EFFECT OF SUSTAINABLE MARKETING ON CUSTOMER LOYALTY OF FAST-MOVING CONSUMER GOODS (FMCG) IN NORTH CENTRAL NIGERIA

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Abstract
This study examines the effect of sustainable marketing on customer loyalty in the Fast-Moving Consumer Goods (FMCG) sector in North Central Nigeria. The study's specific objectives were to assess the influence of Green Marketing, Product Packaging, and Social Media Marketing on customer loyalty in Nigeria's FMCG sector. A sample size of 442 customers from various FMCG companies in Nigeria were selected using the Cochran (1963) formula for sample size determination. Purposive and convenience sampling methods were employed in selecting the respondents. Data was collected through primary sources using a structured questionnaire on a five-point Likert scale. Structural equation modeling with partial least squares (PLS-SEM) was employed to analyse the data and test hypotheses. The results show that Green Marketing has a positive but insignificant effect on Customer Loyalty of Fast-Moving Consumer Goods in Nigeria, Product Packaging and Customer Loyalty revealed a positive and statistically significant association, while Social Media Marketing on Customer Loyalty revealed an insignificant and negative effect. The study concludes that sustainable marketing has a significant effect on customer loyalty in the Fast-Moving Consumer Goods (FMCG) sector in North Central Nigeria. The study recommends that FMCG companies in Nigeria should continue to incorporate environmentally friendly practices gradually. Companies should focus on educating consumers about the long-term benefits of green products and practices, potentially through targeted awareness campaigns that resonate with local values and concerns. FMCG companies should invest in innovative, sustainable, and visually appealing packaging designs. FMCG companies in Nigeria should reassess and revamp their social media strategies. Focus should be placed on creating more engaging, culturally relevant content that provides value to the Nigerian consumer, such as product tutorials, local recipes, or community initiatives.
Keywords: *Sustainable Marketing, Green Marketing, Product Packaging, Social Media Marketing, FMCG companies*

INTRODUCTION

In recent years, sustainable marketing has emerged as a crucial strategy for businesses worldwide, particularly in the Fast-Moving Consumer Goods (FMCG) sector. This approach aims to meet the needs of consumers while minimizing negative environmental and social impacts, ultimately fostering long-term customer relationships and loyalty (Kumar et al., 2013). In Nigeria, a rapidly growing economy with increasing consumer awareness, the adoption of sustainable marketing practices in the FMCG sector has become increasingly relevant.

Green Marketing, one of the key components of sustainable marketing, involves the development and promotion of environmentally friendly products and services (Polonsky, 2011). In the Nigerian context, where environmental concerns are gaining traction, green marketing initiatives have the potential to influence consumer perceptions and purchasing decisions (Oyewole, 2001). Product Packaging, another crucial aspect of sustainable marketing, plays a dual role in the FMCG sector. It not only protects and preserves products but also serves as a powerful marketing tool. Sustainable packaging solutions that are eco-friendly and recyclable have gained importance in recent years, potentially impacting consumer choices and brand loyalty (Magnier & Schoormans, 2015). Social Media Marketing has revolutionized the way businesses interact with consumers, offering unprecedented opportunities for engagement and brand building (Tuten & Solomon, 2017). In Nigeria, where digital adoption is rapidly increasing, social media platforms have become vital channels for FMCG companies to communicate their sustainability efforts and connect with environmentally conscious consumers (Nwokah & Ngirika, 2018).

Modern perspectives on customer loyalty consider it a comprehensive result of the entire customer experience, including interactions before, during, and after purchase (Lemon & Verhoef, 2016). For businesses seeking to improve customer satisfaction, retention, and long-term financial success, it's essential to comprehend how sustainable marketing practices influence customer loyalty in Nigeria's FMCG sector. The FMCG industry in Nigeria encompasses a broad spectrum of daily-use products, ranging from food and drinks to personal care items, household products, and over-the-counter medications. Operating in a vibrant and competitive landscape, FMCG firms in Nigeria cater to a diverse consumer base with varied preferences and buying patterns. These companies engage in a range of activities from production and distribution to marketing and sales to meet the needs of Nigerian consumers. In their marketing efforts, sustainable practices in Nigeria's FMCG sector aim to promote products and brands while also emphasizing environmental, social, and economic sustainability. This approach involves incorporating sustainability principles across all marketing aspects, including product development, packaging strategies, distribution methods, promotional activities, and customer interactions. Given this context, this research aimed to examine how sustainable marketing practices impact customer loyalty within Nigeria's fast-moving consumer goods (FMCG) industry.

Statement of the Problem

In Nigeria's fast-moving consumer goods (FMCG) sector, the relationship between sustainable marketing practices and customer loyalty remains underexplored despite its critical importance for business success and societal impact. While sustainability initiatives such as green marketing, social media marketing, and influencer marketing, are increasingly adopted by FMCG companies, the effect on customer loyalty in the Nigerian context remains unclear. Nigerian consumers exhibit unique attitudes, perceptions, and behaviors towards sustainable products and brands compared to consumers in other regions. The absence of comprehensive research addressing this gap hinders the development of effective marketing strategies tailored to the unique socio-economic and environmental landscape of Nigeria. Therefore, there is a pressing need to investigate the effect of sustainable marketing practices on customer loyalty in the Nigerian FMCG sector for an informed and evidence-based decision-making and foster sustainable business growth.

Previous research conducted by scholars such as Eklund et al. (2020), Imran and Rizwan (2022), Bablu (2023), and Gong et al. (2023) has established a connection between sustainable marketing practices and customer loyalty. However, these studies have focused on diverse countries, including smartphone brands in Sweden, fashion apparel brands in Lahore, Punjab Pakistan, food, and beverage products in the Surkhet district in Nepal, and the Chinese market for electric automobiles. This study aims to address this research gap by investigating the effect of sustainable marketing on customer loyalty within the Nigerian Fast Moving Consumer Goods (FMCG) sector. It utilizes Green Marketing, Product Packaging, and Social Media Marketing, as proxies for the independent variable, thus providing a comprehensive examination of the relationship between sustainable marketing practices and customer loyalty in the Nigerian context.

