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CONSUMER DIVERSITIES, GLOBAL MARKETING MIX STRATEGY

ADAPTATION OR STANDARDIZATION ON PURCHASING BEHAVIOR IN

FOOD FLAVOR INDUSTRY IN NIGERIAN EMERGING MARKETS

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Doctor of Philosophy in Business Administration

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Abstract

CONSUMER DIVERSITIES, GLOBAL MARKETING MIX STRATEGY

ADAPTATION OR STANDARDIZATION ON PURCHASING BEHAVIOR IN FOOD

FLAVOR INDUSTRY IN NIGERIAN EMERGING MARKETS

Oluyemi Arosoye

Unicaf University

Global marketing has progressively developed into a current-day business trajectory, which makes it possible for international manufacturing organizations to employ same marketing strategy. However, there are drawbacks from consumers diversities as they might influence their purchasing behavior and marketing strategy to be employed by international food/drink flavor manufacturers in Nigeria. Nigeria, as an emerging market, has gained attention in global food flavor industry. To better understand the peculiarity of Nigerian consumers' purchasing behavior and effect on marketing strategies, this study focused to unveil their demographics, needs and motivations towards processed and packed foods/drinks, which might influence their purchasing decision.

Stratified random sampling of Nigerian consumers (n=5,064) between age 19 - 70 years, was carried out across the six (6) regional native locations/groups and five (5) regional home locations in Nigeria. Convergent parallel mixed research methodology was employed with research tools- online and paper-based questionnaires, focus group discussion, and in-depth interviews. Prior to actual study, pilot study was conducted to determine the reliability of the questionnaire. Data were analyzed using the Statistical

Analysis System; ANOVA and T-test to understand variance among dependent variables,Duncan's multiple range tests for mean separation, and regression analysis, Principal Component Analysis to analyze factors and estimate relationship between dependent   variables and independent variables, recognize patterns, and explore underlying features which describe the relationship among the variables.

The findings of this study indicated that there were diversities in needs and motivations of Nigerian consumers of processed (flavored) and packed foods/drinks based on demographic, and these influenced their purchasing behavior. Furthermore, it revealed that convenience was the fundamental motivation of most Nigerian consumers after which the next important motivation- health benefits (safety and nutrition). However, for some specific religious and cultural sects, social acceptance was a fundamental need. Each of age group, educational level, religion, family size, regional locations- home, birth and native mostly influenced Nigerian consumers' purchasing behavior towards processed (flavored) and packed foods/drinks.

It can therefore, be concluded that strongest influence came through acculturation, social bond, and family ties, and these invariably are relevant in establishing global marketing strategy employed in Nigerian food flavour industry.

Declaration

I declare that this thesis has been composed solely by myself and that it has not been

submitted, in whole or in part, in any previous application for a degree. Except where

states otherwise by reference or acknowledgment, the work presented is entirely my own.

Copyright Page

Dedication

I dedicate this work to the Almighty God, Who gave His only begotten Son for the

salvation of everyone.

Acknowledgments

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List of Abbreviations

RTE-   Ready-To-Eat

RTD-   Ready-To-Drink

CSD-   Carbonated Soft Drink

RBL-   Regional Birth Location

AGE G –   Age Group

RHL-   Regional Home Location

BC-   Buying Constraint

RNL-   Regional Native Location

FS-   Family Size

EDU-   Educational Level

ESGI-   Extent Social Group Influence

BDF-   Best Drink Flavor

LS-   Level of Satisfaction

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CHAPTER 1: INTRODUCTION

As global processed foods/drinks and flavor industries continue to grow, more international organizations are interested in expansion and are targeting marketing strategies to gain emerging markets. Consumers diversities are influencing their purchasing behavior towards processed (flavored) and packed foods/drinks. Consequently, the purchasing behavior of consumers is affected by global marketing mix strategies employed by international manufacturers of food/drink flavors.

As food flavor industry is developing globally, emerging markets like Nigeria has gained global attention in Africa, however, it is diverse and multicultural, hence, the need to understand Nigerian consumers' motivations and develop relevant marketing strategies for the markets (Flanders, 2020[1]; Okoye, 2018[2]). Inasmuch as business expansion of international manufacturer of food flavors depends on comprehension of the intricacies of each market and consumers, it becomes paramount to study Nigerian consumers demographics, way of life and their purchasing behavior towards processed (flavored) and packed foods/drink.

Understanding the motivations and constraints towards the purchasing intention of consumers help in predicting their purchase behavior (Kakkosa *et al.,* 2014[3]; Wu *et al.*, 2011[4]; De Magistris and Gracia, 2008[5]). Therefore, the willingness and/or tendency of consumers to purchase and consume products is comprehended through in-depth understanding of the motivations and constraints (purchase intention drivers) based on their demographics.

