

EFFECT OF PACKAGING ON CONSUMER PURCHASE DECISION OF MACLEANS TOOTHPASTE IN NORTH CENTRAL NIGERIA

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Abstract

The aim of this study is to determine the effect of color and size of packaging on consumer purchase decision of MacLeans toothpaste in North Central Nigeria. The population of study are users of MacLeans toothpaste in north central Nigeria. The sample size was arrived at using Cochran formula for an unknown population where 384 as sample size was used. The information gathered was evaluated using the Statistical Package for Social Sciences (SPSS) version 23.0 software. The study adopted survey research design, using quantitative research approach and a structured questionnaire to collect the required primary data used for the study. The study deployed factor analysis using Structural Equation Modelling (SEM) in Smart PLS for data analysis. The study found that there is positive and significant effect of packaging size on consumer purchase decision of MacLeans toothpaste in North central Nigeria, while there were negative and insignificant effect of packaging color on consumer purchase decision of MacLeans toothpaste in North central Nigeria. Thus, the study concludes that colors if not carefully selected to represent specific meanings could discourage purchase decisions towards products especially oral care related.

Key Words: Packaging attributes, Purchase Decision.

INTRODUCTION

The convenience and ease of use of packaging can affect consumer purchase decision. Packaging can influence consumer's perception in terms of quality, functionality and sustainability (Pandiagan et al., 2021). A growing body of empirical research suggests that packaging communicates with consumers at the point of purchase (Rundh, 2007, Andualem, 2017, Bahrudin, et al., 2021)). Packaging is no longer considered a container for a product but a sign or billboard (Van, 2007). Packaging is an important trade in the industrialized part of the world and is becoming more important for logistics purpose in developing countries (Rundh, 2016). The first impression between the consumer and the packaging of the product has become relevant (Pandiagan et al., 2021).

Communication through packaging has become more challenging because the number of products that are offered is rapidly increasing. According to Rundh, (2007) & Saha, (2020) consumers are unconsciously influenced by subtle cues in a store environment. These means therefore that, in such an environment cluttered with products, purchase decisions are often not based on systematic and critical evaluation of products features but rather on heuristic and fast processing of packaging attributes. Also, where the true quality of a product is not readily observable, consumers often rely on product attributes to evaluate quality and make purchase decisions (Westland et. al., 2018). Marketers respond to this development by using various visual techniques to increase the consumers attention (Ooijen et. al., 2016). The package therefore is a critical factor in the consumer decision making process. It performs an important role in marketing communications, especially at the point of sale and could be treated as one of the most important factors in influencing consumer's purchase decision.

Understanding consumer view on how packaging attributes play a role in their purchase decision is critical for company's packaging decision globally. Companies are now very much interested in packaging as a tool to increase their sales. This has made packaging design an important mode of communication. Also, the continuous change in consumer lifestyle has made packaging a tool in sales promotion.

Designers of package are of the view that extrinsic attributes of packaging, and how consumers perceive product before they try it affects consumer purchase decision (Gomez & Bhaveshkumar, 2012). Some researchers suggest consumers possess color vocabulary, they expect certain type of color for particular

product with certain combinations to be perceived as most attractive and least healthy and which influences both sensory expectations and flavor perception (Tijssen et. al., 2017). Some consumers interpret bright and vibrant colors as sense of cleanliness and freshness and can even influence taste perception (Gong & Lee 2019). Package sizes on the other hand offer different levels of convenience and a critical decision variable for packaged-goods manufacturers. Package size and price have a direct impact on manufacturers' profitability, but consumers perceive them differently (Krishna et al., 2017). Consumers use the size of a package to determine whether the amount of its held content matches their need and to evaluate the carrying ease of the item (Cunningham, 2017).

Choosing an inappropriate color and size can result in misrepresentation of merchandise and potentially deter consumers from the product (Piqueras & Fiszman, 2015). The frequent switch of consumers especially from MacLeans toothpaste to other toothpaste brands in the market has taken a toll on its profitability and is gradually its supremacy as a household name in the oral health industry (cleanBlogger, 2022). Thus, the study tends to address the effect of packaging attributes on consumer purchase decision of macleans toothpaste in North Central Nigeria. Specifically, the study will address two objectives, which are to determine the effect of packaging:

- a. Color on consumer purchase decision of MacLeans toothpaste in North central Nigeria
- b. Size on consumer purchase decision of MacLeans toothpaste in North central Nigeria

The following hypotheses guided the study and stated in null form:

H₀:1 Package color have no effect on the consumer purchase decision of MacLeans toothpaste in North Central Nigeria.

