

Influence of Sensory Attributes of Malt Brands on Consumer Purchase Behaviour in South-East of Nigeria

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Abstract

The behaviours of consumers are roller coaster in nature which thrusts enormous responsibilities on organizations especially in findings means of satisfying consumers in all their expectations. Therefore, the problem that prompted this research is the proliferation of various brands of malt which has increased competition in Nigerian markets. It became necessary for companies to gain knowledge about the consumers and what spur them into purchase actions. Indisputably, satisfying consumers is very crucial as consumers are now more educated, more advanced, more savvy, too sophisticated and always demand for products that appeal to their senses. Different brands of products can only be differentiated through the senses of sight, taste, touch and smell. Therefore, the research investigated how sensory attributes of malt brands influence consumer purchase behaviour in South-East of Nigeria. Specifically, the study ascertained the extent malt brand visual, gustatory, tactile and olfactory attributes influence consumer purchase behavior. The study established that malt brand visual attribute significantly influences consumer purchase behaviour in south-east Nigeria. The study revealed that malt brand gustatory attribute has a significant influence on consumer purchase behaviour in south-east Nigeria. The study found that malt brand tactile attribute significantly influences consumer purchase behaviour in south-east Nigeria. The study revealed that malt brand olfactory attribute has a significant influence on consumer purchase behaviour in south-east Nigeria. The study recommended that malt brand sensory attributes should be sustained. The study has managerial and practical contributions to the malt manufacturers, managers, practitioners, future researchers, consumers, and the general public in Nigeria.

Keywords: *Influence, Sensory Attributes, Consumer Purchase Behaviour, South-East, Nigeria*

1. INTRODUCTION

Sensory product attributes are attributes of product assessed through the senses which play a crucial role in the creation of emotional sensations and purchase experiences (Krishna, 2012). In sensory marketing, the fundamental method of product analysis is through sensory assessment (Gallardo, Hong, Jamimes & Orozco, 2018). It is a strategic method that uses the sight, taste, touch, hearing and smell to evoke, analyze and interpret consumer perception of product features and benefits before purchase action. Primarily, the consumer choice of products is influenced by sensory attributes (Grzybowska-Brzezinska, Grzywinska-Rapca, Zuchowski & Boraski, 2017). Undoubtedly, in this present dispensation, a consumer might not only choose a product for cost-benefit reasons, but also for sensory experiences during purchase evaluations and decisions. Interestingly, sensory product attributes provide value to the consumers and also make them fall in love with the product through unforgettable experiences that encourage them to make wise purchase behaviours. Furthermore, satisfaction is enhanced when a product provides good visual, gustatory, tactile and olfactory attributes which are proxies for sensory attributes (Krishna, 2012). Indeed, consumers pass their purchase verdict based on sensory intrinsic and extrinsic product characteristics (Anetoh et al., 2020; Gunaratne et al, 2019). Accordingly, product cues such as flavour, texture and aroma (Onyango, Luvitaa, Unbehend & Haase, 2020) are regarded as the intrinsic traits, while brand names, product packaging and information are regarded as the extrinsic traits. Undoubtedly, consumers attach values to the intrinsic and extrinsic traits which as a consequence influence their purchase behaviours (Topcu & Dagdemir, 2017). Rodrigues, Hulten and Brito (2021) submit that as consumers are indispensable to sensory brand association and experience, every marketing offer needs to be focused on them in a unique and specific manner.

