UNIZIK Journal of Marketing (UJofM), Vol. 1(2), Oct. 2024 ISSN xxxx-xxxx

https://journals.unizik.edu.ng/ujofm

Influence of product package and quality on purchase decision of fast-moving consumer goods (FMCG) in Lagos state, Nigeria

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Article Information

Keywords:
Package, quality, labelling, sustainable material, FMCG

Article History

Received: 23 Aug. 2024
Accepted: 23 Sept. 2024
Published: 14 Oct. 2024

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Abstract

The study examined the influence of product package and quality on purchase decision of Fast-Moving Consumer Goods (FMCG) in Lagos State. The aspects of product package included in the study are colour, labelling, design, and sustainable material. The research design used for the study is explanatory, and a questionnaire was used to collect the data. Cluster sampling was used to divide the population into five administrative divisions and three divisions (Ikeja, Ikorodu and Epe) were randomly selected. Two hundred (200) copies of the questionnaire were administered, and one hundred and twenty-six (126) were retrieved and used for the analysis. The data collected were analysed using frequency distribution, mean, standard deviation and multiple regression. The results indicated an R Square value of 57.3%. The findings showed that colour ($b_1=0.021$, $t=0.654$, $p=0.514>0.05$) does not significantly influence purchase decision, thus disproving the first hypothesis. It was also found that labelling ($b_2=0.137$, $t=4.770$, $p=0.000<0.05$), design ($b_3=0.112$, $t=3.691$, $p=0.000<0.05$), and sustainable material ($b_4=0.255$, $t=9.130$, $p=0.000<0.05$) have a significant positive influence on purchase decision thereby accepting the hypotheses accordingly. Furthermore, the study revealed that product quality ($b_5=0.171$, $t=5.352$, $p=0.000<0.05$) significantly influences purchase decision. Therefore, the study recommended that FMCG companies should prioritise product quality and the dimensions of product packaging in their strategies by focusing on labelling, design and sustainable material.

Introduction

The package of a product is often the customer's first point of contact, making companies concerned about product packaging (Dibie & Olannye, 2022). In recent times, companies have increasingly focused on packaging due to the high level of competition among Fast-Moving Consumer Goods (FMCG). As competition intensifies, the market has grown more sophisticated, confronting companies with new marketing

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realities (Okoye-Chine, 2021; Oluwaleke et al., 2023). According to Oduogu et al. (2024), demand for FMCG products—such as food, beverages, personal care items, and household goods—has risen, with retail sales in Nigeria projected to increase by 27% between 2022 and 2027. To take advantage of this growth, FMCG companies engage in product development by gathering market insights and refining strategies to meet the changing needs of consumers (Nte et al., 2020).

Oluwaleke et al. (2023) noted that while the Nigerian FMCG sector is growing rapidly, its performance has been hampered by declining profitability and market share, as it is heavily influenced by shifting market dynamics and consumer trends. Packaging plays a critical role in marketing, as it stimulates consumer interest and attracts customers to a product. A package encloses or wraps the product and can take different forms, such as colour, material, information, size, and shape. It serves as an effective tool to convey appealing visuals, symbols, and brand elements to customers (Lavuri & Ramlal, 2020). As Awoniyi et al. (2022) highlighted, a well-packaged product is more likely to attract customers than one that is poorly packaged. The primary function of packaging at the point of sale is to grab customer attention and differentiate the brand from competitors (Kwaku & Fan, 2020).

From a consumer's perspective, packaging plays a dual role as both a signal and a source of information when making purchase decisions (Yeo et al., 2020; Dibie & Olannye, 2022; Chukwu et al., 2023). Packaging is increasingly becoming a key tool for capturing customer attention. Nearly all manufactured or processed goods require packaging at some stage of production or distribution. However, one of the challenges of packaging is that it can be misleading if customers do not investigate the product thoroughly before purchase (Riszaini & Indayani, 2023). In some cases, FMCG companies reduce production costs by lowering product quality but compensate with attractive packaging. Since the package conceals the product, customers may not be able to assess its quality before making a purchase, highlighting the need to balance packaging design with product quality.

Given the importance of packaging, numerous studies have explored its impact from different perspectives. Research on packaging, its components, and their influence on consumers' purchase decisions has become necessary. Several studies (Kwaku & Fan, 2020; Awoniyi et al., 2022; Chukwu et al., 2023; Nana & Titus, 2023; Baidoun & Salem, 2023; Yahaya et al., 2024) confirm that both visual and verbal elements of packaging significantly influence consumers' initial purchases, product use, and repurchase decisions. However, there is limited empirical research examining how specific packaging elements, when combined with product quality, influence consumer choices in Lagos State. Additionally, there is a gap in research on how eco-friendly packaging materials impact purchase decisions. Therefore, this study focuses on sustainable packaging materials. The objective is to explore the influence of product packaging attributes—such as colour, labelling, design, and sustainable materials—and product quality on FMCG purchase decisions.

Literature Review

Purchase Decision

Purchase decision is an action taken by consumers to choose one of several alternative choices in buying a product (Akbar, 2019). It is a stage in the decision-making process where consumers actually buy (Rihayana et al., 2022). In the view of Oktavian and Wahyudi (2022), purchase decisions are actions taken by consumers to buy products after specific considerations. It is considered an integral part of marketing and consumer behaviour. In a fiercely competitive business environment, marketers must place greater emphasis on comprehending the purchase decisions of their customers (Maimuna et al., 2021). Understanding consumer purchasing patterns is essential since it aids companies in developing and implementing marketing strategies. This knowledge also assists businesses to segment their markets, which results in the development of appropriate marketing strategies. Additionally, it helps businesses to construct an appropriate marketing mix focusing on marketing operations (Kosgei & Wanjira, 2018).