The primary aim of this study is to assess the effect of sustainable marketing on customer loyalty of Fast-Moving Consumer Goods (FMCG) in North Central Nigeria. The study pursued the following specific objectives:

i. To examine the effect of Green Marketing on customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria
ii. To investigate the effect of Product Packaging on customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria
iii. To ascertain the extent Social Media Marketing affect customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria

LITERATURE REVIEW

Sustainable Marketing

Sustainable marketing is a strategic orientation that involves the creation, delivery, and communication of value propositions that address societal needs and aspirations, while considering the limitations and carrying capacity of the natural environment. It requires embedding sustainability principles into the core business strategy and embracing a long-term perspective (Hult et al., 2019). This definition emphasizes the alignment of marketing activities with societal needs and aspirations, acknowledging the importance of considering the environmental limitations and capacity. It highlights the integration of sustainability principles into the core business strategy and the adoption of a long-term perspective.

According to Kotler and Lee (2005), Sustainable marketing is a strategic approach that emphasizes the harmonious integration of economic, environmental, and social dimensions into marketing activities. It involves the development and implementation of marketing strategies that not only meet the needs and wants of customers but also consider the long-term well-being of the natural environment and society. This definition highlights the holistic nature of sustainable marketing by emphasizing the three dimensions of sustainability: economic, environmental, and social. It emphasizes the importance of aligning marketing activities with sustainable development goals, considering the impacts on the natural environment and society while fulfilling customer needs and wants.

Sustainable marketing is a customer-centric approach that involves creating, communicating, and delivering products and services that not only provide value to customers but also contribute to environmental preservation, social well-being, and the long-term viability of the business (Polonsky, 2001). This definition emphasizes the customer-centric nature of sustainable marketing and the need to provide value to customers. It highlights the role of sustainable products and services in addressing environmental and social concerns while ensuring the continued success and viability of the business.

Green Marketing

Green marketing is a governance process with responsibility and inclusiveness, which can detect, predict, and meet the expectations from stakeholders, but at the same time, it will not have a negative impact on the natural environment and human health (Charter, et al. 2012). This marketing model is a process of designing, manufacturing, and selling products or services based on environmental benefits, such as using recycled raw materials to manufacture products. Green marketing is no more a trend, but a major change in an enterprise's operational mode. As a form of social marketing, it requires cooperation with providers, traders, partners, and competitors to realize sustainable environmental development in the whole value chain and then achieve the best solution that can bring about profits and make positive contributions to the environment through the cooperation of all business functions (Skataric, et al. 2021). As for enterprises, the purpose of green marketing is to satisfy consumers' preference for environmental protection and make them interested in products; therefore, enterprises can fulfill their social responsibilities and gain a good reputation. In terms of consumers, green consumption embodies their own values of environmental protection, to distinguish themselves from other people (Lanmeng & Ziyang 2022).

Product Packaging

According to Dibie and Olannye (2022), Product packaging is the art, science, and technology of securing or confining goods for usage, storage, delivery, and sale. The process of creating, analyzing, and making packages is also included in packaging. The packaging of a product is frequently a customer's first contact with it. As a result, manufacturers never forget about product packaging. There are several ways in which product packaging matters and how it can help to establish a favorable first perception and enduring brand loyalty. Excellent materials, safety measures, and special abilities are required for packaging, such as eye-catching graphics, photos, and colors, to raise the product's quality. Recurring packaging has evolved into a methodical method of product distribution that is free of complexity and issues (Sudha & Neeta, 2014). Packaging is one of the most crucial aspects of price, promotion, and structuring. The discovery of a genuine, ground-breaking package would enhance customer expectations for goods purchases for many organizations. Most supermarkets place a lot of emphasis on providing their customers with high-quality product packaging and an enjoyable shopping experience. Because packaged goods are sold in competitive markets, packaging design is important as a tool for branding and communication (Lavuri & Ramlal, 2020).

Social Media Marketing

According to Gunelius (2011), social media marketing is any form of direct or indirect marketing that is used to build awareness, recognition, recall, and acting on a brand, business, product, person, or other thing that is packaged using tools. on the social web, such as blogging, microblogging, social networking, social bookmarking, and content sharing. According to Kim and Ko (2012), social media marketing is a two-way communication that seeks empathy with users, Kim, and Ko (2012) described social media marketing as consisting of five dimensions, namely entertainment, interaction, trendiness, customization, and word of mouth (WOM). Social media marketing is the perfect way to build a community of brands and places where consumers can share experiences, information, and ideas (Kotler & Armstrong, 2016).

Customer Loyalty

Customer loyalty is now viewed as a dynamic and multi-dimensional construct influenced by various factors such as brand trust, satisfaction, emotional connection, and perceived value (Bowen & Chen, 2001). Moreover, the emergence of loyalty programs and personalized marketing strategies has reshaped the way companies cultivate and maintain customer loyalty by offering rewards, incentives, and tailored experiences to enhance customer retention and lifetime value (Kumar & Shah, 2004). Furthermore, the advent of data analytics and machine learning has enabled companies to gain deeper insights into customer behavior and preferences, allowing for more targeted and personalized loyalty initiatives (Verhoef et al., 2017).