Globally, food flavor is gaining more popularity as crucial ingredient that influences consumers' acceptance and preference of food products. Allied Market Research (2017)[6] reported that in the year 2016, the size worldwide flavor market was $12,474 million, and Market Research.com (2018)[7] and IndustryARC (2020)[8] reported an estimate of yearly growth rate of about 5% in the next five years. As reported by IndustryARC (2020)[8] and Leffingwell

and Associates (2018)[9], among the key international food flavor manufacturers who play in worldwide flavor markets are Givaudan, Firmenich, IFF and Symrise, Sensient Technologies, and Takasago International Corporation, while Market Research.com (2018)[7] reported that the rest flavor manufacturers had about 45-50% of the entire worldwide market. Allied Market Research (2017)[6] suggested that food and beverage industry expansion, creativity, innovation, technology in flavor production, and increase in consumers' quest for health and wellness are the main elements influencing worldwide flavors industry. Consequently, according to IndustryARC (2020)[8], the introduction of regional flavors has expanded both the regional and global flavor food industry.

As described by USDA (2022)[10], processed (flavored) foods and drinks have been modified from the natural form, such that it becomes necessary to improve overall flavor or taste delivery by the addition of either natural or synthetic flavoring to invigorate food intake (Mathey *et al*., 2001)[11], and for creativity, new concepts development and adventure for consumers (Czarniecka-Skubina *et al*., 2021)[12]. Allied Market Research (2017)[6] reported how the importance of food flavors as an additive that improves food products acceptability cannot be overemphasized. Food flavors are grouped on grades and price, and these are based on type and nature, final food product and zone of flavor manufacture. In this study, processed (flavored) and packed foods/drinks are ready-to-eat (RTE) foods and cooking aids in the categories of bakery, confectioneries (candies, cream), dairy, breakfast cereals, spreads, pasta, and multipurpose seasonings- powder, paste and cubes. In addition to these are ready-to-drink (RTD) beverages/drinks in the categories of carbonated soft drinks (CSD), still drinks (flavored drinks, low juice drink, high juice drink), malted drinks, and hot beverages-chocolate, tea, and coffee.

Global market trend indicates that focus is on food flavors as additives (Sadler *et al*., 2021)[13], to expand the industry of processed (flavored) and packed foods/drinks, leveraging the evolution of consumers' taste/flavor predilection. Consequently, global food flavor industry has been reported to have grown (Fortune Business Insight, 2021[14]; Global Market Insight, 2019)[6]. Furthermore, it has been reported that global market trend tends towards employing same approach for different markets and regions, thereby disregarding the essence of understanding their culture (Jeong and Lee, 2021[15]; Okoye, 2018[2]; Peprah *et al*., 2017[16]) for in-depth knowledge of consumers' judgment, acceptance, knowledge, attitude and/or intention. Therefore, recorded growth would have been bigger if global market had not drifted solely to employing European standardized marketing strategy for other markets and regions, rather than adapting strategies in line with the peculiarities of every market and region (Okoye, 2018[2]; Peprah *et al*., 2017[16]; Durmaz and Diyarbakırlıoğlu, 2011[17]). In the same manner, despite the development of processed (flavored) and packed foods/drinks is considered low, it still contributes substantially to the growth of the economy of Nigeria (Flanders, 2020[1]; Akpan *et al*., 2017)[71]. This suggests Nigeria economy could be better with a more developed processed (flavored) and packed foods/drink industry.

As reported by Jeong and Lee (2021)[15], Okoye, (2018) and Peprah *et al*. (2017)[16], it is crucial to conduct cross-cultural research based on the consumers' demographic factors- level of education, gender, and age groups, to understand their inclination and attitude towards food/drink, and the extent of social influences on their sensory perception and acceptance of them. Furthermore, through the understanding it would be possible to predict consumers preferences and comprehend their behavior towards certain foods/drinks. On all parts of the world, consumers inclination towards food flavors are specific to region, demographic and culture (Jeong and Lee, 2021[15]; Zion Market Research, 2020[17]). The cultural environment of consumers affects the way they perceive foods/drinks, which invariably influences their

manner of acceptance and consumption, more so taste and flavor preference of consumers have been reported to vary across Africa (Maritz,2013)[13]. It becomes essential to understand differences in consumers culture and the influence on food/drink acceptance with regard to their judgment, knowledge and intention.

Furthermore, in order to predict consumers' preference, there is need to deeply understand their cultural parts as they relate to other demographic factors. Consumers' perception and acceptance are linked to sensory attributes that are relatable to consumers, and these influence their purchasing decision (Jeong and Lee,2021)[15]. As consumers' expectations differ based on their demographics, so do their acceptance of the food/drink products and purchasing decision towards food/drink products.

At the global level, certain tastes/flavors regardless of consumers' demographics are generally preferred over others, while preference for some particular taste/flavors or notes are peculiar to some regions and cultures. It was reported that the attitudes of consumers in Europe, Asia and America to information on processed and packed foods/drinks varies with age group and educational status (Ogundijo et al., 2022)[18]. Similarly, perception of naturalness of additives (food ingredients) varies with consumers based on knowledge, educational status, and health concerns (Osaili et al., 2023[19]; Jeong and Lee, 2021[15]). Furthermore, consumers' willingness to pay more than other brands of the same product categories differs with countries, and with participants' educational status within same culture (Hanel et al., 2018[20]). Values that are related to foods/drinks vary across different cultures (Jeong and Lee, 2021[15]; Monterrosa et al., 2020[21]). Taste preference varies with age group (Ogundijo et al., 2022[18]; Alhammadi et al., 2021[22]; Petrovici and Ritson, 2006[23]).