Gunaratne et al. (2019) maintained that the sensory and perceptual systems are related to the intrinsic product cues, while the cognitive and psychological mechanisms form the extrinsic product cues. Thus, the sensory engraving of a product in consumers' mind influences their brand experience and purchase behaviour (Ebrahim, Ghoneim, Irani & Fan, 2016). In fact, the understanding of consumer sensory perception and preference of varied products offered to them by retailers is a prerequisite for successful product development, launch and commercialization (Barros, Rosenthal, Walters & Deliza, 2016). This is fundamental because consumer perception of goods and services is a sine qua non to purchase behaviour. Undeniably, the importance of the senses cannot be overemphasized. The human senses are certainly very germane as long as consumer product evaluation and purchase behaviours are concerned. Apparently, it is through the senses such as sight, taste, touch and smell that different brands of products such as malt drinks can be identified and differentiated (Rupini & Nandagopal, 2015). Significantly, notwithstanding that there is an interdependency of different sensory perceptions of a product or brand; each of the senses may at different situations have dominance over another in product evaluation and purchase of a product or brand (Pramudya & Seo, 2019). Undoubtedly, despite the fact that consumers are unpredictable in their purchase behaviours; the manufacturer who intends to understand consumers' sensory experiences and position his products in the minds of the consumers through sensory attributes will succeed in this contemporary warfare (Zia, 2017, Nnadi et al., 2021).

Statement of the Problem

The challenges arising from the proliferation of malt brands in Nigeria has led to stiff competition among the manufacturers and brand managers in Nigerian markets (Chendo, 2019; Anetoh & Moguluwa, 2018) and this forms the motivation for this study. The heightened competition coupled with the fact that consumers are more informed, knowledgeable, sophisticated (Okolo, 2017) and ever yearning for products that appeal to their senses (Dodamgoda & Amarasinghe, 2019) made the manufacturers search for different ways of catching the attention of the customers. The competition also made the manufacturers to be more committed in finding possible measures on how best to satisfy their customers. In a bid to address the identified challenges, some manufacturers have paid attention to some key factors such as price, brand name and product availability as the main motivation for consumer patronage of malt brands (Agbaeze, Nnabuko, Ifediora & Ekoja, 2017; Anetoh et al., 2020;). Regrettably, not much is known about sensory attributes that seem to influence consumer purchase behaviours (Hinestroza & James, 2014).

Existing literature has demonstrated that researches on visual, gustatory, tactile and olfactory product attributes have been mentioned in the literature especially in the developed nations in the world (Onyango et al., 2020; Nnadi et al., 2021), but with varying findings. Nevertheless, studies on product sensory attributes have equally been conducted in other developing countries such as China, India, Kenya, Sri Lanka, Tanzania, and Vietnam other than the developed ones (Yang & Lee, 2019). Based on empirical evidence, there are still inconsistencies in the findings of different scholars on the study variables. For instance; (Anetoh et al., 2020; Waheed, Khan & Ahmad, 2018; Imiru, 2017 and Taiye et al., 2015) found that product visual attribute plays a significant role in influencing consumer purchase behaviour contrary to the findings of (Muntaha, 2016 and Siti et al., 2012). Furthermore, Krishna (2012) reported that sensory product attributes play an important role in influencing purchase behaviours. The findings of Raj and Shiny (2017) and Anetoh et al., (2020) revealed that consumer purchase behaviour is significantly influenced by product taste which is contrary to the findings of Carvalho et al. (2016). The findings of (Pramudya & Seo, 2019; Streicher & Etes, 2015) showed that tactile attributes significantly influence consumer purchase behaviour contrary to the finding of Muntaha (2016). Further, Gueguen and Petr (2016) as well as Orth and Bourrain (2015) found that product olfactory attributes have insignificant influence on consumer purchase behaviour. Conversely, studies by (Meng, 2016, Anetoh et al., 2020; Spence, 2015 and Goncalves et al., 2013) found that flavour and congruent scent significantly influence consumer purchase behaviour. Importantly, the findings of previous studies indicate that further empirical justification is needed to address the contradiction that exists in the extant literature. Frankly, based on the available literature reviewed, it was discovered that limited literature on the subject matter still exists in Nigeria. Therefore, it is against this backdrop that this study sought to close the gap identified in the literature. This study is an attempt to provide basic insight and a comprehensive understanding concerning the extent sensory purchasing motives towards malt brands influence consumer purchase behaviour in south eastern part of Nigeria.