Product Package

Arca et al. (2016) described packaging as a coordinated system of preparing goods for safe, efficient and cost-effective transportation, distribution, storage, retailing, consumption and recovery, reuse or disposal combined with maximising consumer value, sales and profit. According to Kwaku and Fan (2020), packaging can give a product strong promotional support at the point of purchase. In the view of Nana and Titus (2023), a package is the product's container, including the external appearance of the container, such as colour, label, design and material used, while the primary use of packaging is to protect the product. Wikström et al. (2019) stated that packaging consists of all the activities involved in designing and producing the container or wrapper for a product.

It is sometimes convenient to categorise packages by layer or function, such as primary, secondary, and tertiary. The primary package is the material that first envelopes and holds the product. This is usually the smallest unit of distribution or use and is the package in direct contact with the content. The secondary package is outside the primary package and is used to group primary packages, while the tertiary package is used for bulk handling, warehouse storage and transport shipping. Therefore, the primary function of packaging is to contain or wrap up a product. Packages are usually sealed, and many require an opening for dispensing the content. Packaging can be crucial to both sellers and customers. It can make a product more convenient to use or store. Raheem et al. (2014) opined that packaging has the potential to increase sales and market share, thereby reducing market and promotional costs. He further stated that packaging protects a product from the external environment.

As noted by Silayoi and Speece (2004), product packaging is one of the factors in purchase decisions that are made at the point of sale, where it becomes an essential part of the selling process. Arca et al. (2016) posited that packaging is an integral part of the branding process as it plays a role in communicating the image and identity of a company. The product package dimensions under consideration in this study are colour, labelling, design and sustainable material. They are expected to have a level of influence on purchase decision.

Package Colour

Colours have the potential to create a deep and long-lasting impression and image about a product (Imiru, 2017). Different colours have different meanings and can help to draw attention according to the consumer's disposition (Chukwu et al., 2023; Yahaya et al., 2024). Customers who visit a store are exposed to different products with different colours that attract their attention. As noted by Awoniyi et al. (2022) package colour has a huge role in product positioning. Every colour has a special meaning that can influence consumers' feelings and mindsets (Yeo et al., 2020). Gopikrisna and Kumar (2015) observed that about 90% of FMCG evaluations are solely based on colour. Colour is also strongly associated with brand personality, thus evoking emotional responses (Mai et al., 2016).

Mazhar et al. (2015) reported that package colour plays a significant role in customer's decision-making. Package colour enhances the product's visual appeal and helps customers to differentiate a brand from another. In many cultures, package colours are associated with different cultural values. Colours with visual appeal in some cultures may not be appealing in others. Thus, companies usually tailor package colours to fit cultural values. Prior studies have found that customers tend to select those products whose package colours appeal more to their cultural values (Mai et al., 2016). In the study of Yeo et al. (2020) in Malaysia, it was found that colour has a significant relationship with buying decisions. Similarly, Waheed et al. (2018) study in Karachi revealed that package colour has a significant positive effect on consumer purchase intentions. Awoniyi et al. (2022) examined the impact of product packaging on consumer patronage of pharmaceutical products in Katsina metropolis and found that colour significantly influence consumer patronage. Hence, the study proposed that:

H_1: Package colour has a significant positive influence on purchase decision of FMCG

Package Labelling

Labelling provides details about the name, feature, quality, price, utility, nature, ingredients, manufacturing date, expiring date, place and producer's identification. It is the primary means of communication between the manufacturer and the consumer. Hence, packaging operations are considered a critical aspect of marketing (Ryan, 2017; Prayusi & Andriani, 2022). Package labelling aims to provide information about product ingredients and allow the consumer to select healthier FMCG items at the point of purchase (Pechey et al., 2020). Calderon-Monge et al. (2024) found that labels can attract consumer's attention and ultimately convince them to buy a product. They also serve as a product feature that helps consumers to remember the product. Through labelling, consumers easily compare a product with other brands in the market. Therefore, the consumer's use of informational elements is an essential issue to the marketer.

The label serves as a means of consumer awareness and is essential to determine the product's efficacy. The description of the product helps customers to make an informed decision. Chaudhary et al. (2024) noted that consumers, with the help of labelling, get to

know and understand the product characteristics, nutritional properties, preservation, and instructions to facilitate the consumers in making a sound decision at the time of purchase. According to Noviarama and Eka (2023), package labels play a role in educating customers and adding value to a product. It is an important marketing strategy to increase product competitiveness but can also be a source of misleading messages. The authors further noted that labelling highlights the product's features and fascinates the customer towards purchasing the product. It builds the connection between the customer and the product features. Yeo et al. (2020) found that packaging information has a significant positive effect on buying decisions, but Waheed et al. (2018) did not find printed information significant. Thus, it is hypothesised that:

H_2: Package labelling has a significant positive influence on purchase decision of FMCG