Furthermore, studies on differences in consumers' preferences based on cultural background include preferences for sweetness and spiciness taste which are shown for American and Korean consumers (Lee et al., 2020)[24]. Across some nationals, sensory attributes

that are experiential to consumers influenced their preferences (Torrico *et al*., 2020)[25]. There are distinctive preferences in some flavors such as cheese flavors between Italian and Spanish consumers (Ojeda *et al.,* 2021)[26], coffee flavors between Chinese and Korean consumers (Hu and Lee, 2019)[27], and vanilla flavors between Asian and European consumers (Bertelsen *et al*., 2021)[28]. Czarniecka-Skubina *et al*. (2021)[12] reported consumer choices and habits towards consumption of coffee in Poland, and that trend shows consumers' openness to new creativity and flavor adventure, while regarding global chocolate consumption, having reviewed over sixty articles, Del Prete and Samoggia (2020)[29] reported that marketing elements - price and promotion were key.

Very importantly, Jeong and Lee (2021)[15] reported that there are several reports that revealed influence of acculturation on consumers' preference, perception, and attitude towards drinks/foods. Acculturation also makes products relatable and familiar, especially in flavor and taste, and the extent of which affects their acceptance and consequently, consumers' purchasing behavior (Lee *et al*., 2015)[13]. It was therefore, recommended that though culture and social factors influence consumers' attitude and intention to purchase and consume foods/drinks, there was need to study acculturation, food environment, information about foods/drink and consumers' lifestyle in association with their various cultures. In addition, it was recommended to employ focus group discussion to shed more light on available findings on consumers' behavior towards foods/drinks to gain in-depth understanding of consumers' motivations and constraints -social, personal and foods/drinks factors and attributes, across various cultures.

According to WorldBank (2019[b])[30] there are different economic classes among African population, while it is reported by Ncube *et al*. (2011)[31] that Africa's middle category which is a main means for expansion of private business segment is made up of three strata in Nigeria which are; transient, lower-middle and the high-middle category. On the other hand, in Africa as a region, Moyo *et al*. (2023)[32] reported unavailability of research on consumers' sensory

perception and properties of indigenous foods in Africa for a long time, focusing on Nigeria, South Africa and Kenya. Consumers' taste predilection have been reportedly different across Africa (Maritz, 2013)[13]. Furthermore, they reported the cognitive views as being responsible for African consumers behavior, but application of well-known theoretical framework on existent research has been low.

Furthermore, global food flavor marketing is a trend which calls for attention, especially in emerging markets like Nigeria. According to Christy (2019)[33], emerging markets are swiftly taking an advancing essential part in the global economy, as about fifty percent (50%) of its development is being propelled by emerging markets. Therefore, most investors give the thoughts of developing emerging markets into their collection to build up their long-period revenue and variegate and transform their challenges.

In addition, according to WorldBank Group (2019ᵃ)[30]; Ramachandran *et al.* (2019)[34]; and Jones and Edwards (2008)[35], Nigeria has a distinctive position in Africa, being the most thickly inhabited and outstanding emerging market with about fifty percent (50%) of the total populace of West Africa, distinguished in culture with not less than two hundred and fifty ethnic groups, while about fifty percent (50%) of its populace are under the age of thirty (30). National Population Commission (2018)[36] revealed the population of 198 million while Encyclopædia Britannica, Inc (2018)[37] reported variegation in people and demographics.

There have been several reports of research on influence of consumers diversity of food preference. Food preference is influenced by flavors used in manufacturing the food product. Globalization and modernization immensely affect the request for food flavors. As reported by Market Research.com (2018)[7], though food flavors are location- specific, preferences of food consumers are changing as a result of their changing ways of life which have effect on their food custom. On the other hand, these changes in preferences and tastes of the consumers are consistent limitations for manufacturers. However, manufacturers are relentlessly ensuring

they have a bigger portion of the demand through diligent research and development and innovations. This becomes possible when the drivers of satisfaction of Nigerian food consumers are well understood.

On the other hands, as suggested by Flavian *et al*. (2008)[38], inherent quality features and external properties of manufactured foods are expected to facilitate consumers' satisfaction and commitment, and invariably their buying behavior. Saling *et al.* (2016)[39] also reported that customer service and stimulating effect of any of the marketing elements affect customers' satisfaction, and eventually, consumers purchasing decisions. Therefore, findings are expected to reveal the properties of the food product; external environmental elements (economic, socio-cultural and marketing); and personality of individual consumer, which Grubb and Grathwohl (1967)[40] referred to as self-concept, in consumers' satisfaction and consumers' behavior. Furthermore, food preference behavior; evolving consumer behavior among individuals, and as reported by Steenkamp (1993)[41], association between consumer food preference and economic status, would be unveiled.

