a comparatively small size in terms of personnel, income, and assets are known as small and medium enterprises (SMEs). They are essential to innovation, job development, and economic progress, especially in emerging nations. SMEs are the foundation of commercial and industrial activity and make a substantial contribution to the national GDP. Nevertheless, they frequently encounter obstacles including restricted financial resources, competitive markets, and regulatory limitations.

Businesses now need to use green marketing strategies more than ever before due to the increased focus on environmental sustainability on a worldwide scale. SMEs in Nigeria, however, continue to implement these techniques in varying degrees. Numerous studies have examined green marketing from a corporate viewpoint, concentrating mostly on large firms and paying little attention to SMEs (Chukwu & Nwafor, 2022; Ogunleye & Adebayo, 2023). Customers are demanding more sustainable goods and services as they grow more ecologically conscious (Ali et al., 2022). However, SMEs in Abuja face challenges in implementing effective green marketing strategies, including financial constraints, lack of consumer awareness, and weak institutional support (Afolabi & Olanrewaju, 2023). This study attempts to fill the substantial knowledge gap caused by the paucity of empirical research on the connection between green marketing and customer purchasing behavior in Nigerian SMEs. Despite the potential benefits of green marketing, its adoption among SMEs in Nigeria remains relatively low due to cost constraints, lack of expertise, and limited regulatory enforcement (Eze & Okonkwo, 2022). Understanding how green marketing influences consumer buying behavior is essential for SMEs to develop effective sustainability strategies. The purpose of this study is to investigate how green marketing strategies affect customer purchasing decisions in selected SMEs in Abuja, Nigeria, filling a gap in existing literature and providing empirical evidence on the subject.

2. Literature Review

2.1 Concept of Green Marketing Practices

For businesses trying to match their operations with environmental sustainability, green marketing has become an essential tactic. Businesses are increasingly embracing green marketing strategies to stand out from the competition and satisfy consumers who care about the environment as the demand for eco-friendly products rises. Numerous academics have offered more understanding viewpoints on the concepts and methods of green marketing, which is a well-recognized topic. According to Ottman (2023), green marketing is essentially about endorsing goods and services on the basis of their positive environmental effects. emphasizing sustainability, eco-friendly production, and corporate responsibility. This approach aims not only to meet consumer expectations but also to contribute positively to the environment. Leonidou et al. (2023) expand on this definition by emphasizing the role of eco-friendly production methods and the reduction of environmental harm in green marketing. They assert that green marketing goes beyond just the promotion of sustainable products; it involves a comprehensive effort to reduce the negative impact of the production process on the environment. This includes using renewable resources, minimizing waste, and ensuring that the product lifecycle is as environmentally friendly as possible. Chen and Chang (2023) define green marketing as a strategic approach that integrates sustainable environmental practices into product development, promotion, and distribution. They underscore the importance of this holistic approach in appealing to environmentally conscious consumers. Green marketing, according to them, is not limited to just the product itself but includes every step of its journey from development to consumer use and eventual disposal. This comprehensive approach ensures that sustainability is at the core of the entire product lifecycle, from conception to delivery. In a similar vein, Peattie and Crane (2023) explain green marketing as the promotion of goods and services that help the environment, taking into account not just how they are produced but also how they are used and disposed. This extended focus on the entire lifecycle is crucial for businesses that aim to genuinely contribute to environmental sustainability. It highlights the need for responsible consumer behavior and the importance of customers education on how their purchases affect the environment.

Green marketing, according to Kotler et al. (2023), is the advertising of goods and services that contribute to the preservation of natural resources. According to their definition, green marketing should not only lessen the negative effects on the environment of production but also to promote responsible consumption. It reflects the increasing role that companies play in not only minimizing their ecological footprints but also encouraging consumers to adopt more sustainable lifestyles. McDonald and Oates (2022) offer another perspective, describing green marketing as a marketing approach that promotes products designed with environmental considerations in mind. Their definition highlights the importance of sustainable production processes and eco-friendly packaging, underscoring that a product's environmental credentials are an essential selling point for eco-conscious consumers. Packaging, as part of green marketing, has become a significant focus due to the rising concerns over plastic waste and the increasing demand for biodegradable alternatives.