Package Design

A strategy for brands to engage with customers and build trust is to align the package design to their needs by offering a solution. Silayoi and Speece (2004) stated that package design is essential as an emerging communication and branding device in the competitive packaged FMCG market. Therefore, packaging design should be in accordance with the target audience (Calver, 2004; Raheem et al., 2014). It is argued that a unique, innovative and distinguished package design helps create product differentiation and brand identity and stimulates consumer purchase intentions (Underwood, 2003). Camilleri (2018) posited that when a company targets high-class consumers, they evaluate the demographic aspects and design a product at a high cost because the consumers want to see the tremendous features of the product. Javed and Javed (2015) found that package design strongly influences consumer purchase intentions, while Waheed et al. (2018) did not find it significant. Kwaku and Fan (2020) found that good product design and purchase decisions have a positive relationship with market value and performance. Yeo et al. (2020) revealed that package design has a significant positive impact on purchase intention. Therefore, the study hypothesised that:

H_3: Package design has a significant positive influence on purchase decision of FMCG

Sustainable Material

The high cost of packaging materials can affect pricing and profitability. High packaging costs can limit FMCG company's ability to adopt more sustainable or innovative packaging solutions. All these impacts the availability and quality of packaging materials, thereby encouraging the rapid use of less-quality packaging materials that are cheaper, such as non-biodegradable packaging materials like plastics, which contribute to environmental pollution (Alexey, 2022). This is one of the reasons for the significant waste management challenges faced in most countries, which are due to improperly disposed packaging materials contributing to littering and drainage blockages. Compliance with packaging regulations and standards can be complex and costly as FMCG companies must navigate various regulations related to recycling and material composition.

This study extends knowledge in favour of the impact of sustainable material on the purchase decision of FMCG. It adds to the knowledge of the choice of packaging material, which has significant implications for sustainability. Using eco-friendly materials can appeal to environmentally friendly consumers. As environmental awareness grows, customers may prioritise eco-friendly choices and sustainable packaging materials such as biodegradable plastics and recycled paper to convey a commitment to reducing environmental impact (Alexey, 2022). Consumers may view companies employing sustainable practices more favourably, influencing their perception of brand values. This positive association can contribute to increased trust and loyalty. Moreover, as governments and regulatory bodies emphasise environmental responsibility, more FMCG companies are aligning with the evolving societal expectations by adopting sustainable packaging. Yeo et al. (2020) found that packaging material shows no significant relationship with buying decisions. However, in this study, it is proposed that:

H_4: Sustainable material has a significant positive influence on purchase decision of FMCG

Product Quality

Product quality is a product's overall characteristics and nature that affect its ability to satisfy expressed or implied needs (Kotler & Keller, 2015). It is the ability of a product to demonstrate its function, which includes overall durability, reliability, accuracy, ease of operation and product repairs, as well as other product attributes. Usman and Prihastomo (2019) defined product quality as a factor in a product that causes the product to perform in accordance with the objectives for which the product was produced and provides maximum results than expected by consumers. The authors further noted that only the best quality products will grow rapidly, and the company will be more successful in the long run. This is because if the product's quality is good, consumers are more likely to repurchase the product. On the other hand, if the product quality is not as expected, the consumer may likely replace the purchase with substitute products.

Similarly, Rihayana et al. (2022) posited that products that have good quality such as reliability, have desired characteristics and specifications, make consumers feel satisfied and increases consumers' desire to make purchases. Thus, product quality is determined by dimensions such as performance, durability, aesthetics, quality impression and serviceability. Several studies have found that product quality has a positive effect on purchase decisions (Anggita & Ali, 2017; Usman & Prihastomo, 2019; Akbar, 2019; Taufik, 2021; Rihayana et al., 2022; Oktavian & Wahyudi, 2022; Riszaini et al., 2023). Hence, it is hypothesised that:

H_5: Product quality has a significant positive influence on purchase decision of FMCG