Findings were partly in line with the report of Nair and Maram (2014)[42], because consumer ways of behaving operate on the supposition that every organization requires understanding of the requirements of its targeted market to excel as it provides the expected satisfaction customers' satisfaction that would surpass its competition. In addition, through a developed marketing audit hinged on theoretical framework of consumer behavior as suggested by Tybout and Hauser (1981)[43], marketing strategies employed by food flavor manufacturers who play in Nigerian market have been unveiled.

The findings of marketing audit would suggest that by checking the elements in the model and determination their association, strategies that would change consumers' buying patterns would be discovered while the extent of their impact would also be measurable. Furthermore, according to Loudon and Della Bhitta (1979)[44], through marketing audit

consumer ways of behaving would be unfolded, as it is considered as a set of actions of decision which take place during a timeframe, which is made up of stimulus, reason and need awareness; quest for knowledge; analyzing of substitutes; and buying and results. This study therefore, entails understanding consumer diversities, global marketing mix strategy adaptation or standardization on purchasing behavior in food flavor industry in Nigerian emerging markets.

Research Problem Statement

Influence of consumers diversities on purchasing behavior is a danger to worldwide marketing, despite worldwide marketing combination in present-time business furnishes international manufacturing organizations with the ease of applying same marketing strategy and advances an established pattern across the globe. National Population Commission (2018)[36] revealed that Nigeria's population which is 198 million is made up of a broad geographical locations and different demographics. This multicultural population has unimaginable diversity, peculiarity and complexity in food taste preference and restrictions. It is therefore, important not to play down the effects of difference that exist in a variegated emerging market like Nigeria, on buying behaviors of Nigerian consumers of flavored foods and marketing strategies employed by international manufacturers of food flavors. Pires, *et al*. (2015)[45] and Akgün *et al.* (2014)[46] are among those who suggested the choice of global marketing strategy of either standardization or adaptation by existing and new entrants' international manufacturers for business sustainability. There is lack of information on specific food taste flavor preference among Nigerian flavoured food consumers; factors that determine their choice of flavoured foods; implications of diversities on their buying behaviors towards flavoured foods; and consequently, marketing strategies (adaptation and standardization) to be employed by existing and new entrants of international flavour manufacturers in Nigerian food flavour industry.

Although there are findings made by many researchers on global marketing techniques in Nigeria and at worldwide level, among which were Bishopton (2018)[47]; Zekiri (2016)[48]; Obasan *et al*. (2015)[49]; Pires *et al*. (2015)[45]; Akgün *et al*. (2014)[46]; Ehikwe (2013)[50] and Ekerete (2001)[51]; there is specificity of food choice and that of consumers as suggested by Steenkamp (1993)[41]. More importantly, in a diverse population like Nigeria, food choice is specific to specific consumers, and food product preference and choice cannot be generalized. As suggested by Rabontu and Boncea (2007)[52] and Loudon and Della Bitta (1979)[44], food consumers buying behaviors need to be understood as a process; while with the self-concept theory of Grubb and Grathwohl (1967)[40], consumers psychology needs to be understood. Furthermore, according to Schiffman and Kanuk (2000)[53], based on economic framework of Marshal on understanding purchasing behavior, individual consumers would purchase products that would provide satisfaction based on their taste and affordability. In the light of these existing concepts, internal and external factors that influence the purchasing behavior of different consumers classified based on demographics, would be necessary to be explored. Therefore, the attributes of consumers, and those of food flavor need to be investigated. Nigerian food consumers are complex and have peculiar requirements due to their diversity, which have great influence on their food buying behaviors, and without these understanding, successful marketing strategies cannot be developed.

Purpose of the Study, Research Aims, and Objectives

The essence of this mixed method research is to explore the impact of dissimilarities in Nigerian food consumers on their buying patterns, investigate elements that are responsible for differences in markets, and provide guideline on marketing strategies- adaptation and/or standardization that will be developed and employed by international flavour manufacturing organizations in Nigeria. In present-day, publications do not exist on worldwide marketing mix covering and comparing cultures, various major regional/tribal groups, and other demographic

in Nigeria for the B2B flavour industry. This study would come up with important marketing information, to new and existing B2B in Nigeria for international flavours manufacturing organization and local food manufacturers. This study would be on hypothetical theory of marketing mix components- price, product, place, and promotion, to show the manner different groups of Nigerian consumers of foods which are being processed behave to each of these components. This would enlighten on strategy to be employed - adaptation or standardization by international food flavours producers, for Nigerian market.

Concrete theory is extant exists on dissimilarities of consumer buying patterns based on demographics. Invariably, deductive research would be used to examine these postulations and to understand what comes into being in consumption of flavors in manufactured food products in Nigeria, using quantitative research perspective as the major viewpoint, while qualitative perspective would be used with some comprehensive interviews with market professionals to comprehend and unveil the basis or causative factors of the occurrence or observations in flavor industry. Questionnaire survey- data gathering instrument, would be employed, with well-arranged questions which would be aimed at the research questions and study objectives. For interview, a sample of unpremeditatedly chosen international flavour-manufacturing organizations which have been playing in Nigerian flavour industry for not less than five years, and those local food producers, would be done. This study aims at exploring the influence of diversity in demographics of Nigerian flavoured food consumers on their attitude towards food flavors as regard their predilection, preference, and purchasing pattern and on marketing strategies used by international food flavour manufacturers.