Jaiswal and Singh (2023) define green marketing as the promotion of products that aim to reduce environmental impact, with sustainability integrated into every aspect of the product lifecycle. This approach aligns with the growing consumer expectation that products should be sustainable not just in production, but throughout their use and eventual disposal. Sustainability, therefore, is a key feature not only of the product itself but also of the way it is marketed and consumed.

Hassan et al. (2022) view green marketing as the practice of developing, promoting, and selling environmentally sustainable products, with a focus on reducing environmental impact across the entire supply chain. This definition highlights the value of sustainability beyond the product and advises companies to think about how their complete operations from obtaining raw materials to disposing of them at the end of their useful lives will affect the environment. Kaur and Garg (2022) describe green marketing as a marketing approach that responds to the rising demand from consumers for goods that are ecologically friendly. They emphasize that green marketing entails incorporating sustainability into business plans, which aligns corporate goals with the values of eco-conscious consumers. This reflects the broader trend of businesses increasingly recognizing sustainability as both a moral imperative and a competitive advantage.

Smith and D'Souza (2023) offer a more comprehensive definition, describing green marketing as a set of practices that combine environmental, ethical, and economic considerations to promote sustainable products. This definition reflects the interconnected nature of sustainability, ethics, and economics in green marketing. Businesses must strike a balance between these three factors in order to manufacture goods that are not only ethically and economically created, but also environmentally sustainable. Green marketing, according to Cheng et al. (2023), is the process of creating goods with little effect on the environment while highlighting ecological sustainability in advertising efforts. According to their definition, it is crucial to make sure that the items themselves are ecologically friendly and that advertising efforts clearly convey these advantages to customers.

Green marketing, according to Banerjee et al. (2022), is the promotion of goods and services with an eye on enhancing environmental results, emphasizing elements like waste minimization and energy efficiency. This strategy fits in with the expanding trend of companies embracing their environmental impact and showcasing their sustainability efforts through green marketing. Green marketing, according to Jain and Kapoor (2022), is the promotion of environmentally friendly goods and methods with the intention of swaying consumer choices in favor of sustainability. They stress that green marketing encourages companies to innovate and enhance their environmental performance in addition to lessening the environmental impact of customer decisions. The strategic utilization of environmental aspects of goods or services as a competitive advantage is what Liu et al. (2023) refer to as green marketing. They contend that since more customers are basing their purchases on a product's environmental credentials, companies can cultivate enduring customer loyalty by emphasizing environmental sustainability.

Green Product Development and Consumer Buying Behavior

Green product development involves designing and producing goods that minimize environmental impact through the use of sustainable materials, energy-efficient production processes, and eco-friendly packaging (Kumar & Polonsky, 2023). Consumers today are more inclined to purchase products that contribute to environmental sustainability, as they perceive such choices as ethically responsible (Goyal & Gaur, 2022). SMEs in Abuja are increasingly adopting green product development strategies, such as using biodegradable packaging, energy-efficient manufacturing, and recyclable materials, to attract environmentally conscious consumers. However, consumer awareness and affordability remain significant factors affecting the acceptance of green products (Chen et al., 2023). Research indicates that when consumers perceive green products as high-quality and effective, they are inclined to buy something (Nguyen et al., 2022). Thus, companies can increase their market attractiveness and influence consumer preference by including sustainability into product design.

Green Pricing and Consumer Buying Behavior

Pricing remains a critical factor in consumer decision-making, and green pricing strategies must balance affordability with the costs associated with sustainability (Kotler et al., 2023). Green pricing refers to the practice of setting product prices that reflect the environmental costs and benefits associated with production and consumption (Singh & Verma, 2022). While some consumers are willing to pay a premium for eco-friendly products, price sensitivity remains a challenge, especially among SMEs in Abuja, where purchasing power varies (Adekunle & Ojo, 2023). Studies have shown that consumers are more likely to pay for green products if they perceive additional benefits such as durability, health advantages, and ethical sourcing (Choi & Ng, 2022). Consequently, SMEs must adopt pricing strategies that make green products more accessible while maintaining profitability. Government incentives and subsidies can also play a role in reducing the cost burden on businesses and encouraging sustainable consumption.