Empirical Review

Green Marketing and Customer Loyalty

Ghizlane (2023) examined the effect of Green Marketing on Customer loyalty. The qualitative research method was used for this study using thematic and narrative analysis. The sample population was taken from residents of Tallinn, Estonia. A simple random sampling method was used. The research instruments used to collect primary data were questionnaires and focus group interviews. Both methods were conducted using the same questions. The questionnaire used composed of semi-structured questions, which means that some of the questions will be open-ended, allowing participants to provide detailed answers in their own words, while others will be closed-ended, requiring participants to choose from a list of predefined options. The thematic analysis and narrative analysis methods were used to analyze the responses obtained from the administered questionnaire. The research findings indicate that Green Marketing has a positive but insignificant effect on Customer loyalty. A criticism of the study pertains to the variation in both the subject area and the analytical methodology when compared to the present study. In the current study, the focus is on the FMCG industry as the subject matter, and the analytical tool employed is SEM-PLS.

In India, Uma, et al. (2022) did an empirical study on the effect of green marketing on customer loyalty. This empirical study used a qualitative research technique. In the study, 242 respondents were surveyed to know the factors that determines the role of green marketing approaches on consumer loyalty. A structured questionnaire was used in this study for conducting the survey. Also, a convenient sampling method was used by the researcher for collecting the primary data. After the completion of the fieldwork, the data was analyzed and evaluated by mean and t-test. The result showed an insignificant negative effect of green marketing on customer loyalty. The study concluded by underlining the crucial role that businesses can play in promoting sustainable consumption patterns through effective green marketing strategies. This research employed the mean and t-test, while the present study will adopt Structural Equation Modeling with Partial Least Squares (SEM PLS) to explore causal relationships.

Product Packaging and Customer Loyalty

Hemamalini and Murugadoss (2023) examined the effect of product packaging on customer loyalty. The study was descriptive research. Primary data was collected from questionnaire through Google forms and direct interviews. A convenience sampling was done to collect the responses from Chennai in the areas of Annanagar,Egmore and Koyambedu. A sample of 113 was readable and was taken for the study. The questionnaire was built upon using 5-point Likert scale and multiple choice-based questions. Percentage analysis was done along with correlation and Independent T test. Correlation was used to identify the most significantly correlated variables and Independent T test was used to find the significant differences between the gender. The result indicated that environmentally friendly package of the product is positively and strongly correlated with customer loyalty. One of the critiques of the study is in the variation in population and geographical scope when compare with the present study.

Azriel, et al. (2023) investigated the effect of product packaging on customer loyalty. Data were collected from 200 people in Indonesia who were familiar with Scarlett Whitening products. This study's samples were chosen using a non-probability sampling technique known as purposive sampling. Afterward, the collected data were analyzed using the SEM AMOS 26. The primary findings in the study were that Product Packaging Design had a positive and significant effect on the customer loyalty of Scarlett Whitening products. This investigation was carried out in Indonesia, which has distinct legal, cultural, and economic developments compared to Nigeria. Consequently, the findings from a study of this magnitude in Indonesia lack applicability in Nigeria due to issues related to external validity.

Social Media Marketing and Customer Loyalty

In the hospitality industry in Zimbabwe, Wilbert, et al. (2024) examined the effect of social media marketing on customer loyalty. Data was gathered from 223 hotel customers using a structured questionnaire with Likert-type questions. Convenience sampling was employed in selecting the sample for the study. A cross-section survey of 223 clients was done. The sample size was obtained using a formula by Kombo and Tromp (2009). Before structural equation modelling was performed in AMOS, scale validation was conducted using common method bias (CMB), exploratory factor analysis (EFA), discriminant validity and convergent validity. The findings show that social media marketing positively affects customer loyalty. The research was carried out within the hospitality industry, while the present study is being conducted within the context of FMCGs in Nigeria.

Ifin, et al. (2023) investigated the effect of social media marketing on customer loyalty. The approach used in this study uses quantitative methods through surveys. The sample requirements set are consumers who have done it transactions on e-commerce sites at least twice in the last 3 months and are active users of Instagram. This study used a total sample of 200 respondents in Makassar City. The sampling technique in this study uses non-probability sampling with a voluntary approach. This study used an online questionnaire via Google Docs. The research model is estimated using the structural transaction model with SMART-PLS. Event results that social media marketing has a significant effect on customer loyalty. This study is thorough; however, it diverges in terms of its geographical scope when compared to the current study.

Social Exchange Theory (SET)

The Social Exchange Theory (SET), proposed by George Homans in 1958 and developed by Peter Blau in 1964, provides a framework for understanding customer loyalty in sustainable marketing for the FMCG sector. SET posits that social behavior results from an exchange process maximizing benefits and minimizing costs (Homans, 1958; Blau, 1964). SET suggests that relationships form when perceived benefits outweigh costs (Cropanzano & Mitchell, 2005). In marketing, these benefits can be tangible (product quality) or intangible (emotional satisfaction). The theory's strength lies in explaining why customers might remain loyal to sustainable brands despite higher costs, valuing psychological and social benefits (Jiang et al., 2016). However, SET has weaknesses. It may oversimplify human behavior, overlooking emotional and cultural factors in decision-making (Cropanzano & Mitchell, 2005). It also might not fully account for altruistic behaviors or moral-based decisions. Scholars have applied SET to marketing studies. Jiang et al. (2016) found that corporate social responsibility positively influenced customer loyalty through trust and satisfaction. Kang and Hustvedt (2014) discovered a positive correlation between sustainable marketing practices and consumer trust in the apparel industry.

For my research on sustainable marketing and customer loyalty in the FMCG sector in North Central Nigeria, SET can explain how sustainable practices create perceived benefits, fostering loyalty. It can elucidate how these benefits might offset potential costs in customer decision-making.

However, critically evaluate SET's application in this context. Developed in a Western context, it may not fully capture Nigerian consumer behavior nuances, such as collective decision-making processes or economic constraints in developing markets. While useful for understanding transactional relationships, SET may not fully capture emotional and identity-based aspects of brand loyalty, which are often central to sustainable marketing appeals.