Conceptual Model

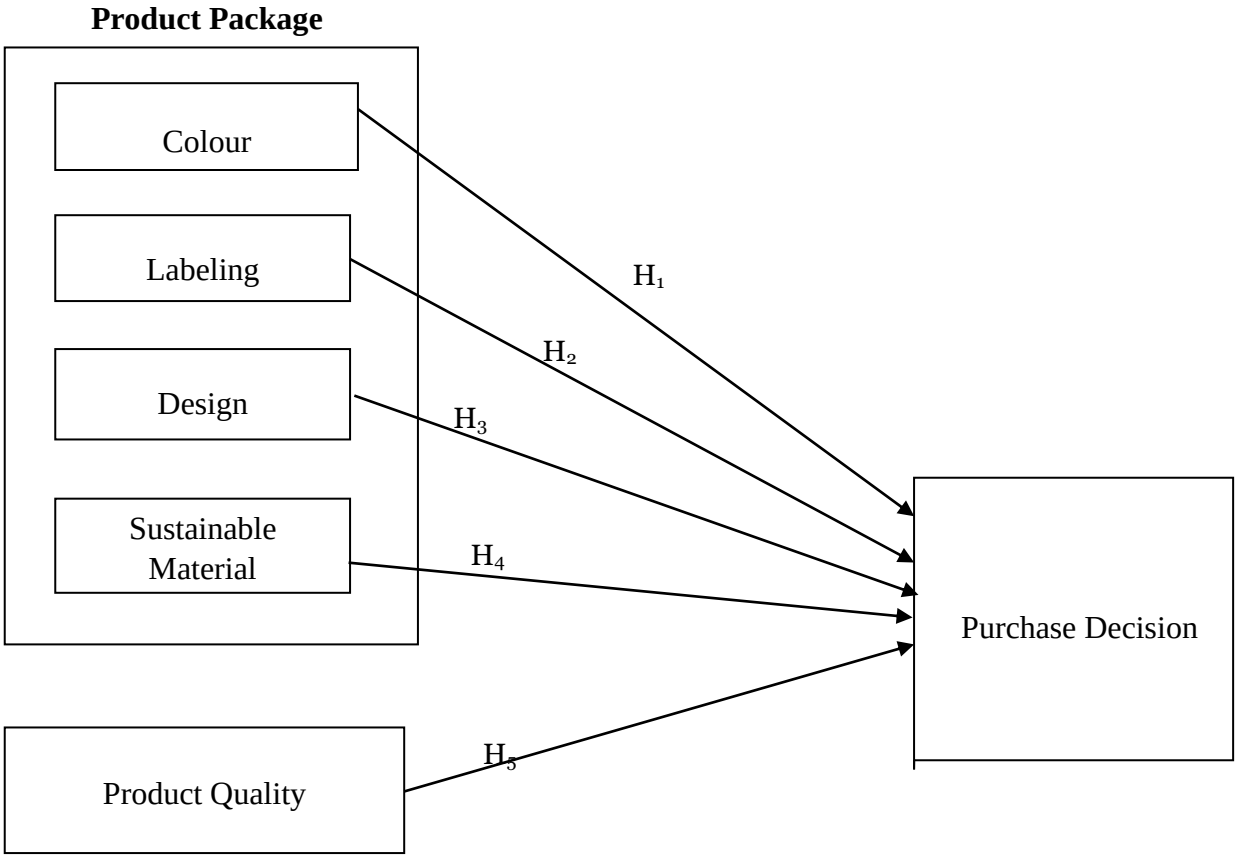

Figure1. Conceptual Model of the Research Constructs

Figure 1 depicts the conceptual model for the study. It explains the relationship among the constructs of the study. In the model, product package is reflected in four elements: colour, labelling, design, and sustainable material. These four elements of product packaging are expected to be essential for FMCG companies to focus their packaging strategies on influencing purchase decisions directly. The model also indicates that combining product package with quality could enhance purchase decision. The model captures the five hypotheses of the study.

Method

An explanatory survey research design was utilized for this study. This design is appropriate for understanding the relationships between packaging elements, product quality, and purchase decisions, as it aims to collect data to explain the relationship and influence between the independent variables (packaging elements and product quality) and the dependent variable (purchase decision). The study population consists of consumers of FMCG in Lagos State.

Given the complexity of the population distribution and the total number of FMCG consumers in Lagos State, cluster sampling was deemed suitable. Cluster sampling is applied when the population can be divided into groups, or clusters, from which some groups are randomly selected. In this study, the clusters are geographical areas, dividing Lagos State into five divisions: Ikeja, Badagry, Ikorodu, Lagos Island, and Epe (Ighomereho, 2021). A simple random sampling technique was employed to select three divisions—namely Ikeja, Ikorodu, and Epe—using a balloting system. The five divisions were written on sheets of paper, folded, and placed in a container. After shaking the container, three sheets were drawn, representing the selected divisions.

Following this, convenience sampling was used to select 150 respondents, with 50 respondents chosen from each of the selected divisions. This aligns with the suggestion by Tabachnick and Fidell (2013) that a minimum of 15–20 observations per study variable is sufficient to ensure an adequate sample size for analyzing relationships between variables.

A questionnaire was used to collect data for the study. It was divided into four sections, A to D, comprising 37 items. Section A focused on demographic characteristics, containing seven close-ended questions. Sections B, C, and D contained 20, 5, and 5 items, respectively, addressing respondents' perceptions of product packaging elements, product quality, and purchase decisions. These sections were developed based on a five-point Likert scale, with items ranging from "strongly agree" to "strongly disagree." A Likert scale was chosen for its ability to quantify respondents' feedback and facilitate result interpretation.

The validity of the questionnaire was ensured through content validity, confirming that the questions accurately represented the key components of packaging, product quality, and purchase decisions. To assess reliability, a pilot study was conducted with 30 respondents, and Cronbach's Alpha was used to measure the reliability of the questionnaire. The Cronbach alpha coefficients are presented in Table 1.

Table 1. Reliability test

Constructs	**Number of Items**	**Cronbach Alpha Coefficient**
Colour	5	0.80
Labeling	5	0.71
Design	5	0.86
Sustainable Material	5	0.73
Product Quality	5	0.85
Purchase Decision	5	0.82

Source: Pilot Study, 2024

Table 1 shows the Cronbach alpha coefficients computed for the items that make up each construct used in the study. Pallant (2010) noted that a Cronbach alpha coefficient of 0.7 or higher denotes good internal consistency. Since the Cronbach alpha coefficient for all the constructs is above 0.7, the research questionnaire can be considered reliable and suitable for use in the study. Out of the one hundred and fifty (150) copies of questionnaire administered to the respondents who are consumers of FMCG in the

three selected divisions in Lagos State, one hundred and twenty-six (126) were retrieved and used for analysis.

Results

Demographic Analysis

The demographic characteristics of the respondents are summarised in Table 2.

