



Assessing the Impact of Ecological Marketing Practice on Consumer Preference for Eco-Friendly Products in South-West Nigeria

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ABSTRACT

In response to increasing global concerns over environmental sustainability, ecological marketing practices have emerged as a critical strategy for businesses aiming to align their operations with sustainable development goals. This study investigates the adoption of ecological marketing in the South-West Nigeria and its effects on consumer behavior. Despite heightened global awareness about sustainability, the adoption of ecological marketing in region is limited, partly due to insufficient understanding of its impact on consumer preferences. This research will examine the effect of green product strategies on consumers' preference for eco-friendly products in South-West Nigeria, assess the influence of green pricing strategies on consumers' willingness to purchase eco-friendly products and investigate how environmental certification affects consumer perceived value of eco-friendly products in South-West Nigeria. The study builds on global and regional literature on green marketing and sustainable consumer behavior. It underscores the need for context-specific research to address cultural and economic factors unique to South-West Nigeria. A mixed-methods approach will be employed, including surveys of 400 consumers and interviews with 30 business professionals. Quantitative data will be analyzed using descriptive and inferential statistics, while qualitative insights will be drawn through thematic analysis. The research evaluates the impact of specific ecological marketing strategies (such as green product strategies, green pricing strategies, and environmental certification) on consumer preferences and identifies the most effective marketing practices in promoting eco-friendly products in the region.

Keywords: Consumer preference, Eco-friendly products, Ecological marketing practice, Environmental certification, Green pricing strategies

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1. INTRODUCTION

Ecological marketing has become a central strategy for firms seeking to address rising global concerns about environmental degradation and sustainability. In recent years, consumers have increasingly shown interest in products that minimize ecological harm, leading firms to adopt green product designs, fair green pricing, and credible environmental certifications (Leonidou & Skarmeas, 2023).



In emerging markets such as Nigeria, this trend is gaining momentum as awareness of climate change and environmental responsibility continues to grow. With the South-West region serving as a major commercial hub, ecological marketing practices have become vital in shaping consumer preferences within its diverse and urbanizing population (Adeola & Evans, 2020). Green product strategies (such as energy-efficient designs and the use of biodegradable materials) play a key role in helping consumers differentiate truly sustainable products from conventional offerings (Rahman & Noor, 2022). Meanwhile, the pricing of eco-friendly goods influences willingness to purchase, particularly in price-sensitive markets like Nigeria where consumers balance environmental concerns with economic realities (Okechukwu & Eze, 2021). Additionally, environmental certifications have emerged as essential tools for signalling product authenticity, enhancing consumer trust, and boosting perceived value (Testa et al., 2024). Despite global progress, empirical evidence on the effectiveness of ecological marketing within Nigeria (especially across the South-West region) remains limited. This study therefore examines the impact of green product strategies, green pricing, and environmental certifications on consumer preference for eco-friendly products in South-West Nigeria. The findings will offer insights beneficial to marketers, policymakers, and sustainability advocates.

1.1 Problem Statement/Justification

Despite increasing global advocacy for sustainability, Nigeria continues to face challenges related to environmental degradation, waste generation, and low adoption of eco-friendly products. Although ecological marketing has been identified as an effective tool for promoting sustainable consumer behaviour, its real influence on purchasing patterns within South-West Nigeria remains underexplored. Existing studies indicate that consumers in developing economies often show interest in sustainability but lack sufficient knowledge to make informed choices (Bamgbade et al., 2024). This raises concerns about whether green product strategies implemented by firms genuinely impact consumer preference in the region. Another major issue concerns pricing. Eco-friendly products are frequently perceived as expensive, limiting consumer willingness to purchase them in lower and middle-income markets (Adebisi & Bello, 2022). Without empirical insights into how green pricing strategies influence consumer willingness to buy in South-West Nigeria, firms may struggle to develop pricing structures that balance sustainability with affordability.

Furthermore, the credibility of environmental certifications poses an additional challenge. Many Nigerian consumers have limited exposure to certification symbols, reducing their perceived value and weakening their role in shaping purchase decisions (Okafor & Adeleke, 2021). If consumers cannot interpret or trust environmental labels, ecological marketing efforts may fail to enhance perceived value, thereby diminishing the effectiveness of green marketing initiatives. Given these gaps, there is a need for an empirical assessment of how green product strategies, green pricing, and environmental certifications influence consumer preference for eco-friendly products in South-West Nigeria. Addressing these issues will strengthen understanding of sustainable consumption dynamics and guide firms in designing more effective ecological marketing interventions.



1.2 Objectives of the Study

- i) To examine the effect of green product strategies on consumers' preference for eco-friendly products in South West Nigeria.
- ii) To assess the influence of green pricing strategies on consumers' willingness to purchase eco-friendly products,
- iii) To investigate how environmental certification affects consumer perceived value of eco-friendly products in South-West Nigeria.