Objectives of the Study

The broad objective of this research is to investigate the influence of sensory attributes of malt brands on consumer purchase behaviour in south-east of Nigeria. The specific objectives seek to;

1. Ascertain the influence of malt brand visual attribute on consumer purchase behaviour.
2. Determine the influence of malt brand gustatory attribute on consumer purchase behaviour.
3. Examine the influence of malt brand tactile attribute on consumer purchase behaviour.
4. Assess the influence of malt brand olfactory attribute on consumer purchase behaviour.

2. LITERATURE REVIEW

2.1: Review of relevant concepts

2.1.1: Sensory product attributes

The visual, gustatory, tactile and olfactory brand attributes originated from the senses of vision, taste, touch and smell respectively. Sensory information vivaciously drives consumer purchase decision (Pramudya & Seo, 2019). The sensory brand experiences improve product purchase intentions as well as the ultimate decisions (Anetoh et al., 2020; Kokko, 2019). Moreso, consumers perceive products with their senses which ultimately influence their purchase intentions (Krishna & Schwarz, 2014). In reality, an added value is created through strategic sensory experience (Krishna, Cian & Aydinoglu, 2017). Importantly, sensory cues enhance consumer choice for healthy food by reducing consumer doubt (Kapoor & Kumar, 2019).

2.1.2: Visual product attribute

Product brand color, design and size are the first way of product identification and differentiation (Karedza & Sikwila, 2017). Across the multifarious domain of consumer behavior, the visual cues enforce and strengthen the purchase decision making process (Mertens, Hahnel & Brosch, 2020). Latasha et al., (2016) opined that sight is used mostly in sensory marketing as it appears to be most stimulated by the environment. However, product color, shape, design and appearance create a lasting imprint and influence consumer purchase behaviour (Anetoh et al., 2020; Halabi & Hands, 2018). The salient of product visual attributes such as size and design is useful in product evaluations and purchase decisions (Kumar & Kappor, 2015).

2.1.3: Gustatory product attribute

Gustation or taste is one of the motivating purchasing factors, the basic reason for buying a product (Van-Wymelbeke et al., 2014). Taste is a genuine driver of consumer choice of food and drinks (Anetoh et al., 2020; Mariam, 2014). Also, consumer purchase decision of malt is elicited by its taste. Bitter, sweet, sour, umami and salty are the five fundamental sensations in the body and are referred to as gustatory sense (Redondo, Gomez-Martinez & Marcos, 2014). The taste of a product guarantees consumer purchase behaviour. Taste is very important in the malt companies because it reduces faking a specific brand of product (Anetoh et al., 2020; Malik et al., 2016).

2.1.4: Tactile product attribute

The tactile attribute of a product is very essential during actual consumer product choice and purchase behaviour (Viciunaite & Alfnes, 2020; Anetoh et al., 2020). Tactile product attributes influence consumer purchase (Anetoh et al., 2020; Slyburyte & Vaitieke, 2019). Dodamgoda and

Amarasinghe (2019) state that the sense of touch influences consumer purchase behaviour. It also enhances consumer emotional attachment toward a particular brand (Overmars & Poels, 2015). Furthermore, touching a product decreases frustration and doubt and increases consumer purchase behaviour (Streicher & Estes, 2015; Anetoh et al., 2020; Nnadi et al., 2021).

2.1.5: Olfactory product attribute

Olfactory cues are used in modern advertising to elicit consumer purchases by associating the scent with the advertised product or brand (Ruzeviciute, Kamleitner & Biswas, 2020; Anetoh et al., 2020). Product olfaction or smell influences consumer purchase decision (Pezoldt, Michaelis, Roschk & Geigenmueller, 2014). Brand differentiation is facilitated by sensory cues like smell to guarantee consumer purchase action (Chatterjee, 2017 Anetoh et al., 2020). Product olfaction has attributes such as flavor, scent, aroma, fragrance, congruence and so on (Moore, 2014 Anetoh et al., 2020). Extant literature supported that pleasant olfaction enhances consumer evaluation of products as well as stores (Spence, 2015 Anetoh et al., 2020; Nnadi et al., 2021).