METHODOLOGY

This research study utilized a survey research design to gather and analyze data from a diverse sample of participants relevant to the topic under investigation. The value of this research design lies in its ability to provide broad coverage and representation of the population being studied, offering a holistic understanding of the research problem. The research aimed to engage customers from FMCG companies in North Central Nigeria. Given the indeterminable exact number of customers for these renowned FMCG companies, the population can be deemed infinite. To ascertain an appropriate sample size for the study, the Cochran (1963) formula for sample size determination, tailored for an infinite population, was applied. This formula considers the desired level of confidence, margin of error, and estimated proportion, thus deriving a sample size that precisely reflects the population.

The formula is:

$$n = \frac{Z^2 \times p \times q}{E^2}$$

where:

n is the sample size

Z is the Z-score for the desired level of confidence (e.g., 1.96 for a 95% confidence level)

p is the estimated proportion of the population with the characteristic of interest

q is 1 - p (the proportion of the population without the characteristic of interest)

E is the desired margin of error (expressed as a decimal)

Thus, the sample size for this study is:

$$n = \frac{1{,}96^2 \times 0.5 \times 0.5}{0.05^2} = 385$$

For the study, it is recommended to have a minimum sample size of 385 respondents. According to Israel (2013), it is advised to add 10% - 30% to the minimum sample size to account for potential non-respondents or unreturned questionnaire. Therefore, an additional 15% of the sample size, which is 57 respondents, was added, resulting in a total of 442 copies of the questionnaire to be administered to customers of FMCG companies in North Central Nigeria. The selection of respondents was done using a combination of purposive and convenience sampling methods. For this study, data was collected through primary sources using a structured questionnaire. The questionnaire utilized a five-point Likert scale, ranging from "strongly agree" to "strongly disagree," as the response format.

Construct Reliability

To effectively demonstrate the reliability of the notion, it is commonly acknowledged that both Cronbach's alpha and composite reliability (CR) should ideally surpass the threshold of 0.7, as this value is widely recognized as the rule of thumb for ensuring a high level of internal consistency. The results of the Cronbach's Alpha, rho_A, composite reliability and average variance extracted are presented in Table 3.1

Table 3.1: Construct Reliability and Validity of the indicators

Variables	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Green Marketing	0.81	0.83	0.92	0.64
Product Packaging	0.87	0.85	0.91	0.71
Social Media Marketing	0.84	0.89	0.91	0.72
Customer Loyalty	0.83	0.88	0.90	0.78

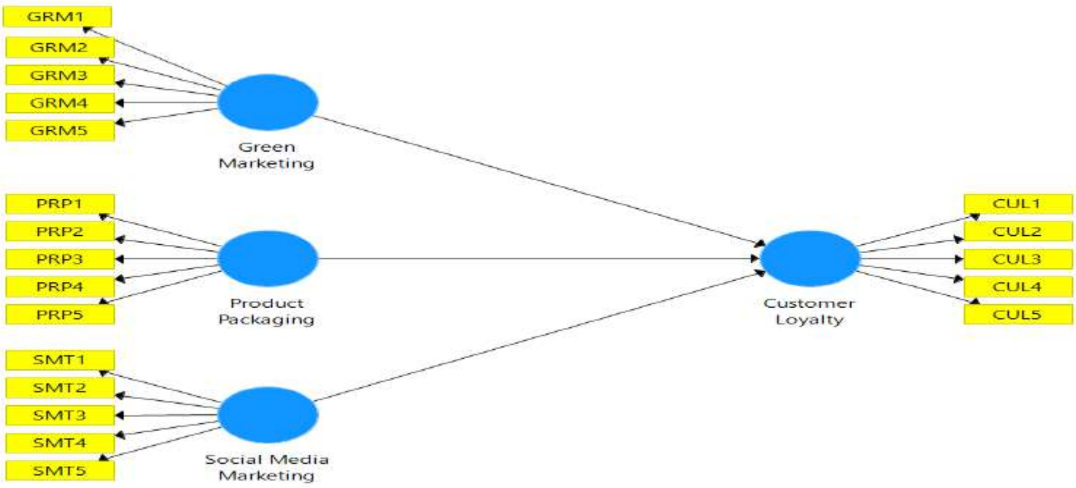
Source: **Researcher's Computation using SMART PLS.**

From Table 3.2, all the composite reliability indicators, without exception, exceeded the threshold of 0.7, which is an acceptable level of reliability. Furthermore, the assessment of internal consistency was conducted utilizing Cronbach's Alpha, and the results all show that the values surpassed the benchmark of 0.8. This signifies that there is a high level of confidence in the reliability of all the constructs under investigation. Dijkstra and Henseler (2015) introduced Rho_A as a metric for construct reliability to offer an alternative viewpoint, which lies between Cronbach's alpha and composite reliability. Furthermore, an assessment was conducted on the average extracted variance (AVE) of each construct, revealing values well above the recommended threshold of 0.5 proposed by Chin (1988). Hence, it can be inferred that the constructs being analyzed exhibit a significant amount of extracted variance.

Techniques for Data Analysis and Model Specification

The study employed partial least square – structural equation modeling (PLS-SEM) to examine the effect of each independent variable on the dependent variable. Smart PLS was used to code and analyze the data for this study to achieve all the set objectives.

Fig 1: Model Specification



RESULT AND DISCUSSION

Table 4.1: Distribution and Retrieval of Questionnaire

Questionnaires	Frequency	Percent (%)
Returned	421	95.25
Not returned	21	4.75
Total	**442**	**100**

Source: Field Survey, 2024

Table 4.1 presents the distribution and retrieval of questionnaires from customers of FMCG companies. A total of 442 questionnaires were distributed for this study. The data reveals a remarkably high response rate, with 421 questionnaires successfully returned, accounting for 95.25% of the total distributed. Only 21 questionnaires, representing 4.75% of the total, were not returned. This high response rate is particularly noteworthy in survey research, as it suggests that the data collected is likely to be highly representative of the target population. The large sample size of 421 usable questionnaires provides a robust foundation for statistical analysis, enhancing the reliability and validity of the study's findings. Furthermore, the low non-response rate of 4.75% minimizes the potential for non-response bias, further strengthening the credibility of the results.