Green Distribution and Consumer Buying Behavior

Green distribution focuses on optimizing logistics and supply chain processes to minimize environmental impact (Christopher & Holweg, 2022). It includes practices such as using fuel-efficient transportation, reducing packaging waste, and implementing reverse logistics for recycling (Carter & Rogers, 2023). In Abuja, SMEs that adopt green distribution strategies can appeal to eco-conscious consumers while reducing operational costs associated with inefficient supply chains (Adeyemi et al., 2023). A study by Khan et al. (2022) highlights that businesses incorporating green distribution techniques experience enhanced brand recognition and consumer loyalty. Additionally, customers are more inclined to support companies that exhibit environmental responsibility through sustainable sourcing and ethical supply chain management (Mishra & Sharma, 2023). By implementing green distribution practices, SMEs can enhance their sustainability credentials and draw in an increasing number of customers who care about the environment.

Consumer Buying Behaviour

Consumer buying behavior refers to the decision-making processes and actions individuals take when selecting, purchasing, and using products or services. It is influenced by factors such as personal preferences, cultural influences, economic conditions, and marketing strategies. In the context of green marketing, consumer buying behavior is shaped by environmental awareness, perceived product benefits, and sustainability commitments. Understanding these behavioral patterns helps businesses tailor their strategies to enhance consumer engagement and brand loyalty.

2.2 Empirical Review

Nguyen and Vo (2022) explored the impact of green product development on consumer behavior in SMEs in Vietnam, with a focus on eco-conscious consumers in urban areas. They used a survey method to gather data from 200 participants and structural equation modeling and factor analysis were used to examine the data. The results indicated that green product development positively affected consumers' purchasing behavior, particularly among those who were highly motivated by environmental concerns. Additionally, the study found that consumers were more likely to pay a premium for products perceived as eco-friendly. The research suggested that SMEs could capitalize on green product development as a strategic tool to increase market share and brand loyalty.

Patel and Kumar (2022) explored the impact of environmentally friendly distribution methods on customer purchasing patterns in SMEs in India. The research focused on 100 SMEs that utilized various green distribution practices, including the use of electric vehicles for delivery, optimizing supply chain logistics, and reducing packaging waste. Data were collected through surveys and interviews with business owners and consumers, and analyzed using regression analysis and structural equation modeling. The study found that green distribution practices significantly influenced consumer buying behavior, especially among environmentally conscious consumers. The study suggested that SMEs could improve their market performance by emphasizing their commitment to sustainability in distribution channels. Furthermore, it was recommended that SMEs communicate their green distribution efforts through promotional activities to attract consumers who prioritize environmental sustainability.

Nguyen and Vo (2022) examined the relationship between green pricing strategies and consumer buying behavior among SMEs in Vietnam. The study focused on 180 SMEs involved in producing green products and analyzed how pricing decisions impacted consumer perceptions. Data were collected through structured questionnaires and analyzed using descriptive statistics and multiple regression analysis. The findings revealed that green pricing strategies, such as offering competitive pricing for sustainable products or providing loyalty rewards, had a significant effect on consumer purchasing behavior. The study suggested that SMEs could increase consumer loyalty by offering eco-friendly products at attractive prices, which would help SMEs align with the increasing consumer demand for sustainable products. The research concluded that SMEs need to adopt pricing strategies that are competitive yet reflect the environmental value of their offerings to boost sales.

Jones et al. (2021) conducted an empirical investigation into the role of green product development on consumer buying behavior in SMEs in Abuja. The study sampled 120 SMEs that produced green products, and the data was analyzed using descriptive statistics and multiple regression models. The results showed a significant relationship between green product development and consumer preference for environmentally friendly goods. Customers showed a high preference for goods that were seen as environmentally friendly, particularly when SMEs made sure to clearly convey the sustainable features of their offerings. According to the study's findings, developing green products not only satisfies consumers' increasing demand for sustainability but also enhances consumer perceptions of the brand, encouraging loyalty and repeat purchases.

