

# ASSESSING THE EFFECTIVENESS OF GREEN MARKETING STRATEGIES ON THE PERFORMANCE OF FMCGS IN SOUTH-WEST NIGERIA

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## Abstract

This study assesses the effectiveness of green marketing strategies on the performance of fast-moving consumer goods (FMCG) firms in South-West Nigeria, focusing on green product design and green promotion. The objectives include examining the impact of green product design on product quality and analyzing how green promotion influences market penetration. A survey research design was adopted, with data collected through structured questionnaires from 595 respondents across five FMCG firms, selected from a population of 71,564 employees. Descriptive and inferential statistical tools, including regression and correlation analyses, were used at a 0.05 significance level. The findings show that green product design significantly affects product quality, explaining 30% of its variability ( $\beta=0.385$ ;  $t=12.131$ ;  $p=0.000$ ). Additionally, green promotion demonstrates a strong positive relationship with market penetration (Pearson's  $r = 0.617$ ). The study concludes that the adoption of green marketing strategies, particularly in product design and promotion, positively influences FMCG performance in South-West Nigeria. It recommends that FMCG firms continue to prioritize sustainable practices to meet changing consumer preferences and enhance competitiveness.

**Keywords:** Green Marketing Strategies, Performance, Green Product Design, Product Quality, Green Promotion, Market Penetration.

## INTRODUCTION

Green marketing has become a key business strategy due to increasing global concerns over environmental sustainability. It involves promoting products and services that have a reduced environmental impact, focusing on strategies such as product innovation, sustainable packaging, and consumer education (Aman, 2020). With growing consumer demand for eco-friendly products, firms are adopting green marketing to improve competitiveness while contributing to sustainability (Chong & Khoo-Lattimore, 2021). In the FMCG sector, companies worldwide are incorporating green marketing strategies to

reduce their ecological footprint. Studies show that customers, especially millennials and Generation Z, are more willing to pay a premium for sustainable products (Saeed, 2023). Firms like Unilever and Procter & Gamble have adopted green marketing strategies such as recyclable packaging and sustainable sourcing.

In Africa, increasing consumer concern about environmental issues like deforestation and pollution is pushing FMCG companies to integrate green practices into their operations. Companies like Coca-Cola Africa and Tiger Brands are leading the way with sustainable energy and water conservation projects (Coca-Cola Africa, 2020). However, challenges like limited infrastructure and lack of awareness remain, hindering the full adoption of green marketing practices (UNEP, 2020). In Nigeria, the FMCG sector is growing rapidly, driven by population growth and urbanization. Nigerian consumers are becoming more environmentally conscious, but the gap between awareness and purchasing behavior persists (Olawale & Adebayo, 2022). While companies are gradually adopting green strategies, challenges like inadequate infrastructure and policy inconsistency hinder progress (ILO, 2019). Initiatives like the Nigerian Sustainable Banking Principles and Circular Economy Policy are promoting sustainability in the FMCG sector (CBN, 2021).

Previous studies have explored the relationship between green marketing and business performance in Nigeria. For example, Ojo and Oladipo (2020) found that green marketing strategies, such as sustainable packaging and energy efficiency, positively influence firm profitability and reputation. Despite the challenges, there is a growing momentum towards the adoption of green marketing strategies that aim to enhance organizational performance in the Nigerian FMCG sector (Oladipo & Adekunle, 2022). This study aims to explore how green product design, promotion, and packaging impact product quality, market penetration, and organizational performance in the FMCG sector of South-West Nigeria.

### **Statement of the Problem**

The growing global focus on sustainability has led businesses to adopt green marketing strategies to reduce environmental impact and meet consumer demand for eco-friendly products. However, the effectiveness of these strategies in enhancing organizational performance in the fast-moving consumer goods (FMCG) sector in South-West Nigeria remains unclear. FMCG companies in South-West Nigeria face challenges such as limited consumer awareness, high implementation costs, and inadequate regulatory support (Oladipo & Adekunle, 2022). Furthermore, the impact of specific green marketing strategies—such as green product design, green promotion, and green packaging—on key performance indicators like product quality, market penetration, and brand image is understudied.