H₀:2 Packaging size have no effect on consumer purchase decision of MacLeans toothpaste in North Central Nigeria.

LITERATURE REVIEW

Packaging

There are several definitions of packaging based on scholars' views and perceptions of the concept. Pandiangan, (2021), defined packaging as a salient sales agent with a view to influencing the intent of buying preference by packaging configuration, consistency and other means. Packaging is indeed a core component of brand differentiation and identity, as it allows the producer to differentiate its labels and brands among its rivals (Cunningham, 2017). Consumers are influenced through product packages, the hue of the scheme used, the security measures, the picture used (Wang et al., 2020).

Cakir, et al., (2019) defined packaging as a stand-alone contact between the products and the intent of the contract. During purchase decision, the package assists the consumer by creating the overall product perception which helps the evaluation and making of the right choice. Packaging is a major instrument in modern marketing activities acting as a decisive communication tool and providing consumers with product-related information during the buying decision process.

According to Deliya & Parmar (2012) package represents its characteristics and communicates the product information. For consumers, the product and the package are one and the same when they see it on shelves. The package is the product until the actual product is consumed and the package is recycled. The relationship between product packaging and expectations of how well the product will perform is the key determinant of the product's success (White, et al., 2016). According to Kauppinen-Raisanen and Jauffret (2018), the package is the wrapping material around a product that serves to contain, identify, describe, protect, display, promote and otherwise make the product marketable and keep it clean. Arenes, (1996) described packaging as the container for a product, the physical appearance of the container and material used.

Esch, et al. (2019) defined packaging as the physical properties of a product that are quantitatively and objectively measurable. In more recent years (Chen, 2021), accepted the definition as expanded to include all evaluative criteria, including objective or physical properties such as price, brand name and subjective properties such as quality and other aspects of the products that a consumer may perceive as providing

benefit or value. Cakir, et. al., (2014) emphasis that packaging are the criteria by which consumers evaluate products prior to making purchase decision. They refer to the various elements and features of packaging that communicate information to consumers. The purchase process is viewed as one in which consumers evaluate alternative products on the strength of various attributes each of which is characterized by cues that may be interpreted in different ways by consumers (Gomez & Molina, 2015). A well-designed package sells the product by attracting attention and through positive communication. Different researchers emphasized different functions of packaging and some of their studies relate either to logistic or marketing functions (Prendergast & Pitt, 1996). For logistics, the attribute allows the product to be contained, apportioned, unitized and communicated (Prendergast, 1995 as cited in Prendergast & Pitt, 1996).

Packaging Color.

They convey special messages about the brands and the power to trigger feelings and thoughts whether positive or negative which ultimately create a unique selling proposition.

According to Swasty, et al. (2019) color is a blend of culture and personal experience accumulated throughout life. It has different meanings and associations in different cultures. Additionally, personal experience influences how people views color. If a person has negative experience with a particular color, they associate that color with negative feelings. Gong & Lee (2019) stress that color is evocative, communicative and persuasive. It has an associative role as the brand identity in packaging design. One's experiences often shape reactions to various colors.

An important attribute of visual design of packaging and the information and meaning it conveys should be consistent with what other marketing are conveying. It can also influence consumers' preferences, expectations, and perceptions of taste, aroma, texture, and liking of food and beverages. Color is the most distinctive visual cue in a packaging (Lee, et al., 2017), but its effects depend on many factors such as the level of attention, the frequency of consumption of the product, the cultural context, the consumers' sensitivity to design, and the product itself (Zellner et al., 2018). Packaging color entices and influences consumer perceptions, and it significantly affects the identification of products/brands (Esch et al., 2019). Color influences different taste/flavor expectations, and they can change the perceived pleasure. Choosing an inappropriate color can result in misrepresentation of merchandise and potentially deter consumers from the product (Piqueras-Fiszman and Spence, 2015).

Packaging Size

According to Chitroda, (2020) package size means the physical dimensions of a container which encloses a consumer commodity. When no price information is explicitly provided, simply being exposed to a product in a smaller package will lead to inferences of higher unit price; in turn, this should be reflected in a perception of higher product quality. It is easier for individuals to track volume changes in packages or portions when the change happens in a single dimension than when the change is compounded across multiple dimensions (Ordabayeva & Chandon, 2015).