Nature and Significance of the Study

Following the suggestion of Cohen *et al.* (2013)[54] and Creswell (2002)[55] this study is planned based on noted research objectives; feedback to be derived from research participants

and most suitable methods to be employed; selection methods to be used for respondents; foreseen issues during survey; and moral measures.

Based on the proposal of Creswell (2014)[56], explanatory sequential design would be used, such that quantitative research would be the major viewpoint, while later qualitative perspective would be used to give an explanation for quantitative findings in fullness. Quantitative research perspective would be used to examine hypotheses on dissimilarities of consumer predilection as a result of age, culture, gender, faith and socio-economic status that emerge from theory with respect to occurrences in flavour consumption in manufactured foods in Nigeria. Through detailed interviews with professionals and managements members of some leading players in flavor industry and some selected top players in food manufacturing industry, a qualitative perspective would be used. This would give clear understanding of the manner and rationale for observations made.

In addition, inasmuch as concrete theory exists on dissimilarities in consumer patterns based on variation in their demographics, stand on Lacey and Luff (2009)[57], deductive research would be employed.

Through quantitative research techniques, numerical values would be systematically obtained. Based on the proposition of Lacey and Luff (2009)[57] and Burns and Grove (2005)[58], the findings would be assessed, estimated, categorized, reviewed and explicate the major characteristics of Nigerian consumers of manufactured foods regarding their demographics.

Furthermore, based on the proposal of Earl (2010)[59], this research is being designed to align with the outlined research questions to which objective responses would be provided, and for which data would be gathered to investigate causative association. Participants below 18 years will be excluded in this research. I would neither coerce participants (respondents) nor influence their decisions while anyone that is vulnerable or would be exposed to risk would not be included.

Qualitative and quantitative findings would be obtained from samples (which are chosen participants employing ideal sampling techniques) who are representative of the Nigerian population that consume manufactured foods based on their respective demographics; international flavours producers who are supply food flavours as ingredients to food manufacturers; and local manufacturers of foods which are being processed. Information obtained would be statistically analysed, represented to understand the major characteristics of Nigerian that consume manufactured foods, in order to draw inferences from the samples used. For the significance of study, according to the report of Market Research.com (2018)[7] there is growth in the demand for food flavors due to globalization and innovation. However, influence of diversities in behavior of consumers among different international locations to marketing mix components brings a challenge to globalization. Very importantly, global food flavor marketing is a trend which calls for attention, especially in emerging markets like Nigeria.

According to Christy (2019)[33], emerging markets are swiftly taking an advancing essential part in the global economy, as about fifty percent (50%) of its development is being propelled by emerging markets. Therefore, most investors give the thoughts of developing emerging markets into their collection to build up their long-period revenue and variegate and transform their challenges.

According to Worldbank Group (2019[a30]; 2019[31]), World Bank (2016)[45]; World Bank Group (2016)[46]; Zidafamor (2016)[60], Edewor *et al.* (2014)[61], Jones and Edwards (2008)[35], Nigeria is the most densely populated and prominent emerging market in Africa, with about fifty percent (50%) of the entire population of West Africa, different in culture, with not less than two hundred and fifty ethnic groups, while about fifty percent (50%) of its population are below the age of thirty (30). As reported by Higazi and Lar (2015)[62] and Edewor *et al.* (2014)[61], Nigeria is a large country where citizens coexist, and therefore, requires to be studied due to its cultural diversity. Past research reports exist on cultural, social, economic and political

diversity in Nigeria as they intersect with human resource development and organizational performance within organizations, and /or political stability of the nation, as reported by Akobo (2016)[63] and Edewor *et al.* (2014)[61]. Furthermore, Yakubu *et al*. (2013)[64] reported the research findings on identified factors that influence preference of Nigerian consumers of fresh Beef in Sokoto, a state in the northern part of Nigeria.

Across the world, there are various research reports of influence of cultural diversities on consumer preference, such as Wright *et al*. (2001)[65] who reported on general cultural influences on food consumption and food taste preferences among multi-cultural societies and global markets, which are recommended to be understood in a changing world. However, there are no reports regarding influence of diversity in demographics (cultural, economic, religious, age, gender) of Nigerian consumers on their purchasing behavior towards flavoured manufactured foods in terms of food flavour preference, and on global marketing strategies employed by international food and food flavour manufacturing companies for Nigerian market. The influence of diversity in demographics of Nigerian consumers of manufactured foods on their attitude towards food flavours as regard their predilection, preference, and purchasing pattern and on marketing strategies employed by international food flavour manufacturers, will be unveiled in this research. In other words, information will be provided on how diversities in Nigerian consumers influence their purchasing behavior and international marketing mix plan- adaptation or standardization, in an emerging economy like Nigeria, in order to facilitate marketing strategies of food flavour manufacturers in an emerging market-Nigeria, and ultimately, worldwide marketing.