The socio-demographic composition of the respondents in Table 2 indicates that 63.5 per cent are males while 36.5 per cent are females. 34.1 per cent of the respondents were below 21 years of age. 27.8 per cent were between the ages of 21-30 years, 17.5 per cent were between the ages of 31-40 years and, 11.9 per cent were between the ages of 41-50 years, and 8.7 per cent were from 51 years and above. Of the three divisions surveyed, 40.5 per cent of the respondents were from Ikeja, 27.0 per cent were from Ikorodu, and 32.5 per cent were from Epe. Primary certificate holders accounted for 16.7 per cent of the responses; secondary certificate holders represented 33.3 per cent; graduates responded with 30.2 per cent, while postgraduate was 19.8 per cent.

Regarding respondents' nature of employment, 33.3 per cent were unemployed, 53.2 per cent were employed, and 13.5 per cent were students. Moreover, 65.9% of the respondents earn below N100 000, and those earning between N100 000 – N300 000 were 19.8 percent. Response from those earning N300,000 and above was 14.3 per cent. 12.7 per cent of the respondents were married, 58.7 per cent were single, and 28.6 per cent were separated. The demographic profile of the respondents shows the spread and diversity of the study sample.

Table 2. Socio-demographic characteristics of the respondents

Respondents' Characteristics	Variable	Frequency	Percent (%)
Gender	Male	80	63.5
	Female	46	36.5
	Total	**126**	**100**
Age	Below 21years	43	34.1
	21-30years	35	27.8
	31-40years	22	17.5
	41-50years	15	11.9
	51 and above	11	8.7
	Total	**126**	**100**
Location	Ikeja	51	40.5
	Ikorodu	34	27.0
	Epe	41	32.5
	Total	**126**	**100**
Level of Education	Primary	21	16.7
	Secondary	42	33.3
	Graduate	38	30.2
	Postgraduate	25	19.8
	Total	**126**	**100**

Nature of employment	Unemployed	42	33.3
	Employed	67	53.2
	Student	17	13.5
	Total	**126**	**100**
Monthly Income	Less than ₦100,000	83	65.9
	₦100,000 – ₦300,000	25	19.8
	₦300,000 and above	18	14.3
	Total	**126**	**100**
Marital Status	Married	16	12.7
	Single	74	58.7
	Separate	36	28.6
	Total	**126**	**100**

Source: Field Survey, 2024

Descriptive Analysis

Table 3. Summary of analysis for colour

STATEMENT	Mean	SD
Package colour influences my initial impression of FMCG product	1.881	1.435
I believe the colour of FMCG product package reflects the quality of the Product	2.595	1.310
Package colour affects my decision when choosing between similar FMCG products	2.523	1.467
I have made unplanned purchases based on the appeal of the package's colour	2.523	1.219
Package colour is an essential factor when recommending FMCG	1.714	1.244

Table 3 summarises the descriptive analysis of package colour. The results indicate low mean values from the respondents. The mean values range from 1.714 to 2.595. This implies that the respondents have a low perception of package colour.

Table 4. Summary of analysis for labelling

STATEMENT	Mean	SD
I trust the quality of FMCG products more if it has clearer package labeling	3.174	0.092
Labelling impacts my choice between similar FMCG products	3.428	0.955
I feel well-informed about FMCG products after reading the label	3.571	0.902
I am more likely to choose FMCG products with labels indicating expiring date	3.285	0.468
I am more likely to pay more for FMCG product with comprehensive package labeling	3.682	0.860

Table 4 shows the descriptive analysis of package labelling. The results indicate moderate mean values from the respondents. The mean values range from 3.174 to 3.682. This implies that the respondents have a moderate perception of package labelling.

Table 5. Summary of analysis for package design

STATEMENT	Mean	SD
Package design can make me switch from my usual FMCG brand to a new one	3.269	1.260
Innovative package design influences my perception of the FMCG brand	3.412	1.190
I believe that FMCG companies should invest in improving their package design	2.396	1.188
FMCG products with poor package design are less appealing to me	3.142	0.709
I am willing to pay more for FMCG products that have appealing package design	2.936	1.153

Table 5 shows the descriptive analysis of package design. The results indicate moderate mean values from the respondents. The mean values range from 2.396 to 3.412. This implies that the respondents have a moderate perception of package design.

Table 6. Summary of analysis for sustainable material

STATEMENT	Mean	SD
I am more likely to purchase FMCG products if they are packaged using sustainable material	3.444	0.283
I am more willing to pay a premium for FMCG products packaged in sustainable material	3.523	0.124
I believe FMCG companies should prioritise using sustainable packaging for their product	3.333	0.284
I believe that FMCG products with sustainable packaging are better for the environment	3.809	0.051
Sustainable material for packaging of FMCG product is more important to me during purchase	4.214	0.731

Table 6 shows the descriptive analysis of sustainable material. The results indicate moderately high mean values from the respondents. The mean values range from 3.333 to 4.214. This implies that the respondents have a moderately high perception of sustainable material.

Table 7. Summary of analysis for product quality

STATEMENT	Mean	SD
I buy products that meet established standards	3.269	1.260
I buy a product that can perform its function	3.412	1.190
I buy products with the required features	2.396	1.188
I buy products that have quality impressions	3.142	0.709
I buy products that provide me with the needed benefits	2.936	1.153

Table 7 shows the descriptive analysis of product quality. The results indicate moderate mean values from the respondents. The mean values range from 2.396 to 3.412. This implies that the respondents have a moderate perception of product quality.