Li and Zhang (2021) investigated the role of green distribution in shaping consumer buying behavior among SMEs in China. The study focused on 120 SMEs that employed green distribution practices such as the use of eco-friendly packaging materials and the decrease in transportation-related energy use. Both consumer and commercial surveys were used to gather data, which was then evaluated using correlation analysis and descriptive statistics. According to the findings, customers were more inclined to support companies that used green distribution strategies because they thought these organizations were ecologically conscious. According to the study's findings, SMEs might improve customer happiness and loyalty and obtain a competitive advantage by implementing green distribution into their business plans. In order to influence consumer purchasing decisions, it was advised that SMEs create clear communication strategies to highlight their green distribution initiatives.

Adias and Akenbor (2020) examined the influence of green product development on consumer buying behavior among SMEs in Rivers State, Nigeria. The researchers focused on 150 SMEs that engaged in eco-friendly product offerings. Data were collected through structured questionnaires and analyzed using mean, standard deviation, and regression analysis. The findings revealed a positive correlation between green product development and consumer purchasing intentions, indicating that SMEs introducing eco-friendly products could influence consumer behavior favorably. The study suggested that SMEs should invest in the development of green products to meet the rising demand for environmentally sustainable options, thus boosting their sales and improving consumer loyalty. This is especially relevant as consumers are becoming more conscientious about environmental issues, driving the demand for sustainable goods.

2.3 Theoretical Review

Theory of Planned Behavior

The theory of planned behavior (TPB) serves as the foundation for this investigation. Ajzen (1991) introduced the notion of planned conduct. According to the idea, attitudes, perceived behavioral control, and subjective norms all have an impact on an individual's behavior in relation to SMEs in Abuja. The development of green products can shape consumer attitudes by emphasizing environmental benefits, fostering positive perceptions, and increasing the intention to purchase eco-friendly products. Consumers who believe their choices support sustainability are more likely to engage in green consumption.

Additionally, TPB also applies to green pricing strategies. By offering eco-friendly products at competitive prices or with incentives like discounts, SMEs can influence consumers' perceived control over purchasing decisions. Competitive pricing enhances the ease of making environmentally responsible choices, leading to increased purchase intentions. SMEs can further refine their pricing strategies to either attract a broad consumer base or target eco-conscious segments. Ultimately, both green product development and pricing strategies significantly impact consumer buying behavior, encouraging sustainable consumption among consumers.

Environmental Kuznets Curve (EKC) theory

Simon Kuznets, an economist, proposed the Environmental Kuznets Curve (EKC) in the 1950s. Kuznets first created the hypothesis to explain the connection between economic growth and income inequality, suggesting that inequality first increases and then decreases as a country develops. Later, the EKC was extended to the environment, suggesting that environmental degradation initially increases with economic growth but eventually decreases as societies become more economically developed and adopt cleaner technologies and stricter environmental policies. The Environmental Kuznets Curve (EKC) theory suggests that as an economy grows, environmental degradation initially increases but later improves as the economy reaches higher levels of development. This theory can be applied to green promotion by analyzing how increasing consumer awareness of environmental issues, linked to socio-economic development, influences demand for eco-friendly products. As SMEs in Abuja align their marketing strategies with growing sustainability concerns, they can promote eco-friendly attributes such as sustainable production processes and packaging. The increasing socio-economic development and environmental consciousness will drive demand for green products.

Similarly, the EKC theory applies to green distribution practices, where economic growth leads SMEs to adopt sustainable supply chain practices. By reducing carbon emissions and optimizing packaging, SMEs align with consumer values of sustainability. Since customers are more inclined to support companies that are dedicated to reducing environmental impact, effective communication of these green distribution strategies can increase customer satisfaction and loyalty and eventually influence their purchasing behavior.

3. Research Objectives

The primary objective of this study is to examine the effect of green marketing practices on consumer buying behavior among SMEs in Abuja, Nigeria. Specifically, the study aims to:

(i) Evaluate how green product development impacts consumer buying behaviour among SMEs in Abuja.