As reported by Market Research.com (2018)[7], though food flavors are location-specific, preferences of food consumers are changing as a result of their changing ways of life which have effect on their food custom. On the other hand, these changes in preferences and tastes of the consumers are consistent limitations for manufacturers and will remain so if there

is no adequate effort through research and innovation to understand the drivers of satisfaction of Nigerian food consumers.

In other to study drivers of intentions to purchase and consume processed (flavored) and packed foods/drinks, it is essential first to consider the fact that buying decisions can be influenced by various needs which motivates them based on their order of priority.

Research Hypotheses and Questions

Consumers have personal attitude, hence, there is self-perception (Bem, 1972)[8]. Prediction of Nigerian consumer behavior as determined by influence of personal attitude of consumers on their willing and personal buying intention; influence of subjective norms on the buying intention of Nigerian consumers under the influence of other people; and influence of perceived behavioral control over the intention of Nigerian consumers based on their ability/capability.

Hypotheses

H_{01}: There is no relationship among the needs of Nigerian consumers of processed (flavored) and packed foods/drinks

H_{02}: There is no relationship between personal attitude of Nigerian consumers and their willing intention to purchase processed (flavored) and packed foods/drinks

H_{03}: There is no relationship between subjective norms (perceived social pressure) and the decision of Nigerian consumers to purchase processed (flavored) and packed foods/drinks

H_{04}: Perceived behavioral control are not positively related with Nigerian consumers' intention to purchase processed (flavored) and packed foods/drinks

Questions

Q1: What is the relationship between the characteristics of food flavors and the purchasing behaviors of Nigerian consumers of processed (flavored) and packed foods/drinks?

Q2: What is the relationship between demographics of Nigerian consumers, their needs and buying pattern and preference for processed (flavored) and packed foods/drinks?

Q3: What is the essence of diversities of Nigerian consumers of processed and packed foods and drinks in developing marketing strategies for food flavor industry in Nigeria?

Q4: What is the essence of purchasing behavior of Nigerian consumers of processed and packed foods and drinks in developing marketing strategies for food flavor industry in Nigeria?

CHAPTER 2: LITERATURE REVIEW

Global marketing has continuously developed into a present-day business direction, that enables employing same marketing strategy across the globe by any international manufacturing organization. Nevertheless, there are drawbacks in the effectiveness of global marketing strategies due to peculiarities of consumers, and/or local and cultural context which vary across the globe (Diallo *et al*., 2018)[66].

The global growth in food/beverage and flavor industries reflects in the intention of international food flavor manufacturers to expand their business, with much focus on Africa emerging markets, one of which is Nigeria (Fortune Business Insight, 2021[14]; Foodstuff Africa, 2020)[67]. Diversities in consumers have tremendous effect on their purchasing behavior towards processed (flavored) and packed foods/drinks, and both influence the global marketing mix strategies employed by international manufacturers of food/drink flavors. Understanding the diversities of Nigerian consumers, and their attitudes, motivations, social influences enables to predict their purchasing behavior, and develop ideal marketing strategy for any international food flavor manufacturer.

Food flavor industry is developing globally, and Nigeria has gained global attention in Africa. However, Nigeria is diverse and multicultural, hence, the need to understand Nigerian consumers' motivations and develop relevant marketing strategies for the markets (Flanders, 2020[1]; Okoye, 2018[2]). Inasmuch as business expansion of international manufacturer of food flavors depends on comprehension of the intricacies of each market and consumers, it becomes paramount to study Nigerian consumers demographics, way of life and their purchasing behavior towards processed (flavored) and packed foods/drink.

Comprehending the motivational factors and constraints towards the purchasing intention of consumers makes it possible to understand their willingness and interest in future purchase and consumption, hence predict their purchase behavior (Kakkosa *et al.,* 2014[3]; Wu

et al., 2011[4]; De Magistris and Gracia, 2008[5]). The tendency and needs of consumers to purchase and consume products is needs to be understood as purchase intention drivers on the basis of their demographics.

Development of processed (flavored) and packed foods/drinks industry through flavors is a global trend (Global Market Insight, 2019)[6]. Meanwhile, food and beverage industry in Nigeria has gained ground because it contributes over one-fifth of the total value of the manufacturing industry (Flanders, 2020[1]). Furthermore, Nigeria, which is gaining attention in global food and beverage flavor industry due to the market potential, has been identified as an emerging market in Africa (Flanders, 2020[1]; Oyedele and Firat, 2019[68]; Christy, 2019[33]; Ogonu and Nwogu, 2018[69]; Egede, 2013[70]). Akpan *et al.* (2017)[71] reported the importance of food and beverage industry in Nigeria economy.

It is a concern that in spite of the huge market potential and tremendous growth that have been reported in food and drink processing industry in Nigeria, there is still under-development in the industry. In order to improve development of the industry, there is need for differentiation of products so as to satisfy the progressing taste, expectations and needs of young adults and consumers whose monthly income are high (Nzeka, 2013)[72].