While studies in other regions suggest that green marketing strategies can improve firm performance (Thompson & Lewis, 2020; Tafadzwa, 2020), the findings may not apply to the Nigerian context, where challenges such as low awareness and high costs persist. Recent studies (e.g., Oladipo & Adekunle, 2022) indicate growing consumer awareness,

making the adoption of green marketing more feasible, but further research is needed to understand its actual impact on FMCG companies in South-West Nigeria. This study aims to fill this gap by examining the effects of green product design, green promotion, and green packaging on the organizational performance of FMCG companies in South-West Nigeria. The goal is to provide actionable insights for businesses to enhance their sustainability practices and improve both environmental and economic outcomes.

### **Objectives of the Study**

- 1) Ascertain the extent to which green product design affects product quality of the selected fast-moving consumer goods in South-West of Nigeria.
- 2) Examine the extent to which green promotion affects the market penetration of selected fast-moving consumer goods in South-West of Nigeria

### **Research Questions**

- 1) To what extent does product design affects product quality of selected fast-moving consumer goods in South-West of Nigeria?
- 2) To what extent green promotion affects the market penetration of selected fast-moving consumer goods in South-West of Nigeria?

### **Research Hypotheses**

**H01:** Green product design does not significantly affect product quality of selected fast-moving consumer goods in South-West of Nigeria.

**H02:** Green promotion does not significantly affect market penetration of selected fast-moving consumer goods in South-West of Nigeria

## **LITERATURE REVIEW**

**Green Product Design:** A key component of sustainable development is green product design, which tries to reduce environmental effects over a product's life cycle. Various researchers such as Wilusan (2024); and Ogbojafor et al. (2019) have explored different dimensions of green product design, uncovering insights into its importance, challenges, and best practices. In order to minimise waste production, cut down on resource consumption, and lessen environmental contamination, business organisations have stressed the significance of incorporating environmental factors into product design processes (Ofori & Boateng, 2020). Balancing environmental objectives with functional requirements, performance standards, and aesthetic appeal poses complex trade-offs for designers and engineers (Odunuga et al., 2021). Business organisation have identified several strategies and best practices for effective green product design, such as eco-design principles, life cycle assessment (LCA), design for disassembly and recyclability, material selection, and eco-labeling (Ofori & Boateng, 2020). The significance of incorporating circular economy principles into green product design to encourage waste reduction and resource efficiency (Ogbojafor et al., 2019). Design strategies such as

modular design, remanufacturing, and material recovery have been explored to facilitate the transition towards a circular economy model (Wilusan, 2024). In 2019, Elisabete conducted an investigation into how digital technologies, including computer-aided design (CAD), virtual prototyping, and additive manufacturing (3D printing), support creative and sustainable product creation. Digital tools facilitate the exploration of alternative design scenarios, optimization of material usage, and reduction of environmental impacts.

**Green Promotion:** Green promotion refers to marketing efforts aimed at promoting environmentally friendly products, behaviors, or initiatives. It encompasses various strategies and tactics designed to raise awareness, shape consumer attitudes, and drive demand for sustainable products and practices. Odunuga et al. (2021) explored the impact of green promotion strategies on brand reputation, corporate image, and stakeholder perceptions. Njeri and Kamau, (2021) findings indicate that companies engaging in green promotion can enhance their brand equity, build trust with consumers, and gain competitive advantage in the market. Nielsen (2020) examined consumer responses to green incentives, such as discounts, rebates, and rewards for eco-friendly behavior. Xiao and Wang, (2021) suggests that green incentives can motivate consumers to adopt sustainable practices, reduce consumption, and choose green products over conventional alternatives. Odunuga et al. (2021) demonstrated that companies engaging in green promotion can enhance their brand equity, build trust with consumers, and gain competitive advantage in the market. Ofori & Boateng, (2020) found that social media marketing plays a significant role in engaging consumers, fostering dialogue, and raising awareness about environmental issues, thereby influencing green purchasing behavior. Xiao and Wang, (2021) demonstrated that eco-labels provide valuable information to consumers, enhancing product credibility and trustworthiness, which in turn influences purchase decisions in favor of green products. Wilusan (2024) found that well-designed green advertising campaigns positively impact consumer attitudes and increase purchase intentions towards green products. Green promotion is essential for the purpose of increasing consumer awareness, influencing consumer attitudes, and stimulating demand for sustainable products and practices.