(ii) Assess how green pricing affects consumer buying behaviour of SMEs in Abuja .

(iii) Assess how green distribution affects consumer buying behaviour of SMEs in Abuja.

The investigation was guided by the following hypotheses:

H_{01}: The development of green products has no significant impact on consumer buying behaviour of SMEs in Abuja.

H_{02}: Among SMEs in Abuja, green pricing has no significant effect on consumer buying behaviour.

H_{03}: green distribution has no significant and positive effect on consumer buying behaviour of SMEs in Abuja.

3.1 Methodology of Research

A descriptive research approach was used in this study to investigate how green marketing strategies affect customer buying behaviour among small and medium enterprises (SMEs) in Abuja. The study utilized survey methods to collect and analyze data from respondents, allowing for an in-depth understanding of their green marketing strategies and consumer buying behaviour. A structured questionnaire served as the primary instrument for data collection, ensuring that responses were systematically gathered and analyzed. The total population consists of 613,492 SMEs in Abuja (Source: SMEDAN, 2020). Also, the researcher used purposive sampling technique to select 150 consumers based on their interaction with eco-friendly products, either through purchasing or marketing exposure. To reach relevant consumers, the researcher obtained records of registered wholesalers from the various SMEs that are engaged in green marketing practices most especially, agro allied and manufacturing companies. Unlike probability sampling, purposive sampling does not rely on a total population size, but rather on the relevance of respondents to the research objectives. This approach ensures that only consumers with firsthand experience in eco-friendly product consumption are included, thereby enhancing the validity and reliability of the findings. To determine an appropriate sample size, Slovin's formula (1960) sampling technique was applied, resulting in a sample size of 400 respondents. For this study, a total of 400 questionnaires were distributed to owners and managers of SMEs focusing on their level of engagement with eco-friendly product promotions and the effectiveness of green marketing strategies. More also, 150 questionnaires were distributed to consumers using ecofriendly products of this SMEs. The collected data was processed and analyzed using multiple regression analysis and correlation analysis which are statistical technique that examines the relationships between variables.

Slovin's formula (1960) sampling technique.

Formular :

$$n = \frac{N}{1 + Ne^2}$$

Where :

n= number of samples

N= total population

e= error tolerance (level)

A confidence level of 95 percent (given a margin of error of 0.05)

$$n = \frac{613{,}492}{1 + (613{,}492\ )(0.05^2)}$$

$$n = \frac{613{,}492}{1 + (613{,}492\ )(0.0025\ \ )}$$

$$n = \frac{613{,}492}{1{,}534.73}$$

n=399 approximately 400

Model Specification

The independent variable in this study is Green Marketing (GM), which is examined through four key proxies: Green Product Development (GPD), Green Pricing (GPG) and Green Distribution (GD). Each of these proxies represents a crucial a component of green marketing tactics used by companies to advertise eco-friendly goods. The dependent variable is consumer buying behaviour. The model is presented thus:

CBB = *f*(GM)

$CBB = \beta_o + \beta_1 GPD + \beta_2 GPG + \beta_3 GD + \mu_i$ -- (1)

Where: GM = an indicator representing Green marketing (Independent Variable);

CBB= dependent variable representing Consumer buying behaviour

β_o = a constant and $\beta_{1\text{-}3}$ = coefficients of independent variables;

GPD = a predictor representing Independent Variable (green product development);

GPG= a predictor representing Independent Variable (green pricing);

GD= a predictor representing Independent Variable (green distribution);

μ = Stochastic error term;

i = Cross sectional; and

f = Functional relationship.

The study adopts the scale developed by Ottman (2011), Peattie (1995), and Chen (2010) to measure green product development, pricing, distribution, and consumer behavior. These scales have been widely used in marketing research to assess key constructs related to green marketing practices.

3.2 Research Question

This study seeks in order to respond to the following research inquiries:

(i) How much does the development of green products affect consumer buying behaviour among SMEs in Abuja?

(ii) How much does green pricing influence Abuja SMEs' consumer buying behaviour?