2.1.6: Consumer purchase behaviour

Consumer purchase behaviour is an absolute resolution to purchase or not to purchase a product (Imiru, 2017). It is a consumer's resolve to evaluate and choose a product or brand out of several alternatives (Khuong & Duyen, 2016; Anetoh et al., 2020;). It also involves a consumer assesses many brands of a product category along its alternatives based on the strength of various attributes and eventually purchases the brand that appeals to his/her senses (Oghojafor et al., 2013). Wekeza & Sibanda (2019) as well as Anetoh et al., (2020) maintained that a consumer purchase behavior is driven by his/her purchase intention. Consumers who are satisfied with a specific brand will have a positive disposition towards it (Nnadi et al., 2021).

2.2: Relevant theories for the study

The senses theory by Parimala (2014):

The senses theory was propounded by Parimala (2014) which states that a customer can assess the attributes of a product using the visual, gustatory, tactile and olfactory sensory modalities. According to this theory, a consumer evaluates a product attribute through a sense organ. This theory assumes that when a consumer assesses a brand by either of the senses; sight, taste, sound, smell, and texture, it is a single sensory evaluation. On the other hand, when the evaluation of the product involves the interactions of many sense organs, it is known as multiple sensory evaluations. The relevance of this theory to the study is that it houses the independent variables of this study. Therefore, this research on the influence of the sensory attributes of malt brands on consumer purchase behaviour has all the independent variables emanated from this theory and also anchored on it.

Consumer purchase decision theory by Blackwell, Miniard and Engel (2005)

The consumer purchase decision theory by Blackwell et al. (2005) state that a consumer passes through seven steps of pre-purchase, purchase and post-purchase decision stages. A consumer's purchase decision process starts from need identification/recognition, information search, pre-purchase assessment of product attributes, consumer purchase behaviour, consumption, post-

consumption evaluation and divestment. The identification of a consumer's needs is the first stage. Embarking on relevant information search is the second stage. The third stage is the assessment of product alternatives that propels purchase intention. The fourth stage is consumer purchase behaviour. The fifth stage is consumption while the sixth stage is a post-consumption assessment that results in either satisfaction or dissatisfaction. Divestment is the seventh stage that confirms if the consumed product was requested in the future or not. The relevance of this theory to the research is that consumer purchase behaviour originated from the fourth stage of this theory.

3. METHODOLOGY

The study adopted an ex-post facto and survey research designs. The justification for using an ex-post facto as well as a survey research design method in the study is to legitimately enable the researchers to apply and run both descriptive and inferential statistics. An ex-post facto research design involves collecting and analyzing data about the independent variables or attributes without manipulating any of them in order to find out how they are related to other variables (Nwankwo, 2010). Ex-post facto design prevents unethical manipulations of the malt attributes when ascertaining the extent to which the independent variables influence or affect the dependent variable (Nworgu, 2016). In addition, a survey research design was employed to generate the needed data from the respondents (malt consumers) concerning those attributes that are not manipulated by the researcher (Eboh, 2009). The intention to use two research designs is appropriate since the research objectives include determination of the extent to which sensory attributes of malt brands influence consumer purchase behaviour (Hair, Bush & Ortinau, 2000). The choice of using an ex-post facto and survey research design methods is appropriate and consistent with the work (Anetoh et al., 2020; Johnson, Onwuegbuzie & Turner, 2007).