Furthermore, global processed and packed foods/drink industry is expanding through evolving consumers' lifestyle, and this consequently enhance the growth of global food flavor industry (Global Market Insight, 2019)[6]. Nzeka (2013)[72] reported the big potential of processed and packed food/drink industry in Nigeria, the leading manufacturers of processed and packed foods/drinks and their product categories. These processed foods and cooking aids include biscuit, crackers, bread, snacks, breakfast cereals, bouillon, multipurpose seasoning, dairy products, spreads, while processed drinks/beverage include carbonated soft drink, still drinks, chocolate drinks, coffee drinks, malted drinks. Nigerian soft drink size has been reported to be among the first four largest market globally, and the trend has been focus made by

manufacturers on variation of flavorings (products) to expand the business rather than quantity and price (Bailey, 2020)[73].

Processed foods/drinks are categories of foods/drinks which have been altered from its during preparation, and the level of processing might be minimal or heavy (Monteiro *et al*., 2018)[301]. They contain some forms of additives which might be preservatives; flavorings used for flavor, aroma and taste impartation; nutrients for fortification and coloring for color impartation (USDA, 2022)[10]. According to USDA (2022)[10] and Nzeka (2013)[72], food and drink flavorings are intermediate products which are used in processed and packed foods.

Signé and Johnson (2018)[74] reported that the use of standardized strategy across Africa cannot work because of variation in taste predilection. Product strategy as it relates to flavor delivery is the new strategy employed in carbonated soft drink products, which was unlike price and promotional strategies earlier employed in Nigerian industry. As consumers are the focus in developing successful marketing strategy (Peter and Olson, 2010)[302] through consumer insights to gain competitive advantage. Signé and Johnson (2018)[74] suggested that 'one-size-fits-all" strategy would not work everywhere, hence the need to study each African market and find suitable strategies based on the peculiarities of the consumers.

Furthermore, in understanding Nigerian consumers peculiarity, though it has been reported to be complex according to Brauw and Herskowitz (2019)[75], there are reports made on comprehending consumers' preferences as influenced by certain food attributes, such as color of food package and content, and nutrition labels on the perception of food healthiness and consequently purchase intention (Huang and Lu, 2016)[76]. Agbaeze *et al*. (2017)[77] reported that the sensorial attractiveness of processed (flavored) and packed foods/drinks and the physical appearance of its packaging have strong influences on consumer acceptance. Total appearance includes color of product/content and package, graphics and labels spontaneously

impact on consumer's mind during purchase decision process. Purchase decision process varies with consumers (Prasad and Jha, 2014)[78].

In addition, Peters-Texeira and Badric (2007)[303] suggested that boosting the color of beverage food drinks could increase perception and prediction for the flavor. On the other hand, Yin *et al*. (2017)[304] reported that food flavor- aroma and taste control appetite as they promote a sense of satiety. Findings were reported on comprehending buying behavior of African consumers (Kuada and Bujac, 2018[305]; Ramya and Ali, 2016[306]), while reports were made on factors which affect Zambian consumers' purchasing behavior (Mweemba *et al*., 2022[307]); purchasing behavior towards soft drinks among Kenyan consumers (Njoroge, 2017[308]). In addition, there have been reports on influence of consumers demographic in some specific locations in Nigeria on their food choices. Udomkun *et al.* (2021)[309] reported the motivating factors and demographic of consumers whose regional home location is Oyo State in Nigeria and Cameroonian consumers of plantain-based food products. Their findings reveal that based on demographic of Nigerian consumers, their choices were based on taste (as influenced by gender), nutrition (influenced by education and earning), and price (influenced by family size).

There are other reports made on consumer purchasing behavior of Nigerian consumers towards some specific products/brands in some regional locations. Isibor *et al*. (2019)[310], Zhou *et al*. (2020)[311] and Jesuleye *et al*. (2020)[312] reported on soft drink in Benin City and for green innovation in Lagos State, respectively. Furthermore, Akpoyomare *et al*. (2012)[313] reported on consumers purchasing behavior in food and beverage industry in Lagos State, and Godswill and Miyene (2020[a314]; 2020[b315]) and Adewumi *et al*. (2014)[316] reported their findings on consumers purchasing behavior in Rivers State and Ilorin, Kwara State, respectively, towards cocoa, tea and coffee beverages, as influenced by demographics and marketing elements- price and product attributes. Salami and Afolayan (2020)[317] suggested the use of local hibiscus calyx as natural and indigenous ingredient in soft drink manufacturing in Nigeria, and health-

benefitting vegetable/spice- turmeric, in fortifying drinks (Idowu-Adebayo *et al*., 2020)[318]. Agbaeze *et al*. (2017)[77] reported their research on chocolate drink brands in Enugu State, Nigeria, while on the other hand, Anetoh *et al*. (2020)[78] reported on essence of sensory attributes in malt drink brands in Nigeria, the significant relationship between consumers' purchase intentions and buying decision and the need for further studies after the exploratory research.