1.3 Research Questions

- i) How do green product strategies affect consumers' preference for eco-friendly products in South-West Nigeria?
- ii) To what extent do green pricing strategies influence consumers' willingness to purchase eco-friendly products?
- iii) How does environmental certification affect consumers' perceived value of eco-friendly products in South-West Nigeria?

1.4 Research Hypotheses

- H₁: Green product strategies have no significant effect on consumers' preference for eco-friendly products in South-West Nigeria.
- H₂: Green pricing strategies do not significantly influence consumers' willingness to purchase eco-friendly products in South-West Nigeria.
- H₃: Environmental certification does not significantly affect consumers' perceived value of eco-friendly products in South-West Nigeria.

2. LITERATURE REVIEW:

Ecological Marketing Practice

Ecological marketing practice refers to the deliberate integration of environmentally responsible actions into the design, pricing, promotion, and delivery of products and services. Unlike traditional marketing, which prioritizes profitability and customer satisfaction, ecological marketing emphasizes reducing environmental harm while creating value for consumers and society. It reflects a sustainability commitment that goes beyond regulatory compliance and becomes embedded in everyday business decisions (Camilleri, 2022). In contemporary markets, ecological marketing practice includes initiatives such as biodegradable inputs, reduced carbon footprints, recyclable packaging, and honest communication of environmental benefits. These practices enable firms to respond to growing concerns about climate change and pollution, while strengthening consumer trust and brand credibility. Research shows that authentic environmental responsibility increases consumer engagement with brands (Hojnik & Ruzzier, 2023). Thus, ecological marketing practice supports environmental protection and long-term competitiveness. Transparency remains essential, as consumers are increasingly aware of greenwashing and demand claims supported by tangible actions (Sarkar & Searcy, 2024). Consequently, sustainability efforts must be genuine, measurable, and clearly communicated. In developing contexts such as Nigeria, ecological marketing practice is emerging due to urbanization, youth awareness, and global sustainability discourse, influencing consumer behaviour and environmental outcomes positively and supporting responsible business growth and sustainable development nationally.



2.1 Green Product Strategies

Green product strategies refer to deliberate efforts by firms to design, source, and deliver products that minimize environmental harm while meeting consumer expectations for quality, safety, and performance. They signal a shift from traditional production models toward life-cycle sustainability. As global environmental challenges intensify, organizations increasingly view green products as ethical necessities and sources of long-term competitiveness (Chen, Lin, & Chang, 2023). Central to these strategies is the use of eco-friendly materials, including biodegradable inputs, recycled components, and non-toxic substances. Such materials appeal to health-conscious consumers and strengthen trust by signalling genuine environmental commitment (Bocken & Short, 2024). Another critical dimension involves enhancing product durability and energy efficiency. Products that last longer or consume fewer resources allow consumers to feel responsible and value-oriented, reinforcing loyalty and market preference (Roh, Lee, & Han, 2023). Green product strategies also encompass cleaner production processes that reduce waste, lower carbon emissions, and integrate renewable energy. Although these improvements often occur behind the scenes, they contribute to clear brand differentiation. In emerging markets such as Nigeria, rising environmental awareness makes green product strategies especially relevant.

2.2 Green Pricing Strategies

Green pricing strategies balance environmental responsibility, consumer value, and market competitiveness. They recognize additional costs from sustainable materials, cleaner production, waste reduction, and certification, shaping prices and perceptions (Hossain & Khan, 2023). Central to green pricing is value justification: consumers accept higher prices when benefits such as health, durability, environmental protection, and moral alignment are clear (Nguyen et al., 2021). Transparency is essential, as unclear premiums trigger scepticism and greenwashing concerns. Clear explanations of sustainability benefits increase willingness to pay (Bai & Chen, 2023), especially in South-West Nigeria where pollution is visible. Firms apply premium-based pricing by linking prices to ethical sourcing, recyclable packaging, and low-carbon production (Adeola & Ezenwafor, 2024). Penetration green pricing uses low introductory prices to encourage trial before adjustment (Gupta & Bhattacharya, 2023). Competitive green pricing matches conventional alternatives through cost efficiencies, improving accessibility (Olamide & Adeyeye, 2024). Consumer psychology matters: prices signal quality, ethics, fairness, or accessibility (Lee & Rahman, 2022). Socio-cultural values, technology, trust, certification, and honest communication shape acceptance over time (Mensah & Boakye, 2023; Farid & Abubakar, 2024; Zafar & Tariq, 2022).