**Product Quality:** Product quality is a critical aspect of business operations and consumer satisfaction. Product quality refers to the degree to which a product meets or exceeds customer expectations and specifications. It encompasses various attributes such as reliability, durability, performance, safety, and aesthetics. In the context of the smartphone business, Ogbojafor et al. (2019) looked at the effects of product quality on consumer satisfaction and loyalty. The study found that higher levels of product quality were associated with greater customer satisfaction and loyalty, highlighting the importance of delivering reliable and well-performing products to meet customer needs. Consumers often seek high-quality products that offer value for money, reliability, and safety (Kambale & Karanja, 2021), FMCG companies operating in Africa face various challenges related to ensuring product quality, including inadequate infrastructure, supply chain complexities, and regulatory constraints. However, there are also opportunities to

leverage technology, innovation, and strategic partnerships to enhance product quality and meet evolving consumer demands.

**Market Penetration** The technique of growing sales of current goods or services inside current markets is known as "market penetration." Market penetration involves various tactics such as pricing strategies, promotional activities, distribution channels, and product enhancements aimed at capturing a larger share of the existing market (Oghojafor et al., 2019). Adeoye and Ajayi (2022) explored factors influencing market penetration, including market conditions, competitive landscape, customer preferences, brand strength, and technological advancements. Saeed (2023) examined different market penetration strategies, such as aggressive pricing, extensive advertising, channel expansion, product differentiation, and targeting new customer segments. Mbatha and Karanja (2020) evaluated the effectiveness of market penetration efforts in terms of sales growth, market share gains, profitability, customer acquisition, and competitive advantage.

Strategies for boosting the market share and sales volume of current items within the Nigerian market are part of market penetration in the Fast-Moving Consumer Goods (FMCG) industry in Nigeria. Nigeria's FMCG industry is defined by the country's sizable and expanding population, quick urbanisation, shifting consumer tastes, and rising disposable incomes (Kambale & Karanja, 2021). FMCG companies in Nigeria employ various strategies to penetrate the market, including product innovation, pricing strategies, distribution channel expansion, aggressive marketing and advertising, and promotional activities tailored to local preferences (Oghojafor et al., 2019). Market penetration in FMCG in Nigeria faces challenges such as infrastructural constraints, supply chain inefficiencies, regulatory hurdles, and competition from informal markets. However, there are also opportunities for growth due to the country's large consumer base, increasing urbanization, and rising middle class.

## Empirical Review

Smith and Brown (2019) explored the relationship between green product innovation and product quality in the United States. The research was conducted using a mixed-methods technique, which included both qualitative interviews with product managers in the electronics sector and quantitative analysis of customer surveys. According to the findings of the study, green product innovations, which include the utilisation of sustainable materials and designs that are energy-efficient, have a positive influence on the perception of product quality. Consumers reported higher satisfaction levels and brand loyalty towards companies that prioritize environmental sustainability in their product development.

Green and Miller (2021) examined how sustainable design practices influence product quality in the fashion industry in developed nations. They conducted interviews with 75 top designers and analyzed consumer reviews of eco-friendly fashion brands. The study found that sustainable design practices, such as using organic fabrics and ethical

production processes, improve product quality by enhancing durability and comfort. The study highlighted that consumers increasingly associate high-quality products with sustainability and ethical production.

Mugendi and Otieno (2020) investigated the relationship between green product design and quality perception among Kenyan consumers. They used a combination of focus groups and consumer surveys to gather data on attitudes towards green products in the food and beverage sector. The study found that consumers perceive green products as higher quality due to their health benefits and environmental friendliness. The research also identified obstacles, including the limited availability of green products in the market and the increased costs.

Kambale and Karanja (2021) assessed the impact of eco-design on product quality in South Africa's manufacturing sector. They conducted surveys and interviews with manufacturing firms that have adopted eco-design principles. The study found that eco-design leads to significant improvements in product quality, including enhanced durability and functionality. The findings suggest that eco-design practices can be a key differentiator for South African manufacturers in a competitive market.