According to Fresan, et al. (2019) packaging size is the dimension that your item would be shaped in. Size perception is even less accurate when some dimensions change in opposite directions, such as when the base of a package decreases while the height increases (elongation) (Ordabayeva & Chandon, 2015). Krishna (2007) reported that the elasticity of size estimations depends on the dimension of an object. Krishna (2007) reported that the elasticity of size estimations depends on the dimension of an object.

Consumer Purchase Decision

According to Francis and Sarangi (2022) consumer behavior can be referred to as the physical activity and decision engaged in obtaining, evaluating, disposing or using of services and goods. Consumer behavior is often goal oriented and purposeful. Consumers are free to make decisions with regard to choices that would be made. Consumer behavior is the method, which starts with the stimuli a consumer gains from his surroundings and ends with actual purchase. The quality and quantitative observation of customer behavior analysis demonstrate how consumers communicate with the company. Consumers are first divided into buyer individuals according to their general characteristics. An overview of consumer conduct gives an

insight into the various factors influencing a public. It gives an idea of the motivations, goals and decision-making process

According to Prianjana, (2021) consumer behavior is the study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires. Market behavior is concerned with researching what encourages people and companies to buy certain goods and endorse particular brand.

Orzan, et al., (2018) provide a different definition by explaining consumer behavior as the study of the buying units and the exchange processes involved in acquiring, consuming, and disposing of goods, services, experiences, and ideas. This definition focuses on buying units in an attempt to include not only the individual but also groups that purchase products or services. The quality and quantitative observation of customer behaviour analysis demonstrate how customers communicate with the company (Zhao, et al., 2020). Customer behavior analysis is driven by relationship marketing because it is keen to rediscover the true meaning of marketing by re-affirming the importance of the customer (Rahman & Reynolds, 2019).

Packaging Color and Consumer Purchase Decision

Swasty et. al. (2021) investigated the effect of packaging color scheme on perceptions, product preferences, product trial, and purchase intention. The aim of the study was to understand the effect of different color scheme on perceptions, food product preference, product trial, and purchase intention. The study was also to investigate whether consumers' attitude and preferences towards brand can be influenced by manipulating color as a visual design attribute of a package. The research adopted chi-square and one-way ANOVA in testing its hypothesis. The population of the study were undergraduate students of visual communication design department in a university in Bandung, Indonesia. Data was conducted by cross-tab test and chi-square test using SPSS software between monthly expenditures with each color ranging from dominant white, dominant yellow, monochrome color scheme, analog color scheme and complementary color scheme. The study shows that there were no significant differences between the price perception, the perceived quality, product preferences, product trial and intention to buy in the different color schemes, except white dominant color in perceived quality aspect. Respondents who assessed the use of monochrome color scheme tended to have higher price perception and higher quality than white, yellow, analog and complimentary color schemes. Also, other areas of setback on this study is that the respondents who are design students make these findings not to have a general perspective about consumers. The design students are considered as experts especially in color study. Furthermore, this study only investigates the homogeneity test on social economic status (SES). The homogeneity test should be tested on all control variables such as age, gender, sex, educational level on the study variables to ensure that these variables are not significant and to enhance the general acceptability of the result. Another issue is that the size of the sample, which is 110 participants. This can be considered too small, given the number of variables tested and combinations presented to the respondents.

Rathee and Rajain (2019) conducted a survey on the role of color in the influence of consumer purchase behaviour. The aim of the study is to understand the role colour plays in influencing consumer behaviour among male and female gender. The survey made use of the model of psychological functioning to gather data. The research design used in the study was descriptive wherein both primary and secondary data was collected. An online survey was conducted and the survey form was sent to 250 people using non-probability convenience sampling. Out of 250 people, 225 responded. It was found that yellow colour was preferred the least and blue the most. There were significant differences in choices made by the two genders. There was significant difference among respondents regarding purchase of warm and cool colors as well as warm and neutral colors. The results indicated that color influenced customer's decision and brand recall while making purchases.