2.3 Environmental Certification

Environmental certification is formal recognition granted to products, services, or organizations that meet established environmental and sustainability standards. It assures consumers that products are produced responsibly, comply with ethical and legal requirements, and reduce ecological harm (Tariq & Saeed, 2023). By linking corporate sustainability claims with verified standards, certification strengthens consumer trust and informed decision-making. Common labels include ISO 14001, Energy Star, Forest Stewardship Council, and EcoLabel, which signal adherence to best environmental practices. For environmentally conscious consumers, these certifications represent credibility, reliability, and protection against greenwashing (Zhang et al., 2024). Research shows that certified products are more likely to be preferred, as consumers perceive them as safer, more ethical, and value-aligned (Kautish & Khare, 2022).



Certification also promotes brand loyalty, particularly among younger and educated consumers willing to pay price premiums. In developing markets such as Nigeria, environmental certification is gaining relevance as sustainability awareness increases. Urban consumers increasingly view certification as accountability evidence, while firms use it for differentiation and responsible production. Overall, environmental certification functions beyond regulation, enhancing confidence, credibility, and sustainable consumption across value chains globally.

2.4 Consumer Preference for Eco-friendly Products

Consumer preference for eco-friendly products reflects a growing desire to protect health, support ethical brands, and contribute to environmental sustainability. As pollution, climate change, and waste become more visible, consumers increasingly reconsider purchasing motives, driven by awareness and emotional responsibility toward a sustainable future (Li & Wu, 2023). Eco-friendly products symbolize care for self, family, and society, strengthening preference when perceived as safe, natural, and less harmful, even at higher prices (Hazen & Mollenkopf, 2024). However, environmental benefits alone are insufficient; products must align with personal values and lifestyle aspirations. Trust remains central to preference formation. Consumers favor eco-friendly brands when sustainability claims appear genuine, supported by clear information, credible labels, and honest communication, which reduce skepticism and counter greenwashing concerns (Sharma & Kushwah, 2023). In developing contexts such as Nigeria, rising education, digital exposure, and global sustainability movements are reshaping consumer evaluations. Younger consumers, in particular, increasingly prioritize environmentally responsible products. Although affordability constraints persist, preference for eco-friendly products continues to grow as individuals seek healthier, ethical, and socially responsible consumption patterns. Ultimately, consumer preference for eco-friendly products represents.

2.5 Consumers' Willingness to Purchase Eco-friendly Products

Consumers' willingness to purchase eco-friendly products reflects awareness of environmental issues and readiness to act through consumption. It goes beyond preference, capturing intention to choose sustainably sourced, energy-efficient, and environmentally safer products (Haque & Alam, 2023). Willingness is shaped by personal values, perceived environmental impact, and social responsibility, blending ethics with practicality. Price, perceived quality, and trust are central influences. Many consumers accept price premiums when they believe products deliver real environmental benefits or follow ethical practices (Singh & Verma, 2024). However, excessive prices or unclear claims reduce willingness, despite positive sustainability attitudes, highlighting the need for clear communication, credible certification, and visible impact messaging. Social and cultural influences also matter. Consumers are more willing when peers, families, or valued social groups support sustainability, while urban and younger demographics show stronger willingness due to global environmental exposure (Rahman et al., 2024). In developing markets such as Nigeria, willingness is steadily increasing as environmental education, urbanization, and digital media raise awareness. Firms combining affordability, transparency, and ethical practices are better positioned to convert positive attitudes into actual purchasing behaviour, supporting sustainable consumption.



2.6 Consumer Perceived Value of Eco-friendly Products

Consumer perceived value represents buyers' overall evaluation of benefits relative to costs associated with a product. For eco-friendly products, this value extends beyond functional attributes such as quality, durability, and performance to include emotional, social, and ethical benefits reflecting environmental concern (Rahman & Akter, 2023). Perceived value therefore links consumer expectations with satisfaction, shaping preference and purchasing behaviour. In green markets, value is strongly influenced by environmental impact, health and safety considerations, and alignment with personal or social values. Products that reduce waste, conserve energy, or use natural materials are often seen as more valuable because they meet practical needs while fulfilling ethical motivations (Hossain et al., 2024). This combined functional and moral benefit enhances attractiveness and can increase willingness to pay despite higher prices. Trust further strengthens perceived value. Certifications, transparent labeling, and verified environmental claims reassure consumers that sustainability promises are genuine, reinforcing confidence in eco-friendly products (Chen et al., 2023). Social and cultural factors also matter, as positive community attitudes toward green consumption increase perceived social value and purchase intentions. In Nigeria, rising environmental awareness, particularly among urban consumers, is increasing perceived value of eco-friendly products. Firms that clearly communicate functional, emotional, ethical, and social benefits can build loyalty, justify pricing, and promote sustainable consumption patterns.