Table 8. Summary of analysis for purchase decision

STATEMENT	Mean	SD
I will always patronise my brand	3.500	0.401
I have no regret in purchasing my brand	3.825	0.891
I always make purchasess after searching for information	3.753	0.013
I am confident in my ability to make informed purchase decision	3.849	0.121
I do not have a preferred brand when making purchase decision	3.626	0.004

Table 8 shows the descriptive analysis of the respondents' purchase decision. The results indicate moderate mean values. The mean values range from 3.500 to 3.849. This implies that the respondents have a moderate perception of product decision.

Test of Hypotheses

Multiple regression analysis was used to examine the influence of the four dimensions of packaging and product quality on purchase decision of FMCG. The outcome is depicted in Table 9.

Table 9 shows a strong positive correlation of 0.757 and R Square of 0.573, which means that 57.3% of the dependent variable (purchase decision) can be explained by the independent variables (colour, labelling, design, sustainable material and product quality). Table 9 also indicates an F statistic of 87.749, which means that the relationship between the independent and dependent variables is statistically significant ($p=0.000<0.05$).

Table 9 further shows that the coefficient of colour is 0.021, the t-value is 0.654, and the p-value is 0.514, which indicates that colour is not statistically significant ($p=0.514>0.05$). This means that colour does not have a significant influence on purchase decision. The package labelling coefficient is 0.137, the t-value is 4.770, and the p-value is 0.000, which indicates that the coefficient for package labelling is statistically significant ($p=0.000<0.05$). This means that labelling has a positive

significant influence on purchase decision. The package design coefficient is 0.112, the t-value is 3.691, and the p-value is 0.000, which suggests that design is statistically significant (p=0.000<0.05). This indicates that package design has a significant positive influence on purchase decision.

Table 9. Summary of regression analysis of package dimensions, product quality and purchase decision

Model 1	**B**	**t-value**	**p-value**	**R**	**R^2**	**F-value**	**F-sig**
(Constant)	1.267	9.536	0.000	0.757	0.573	87.749	0.000
Colour	0.021	0.654	0.514				
Labelling	0.137	4.770	0.000				
Design	0.112	3.691	0.000				
Sustainable Material	0.255	9.130	0.000				
Product Quality	0.171	5.352	0.000				

Model 1: Predictors: (Constant), colour, labelling, design, sustainable material, product quality
Dependent Variable: Purchase Decision

Sustainable material has a coefficient of 0.255, a t-value of 9.130, and a p-value of 0.000, which indicates that sustainable material is significant (p=0.000<0.05). Therefore, sustainable material has a positive influence on purchase decision. This implies that labelling, design and sustainable material are significant predictors of purchase decisions, while colour is not statistically significant. Product quality also significantly influences purchase decisions with a coefficient value of 0.171, t-value of 5.352, and p-value of 0.000. Thus, H_2, H_3, H_4 and H_5 were accepted while H_1 was rejected. This implies that FMCG, with better designs, clearer labelling, sustainable packaging, and quality, will most likely influence purchase decisions positively.

Discussion

The study examined the influence of colour, labelling, design, sustainable materials, and product quality on the purchase decision of FMCG products. The relationship between colour and purchase decisions revealed that package colour does not significantly influence purchasing decisions. This finding contrasts with the report by Mazhar et al. (2015), which indicated that package colour plays a critical role in customers' decision-making. It also differs from the findings of Waheed et al. (2018) and Yeo et al. (2020), who found that package colour significantly impacts purchase decisions. These differences may be attributed to the economic and socio-cultural factors in Lagos State, a cosmopolitan area with consumers from diverse cultural backgrounds, potentially diminishing the impact of colour on purchasing decisions. The study further found that

labelling significantly influences the purchase decision for FMCG products. This supports Chaudhary et al.'s (2024) assertion that labelling helps consumers understand product characteristics, nutritional content, preservation methods, and usage instructions, aiding them in making informed decisions. Similarly, the findings align with Noviarama and Eka (2023) and Calderon-Monge (2024), who noted that labels can attract consumer attention and encourage purchases. However, the result conflicts with Waheed et al. (2018), who reported that printed information does not significantly affect purchase decisions. The implication is that companies must ensure accurate and comprehensive labelling to enhance consumer purchase decisions.

Moreover, the findings revealed that product design positively influences purchasing decisions. This aligns with Yeo et al. (2020) and Javed and Javed (2015), who found that package design strongly impacts consumer intentions. However, the results diverge from Waheed et al. (2018), who found design to be insignificant in this context. The study also found that sustainable materials significantly influence purchasing decisions, consistent with Alexey's (2022) observation that consumers view companies employing sustainable practices more favorably, which positively shapes brand perceptions. However, the result contradicts Yeo et al. (2020), who found no significant relationship between packaging material and purchase decisions. Additionally, product quality was identified as a critical factor influencing purchase decisions. Several studies confirm that product quality positively impacts consumer purchasing behavior (Anggita & Ali, 2017; Usman & Prihastomo, 2019; Akbar, 2019; Taufik, 2021; Rihayana et al., 2022; Oktavian & Wahyudi, 2022; Riszaini et al., 2023).