Packaging Size and Consumer Purchase Decision

Miyuri (2020) carried out a survey on 'understanding consumer perceptions of quality based on package size: the moderating role of the evaluation context. There seems no apparent reason for consumers to assume that quality is dependent on package size. Hence, the essential prediction of the current study is that

the effect is not universal, and that such evaluations would depend on the specific context. The survey was conducted based on two experiment. Study 1: Investigated the package size effect by comparing a standalone context and a situation in which participants viewed and evaluated two different sizes. Study 2: Subsequently explored the found effect by comparing a standalone context and a context in which participants viewed two different sizes but had to evaluate one of the options. The results of the analyses conducted indicated that the package size effect generally occurred in a standalone context. In contexts in which both small and large-sized packages were presented together, the effect was only found to occur when the attention of the participants was directed to one size. In situations when the attention of the participants was directed equally to both sizes, the two sizes were perceived to be similar in quality.

Theoretical Framework

The cue consistency theory was proposed by psychologist Shelly C & Yaacov T. (1999) conducted a study on “cue consistency and attitude change: the moderating effect of perceived importance of the Attitude objects”, how consistency between product claim and prior beliefs can affect consumer attitudes, and is used to underpin this study.

According to cue consistency theory, consumer will be more likely to believe a product claim if it is consistent with the consumer’s existing beliefs about the product category. If a claim is consistent with what the consumer already knows about the product, the claim will be more credible and persuasive. This is important for understanding how people process information and make decisions. Individuals can combine information from multiple cues, each with a probabilistic relationship to a criterion, into a unitary judgment about that criterion.

In markets where product quality is not easily observable, consumers generally make their purchase decisions while experiencing feelings of uncertainty (Erdem & Swait, 1998; Jacoby, Olson, & Haddock, 1971). To cope with such uncertainty and make inferences about product quality, consumers search for and process available product-related cues, which can be marketing controlled (price, advertising, branding) or non-marketing controlled (third-party information, culture, beliefs). Product is made of a series of cues which can be used to evaluate quality and can affect consumer purchase decisions, that is, the cue is a function of product attributes.

According to Sullivan & Burger (1987) consumers want to choose the suitable one from a great number of products, but it is difficult to measure the product function “directly and objectively”. In order to overcome this barrier, consumers may indirectly evaluate quality with available information. For this reason, they infer quality with certain information which are the cues (Maheswaran & Chaiken, 1991). Miyazaki et al. (2005) states that cue consistency theory occurs when all cues give consistency quality information, this cue can play large role in quality evaluation.

There is need for an analysis of the manner in which patterns or configurations of cues are utilized. Cue-consistency theory suggests that multiple sources of information are more useful when they provide corroborating information than when they offer disparate information (Chaiken, 1991). Information integration, is a generally accepted trait on how consumers arrive at judgments. It proposes that evaluations are based on combining intrinsic product features and extrinsic cues (Alba et al. 1999). What we infer about others is based upon a set of expectations about the nature of persons, derived in part from experience with behavior. Indeed, support for such expectations about others resides in the very consistency of behavior.

METHODOLOGY

The study took the form of a descriptive survey design. The population of the study comprises of users of MacLeans toothpaste in North central Nigeria. A sample size of 384 was arrived at from an unknown population using the Cochran formula. The study adopted the purposive sampling to select consumers in the North Central region of Nigeria, and also adopted to select users of toothpaste including Macleans toothpaste in the study area. Primary data was collected using structured questionnaire and analyzed using partial least square regression analysis technique. The hypothesized model for the study is specified thus:

$$CPD = \beta_0 + \beta_1 PKC + \beta_2 PKS + \epsilon$$

Where; CPD = Consumer purchase Decision, βO = intercept, PKC = Packaging Color, PKS = Packaging Size, and ϵ = error term

The study distributed 384 copies of questionnaire out of which 373 were properly filled and returned. Subsequently, all analyses were conducted using the 373 valid responses.

RESULTS AND DISCUSSION

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PKC	373	1	5	4.31	.743	-1.673	.167	5.438	.332
PKS	373	1	5	3.27	1.206	-.049	.167	-1.084	.332
CPD	373	1	5	3.10	1.220	.335	.167	-1.194	.332
Valid N (listwise)	373								

Source: SPSS Output, 2023

The table above indicates the behavior of all the variables under study. The average value of packaging color (PKC) recorded was 4.31 indicating that most respondents were between agree and strongly agree while the maximum and minimum value stood at 5 and 1, respectively. Also, the skewness value which stood at -1.673 indicates that the variable is normally distributed since it is less than 1.96. Also, packaging size (PKS) recorded a minimum and maximum of 1 and 5 respectively, while the mean value stood at 1.96 indicating disagreement. With a skewness value of -.049, the variable also indicated normal distribution. Lastly, consumer purchase decision (CPD) had a minimum and maximum values of 1 and 5 respectively with an average value of 3.10, which indicated undecided. A skewness value of 0.335 signifies normal distribution.