(iii) How much does green distribution affect Abuja SMEs' consumer buying behaviour?

4. Results and Discussion

Independent Variable **Dependent Variable**

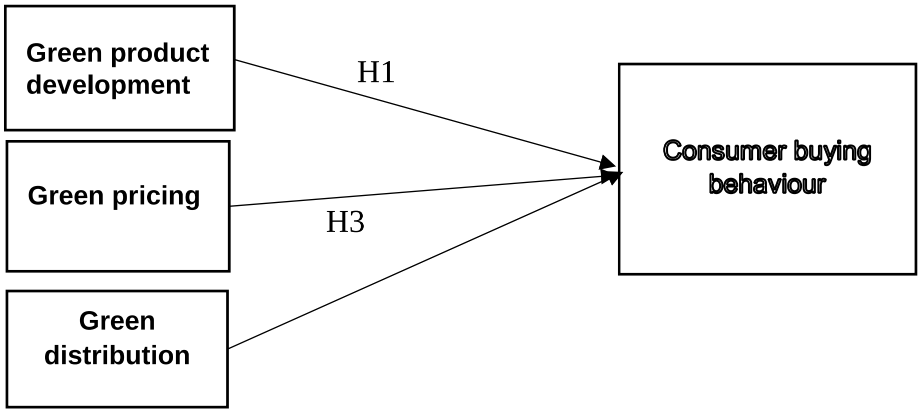

Figure 1. Model Construct

Author concept (2025)

A total of 400 questionnaires were distributed to SME owners and managers, with 251 successfully completed and returned. Additionally, using the purposive sampling technique, 150 questionnaires were administered to consumers of green marketing products, out of which 122 were completed and returned. In total, 373 questionnaires were successfully retrieved.

Table 1. Correlations

Control Variables			GPD	GPG	GD
CBB	GPD	Correlation	1.000	.716	.714
		Significance (2-tailed)	.	.000	.000
		Df	0	370	370
	GPG	Correlation	.716	1.000	.780
		Significance (2-tailed)	.000	.	.000
		Df	370	0	370
	GD	Correlation	.714	.780	1.000
		Significance (2-tailed)	.000	.000	.
		Df	370	370	0

Table 1 indicates the correlation matrix which presents the relationships between green marketing variables which are: Green Product Development (GPD), Green Pricing (GPG), and Green Distribution (GD) and consumer buying behavior. The analysis highlights the strength and statistical significance of these relationships, providing understanding into how these factors influence consumer purchasing decisions. The correlation values indicate that all three independent variables are positively correlated with each other. Green Product Development (GPD) and Green Pricing (GPG) exhibit a strong correlation ($r = 0.716$, $p < 0.001$), suggesting that businesses that focus on developing eco-friendly products are also likely to adopt green pricing strategies. Similarly, Green Product Development (GPD) and Green Distribution (GD) are strongly correlated (r = 0.714, p < 0.001), indicating that companies investing in sustainable product development also prioritize environmentally friendly distribution methods. The highest correlation exists between Green Pricing (GPG) and Green Distribution (GD) (r = 0.780, p < 0.001), signifying that firms implementing green pricing are also more inclined to optimize their distribution networks in line with sustainable practices. The significance values (p-values) for all correlations are 0.000, confirming that these relationships are statistically significant at a 99% confidence level. This means there is a negligible probability that these correlations occurred by chance, reinforcing the validity of the findings. Furthermore, the degrees of freedom (df) indicate the number of data points available for correlation computation, supporting the robustness of the statistical analysis.

Table 2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.983[a]	.966	.965	.22374

a. Predictors: (Constant), GPD, GPG, GP

Table 2 present the R-value (0.983) which indicates a very strong positive correlation between the independent variables (green product development (GPD), green pricing (GPG), and green distribution (GD) and the dependent variable (consumer buying behavior (CBB). The R-Square value (0.966) suggests that 96.6% of the variance in consumer buying behavior is explained by the three green marketing variables. The Adjusted R-Square (0.965), which accounts for the number of predictors, remains very close to the R-Square value, further confirming the model's robustness. The standard error of the estimate (0.22374) indicates a low level of variability, meaning the model makes accurate predictions.