The geographical scope of the research was limited to south eastern part of Nigeria using the State capitals namely; Abakaliki (Ebonyi State), Awka (Anambra State), Enugu (Enugu), Owerri (Imo) and Umuahia (Abia). Abakaliki, Awka, Enugu, Owerri and Umuahia were selected since they are adequate because they are the state capitals with teeming population of large number of customers that purchase and consume malt drinks in the specified study areas. The target population of the study consist of adult consumers of selected malt drinks namely; Maltina, Malta Guinness, Amstel Malta, Dubic Malt and Grand Malt in geographical areas under investigation (at least 18 years and above). The population size is unknown because there is no sampling frame or database that show a specified number of malt consumers. The sample size of the study was determined using a Cochran formula for an unknown population size. The study is projected to select and use thirty sales outlets majoring on malt drinks (6 sales outlets from each states capital). This study used a convenience sampling technique to select and reach the respondents that will participate in the survey. The implementation of the convenience sampling method was achieved by using malt consumers who was available and present consuming or purchasing malt brands in the sales outlets to be selected across the geographical areas under survey. The data were sourced using primary data collection strategy. A structured questionnaire was used for the proposed survey. The scale was adopted from previous studies and modified to suit the context of the projected study. The instrument to be used in the anticipated study was designed to have three sections. Section A was designed to capture the demographic characteristics as well as general information about the

respondents. Section B was designed to ascertain the extent the sensory attributes of malt brands are important or valued by the respondents. Section C was designed to measure consumer purchase behaviour of malt brands based on sensory attributes. Likert's five-point interval scale method of structured questionnaire was adopted.

Validation and the Reliability of the research instrument

The validity of the research instrument for the study was established through content, face, and construct validity. The content validation was made through a careful selection of measuring indicators and parameters from the literature as well as from the previous studies. The face validity of the instrument for the study was done using four research experts in Department of Marketing, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus. The title of the study, the research problem statement, the research questions and hypotheses was attached to the draft copies of the questionnaire that was given to them. This enabled them to understand what the study stands to accomplish. Their corrections will help to enhance the soundness, accuracy and appropriateness of the research instrument for the main survey. In addition, the construct validation was checked using convergent as well as discriminant validity of the study constructs. The research adopted two types of instrument reliability checks. The study used test-retest reliability test method to address the stability aspect of reliability. A pilot study was done in Asaba, Delta State using 30 pilot respondents. A Cronbach alpha average coefficient value of 0.7684 established the internal consistency of the measuring instrument which made it appropriate for the main field survey. George and Mallery (2003) provided the benchmark for accepting or rejecting the reliability test result: > 0.9 = excellent, > 0.8 = good, > 0.7 = acceptable, > 0.6 = questionable, > 0.5 = poor and < 0.5 = unacceptable. The questionnaire was administered to adult malt consumers of at least 18 years or older who was found purchasing or drinking malt brands under investigation in the proposed bars, restaurants and fast-food joints to be selected across the state capitals of Awka, Enugu, Abakaliki, Owerri and Umuahia. The time horizon for the field survey was a cross-sectional whereby the copies of the questionnaire was distributed to the respondents only once within the stipulated period. In addition, copies of the questionnaire was distributed to the respondents by the researchers and his field research assistants across the sales outlets to be selected for the survey. The data collection will last for about 30 days at different time of the day so as to minimize sampling bias and also to get a varied mix of respondents (Kok & Fon, 2014).

4 RESULTS

The hypotheses formulated to guide the study were tested using the Partial Least Squares Structural Equation Modeling at 0.05 level of significance. PLS-SEM was used to test the significance of the model using bootstrapping procedure to ascertain the influence of the independent variables on the dependent variable. The reason for the use of PLS-SEM is that it is the most appropriate technique for the study. In addition, the issue of multicollinearity problem does not affect PLS-SEM operation (Qureshi & Compeau, 2009). Thus, the path coefficient was significant at 0.20 if the t-statistic is greater than or equal to 1.96 (Wong, 2013) or the p-value is less than or equal to 0.05 (Hair et al., 2014; Anetoh et al., 2020).

Table 1: The PLS-SEM Results

Hypotheses	Hypotheses paths	Coefficients	T-values	P-values	Remark
H1	MBVA -> CPB	0.621	9.106	0.001	Significant
H2	MBGA -> CPB	0.777	10.710	0.000	Significant
H3	MBTA -> CPB	0.312	4.482	0.014	Significant
H4	MBOA -> CPB	0.428	7.366	0.002	Significant

Path coeff. is significant at 5% level of significance; if the t-value is ≥ 1.96 , or p-value ≤ 0.05 .