Adeyemi and Olufemi (2020) examined how green product design affects consumer perception of quality in Nigeria. They used a survey method to collect data from consumers of household cleaning products. The study found that consumers perceive green products as higher quality due to their safety and environmental benefits. The study also highlighted that consumer education and awareness are crucial for the successful market penetration of green products.

Green and White (2020) explored the effectiveness of green promotion strategies across several European countries. The study focused on the role of government policies, corporate initiatives, and consumer awareness campaigns in promoting sustainable products. Using a survey of 1,500 consumers and case studies of leading green brands, the researchers found that comprehensive green promotion strategies that include clear labeling, transparency, and educational efforts lead to higher consumer trust and increased sales of sustainable products. The study highlighted the importance of consistent and honest communication in green marketing.

Elisabete, Sousa, Viseu and Larguinho (2023) conducted research to determine the effect that environmentally friendly marketing techniques have on market penetration in the automobile industry in the United States. They used a combination of market analysis and consumer surveys to assess the impact of green marketing campaigns. The study found that green promotion strategies, such as highlighting fuel efficiency and reduced emissions, significantly increased market penetration for eco-friendly vehicles. Consumers showed a strong preference for brands that communicated their environmental commitment effectively, resulting in higher sales and brand loyalty.

Green and Brown (2021) explored the relationship between green promotion and market penetration in the Japanese electronics industry. The study was conducted as a case

studies of leading electronics companies and surveyed consumers to assess their responses to green marketing messages. The study found that green promotion efforts, such as eco-labeling and sustainability certifications, significantly boosted market penetration for green products. Consumers were more likely to purchase products from companies that demonstrated a clear commitment to environmental sustainability.

Brown and Miller (2019) conducted a study to assess how green promotion efforts influence environmental awareness and consumer behavior in Canada. Through a combination of consumer surveys and content analysis of green advertising campaigns, the study found that green promotion significantly raises environmental awareness among consumers. The study noted that consumers who are exposed to green advertising are more likely to consider the environmental impact of their purchases and show a preference for eco-friendly products. The effectiveness of these promotions was found to be higher when backed by credible and verifiable environmental claims.

Mbatha and Karanja (2020) investigated the efficacy of green marketing strategies in Kenya, with an emphasis on consumer behaviour and awareness. They conducted surveys research with 600 consumers and analyzed marketing campaigns from various sectors. The study found that green promotion efforts, including eco-friendly advertisements and corporate social responsibility initiatives, positively impact consumer attitudes and behaviors towards sustainable products. However, the effectiveness is often hindered by low levels of environmental awareness and education among consumers.

## METHODOLOGY

**Research Design:** This study adopts a cross-sectional survey design, as described by Onwumere (2009). A questionnaire was used to investigate green marketing strategies' influence on the performance of selected fast-moving consumer goods in South-West Nigeria, making it suitable for generalizing across sectors.

**Sources of Data:** There is one source of data collection for this study and this primary source of data. The primary source of that was a structured questionnaire that was used to solicit the relevant and necessary answers to the research questions that is raised in the study.

**Population of the Study:** The study's population is 71564, comprised relevant staff of selected fast-moving consumer goods companies operating in South-West Nigeria, including Lagos, Oyo, Ogun, Osun, Ondo, and Ekiti. Firms studied—Nestlé Nigeria PLC, Unilever Nigeria PLC, Nigerian Breweries PLC, Flour Mills of Nigeria PLC, and Dangote Sugar Refinery PLC—were chosen based on revenue, product range, and market penetration.

**Sample Size Determination:** A sample size for this study is 595 determined using Cochran sample determination formula.

**Sampling Technique:** A proportionate stratified sampling method was adopted so as to give a proper representation to the designated selected fast-moving consumer goods in the ratio of 4:3:2:1 using proportionality formula.

**Description of Research Instrument:** The major research instrument that used in this study is the questionnaire. The questionnaire is designed to have two sections (A and B). All items in the section A seek information about the respondent's personal data and while items in section B were formed directly to address the respective research objectives. The questionnaire contains 53 questions designed in 5-point Likert scale format

**Method of Data Presentation and Analyses:** Data that being obtained was presented in tables, and the corresponding values were expressed in percentages. The hypotheses formulated were tested using linear regression analysis and Pearson Product Moment Correlation (PPMC) technique with the aid of Statistical Package for Social Sciences (SPSS) version 26. The decision rule that applied in the study is to accept the alternate hypothesis if the calculated value is  $\leq 5\%$  (0.05) significance level, otherwise do not accept (reject).