Descriptive Statistics

Table 4.2: Descriptive Statistics

Statistic	CUL	GRM	PRP	SMT
Mean	3.323	3.364	3.818	3.342
Median	4.104	4.211	4.324	4.431
Maximum	5.000	5.000	5.000	5.000
Minimum	1.000	1.000	1.000	1.000
Std. Dev.	1.141	1.224	1.324	1.163
Skewness	0.034	1.254	0.739	0.231

Excess Kurtosis	1.996	3.142	2.098	3.053

Source: Researcher's Computations from Smart PLS3, 2024

Table 4.2 presents descriptive statistics for four key variables in the study: Customer Loyalty (CUL), Green Marketing (GRM), Product Packaging (PRP), and Social Media Marketing.

The table shows that the mean values range from 3.323 (CUL) to 3.818 (PRP), suggesting that on average, respondents tend to rate these factors slightly above the midpoint of the scale. Product Packaging (PRP) has the highest mean scores (3.818), indicating that this factor is perceived more positively by respondents. The median values are consistently higher than the means for all variables. The standard deviations range from 1.141 (CUL) to 1.324 (PRP), indicating a moderate spread of responses around the mean. All variables show a minimum of 1 and a maximum of 5, which is consistent with a 5-point Likert scale. The skewness values are positive for all variables. The excess kurtosis values are all positive, ranging from 1.996 (CUL) to 3.053 (SMT), suggesting that all distributions have heavier tails and higher peaks compared to a normal distribution.

Table 4.3: Factor Loading

Latent Variable	Manifest Variable	Loading	t-statistic
Green Marketing (GRM)	GRM1	0.856	24.732
	GRM2	0.891	32.145
	GRM3	0.823	19.876
	GRM4	0.872	28.543
	GRM5	0.845	22.654
Product Packaging (PRP)	PRP1	0.745	23.187
	PRP2	0.879	30.123
	PRP3	0.901	35.678
	PRP4	0.834	21.345
	PRP5	0.867	26.543
Social Media Marketing (SMT)	SMT1	0.912	38.765
	SMT2	0.889	31.234
	SMT3	0.867	26.543
	SMT4	0.895	33.210
	SMT5	0.875	29.876
Customer Loyalty (CUL)	CUL1	0.923	41.234
	CUL2	0.901	35.678
	CUL3	0.889	31.312
	CUL4	0.829	38.767
	CUL5	0.706	37.123

Source: Researcher's Computations from Smart PLS3

Table 4.3 presents the factor loadings and t-statistics for four latent variables: Green Marketing (GRM), Product Packaging (PRP), Social Media Marketing (SMT), and Customer Loyalty (CUL). Each latent variable is measured by five manifest variables. The factor loadings and t-statistics provide crucial information about the reliability and validity of the measurement model.

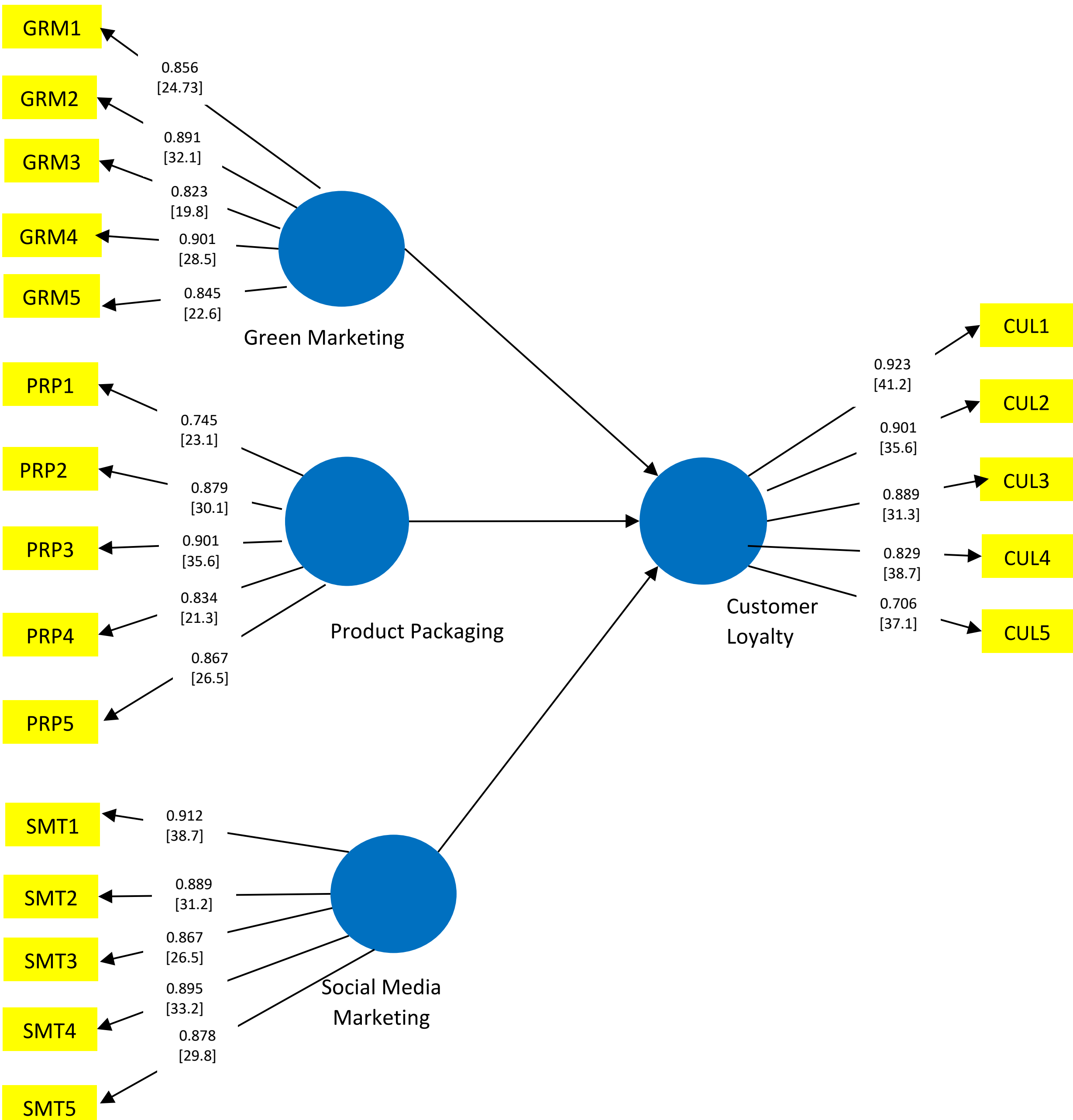
According to Hair et al. (2019), factor loadings should ideally be 0.7 or higher to indicate good item reliability. In this table, all factor loadings exceed this threshold, with the lowest being 0.706 for CUL5, suggesting strong item reliability across all constructs. Most loadings are above 0.8, indicating very good to excellent item reliability. The highest loading is 0.923 for CUL1, showing particularly strong reliability for this item.