Table 3. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	517.636	3	172.545	3446.912	.000[b]
	Residual	18.471	369	.050		
	Total	536.107	372			

a. Dependent Variable: CBB
b. Predictors: (Constant), GPD, GPG, GP

Table 3 presents the ANOVA table which evaluates the overall significance of the regression model. The F-statistic (3446.912, p < 0.001) is extremely high, demonstrating that the model significantly explains variations in consumer buying behavior. The small residual sum of squares (18.471) compared to the regression sum of squares (517.636) confirms that the model provides a good fit to the data. The significance value (0.000) indicates that the independent variables collectively have a statistically significant impact on consumer buying behavior.

Table 4. Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.254	.314		3.999	.000
	GPD	.178	.034	.162	5.281	.000
	GPG	.734	.038	.727	19.224	.000
	GD	.835	.031	.827	26.916	.000

a. Dependent Variable: CBB

The regression coefficients provide understanding into the individual contributions of each independent variable to consumer buying behavior: Constant (1.254, $p < 0.001$): This represents the predicted value of consumer buying behavior when all independent variables are zero.

Table 4 indicates that green product development (GPD) significantly and favorably influences the buying behaviour of consumers ($\beta = 0.162$, $p < 0.001$). This indicates a favorable influence, with a 0.178 rise in consumer buying behavior for every unit increase in green product development. This further suggests that the null hypothesis which holds that the development of green products has no discernible impact on the purchasing habits of SMEs in Abuja is rejected. The outcome further demonstrated that the development of green products significantly influences the purchasing decisions of SMEs in Abuja. The outcome supports the findings of Adias and Akenbor (2020), Nguyen and Vo (2022), who also discovered that the development of green products significantly influences buying behavior of SMEs' customers.

Table 4 also indicates that green Pricing (GPG) has a positive and significant effect on consumer buying behavior ($\beta = 0.727$, $p < 0.001$). This variable has a strong impact, as a unit increase in green pricing results in a 0.734 increase in consumer buying behavior. This suggests that green pricing strategies has significant effect in influencing consumer purchasing decisions. With this result, the null hypothesis which states that green pricing has no significant impact on consumer buying behavior among SMEs in Abuja is rejected. The result is in consonance with the findings of Nguyen and Vo (2022). These scholars also found that green pricing has significant effect on consumer buying behavior among SMEs.

Table 4 indicates that green distribution (GD) has a positive and significant effect on consumer buying behavior ($\beta = 0.827$, $p < 0.001$). Green distribution has the strongest impact, with a unit increase leading to a 0.835 increase in consumer buying behavior. This indicates that green distribution activities are the most influential factor in driving consumer engagement with eco-friendly products. This result further invalidates the null hypothesis which states that green distribution has no significant effect on consumer buying behavior among SMEs in Abuja. The result is in tandem with the findings of Li and Zhang (2021), Patel and Kumar (2022). These scholars also found that green distribution has significant effect on consumer buying behavior among SMEs.

5. Conclusions

The regression analysis confirms that green marketing practices significantly influence consumer buying behavior, with Green Promotion having the highest impact, followed by Green Pricing and Green Product Development. The high R-Square value (96.6%) demonstrates that the model is highly effective in explaining consumer responses to green marketing initiatives. Therefore, businesses aiming to enhance consumer engagement with eco-friendly products should prioritize strategic promotional efforts while maintaining competitive pricing and investing in sustainable product development.

The following recommendations where made from the findings:

i. Businesses should invest in sustainable product innovation by incorporating eco-friendly materials and manufacturing processes. This will positively influence consumer buying behavior and strengthen brand loyalty toward green products.

ii. Companies should adopt pricing strategies that balance affordability with sustainability, ensuring that eco-friendly products remain accessible to a broad consumer base. This approach will significantly enhance consumer purchase decisions.

iii. Firms should prioritize efficient and eco-friendly distribution channels, such as sustainable packaging and carbon-neutral logistics. This will maximize consumer engagement and improve the overall market performance of green products.

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