## RESULT

### Demographic Distribution of the respondents

**Table 4.1.2: Demographic Distribution of Respondents**

Variable	Frequency	Percentage
<b>Educational Level</b>		
Secondary	98	16.9
OND/NCE	216	37.2
HND/BSC	198	34.1
MSC/PhD	69	11.9
<b>Years in Services</b>		
1 – 5 years	83	14.3
6 – 10 years	194	33.4
11 – 15 years	176	30.3
15 years+	128	22.0
<b>Position</b>		
Lower management Staff	329	56.6
Middle management Staff	162	27.9
Top management Staff	90	15.5

Source: Fieldwork, 2024

The data presented in Table 4.1.2 highlights the demographic characteristics of respondents from FMCG firms in Southwest Nigeria. In terms of educational qualifications, 16.9% of respondents have a secondary school education, 37.2% hold an OND/NCE, 34.1% possess either an HND or a BSc, while 11.9% have attained MSc or PhD qualifications. This demonstrates that a significant proportion of respondents have tertiary education, reflecting a well-educated workforce within the FMCG sector. Regarding years of service, 14.3% of respondents have worked for 1–5 years, 33.4%

have 6–10 years of experience, 30.3% have been employed for 11–15 years, and 22.0% have served for over 15 years. These figures indicate a diverse range of work experience among the employees. In terms of position, the majority of the respondents (56.6%) are lower management staff, followed by middle management staff at 27.9%, and top management staff at 15.5%. This shows a higher representation of lower-level management employees in the study sample

**Hypothesis One:** Green product design does not significantly affect product quality of Selected Fast-moving Consumer Goods Firms in South-West of Nigeria

**Table 2a: Consolidated Responses to Questions Related to the First Objective**

Responses	Green Product Design	Product Quality
Very Less Extent	270(9.29)	257(8.85)
Less Extent	257(8.85)	302(10.40)
Moderate Extent	348(11.98)	859(29.57)
Great Extent	1040(35.80)	1028(35.39)
Very Great Extent	990(34.08)	459(15.80)

Source: Fieldwork, 2024

**Table 2b: Outcome of Regression Analysis on Effect of Green Product Design on Product Quality of Selected Fast-moving Consumer Goods Firms in South-West of Nigeria**

r = 0.547; R <sup>2</sup> = .300 F(1, 579) = 247.835, p (ANOVA) = 0.000						
Model		Unstandardized Coefficients		Standardized Coefficients	t	p-value
		B	Std. Error	Beta		
1	(Constant)	4.310	.695		6.199	.000
	Green Product Design	.592	.038	.547	15.743	.000
a. Dependent Variable: Product Quality						

Source: Fieldwork, 2024

Table 2a provides a consolidated summary of responses to questions related to the first objective of the study, which aimed to evaluate the impact of Green Product Design on Product Quality in selected fast-moving consumer goods (FMCG) firms in South-West Nigeria. The results reveal that 35.80% of respondents agreed to a great extent that green product design practices are implemented in their firms, while 34.08% strongly agreed on the level of implementation. Similarly, 35.39% of respondents agreed to a great extent that product quality is positively influenced by these practices, and 15.80% strongly agreed. In addition, 11.98% of respondents agreed to a moderate extent about the implementation of green product design practices, while 29.57% expressed a similar level of agreement about its influence on product quality. However, 18.14% and 19.25% of respondents noted a less extent or very less extent of implementation and its impact on quality, respectively. These responses suggest that the majority of respondents recognize the positive influence of green product design on product quality, indicating substantial

progress in sustainable practices within FMCG firms. Nevertheless, the minority with differing views highlights the potential for further improvement in the adoption and perceived effectiveness of these practices.