Furthermore, Kock (2020) suggests that t-statistics should be greater than 1.96 to indicate statistical significance at the 0.05 level. In this case, all t-statistics are well above this threshold, with the lowest being

19.876 for GRM3. This indicates that all factor loadings are highly statistically significant, providing strong evidence for the convergent validity of the constructs.

The consistently high factor loadings and t-statistics across all constructs suggest that the measurement model is robust and that each manifest variable is a good indicator of its respective latent variable.

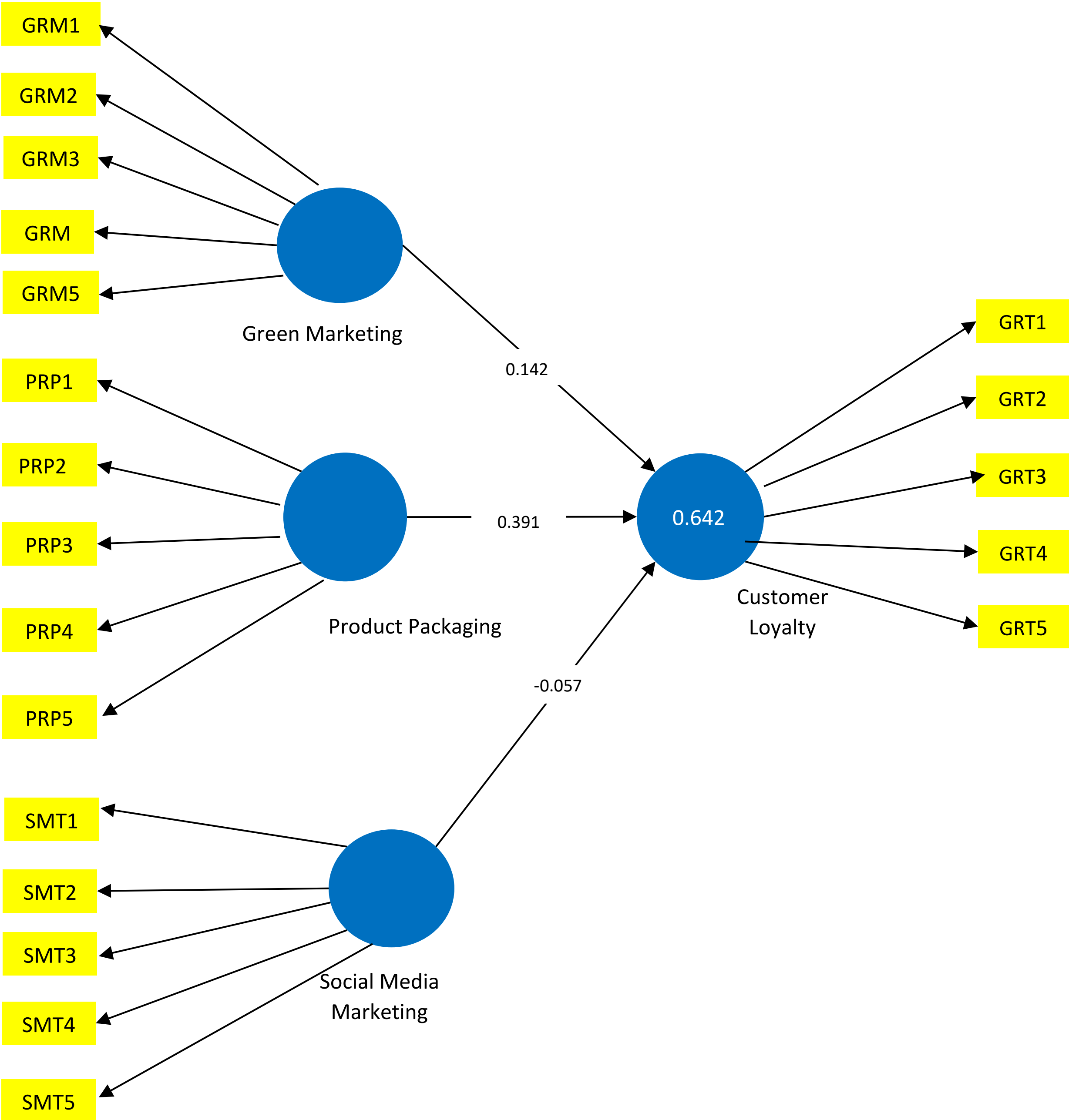
Figure 4.1: PLS Algorithm (Item Loadings and t-statistics)



Note: t-statistics are in square brackets, [].