2.7 Theoretical Review

Theory of Planned Behaviour (TPB)

The Theory of Planned Behavior (TPB), proposed by Ajzen (2020), posits that individual behaviour is determined by behavioural intentions, which are influenced by attitudes, subjective norms, and perceived behavioural control. In the context of eco-friendly products, TPB explains how consumers' positive attitudes toward green products, social pressure to act sustainably, and the perception of ease in purchasing environmentally friendly items influence both preference and purchase decisions. The relevance of TPB to this study lies in its ability to predict consumer behaviour based on intention, offering insight into how green product strategies and pricing affect willingness to purchase. Its merit is its structured approach to understanding and predicting behaviour, making it suitable for empirical testing. However, TPB assumes rational decision-making and may underrepresent emotional, moral, and cultural dimensions that influence eco-consumption, particularly in developing countries where situational and economic constraints can limit behaviour despite positive intentions.

2.8 Value-Belief-Norm (VBN) Theory

The Value-Belief-Norm (VBN) Theory posits that pro-environmental behaviour is driven by personal values, ecological worldviews, and moral obligations (Stern, 2021). Consumers act sustainably when they feel a sense of responsibility toward the environment and perceive their actions as meaningful. This theory is relevant to the study as it links green product strategies, green pricing, and environmental certification to consumer preference, willingness to purchase, and perceived value, reflecting how moral and ethical considerations shape eco-friendly behaviour. Its merit lies in capturing the emotional and ethical drivers of consumption, particularly in sustainability contexts, offering a deeper understanding of why consumers may value eco-friendly products beyond functional benefits. The limitation of VBN is that it may underemphasize external barriers such as cost, availability, or infrastructure that can restrict pro-environmental behaviour. Given the study's focus on consumer values and the perceived ethical and environmental impact of eco-friendly



products, the VBN theory is adopted as it more effectively explains the motivational and value-driven aspects of green consumption.

2.9 Empirical Review

Green Product Strategies and Consumers' Preference

Several studies have examined the impact of green product strategies on consumer preference for eco-friendly products. Pravin (2024) investigated the influence of sustainable product attributes on consumer preference in China. The study aimed to assess how eco-friendly design, materials, and packaging affect brand loyalty and purchase intention. Using a quantitative survey of 400 respondents, findings revealed that green product features positively influenced consumer preference and perceived value. Similarly, Ghobbe and Nohekhan (2023) explored the effect of green product strategies on brand choice in Ghana, surveying 350 urban consumers. They found that environmental attributes significantly affected preference and willingness to recommend products. Mohammadi et al., (2023) examined emotional and ethical motivations behind green product selection in Vietnam, using 250 surveys and semi-structured interviews, concluding that sustainable features enhanced brand attachment and preference. Cosma (2024) focused on urban consumers' adoption of eco-friendly products, employing 350 respondents in a quantitative study and finding that product sustainability strongly influenced preference and repeat purchase intention. Çorman (2025) investigated green product adoption in India, revealing that perceived environmental benefits and trust in sustainability claims increased preference, based on 280 surveys. Finally, Rahman and Bari (2023) assessed the influence of green product features on consumer choice in Bangladesh using a descriptive survey of 300 participants, showing that product attributes aligned with environmental consciousness enhanced preference. Overall, these studies highlight that well-designed green products significantly affect consumer preference, supporting the focus of this study on South-West Nigeria.

2.10 Green Pricing Strategies and Consumers' Willingness to Purchase

Research has shown that green pricing strategies significantly influence consumers' willingness to purchase eco-friendly products. Gomes et al., (2023) examined pricing transparency in Vietnam, aiming to understand how perceived fairness of eco-friendly product pricing affects willingness to buy. Using 250 surveys and interviews, they found that clear communication about the rationale behind higher prices increased purchase intention. Lopes (2024) investigated Indian consumers' responses to premium pricing for sustainable products with 280 respondents, reporting that credibility and perceived fairness positively influenced willingness to pay. Alenazi (2025) studied 320 urban Chinese consumers and found that ethical pricing strategies, combined with environmental claims, enhanced willingness to purchase. Kurek (2025) explored willingness to pay in Nigeria, showing that transparent pricing and value justification led to higher adoption of eco-friendly products among 300 respondents. Hasan (2024) conducted a quantitative study with 350 respondents in Bangladesh, revealing that perceived cost-benefit alignment increased willingness to purchase. Lastly, Mardius (2023) examined price sensitivity and ethical consumption in developing markets using 310 surveys, finding that consumers were willing to pay a moderate premium when they believed pricing supported environmental sustainability. Collectively, these studies indicate that green pricing strategies, especially when transparent and justified, are crucial in driving consumer willingness to purchase eco-friendly products.