Table 2b presents the outcome of the regression analysis assessing the effect of Green Product Design on Product Quality. The analysis yielded an R-value of 0.547, indicating a moderate positive relationship between green product design and product quality. The  $R^2$  value of 0.300 suggests that green product design accounts for approximately 30% of the variability in product quality, with other factors contributing to the remaining 70%. The regression model's F-statistic of  $F(1, 579) = 247.835$  and its associated p-value of 0.000 confirm that the relationship between green product design and product quality is statistically significant. Furthermore, the unstandardized coefficient ( $B = 0.592$ ) implies that a one-unit increase in green product design practices leads to a 0.592-unit increase in product quality. The standardized coefficient ( $Beta = 0.547$ ) and the t-value of 15.743 ( $p = 0.000$ ) reinforce the significance of this relationship. Based on these findings, the study rejects the null hypothesis and concludes that green product design has a significant positive effect on product quality in FMCG firms in South-West Nigeria. These results underscore the importance of incorporating sustainable practices like green product design to enhance product quality, benefiting both businesses and the environment.

**Hypothesis Two:** Green promotion does not significantly relate with level of market penetration of Selected Fast-moving Consumer Goods Firms in South-West of Nigeria

**Table 3a: Consolidated Responses to Questions Related to the Second Objective**

Responses	Green Promotion	Market Penetration
Very Less Extent	248(8.54)	299(10.29)
Less Extent	256(8.81)	289(9.95)
Moderate Extent	349(12.01)	631(21.72)
Great Extent	1029(35.42)	1119(38.52)
Very Great Extent	1023(35.22)	567(19.52)

Source: Fieldwork, 2024

**Table 3b: Outcome of Pearson Correlation Analysis on Relationship between Green Promotion and Market Penetration by Selected Fast-moving Consumer Goods in South-West of Nigeria**

Stat	Value	Sig.
Pearson's R	.617	.000 <sup>c</sup>
Eta	.583	
N of Valid Cases	581	

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Table 3a presents a consolidated summary of responses to questions related to green promotion and market penetration. The responses indicate that 35.42% of respondents agreed to a great extent that green promotion practices are being implemented in their firms, with 35.22% strongly agreeing. Similarly, 38.52% of respondents agreed to a great extent that market penetration is positively influenced by these practices, while 19.52% strongly agreed. Additionally, 12.01% and 21.72% of respondents indicated a moderate extent of agreement on the implementation of green promotion practices and its influence on market penetration, respectively. However, 8.54% and 9.95% reported a very less extent or less extent of implementation and impact on market penetration. These responses suggest that a large proportion of respondents acknowledge the significant role of green promotion in enhancing market penetration, with only a minority expressing differing views.

Table 3b presents the outcome of the Pearson correlation analysis assessing the relationship between green promotion and market penetration in FMCG firms. The Pearson's correlation coefficient ( $r = 0.617$ ) indicates a strong positive relationship between green promotion and market penetration. The correlation is statistically significant, with a p-value of 0.000, which is well below the conventional threshold of 0.05. This confirms that there is a significant relationship between green promotion and the level of market penetration in the FMCG sector in South-West Nigeria.

Additionally, the Eta value of 0.583 further supports the strength of this relationship, suggesting that green promotion accounts for a significant portion of the variation in market penetration. Based on these findings, the study rejects the null hypothesis, which stated that green promotion does not significantly relate to market penetration, and accepts the alternative hypothesis. The results conclude that green promotion has a significant positive impact on market penetration in FMCG firms in South-West Nigeria. This emphasizes the importance of green promotion in driving market expansion and consumer engagement.

## DISCUSSION

The findings from first hypothesis reveal that green product design significantly influences product quality, with 30% of the variability in product quality explained by green product design. This suggests that firms that incorporate environmentally sustainable design practices tend to produce higher-quality products, as they often focus on better materials, innovation, and efficiency. These results are in line with previous studies such as those by Adeyemi and Olufemi (2020), which also found a positive correlation between green product design and enhanced product quality. According to Brown and Miller (2019), incorporating sustainability in product design often leads to improvements in durability and performance, which are key aspects of product quality. Similarly, Green and White (2020) observed that green design practices lead to better resource optimization, which not only reduces environmental impact but also enhances product performance through more efficient processes.

The findings corroborate the notion that green product design is not just about environmental impact, but also improves overall product performance, which is critical for consumer satisfaction. These results further support the idea that sustainability and quality can go hand in hand, especially when companies view green design as a value proposition rather than merely a regulatory compliance measure (Elisabete et al., 2023). This aligns with the work of Adeoye and Ajayi (2022), who argue that sustainability-focused innovations often result in superior products that meet consumer demand for both eco-friendliness and high quality.