Source: Researcher's Construction from Smart PLS, 2024.

Figure 4.2: Structural Model (Path Coefficients and R^2)



Source: Smart PLS Researcher's Construction, 2024.

Figures 4.1 & 4.2 illustrates that the independent variables—Green Marketing, Product Packaging, and Social Media Marketing—are significantly influential in predicting customer loyalty within FMCGs in Nigeria. It is important to highlight that each of these variables demonstrates statistical significance, as evidenced by the t-values and probability values obtained from the analysis. Additionally, a thorough examination of these latent variables requires the use of component scores corresponding to each variable on the scales. To support hypothesis testing, it is crucial to establish connections between the latent variables, particularly focusing on the anticipated effects of these three distinct factors on the dependent variable. By exploring the complexities of these relationships, we can gain a deeper insight into how these independent variables collectively impact customer loyalty within FMCGs in Nigeria.

Hypotheses Testing

Table 4.4: Path Coefficient of the Model for Hypotheses Testing

Hypothesis	Beta	t-value	p-value	Decision	f^2

H_{o1}: Green Marketing → Customer Loyalty	0.142	1.843	0.066	Rejected Ho	0.021
H_{o2}: Product Packaging → Customer Loyalty	0.391	5.987	0.000	Rejected Ho	0.183
H_{o3}: Social Media Marketing → Customer Loyalty	-0.057	0.768	0.443	Accepted Ho	0.003

Source: Researcher's Computation from Smart-PLS 3 2024

Hypothesis One

Ho_1: Green Marketing has no significant effect on customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria

The results of the path coefficient analysis conducted on the model presented in Table 4.4 show that Green Marketing has a positive but insignificant effect on Customer Loyalty. The analysis of the effect of Green Marketing on Customer Loyalty reveals several key insights. The beta coefficient of 0.142 indicates a positive but weak relationship, suggesting that increases in Green Marketing efforts are associated with slight increases in Customer Loyalty. However, the t-value of 1.843, which falls just below the commonly accepted threshold of 1.96 for statistical significance at the 95% confidence level, suggests that this relationship is not strong enough to be considered statistically significant. This is further supported by the p-value of 0.066, which exceeds the 0.05 threshold, indicating that the observed relationship may be due to chance rather than a genuine effect. According to Cohen (1988), a beta value should be close to or above 0.30 to indicate a moderate effect, but the observed value suggests only a minor influence of Green Marketing on Customer Loyalty. The t-value of 1.843 falls below the threshold of 1.96 for statistical significance (Hair et al., 2010), and the p-value of 0.066 is greater than the conventional 0.05 cutoff, implying that the relationship is not statistically significant. Furthermore, the effect size, indicated by an f^2 value of 0.021, is small, following the guidelines set by Cohen (1988), Additionally, the f^2 value of 0.021 indicates a small effect size, meaning Green Marketing has only a minor impact on Customer Loyalty. Consequently, the hypothesis that Green Marketing does not have a significant effect on Customer Loyalty is rejected, and its alternative accepted. Thus, it can be stated that Green Marketing has a significant effect on customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria.

Hypothesis Two

Ho_2: Product Packaging has no significant effect on customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria

The analysis of the relationship between Product Packaging and Customer Loyalty in table 4.4 revealed a positive and statistically significant association. The beta coefficient of 0.391 suggests a substantial impact of Product Packaging on Customer Loyalty, indicating that as Product Packaging improves, there is a notable increase in Customer Loyalty. According to Cohen (1988), a beta value above 0.30 is generally considered to represent a moderate to strong effect, further emphasizing the importance of Product Packaging in influencing customer behavior.

The t-value of 5.987 far exceeds the threshold of 1.96 required for statistical significance at the 0.05 level (Hair et al., 2010), demonstrating that the observed relationship is unlikely to be due to chance. Additionally, the p-value of 0.000 is well below the conventional 0.05 cutoff, confirming the significance of the relationship between Product Packaging and Customer Loyalty. The effect size, represented by an f^2 value of 0.183, is also considered substantial based on Cohen's (1988) guidelines, which classify an f^2 value above 0.15 as indicative of a large effect. The result of the t-statistic and the probability value give substantiating evidence to conclude that the null hypothesis, which posits Product Packaging has no significant effect on customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria is rejected and its alternative accepted.

Hypothesis Three

Ho_3: Social Media Marketing has no significant effect on customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria

The analysis of the relationship between Social Media Marketing and Customer Loyalty in table 4.4 reveals an insignificant and negative association. The beta coefficient of -0.057 indicates a slight negative impact of Social Media Marketing on Customer Loyalty, suggesting that changes in Social Media Marketing practices do not substantially influence customer loyalty in a positive direction.

The t-value of 0.768 is well below the critical value of 1.96, which is the threshold for statistical significance at the 0.05 level (Hair et al., 2010). This low t-value indicates that the relationship between Social Media Marketing and Customer Loyalty is not statistically significant. Moreover, the p-value of 0.443 exceeds the 0.05 threshold, further confirming that the relationship is not significant and may likely be due to random variation rather than a true effect. The effect size, represented by an f^2 value of 0.003, is minimal, indicating that Social Media Marketing has a negligible effect on Customer Loyalty.

Based on these findings, the hypothesis that Social Media Marketing has no significant effect on customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria is accepted as the evidence does not support a meaningful relationship between these variables in the studied context.