2.11 Environmental Certification and Consumer Perceived Value

Environmental certification has been shown to enhance consumer perceived value for eco-friendly products. Khan and Amin (2023) examined certified eco-labels in Pakistan to determine their effect on consumer trust and perceived value. Using a survey of 320 respondents, they found that certifications significantly increased confidence and purchase intention. Dias and Silva (2024) investigated Bangladesh, assessing whether environmental certification influenced perceived product value among 300 participants; findings showed a positive effect on both perceived quality and consumer trust. Velaoras (2024) studied Chinese consumers, using 350 survey responses to demonstrate that eco-certifications improved credibility and reinforced consumer willingness to pay. Mitchell et al., (2025) explored the role of eco-labels in Malaysia, revealing that certified products were perceived as higher value due to verified sustainability claims, based on 280 survey responses. Yu and Pan (2024) assessed the effect of certification on perceived value in Bangladesh, confirming that labeled products enhanced consumer perception of quality, ethical responsibility, and functional value. Finally, James (2024) in Vietnam found that certification, combined with clear product information, significantly influenced consumer perceived value and brand loyalty using 250 surveys and interviews. These studies collectively demonstrate that environmental certification serves as a critical trust-building mechanism, enhancing perceived value and encouraging sustainable consumption behaviours.

2.12 Gaps in the Literature

Despite extensive research on ecological marketing and consumer behaviour, notable gaps remain. Existing studies largely focus on developed economies, with limited empirical evidence from West Africa, particularly Nigeria (Li & Wu, 2023; Nguyen & Nisar, 2022). Moreover, green product strategies, green pricing, and environmental certification are often examined independently, rather than collectively, in relation to consumer preference, willingness to purchase, and perceived value. Additionally, culturally driven and value-based motivations are underexplored, while mixed-method approaches remain insufficiently applied, limiting contextual understanding in emerging markets such as South-West Nigeria.

3. METHODOLOGY

This study adopts a quantitative research design to examine the impact of ecological marketing practices on consumers' preference for eco-friendly products in South-West Nigeria, focusing on the states of Lagos, Oyo, and Ogun due to their high concentration of retail outlets, availability of eco-friendly products, and diverse urban consumer base. The study population comprises adult consumers aged 18 years and above who purchase fast-moving consumer goods in these states, with a total population of 1,200,000 based on the National Bureau of Statistics (2023). A purposive sampling technique is employed to ensure that only respondents with prior experience purchasing eco-friendly products are included, as they can provide relevant and informed responses. The sample size is determined using the Krejcie and Morgan (1970) formula: where sample size, = population, = 0.5, = 0.05, and = 3.841, resulting in a minimum sample size of 384, which is rounded up to 400 to accommodate non-responses.



Research instrumentation involves a structured questionnaire comprising sections on demographics, green product strategies, green pricing strategies, environmental certification, and consumer behaviour (preference, willingness to purchase, perceived value), with items measured on a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). Data collection will be conducted through a combination of physical distribution and online administration over a period of four weeks to ensure wide coverage. Data analysis will involve descriptive statistics, including frequency, mean, and percentage, as well as inferential statistics, specifically regression and correlation analysis, using SPSS version 28 to examine the relationships between ecological marketing practices and consumer preference for eco-friendly products.

3.1 Data Presentation and Analysis

Table 1: Green product strategies have no significant effect on consumers' preference for eco-friendly products in South-West Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	32	8.7	8.7	8.7
	Disagree	22	6.0	6.0	14.7
	Undecided	108	29.4	29.4	44.1
	Agree	119	32.4	32.4	76.6
	Strongly Agree	86	23.4	23.4	100.0
	Total	367	100.0	100.0	

Source: Survey, 2025

The table above indicates that 8.7% of the respondents strongly disagree, 6.0% disagree, 29.4% was undecided, while 32.4% agree and 23.4% strongly agree that green product strategies have no significant effect on consumers' preference for eco-friendly products in South-West Nigeria. This indicates that consumers patronize environmentally friendly product design and sustainability features, making green product strategies a major driver of preference.

Table 2: Green pricing strategies do not significantly influence consumers' willingness to purchase eco-friendly products in South-West Nigeria.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	22	6.0	6.0	6.0
	Disagree	9	2.5	2.5	8.4
	Undecided	118	32.2	32.2	40.6
	Agree	139	37.9	37.9	78.5
	Strongly Agree	79	21.5	21.5	100.0



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	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	22	6.0	6.0	6.0
Disagree	9	2.5	2.5	8.4
Undecided	118	32.2	32.2	40.6
Agree	139	37.9	37.9	78.5
Strongly Agree	79	21.5	21.5	100.0
Total	367	100.0	100.0	

Source: Survey, 2025

Table 2 above that 6.0% of the respondents strongly disagree, 2.5% disagree, 32.2% was undecided, while 37.9% agree and 21.5% was strongly agree that green pricing strategies do not significantly influence consumers' willingness to purchase eco-friendly products in South-West Nigeria. This implies that many consumers believe green pricing minimally affects purchase willingness, while notable undecided responses indicate uncertainty about pricing influence.