Conclusion

Based on the study's findings, product package elements, except colour, significantly influence FMCG purchase decisions. Labelling, design, and sustainable materials play essential roles in shaping consumer behavior. Additionally, product quality is a crucial determinant of purchase decisions. These findings provide valuable insights into the most impactful packaging elements and underline the importance of packaging and product quality in influencing consumer behavior. The results also have strategic implications for FMCG companies in Lagos and similar markets, informing their product and marketing decisions.

Recommendations

Based on the findings and conclusion, this study recommends that:
First, companies should focus on effective package labelling by ensuring labels are clear, informative and easy to read. Labelling should include essential information like product ingredients, usage instructions, benefits, manufacturing and expiring date. Labelling should be used to highlight unique selling propositions (USP) to attract more consumers. Second, Companies should invest more in attractive and functional designs of their products by adopting designs that resonate with consumers. Package designs should cater for the target customer preference by incorporating elements that evoke positive emotional responses, facilitating ease of use, transport and storage. Third, Sustainable material for product packaging must be embraced using eco-friendly and

recyclable material to appeal to environmentally conscious consumers. Companies should ensure compliance and safety through packaging compliance with all relevant health, safety and environment (HSE) standards. Fourth, companies should endeavour to build quality into their products. They should ensure that their products meet the expectations of their customers. Finally, although product colour did not influence purchase decision in this study, companies can use it strategically and intentionally for different versions of their products.

Limitations and Future Research

The study has some limitations that need to be considered. Firstly, the study relied on self-reported data from a relatively small sample size, which may have introduced bias. Moreover, the geographical scope (Lagos) limits generalizability to other regions in Nigeria and there could be other factors influencing purchase decision. Additionally, the study adopted an explanatory research design, which is cross-sectional. Further studies can conduct longitudinal studies to observe how packaging trends evolve over time and the moderating effect of product quality on the relationship between packaging and purchase decision.

References

Akbar, M. F. (2019). The influence of product quality and price on purchasing decisions at Mitraindo South Tangerang online shop. *Jurnal Ad'ministrare*, *6*(2), 237-248.

Alexey, I. (2022). Need for sustainable packaging: An overview. *National Library of Medicine. Polymers (Basel),* 14(20), 4430.

Anggita, R. & Ali, H. (2017). The influence of product quality, service quality and price on purchase decision of SGM bunda milk (study on PT. Sarihusada Generasi Mahardika Region Jakarta, South Tangerang District). *Scholars Bulletin,* 3(6), 261-272.

Arca, J.G., Garrido. A.T.G. & Prado, J.C. (2016). Packaging logistics for improving performance in supply chains: The role of meta-standards implementation. *Production,* 26(2), 261-272.

Awoniyi, O., Abubakar, A. & Sadiq, S.A. (2022). Product packaging and consumer patronage of pharmaceutical products in the Katsina metropolis. *International Journal of Public Administration and Management Research, 8*(2), 37-51.

Baidoun, S. & Salem, M. (2023). *The role of visual and verbal packaging design on consumers' purchase decisions*. In AI and business, and innovative research, Palestian: Springer Link, 579-588

Calderon-Monge, E., Ramírez-Hurtado, J.M. & Cuesta, I.R. (2024). Labeling and consumer purchases. *International Journal of Consumer Studies,* 48, 1-12.

Calver, G. (2004). *What is packaging design?* Switzerland: RotoVision.

Camilleri, M.A. (2018). *Market segmentation, targeting and positioning*. In Travel marketing, tourism economics and the airline product, Switzerland: Springer Cham, 69-83.

Chaudhary, R., Singh, S. & Gupta, A. (2024). Package labeling and purchase decision: A systematic review and meta-analysis. *Journal of Consumer Research*. 50(2), 1-18.

Chukwu, G. C., Ifekanandu, C. C. & Asemota, K.A. (2023). Product packaging and consumer perception of made in Nigeria products. *International Journal of Current Science (IJCSPUB),* 13(3), 846-866.

Dibie, R.N. & Olannye, P.A. (2022). Effect of product packaging on consumer buying decision of cosmetics brands in Asaba, Delta State supermarkets. *Lafia Journal of Economics and Management Sciences,* 7(2), 151-170.

Gopikeishna, R. & Kumar, M. (2015). A conceptual study on psychology of colour in marketing and branding. *International Journal of Economic Research,* 12(2), 501-505.

Ighomereho, O. S (2021). *Fundamentals of research project writing in management and social sciences*. Ibadan: Stirling-Horden.

Imiru, G.A. (2017). The effect of packaging attributes on consumer buying decision in major commercial cities in Ethiopia. *International Journal of Marketing Studies,* 9(6), 43-54.

Javed, S. A. & Javed. S. (2015). The impact of product packaging colour on customers' buying preferences under time pressure. *Marketing and Branding Research,* 2(1), 4-14.

Kosgei, B.J. & Wanjira, J. (2018). The influence of package graphics and colour attributes on consumers' buying behaviour in Kenya. *Journal of Marketing and Consumer Research,* 47, 23-31.

Kotler, P. & Keller, K. L. (2015). *Marketing Management*. New York: Pearson Edition Limited.

Kwaku, A. R. & Fan, Q. B. (2020). Effect of good product design and packaging on market value and the performance of agricultural products in the Ghanaian market. *Open Access Library Journal,* 7(1), 1-14.

Lavuri, R. & Ramlal, P. (2020). Packaging strategies: Knowledge outlook on consumer buying behavior. *Journal of Industry- University Collaboration,* 2(2), 67-78.