Table 2: Correlations

		PKC	PKS	CPD
PKC	Pearson Correlation	1	.244**	.100
	Sig. (2-tailed)		.000	.145
	N	373	373	373
PKS	Pearson Correlation	.244**	1	.006
	Sig. (2-tailed)	.000		.926
	N	373	373	373
CPD	Pearson Correlation	.100	.006	1
	Sig. (2-tailed)	.145	.926	
	N	373	373	373

**.. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output, 2023

Packaging color showed a positive but weak relationship with packaging size which stood at 0.244 which is significant at 5% level of significance. PKC showed a weak but positive relationship with consumer purchase decision which stood at 0.100 and is significant at 5% level of significance. Also, PKS showed a weak and positive relationship with CPD which stood at 0.006. All the variables under study satisfy multicollinearity as though none of the independent variable is strongly related to another.

Table 3: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.714 ^a	.510	.501	1.220	.843

a. Predictors: (Constant), PKS, PKC

b. Dependent Variable: CPD

Table 4: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	161.021	2	1.642	31.103	.000 ^b
	Residual	154.707	370	1.488		
	Total	315.728	372			

a. Dependent Variable: CPB

b. Predictors: (Constant), PKS, PKC

Table 5: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.425	.505		4.802	.000		
	PKS	.172	.116	.105	4.483	.000	.941	1.063
	PKC	-.019	.072	-.019	-.270	.787	.941	1.063

a. Dependent Variable: CPB

Source: SPSS Output, 2023

The result, as shown in the tables above revealed an R-square value of 0.510 which signifies that 51% of the variation in consumer purchase behavior could be explained by the combination of the two independent variables under study i.e packaging color and size. The remaining 49% variation could be explained by other factors or variables not included in this study. The f-statistics stood at 31.103 and the probability of the f-statistics was found to be significant at 5% level of significance ($p\ 0.000 < 0.05$) which, therefore indicates that the model is fit to measure the association between the variables under study.

The regression result indicates a positive effect of packaging size on consumer purchase decision implying that availability of toothpaste in portable and reasonable sizes influences purchase decision on the side of the customer. The probability of t-statistics stood at 0.000 which is less than 0.05 level of significance thereby indicating that the effect is significant and as such the study lacks sufficient ground to accept the null hypothesis leading to the acceptance of the alternative hypothesis which states that packaging size has significant effect on consumer purchase decision of MacLeans toothpaste in North Central, Nigeria. This finding agrees with the findings of Miyuri, (2020), where different pack sizes influence purchase decision compare to stand alone size.

Conversely, the regression result indicates a negative effect of packaging color on consumer purchase decision of MacLeans toothpaste implying that too many combinations of colors on the package of toothpaste has discouraged purchase intention towards them.

The probability of t-statistics stood at 0.787 which is greater than 0.05 level of significance thereby indicating that the effect is insignificant and as such the study accepts the null hypothesis which states that packaging color has no significant effect on consumer purchase decision of MacLeans toothpaste in North Central, Nigeria. This finding disagrees with the findings of Rathee & Rajain (2019) which indicated that color influenced consumer's decision and brand recall while making purchases.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings, the study concludes that packaging size has positive effect towards MacLeans toothpaste in North Central Nigeria and contributed significantly to consumers choice while packaging color on the other hand has yielded negative effect on MacLeans toothpaste in North central Nigeria and contributed insignificantly to purchase decision. Thus, the study concludes that color is significant in decision making processes concerning MacLeans packaging and if not carefully selected to represent specific meanings could discourage purchase decisions especially towards oral and health-care related. Based on the foregoing, the study recommends the following:

- i. Toothpaste companies should continue to present their toothpaste in different sizes especially the small and family size pack to accommodate the needs of different segments of the market. Small size pack is perceived to be more convenient and easier to use which can be appealing to busy consumers. While the family size pack could be perceived as being a better value for money since the cost per ounce is typically lower than smaller pack. This will allow for more buyers since they have products that suit their needs.
- ii. Toothpaste companies should carefully select colors that both represents certain information and are attractive to the buyers. Full color has positive effect on consumer purchase decision. It can be more eye-catching and attention-grabbing than a package with less colors. Different colors can evoke different emotions and associations. This must be kept in mind especially in the course of upgrading.

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