Table 3: Environmental certification does not significantly affect consumers' perceived value Of eco-friendly products in South-West Nigeria

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	177	48.2	48.2	48.2
Disagree	143	39.0	39.0	87.2
Undecided	20	5.4	5.4	92.6
Agree	17	4.6	4.6	97.3
Strongly Agree	10	2.7	2.7	100.0
Total	367	100.0	100.0	

Source: Survey, 2025



Table 3 above shows that 48.2% of the respondents strongly disagree, 39.0% disagree, 5.4% undecided while 4.6% agree and 2.7% strongly agree that environmental certification does not significantly affect consumers' perceived value of eco-friendly products in South-West Nigeria. This implies that consumers believe environmental certification significantly enhances perceived value of eco-friendly products, reinforcing trust and informed purchasing decisions locally.

Hypothesis 1

H₁: Green product strategies have no significant effect on consumers' preference for eco-friendly products in South-West Nigeria.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.930 ^a	.866	.864		.43025

a. Predictors: (Constant), I am willing to pay more for eco-friendly products. I am loyal to brands with green product attributes, I prefer products made from environmentally friendly materials, sustainability features influence my product choice.

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	431.480	4	107.870	582.727	.000 ^a
	Residual	67.011	362	.185		
	Total	498.490	366			

a. Predictors: (Constant), I am willing to pay more for eco-friendly products., I am loyal to brands with green product attributes., I prefer products made from environmentally friendly materials., Sustainability features influence my product choice.

b. Dependent Variable: Green product strategies have no significant effect on consumers' preference for eco-friendly products in South-West Nigeria.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.441	.091		-4.827	.000
	I prefer products made from environmentally friendly materials.	.019	.097	.018	.192	.848



Sustainability features influence my product choice.	.013	.171	.013	.079	.937
I am loyal to brands with green product attributes.	.392	.069	.358	5.676	.000
I am willing to pay more for eco-friendly products.	.589	.178	.559	3.312	.001

a. Dependent Variable: Green product strategies have no significant effect on consumers' preference for Eco-friendly Products in South-West Nigeria.

H_{01} : Green product strategies have no significant effect on consumers' preference for eco-friendly products.

H_{11} : Green product strategies significantly influence consumers' preference for eco-friendly products.

Model Fitness

$R = 0.930$ indicates a very strong positive relationship between green product strategies and consumers' preference. $R^2 = 0.866$ implies that 86.6% of the variation in consumers' preference for eco-friendly products is explained by the green product strategy variables. Adjusted $R^2 = 0.864$ confirms the robustness of the model after adjusting for predictors. The standard error (0.43025) indicates a relatively low prediction error.

ANOVA Result shows that $F(4, 362) = 582.727$, $p < 0.001$, showing that the regression model is statistically significant. This confirms that green product strategies collectively influence consumer preference.

Individual Predictors

Brand loyalty to green attributes ($\beta = 0.358$, $p < 0.001$) significantly and positively influences consumers' preference.

Willingness to pay more for eco-friendly products ($\beta = 0.559$, $p = 0.001$) is the strongest predictor, indicating that price tolerance plays a major role in eco-friendly preferences.

Preference for environmentally friendly materials ($p = 0.848$) and sustainability features ($p = 0.937$) do not individually have a significant effect.

Conclusion: Since the model is significant at $p < 0.05$, H_{01} is rejected. Green product strategies significantly influence consumers' preference for eco-friendly products, with brand loyalty and willingness to pay more being the key driving factors.

Hypothesis 2

H_2 : Green pricing strategies do not significantly influence consumers' willingness to purchase eco-friendly products in South-West Nigeria.



Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.908 ^a	.824	.823	.43443

a. Predictors: (Constant), I consider the value of eco-friendly products fair relative to conventional products, Clear pricing information increases my likelihood of purchase., I am willing to pay more for eco-friendly products.

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	321.269	3	107.090	567.430	.000 ^a
	Residual	68.508	363	.189		
	Total	389.777	366			

a. Predictors: (Constant), I consider the value of eco-friendly products fair relative to conventional products, Clear pricing information increases my likelihood of purchase, I am willing to pay more for eco-friendly products.

b. Dependent Variable: Green pricing strategies do not significantly influence consumers' willingness to purchase eco-friendly products in South-West Nigeria.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.294	.093		3.150	.002
	I am willing to pay more for eco-friendly products.	.259	.065	.278	3.960	.000
	Clear pricing information increases my likelihood of purchase.	.229	.037	.215	6.163	.000
	I consider the value of eco-friendly products fair relative to conventional products.	.461	.069	.463	6.704	.000

a. Dependent Variable: Green pricing strategies do not significantly influence consumers' willingness to purchase eco-friendly products in South-West Nigeria.



H₀₂: Green pricing strategies do not significantly influence consumers' willingness to purchase eco-friendly products.

H₁₂: Green pricing strategies significantly influence consumers' willingness to purchase eco-friendly products.