Mai, R., Symmark, C. & Pallucchini, L. (2016). The importance of colour in marketing. *Journal of International Consumer Marketing,* 18(2), 159-176.

Maimuma, B., Mukhtar, H. & Maiyaki, A.A. (2021). Impact of packaging fast-moving consumer goods (FMCG) on consumer buying behavior: A review of literature. *African Scholar Journal of Management Science and Entrepreneurship (JMSE), 2(7),* 67-82.

Mazhar, M., Sayela, D., Bhutto, M. & Mubeen, S. A. (2015). Impact of product packaging on consumer buying behaviour: Evidence from Karachi. *Journal of Marketing and Consumer Research,* 1(16), 113-117.

Nana, G.O. & Titus, C.O. (2023). Impact of product packaging on consumer buying decision of the manufacturing industry in Delta State. *International Journal of Research Publications & Review*, 4(7), 2159-2165.

Noviarama, D. P. & Eka, A. (2023). The role of product packaging labels on product purchase interest. *Bulletin of Culinary Art and Hospitality,* 2(2), 57-60.

Nte, N. D., Omede, K.N., Enokie, B.K. & Bienose, O. (2020). Competitive intelligence and competitive advantage in pharmaceutical firms in developing economies: A review of Lagos State, Nigeria. *Journal of the Management Economics and Industrial Organization.* 4(1), 76-79.

Oduogu, M., Anene, C. & Oyewole, B. (2024). Nigeria's FMCG sector: Opportunities and challenges for local and international players. *Stren & blan partners,* 1-14. http://strenandblan.com

Okoye-Chine, M. (2021). The effect of sales promotion on marketing of Coca-Cola drinks in Anambra State. *International Journal of Innovative Social Sciences and Humanities Research,* 9(1), 117-129.

Oktavian, R. F. & Wahyudi, H. (2022). The influence of product quality and price on purchase decisions. *Jurnal Manajemen dan Bisnis*, *6*(2), 379-392.

Oluwaleke, E., Debbie, A., Abdulraseed, L. & Olanrewaju O. (2023). Change management in FMCGS in Lagos. A study of selected FMCGS in Lagos State. *Acta Universitatis Danubius,* 19(5), 114-138.

Pallant, J. (2010). *SPSS survival manual. A step-by-step guide to data analysis using SPSS* (4thed). Berkshire: McGraw-Hill Companies

Pechey, E., Clarke, N., Mantzari, E. & Blakwell, A.K.M. (2020). Image-and-text health warning labels on alcohol and food: Potential effectiveness and acceptability. *BMC Public Health Journal,* 20(376), 1-14.

Prayusi, N.D. & Andriani, E. (2022). The role of food product packaging labels on product purchase interest. *Bulletin of Culinary Art and Hospitality,* 2(2), 57-60.

Raheem, R.A., Vishnu, P. & Ahmed, A.M. (2014). Role of packaging and labeling on Pakistani consumer's purchase decision. *European Scientific Journal,* 10(16), 464-473.

Rihayana, I. G., Salain, P. P. P., Rismawan, P. A. E. & Antari, N. K. M. (2022). The influence of brand image, and product quality on purchase decision. *International Journal of Business Management and Economic Review*, 4(06), 342-350.

Riszaini, V. A. & Indayani, L. (2023). The influence of product quality, price, and service quality on purchase decisions of fast food in Sidoarjo. *Academia Open,* 8(1), 1-17.

Ryan, J. M. (2017). *Food package labeling: Validating preventive food safety and quality controls*, Netherlands: University Medical Center.Utrecht, Elsevier B.V.

Silayoi, P. & Speece, M. (2004). Product packaging and purchase decisions: An exploratory study on the impact of involvement level and time pressure. *British Food Journal,* 106 (8), 607-628.

Tabachnick, B. G. & Fidell, L. S. (2013). *Using multivariate statistics (6th ed.)*. Boston, MA: Pearson Education.

Taufik, E. R. (2021). Purchase decision analysis through price and product quality. *International Journal of Social Science (IJSS)*, 1(3), 337-344.

Underwood, R. (2003).The communicative power of product packaging: Creating brand identity via lived and mediated experience. *The Journal of Marketing Theory and Practice,* 11(1), 62-76.

Usman, O. & Prihastomo, G. (2019). The effect of product quality, price, promotion, and lifestyle on purchase decisions to drink the coffee. *SSRN,* 1-15. Retrieved from https://api.semanticscholar.org/Corpus *ID:219354336*

Waheed, S., Khan, M. M. & Ahmad, N. (2018). Product packaging and consumer purchase intentions. *Journal of Market Forces,* 13(2), 97-114

Wikström, F., Williams, H., Trischler, J. & Rowe Z. (2019). *The importance of packaging functions for food waste of different products in households*. Sweden: Karlstad University.

Yahaya, H., Clement, I. C., Andah, R. A. & Sulaiman, A. S. (2024). Effect of product packaging on consumer buying decisions of products of small enterprises in North Central States and Federal Capital Territory, Abuja, *FULafia International Journal of Business and Allied Studies (FIJBAS),* 2(2), 254-269.

Yeo, S., Tan, C., Lim, K. & Khoo, Y. (2020). Product packaging impact on consumer's purchase intention. *International Journal of Business and Society,* 21(2), 852-864.