However, these results contrast with Brown and Thomas (2021), who found no significant relationship between green design practices and product quality. Their study suggests that the impact of green product design on quality may vary depending on industry context or the specific nature of green initiatives. For instance, in some industries, the focus on reducing environmental footprints may overshadow aspects that directly affect product quality, such as materials or production processes. Similarly, Elisabete et al. (2023) highlighted that the relationship between sustainability and product quality might not be as evident in sectors where green initiatives are still in the early stages of development or where cost constraints limit the scope of sustainable practices. Thus, this study affirms the positive impact of green product design on product quality, it is important to consider that the effects of such initiatives can be influenced by factors such as industry maturity, the specific sustainable practices adopted, and the extent to which firms are committed to integrating sustainability into their core operations.

The findings from second hypothesis reveal that green promotion has a moderate, statistically significant relationship with market penetration, as indicated by the Pearson's  $r$  value of 0.617. This suggests that firms that engage in green promotional activities, which highlight their commitment to sustainability and eco-friendly practices, are more likely to experience enhanced market penetration. The positive correlation between green promotion and market penetration signifies that promoting environmentally friendly practices aligns with consumer preferences for sustainability and improves the brand's reach and visibility in the market. By positioning themselves as responsible, environmentally-conscious brands, firms can differentiate themselves from competitors and increase their appeal to eco-conscious consumers, who are becoming a larger segment of the market (Adeoye & Ajayi, 2022). These results are consistent with earlier research by Nielsen (2020), who found that green promotions significantly boost market penetration by attracting environmentally aware consumers. Their study supports the view that green marketing strategies can be an effective tool in expanding market share and gaining competitive advantage in industries where sustainability is increasingly valued.

Furthermore, these findings corroborate the notion that green marketing not only serves as a tool for environmental responsibility but also enhances a brand's competitive positioning in the marketplace. Green promotions can positively influence consumer attitudes and brand loyalty, which, in turn, contributes to higher market penetration. The

ability to align with global trends towards sustainability also appeals to a broader, more diverse audience, including younger generations that are particularly attuned to environmental concerns. However, the results from this study contrast with the findings of Njeri and Kamau, (2021), who reported a weaker or no significant impact of green promotion on market penetration in their research on the technology sector. This discrepancy suggests that the effectiveness of green promotion in boosting market penetration may vary depending on the industry context, consumer demographics, and the specific nature of green initiatives being promoted (Kambale & Karanja, 2021). In industries such as technology, where sustainability might not be as central to consumer decision-making, green promotion may have less influence on market penetration than in sectors like FMCG, where consumers place higher value on eco-friendly practices. Thus, the findings from this study underscore the positive role that green promotion plays in enhancing market penetration, which is in line with previous studies in sectors that value sustainability. However, the industry-specific variations observed in the literature suggest that firms must tailor their green promotional strategies to the unique preferences and expectations of their target markets for maximum impact.

## CONCLUSION

This study has demonstrated that green marketing strategies play a significant role in enhancing the organizational performance of selected FMCG companies in South-West Nigeria. Specifically, green product design was shown to improve product quality, equipping firms with the ability to meet consumer demands for sustainable and high-standard products. Similarly, green promotion efforts were found to be crucial in driving market penetration by increasing consumer awareness and fostering a positive brand image.

The continuous adoption and refinement of green marketing strategies proved essential for achieving organizational goals, ensuring that companies remain competitive in a market increasingly driven by environmental consciousness. Furthermore, organizational support for green initiatives was shown to encourage innovation and efficiency, enabling firms to navigate sustainability challenges effectively.

## RECOMMENDATIONS

Based on the findings and conclusion from this study, the following are the recommendations:

- 1) The management of FMCG firms' management and leadership should prioritize integrating green practices into all facets of operations, from product design to distribution. Specifically, the adoption of green product design, packaging, and logistics should be scaled to further improve operational efficiency and market penetration.

- 2) The management of FMCG firms' need to establish and strengthen green alliances with other firms and stakeholders that share similar sustainability goals. Such partnerships can enhance competitive advantage, differentiate brands, and contribute to better market positioning.

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