Model Fitness

R = 0.908 indicates a strong positive relationship. R² = 0.824 shows that 82.4% of the variation in consumers' willingness to purchase eco-friendly products is explained by green pricing strategies. Adjusted R² = 0.823 confirms model reliability.

ANOVA Result shows that F(3, 363) = 567.430, p < 0.001, indicating that the model is statistically significant.

Individual Predictors

All predictors are statistically significant since perceived fair value of eco-friendly products ($\beta = 0.463$, p < 0.001) has the strongest effect. Willingness to pay more ($\beta = 0.278$, p < 0.001) positively influences purchase intention. Clear pricing information ($\beta = 0.215$, p < 0.001) increases the likelihood of purchase.

Conclusion

Because p < 0.05, H₀₂ is rejected. Green pricing strategies significantly influence consumers' willingness to purchase eco-friendly products in South-West Nigeria, particularly when prices are perceived as fair and clearly communicated.

Hypothesis 3

H₃: Environmental certification does not significantly affect consumers' perceived value of eco-friendly products in South-West Nigeria.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.695 ^a	.483	.479		.68746

a. Predictors: (Constant), Environmental certification influences my purchase decisions; I trust eco-labels when purchasing products, Certified products enhance my perception of quality.

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	159.790	3	53.263	112.701	.000 ^a
	Residual	171.084	362	.473		
	Total	330.874	365			

a. Predictors: (Constant), Environmental certification influences my purchase decisions; I trust eco-labels when purchasing products; Certified products enhance my perception of quality.



ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	159.790	3	53.263	112.701	.000 ^a
	Residual	171.084	362	.473		
	Total	330.874	365			

a. Predictors: (Constant), Environmental certification influences my purchase decisions; I trust eco-labels when purchasing products; Certified products enhance my perception of quality.

b. Dependent Variable: Environmental certification does not significantly affect consumers' perceived value of eco-friendly products in South-West Nigeria.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.272	.293		-11.178	.000
	I trust eco-labels when purchasing products.	.477	.090	.464	5.325	.000
	Certified products enhance my perception of quality.	-.526	.137	-.459	-3.830	.000
	Environmental certification influences my purchase decisions.	1.216	.120	.742	10.126	.000

a. Dependent Variable: Environmental certification does not significantly affect consumers' perceived value of Eco-friendly Products in South-West Nigeria.

Hypothesis 3

H₀₃: Environmental certification does not significantly affect consumers' perceived value of eco-friendly products.

H₁₃: Environmental certification significantly affects consumers' perceived value of eco-friendly products in South-West Nigeria.

Model Fitness

R = 0.695 indicates a moderate positive relationship. R² = 0.483 shows that 48.3% of the variation in perceived value is explained by certification-related factors. Adjusted R² = 0.479 confirms adequacy of the model. ANOVA Result reveals that F(3, 362) = 112.701, p < 0.001, indicating that the model is statistically significant.



Individual Predictors

Environmental certification influencing purchase decisions ($\beta = 0.742$, $p < 0.001$) is the most influential predictor. Trust in eco-labels ($\beta = 0.464$, $p < 0.001$) significantly enhances perceived value. Certified products enhancing perceived quality shows a negative coefficient ($\beta = -0.459$, $p < 0.001$), suggesting possible consumer skepticism or confusion about certification claims.

Conclusion

Since $p < 0.05$, H_{03} is rejected. Hence, environmental certification significantly affects consumers' perceived value, although mixed perceptions exist regarding certified product quality.

4. DISCUSSION OF FINDINGS

H₀₁: Green product strategies have no significant effect on consumers' preference for eco-friendly products

The first hypothesis, which tested whether green product strategies significantly affects consumers' preference, was supported by the data. The results revealed that green product strategies had a strong positive effect on consumers' preference ($\beta = 0.358$, $p < 0.001$), with an R^2 value of 0.866, meaning 86.6% of the variance in consumers' preference is explained by green product strategies. These findings align with the assertions of scholars, who emphasized that environmental attributes significantly affected preference and willingness to recommend products (Ghobbe & Nohekhan, 2023). Green product strategies strongly shape consumer preferences, validating sustainability – focused design, quality improvements and environmental attributes as competitive advantages. Similarly, it was highlighted that green product features positively influenced consumer preference and perceived value (Pravin, 2024).

H₀₂: Green pricing strategies do not significantly influence consumers' willingness to purchase eco-friendly products

Green product strategies strongly shape consumer preferences, validating sustainability –focused design, quality improvements and environmental attributes as competitive advantages. Similarly, it was highlighted that green product features positively influenced consumer preference and perceived value (Pravin, 2024).

This finding is consistent with the work of scholars who posited that ethical pricing strategies, combined with environmental claims, enhanced willingness to purchase (Alenazi, 2025). This highlights price incentives' critical role in promoting eco-friendly product adoption. For instance, in communities with strong ethical beliefs about fairness and equity, pricing strategies are expected to reflect those values. Moreover, it was argued that consumers are willing to pay a moderate premium when they believe pricing supports environmental sustainability (Liu et al., 2023).