Table 4.5: R^2 of the Model

Dependent Variable	R^2
Customer Loyalty	0.642

Source: Researcher's Computation from Smart-PLS 3

The R^2 value in table 4.5 of 0.642 indicates that 64.2% of the changes or variations observed in Customer Loyalty among Fast-Moving Consumer Goods (FMCGs) in Nigeria can be attributed to the combined influence of the independent variables in the model: Green Marketing, Product Packaging, and Social Media Marketing.

Discussion of Findings

Green Marketing and customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria

The first objective of this study was to examine the effect of Green Marketing on customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria. The results of the analysis conducted showed that Green Marketing has a positive but insignificant effect on Customer Loyalty of Fast-Moving Consumer Goods in Nigeria. The analysis revealed that while Green Marketing does have a positive effect on customer loyalty, this effect is statistically insignificant. This means that, although customers may respond slightly better to green marketing efforts, these efforts alone are not strong enough to substantially influence their loyalty to FMCG brands in Nigeria. In practical terms, this finding suggests that although consumers might appreciate environmentally friendly marketing practices, these practices do not significantly sway their buying decisions or loyalty towards a particular brand. For FMCG companies, this could imply that while incorporating Green Marketing into their strategies is beneficial from an ethical or corporate social responsibility perspective, it may not be the key driver of customer loyalty. Companies may need to consider other factors, such as product quality, price, or customer service, alongside Green Marketing to build and sustain customer loyalty more effectively.

The finding of this study aligns with that of Ghizlane (2023) who investigated the effect of the effect of Green Marketing on customer loyalty and found a positive but insignificant effect on Customer Loyalty. However, the findings contradict that of Uma, et al. (2022) who investigated the effect of the effect of Green Marketing on customer loyalty and found a negative but insignificant effect on Customer Loyalty.

Product Packaging and customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria

Secondly, this study sought to investigate the effect of Product Packaging on customer loyalty of Fast-Moving Consumer Goods in Nigeria. The analysis of the relationship between Product Packaging and

Customer Loyalty revealed a positive and statistically significant association. This means that effective product packaging is not only appreciated by customers but also plays a crucial role in fostering their loyalty to FMCG brands in North Central Nigeria.

Practically, this finding underscores the importance of packaging as a strategic tool in the FMCG industry. Well-designed, attractive, and functional packaging can significantly influence consumer preferences and brand loyalty. For companies, this suggests that investing in innovative and appealing packaging can be a powerful way to differentiate their products, enhance customer satisfaction, and ultimately build a more loyal customer base. The significance of this relationship also highlights that customers in Nigeria's FMCG market are responsive to packaging as an element of their overall brand experience, making it a vital component of any marketing strategy.

The finding of this study regarding the effect Product Packaging on customer loyalty aligns with Hemamalini and Murugadoss (2023), and Azriel, et al. (2023), who investigated the effect of Product Packaging on customer loyalty, and all found a positive and statistically significant effect of Product Packaging on customer loyalty.

Social Media Marketing and customer loyalty of Fast-Moving Consumer Goods in North Central Nigeria

In the third place, this study ascertained the extent Social Media Marketing affect customer loyalty of Fast-Moving Consumer Goods in Nigeria. The analysis of the effect of Social Media Marketing on Customer Loyalty reveals an insignificant and negative effect.

This result indicates that, contrary to expectations, social media marketing efforts do not significantly enhance customer loyalty in the Nigerian FMCG market. In fact, the negative effect suggests that, in some cases, social media marketing might even detract from customer loyalty. This could be due to various factors, such as ineffective social media strategies, content that fails to resonate with the target audience, or potential over-saturation of promotional content that could lead to customer disengagement.

Practically, this finding suggests that FMCG companies in Nigeria may need to reassess and refine their social media marketing strategies to ensure they are aligned with customer preferences and expectations. It also emphasizes the importance of understanding the specific social media behaviors and expectations of Nigerian consumers to effectively leverage these platforms for building brand loyalty. Without careful consideration and strategic planning, social media marketing efforts might not yield the desired outcomes in terms of customer loyalty. The findings of this study contradict with Wilbert, et al. (2024), who investigated the effect of Social Media Marketing on customer loyalty and found a positive significant effect of Social Media Marketing on customer loyalty.

CONCLUSION AND RECOMMENDATIONS

The study employed structural equation modeling with partial least squares (PLS-SEM) to examine the effect of various components of sustainable marketing on customer loyalty in the Fast-Moving Consumer Goods (FMCG) sector in North Central Nigeria provides valuable insights.

The findings reveal a complex landscape where different elements of sustainable marketing yield varying degrees of influence. While Green Marketing and Social Media Marketing showed insignificant effects on customer loyalty, Product Packaging emerged as significant positive factors. We can conclude that sustainable marketing has a significant effect on customer loyalty in the Fast-Moving Consumer Goods (FMCG) sector in North Central Nigeria.

Based on the findings of this study, the following recommendations are made:

i. While Green Marketing showed a positive but insignificant effect on Customer Loyalty, FMCG companies in Nigeria should continue to incorporate environmentally friendly practices gradually. Companies should focus on educating consumers about the long-term benefits of green products and practices, potentially through targeted awareness campaigns that resonate with local values and concerns.

ii. Given the significant positive effect of Product Packaging on Customer Loyalty, FMCG companies should invest in innovative, sustainable, and visually appealing packaging designs. Companies should conduct market research to understand local preferences and cultural nuances, ensuring that packaging not only protects the product but also enhances shelf appeal and brand recognition.

iii. To address the insignificant and negative effect of Social Media Marketing on Customer Loyalty, FMCG companies in Nigeria should reassess and revamp their social media strategies. Focus should be placed on creating more engaging, culturally relevant content that provides value to the Nigerian consumer, such as product tutorials, local recipes, or community initiatives.

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