Note: MBVA = malt brand visual attribute; MBGA = malt brand gustatory attribute; MBTA = malt brand tactile attribute; MBOA = malt brand olfactory attribute; CPB = consumer purchase behavior.

Source: PLS-SEM Output, 2025.

Based on the results on table 1, the study found that malt brand visual attribute significantly influences consumer purchase behaviour in south-east Nigeria. The study revealed that malt brand gustatory attribute has a significant influence on consumer purchase behaviour in south-east Nigeria. The study found that malt brand tactile attribute significantly influences consumer purchase behaviour in south-east Nigeria. The study revealed that malt brand olfactory attribute has a significant influence on consumer purchase behaviour in south-east Nigeria.

5. CONCLUSION AND RECOMMENDATIONS

The importance of sensory attributes of malt brands cannot be over emphasized. The study has revealed that sensory attributes of malt brands have significant and positive influence on consumer purchase behaviour in south-east Nigeria. The study has demonstrated that malt brand visual attribute positively and significantly influence consumer purchase behaviour in south-east Nigeria. The study has established that malt brand gustatory attribute positively and significantly influence consumer purchase behaviour in south-east Nigeria. The study has confirmed that malt brand tactile attribute positively and significantly influence consumer purchase behaviour in south-east Nigeria. The study has proven that malt brand olfactory attribute has a positive and significant influence on consumer purchase behaviour in south-east Nigeria. Based on the findings, the study recommends that;

1. Malt manufacturers and other stakeholders in the beverage industry should sustain efforts made in visual aspect of packaging and promoting malt brand for enhanced consumer purchase behaviour.
2. Malt manufacturers and other stakeholders in the beverage industry should maintain efforts made in gustatory aspect of packaging and promoting malt brand for enhanced consumer purchase behavior.
3. Malt manufacturers and other stakeholders in the beverage industry should continue with the efforts made in tactile aspect of packaging and promoting malt brand for enhanced consumer purchase behavior.
4. Malt manufacturers and other stakeholders in the beverage industry should sustain efforts made in olfactory aspect of packaging and promoting malt brand for enhanced consumer purchase behavior

6. CONTRIBUTIONS, RELEVANCE AND IMPLICATION OF THE STUDY

This study is expected to provide a comprehensive understanding that sensory attributes of malt brands influence consumer purchase behaviour. The study is expected to be of great significance and beneficial to major stakeholders in food and beverage companies. This study is projected to broadening the frontier of existing knowledge available in sensory marketing literature. The planned study is expected to have managerial and practical contributions to various stakeholders such as the malt manufacturers, brand managers, marketing practitioners, future researchers, malt consumers, the general public and government. The findings of the study will aid the management of food and beverage industry on where to focus their marketing efforts in order to overcome the challenges brought about by competition in Nigerian markets. Brand managers and marketers will through this study gain background knowledge that will help them in developing competitive strategies through which they will communicate the values associated with sensory attributes of malt brands to their customers for increased patronage and increased profits for the organizations. Marketing practitioners are expected to use the findings of this proposed research to form database information and intelligence that will help them to communicate the benefits associated with malt drinks to their various customers. This study is expected to be the threshold for policy formulation and execution. In addition, future researchers are expected to benefit from the proposed research since this study will serve as secondary source of data to them. The findings of the study would be an information repository reference avenue for the firms, resellers, scholars, academic community and even the students. The study is expected to be of great value to the consumers as they are expected to use the findings of this study to understand how sensory attributes influence purchase behaviour. Also, the findings of this study will also be of great value to the government through tax since the ensuing vivacity from the findings of this study is expected to reveal the viability and potentiality of beverage industry in Nigeria especially in south east geographical zone.

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