H₀₃: Environmental certification does not significantly affect consumers' perceived value of eco-friendly products

The third hypothesis focused on whether environmental certification significantly influence perceived value, and again, the relationship was significant ($\beta = 0.742$, $p < 0.001$), with $R^2 = 0.483$. This suggests that perceived value accounts for 48.3% of the variation in environmental certification. This finding supports the works of scholars who argued that certifications significantly increased



confidence and purchase intention (Khan & Amin, 2023).

In communities like Bida with strong and diverse consumer base, companies that reflect or respect environmental certification tend to create more satisfying consumers' perceived value. It was also demonstrated that labeled products enhanced consumer perception of quality, ethical responsibility, and functional value (Yu & Pan, 2024).

4.1 Summary of Findings

The study examined ecological marketing practices and consumer responses to eco-friendly FMCGs. Findings revealed that green product strategies significantly influenced consumer preference ($\beta = 0.358$, $p < 0.001$), explaining 86.6 percent variance, confirming sustainability-focused design and environmental attributes as strong competitive drivers, consistent with Ghobbe and Nohekhan (2023) and Pravin (2024). Green pricing strategies also positively affected willingness to purchase ($\beta = 0.559$, $p = 0.001$), accounting for 82.4 percent variation, supporting evidence that ethical and fair pricing encourages eco-friendly adoption (Alenazi, 2025; Liu et al., 2023). Environmental certification significantly enhanced perceived value ($\beta = 0.742$, $p < 0.001$), explaining 48.3 percent variance, reinforcing that eco-labels build trust, quality perception, and confidence (Khan & Amin, 2023; Yu & Pan, 2024). Overall, the findings demonstrate that product design, pricing fairness, and credible certification jointly shape consumer preference, perceived value, and purchasing intentions within the South-West Nigerian eco-friendly FMCG market. These outcomes collectively highlight practical relevance for marketers, policymakers, and sustainability-driven businesses operating regionally.

5. CONCLUSION

The study concludes that green product strategies play a decisive role in shaping consumers' preferences for eco-friendly FMCGs, as sustainability-oriented design and environmental attributes clearly attract and retain consumers. It also establishes that green pricing strategies significantly enhance consumers' willingness to purchase, demonstrating that fair and ethically justified pricing strengthens acceptance of eco-friendly products. Furthermore, the research confirms that environmental certification substantially improves perceived value by reinforcing trust, quality perception, and confidence in eco-friendly offerings. Taken together, these findings affirm that ecological marketing practices are not symbolic gestures but powerful drivers of consumer preference and purchasing behavior. When effectively combined, green product features, pricing fairness, and credible certifications create meaningful value for consumers and strengthen the competitiveness of eco-friendly FMCGs in South-West Nigeria.

6. RECOMMENDATIONS

This study carried out in-depth research on ecological marketing practice and consumer preference for eco-friendly products. From the findings of the research, the following recommendations were put forward:

- Product strategy: FMCG firms should continuously invest in sustainability-focused product design and environmentally responsible features that clearly communicate functional and ethical benefits to consumers.
- Pricing strategy: Marketers should adopt transparent and fair green pricing strategies, ensuring price premiums are justified through visible environmental and quality benefits.



- Certification strategy: Companies should prioritize credible environmental certifications and actively educate consumers on their meaning to strengthen trust and perceived value.
- Policy action: Regulators should standardize and monitor eco-label certifications to prevent greenwashing and protect consumer confidence.

7. CONTRIBUTION TO KNOWLEDGE

This study advances knowledge by empirically integrating green product design, pricing strategies, and environmental certification within one explanatory framework for eco-friendly FMCGs. It demonstrates, with robust statistical evidence, how these ecological marketing practices jointly influence preference, perceived value, and willingness to purchase. By contextualizing findings within South-West Nigeria, the research offers culturally grounded insights often missing in sustainability literature. It also validates eco-label credibility and ethical pricing as measurable drivers of consumer behaviour, providing scholars and practitioners with reliable metrics for evaluating green marketing effectiveness in emerging markets globally today.

8. LIMITATIONS AND SUGGESTION FOR FUTURE RESEARCH

The study relied on cross-sectional survey data from one region, limiting causal inference, longitudinal insight, and generalizability to other Nigerian regions or evolving consumer segments over time, contexts, cultures, nationally. However, the following areas may be improved upon:

- (i) Further studies should examine digital media interactions with eco-labels and pricing strategies influencing younger consumers.
- (ii) Future studies should employ longitudinal designs to track green preferences and purchasing behaviors over time.
- (iii) Comparative research across Nigerian regions could reveal cultural variations influencing marketing effectiveness and consumer responses.

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