In addition, Flanders (2020)[1] reported their findings on Nigerian food and beverage consumers about their self-esteem need as they spend reasonable amounts on quality products that could been seen by others; high level of brand and health awareness by the urban consumers of foods and beverages; and their price-sensitivity. There is no report on effect of diversity of Nigerian consumers across the different demographics and influence of demographics on their motivations and purchasing decisions. Afolaranmi *et al*. (2020)[79] reported that for some chosen foods and beverages manufacturers in Lagos State. Ansah (2016)[80] reported research findings on Ghanaian market to employ marketing strategies-standardization and adaptation on the multicultural market for the marketing mix elements, while Pires *et al*. (2015)[45] reported findings of qualitative research on marketing strategies for multinational companies in Brazil and suggested similar research should be carried out on other emerging markets, using more than qualitative research methodology.

Effect of global marketing on general business practices in Nigeria, and the efficacy of global marketing mix elements in marketing strategy development were reported by Ogonu and Nwogu (2018)[69]. They further shared the shortcomings of the study which cannot be generalized across Nigeria, and therefore, identified the gap to understand Nigerian food consumers' needs, preferences, and frequency in purchasing and consumption based on multiregional locations, across multicultural backgrounds, and environment diversities.

Furthermore, report of exploratory qualitative research by Oyedele and Firat (2019)[68] on Nigeria as an emerging market focused on small firms, and global alliances unveiled complexities in the market which requires flexibility of marketing strategy. However, research did not focus on food-related products which requires understanding the peculiarities and complexities of Nigerian consumers as they relate to the type of strategies to be employed by international organization.

Descriptors

Food and beverage industry; processed (flavored) and packed foods/drinks; flavor; purchasing behavior; buying behavior; emerging market; Nigeria; marketing strategy; demographics; marketing mix; consumers' food preferences; consumption

Theoretical/Conceptual Framework

Several theories on consumer behavior and detailed frameworks have been established in the past few years to understand how consumers make food selection. Association of individual features, influences and way of life generate the series of actions which results to the ultimate food selection by consumers, despite anticipating food selection has been reported to be intricate, as described by Rabontu and Boncea (2007)[52]; and Loudon and Della Bitta (1979)[44].

As reported by Gorton and Barjolle (2014)[81], elements that affect food precedence / selection are summarized to be the attributes or make up of the individual consumer, of the food itself and the environment of the consumer.

Motivational Theory

According to Maslow (1943)[82], needs are fundamental, interconnected and arranged in the order of importance, and they determine what stimulate a consumer. According to him, as soon as the most crucial need is satisfied, the next in the order of relevance come up or appear.

A consumer's motivation results from his/her seeking to meet the fundamental needs, which are physiological that are conditions/necessities for survival, safety/well-being/health, social/communal for sense of belonging and acceptance in the social group, self-worth/respect, and self-fulfillment/specific personal needs for self-actualization.

Furthermore, as reported by Uysal *et al*. (2017)[83], Maslow's theory of hierarchy of needs involves five major needs- physiological, safety, social, esteem, and self-actualization. **Physiological needs** are the essential needs for survival or existence as human which include needs for breathing, eating/drinking, clothing, shelter, and resting, while **safety needs** are the needs which make provision for an individual's sense of safety, security, good health and well-being, and protection from harm. **Social needs** make provision for an individual's sense of love, integration, belonging, acceptance, companionship, partnership, involvement, togetherness, and membership. These needs are met through family, social group membership, friendship and close association. **Esteem needs** make provision for an individual's needs related to self-esteem, self-regard, self-respect, self-admiration, dignity, and morale. **Self-actualization needs** provide the individualized or personal satisfaction, and self-fulfillment as it is linked to the capability- skills, talent and creativity, to attain their highest potential.

Consequently, these needs generate inner propelling force and stimuli, and hence serve as motivations, which influence an individual's purchasing intentions, and purchasing behavior. It is noteworthy to understand that consumer's frequency of purchase and consumption indicate the degree of satisfaction such a consumer derives from the processed and packed foods/drink (Agbaeze *et al*., 2017)[78].

There are research reports which revealed different consumers' motivations. Rybnicek *et al*. (2019)[84]; Krishna and Strack (2017)[85], Durmaz and Diyarbakırlıoğlu (2011)[17]; Peighambari *et al*. (2016)[86] and Hausman (2000)[87] reported that motivation is influenced by the thought that consumers diligently search for inspiration through stimuli/ impulses and tend

to sustain best magnitude of activation. Therefore, Hanus (2018)[88] and Kaya (2016)[89] reported that the fascination of impulses is influenced by inspiring attributes, which in foods, include price, attributes (such as colour, flavor strength, and uniqueness), ease, satisfaction and health, in respect of the best magnitude of activation of the individual perceiving the food. In other words, individual food consumer differs in the magnitude of activation they prefer most, as the same impulse might just be good for some consumers, and same might be low or too high for others. Furthermore, the level of arousal that was just right for some, might change as there is recurring exposure to the impulse that produce the arousal. Hence, uniqueness may fade with time.

In addition, Lévy *et al*. (2006)[90] reported the findings of their research that predilection is dynamic, as the activation attributes might change with situation in which food is consumed, therefore, distinct stimulations might supplement one another in achieving the most favourable level of stimulation. Gorton and Barjolle (2014)[81] reported that the strongest controlling proposition employed categorically to comprehend food selection as explained are; the economic (ménage and unplanned utility) frameworks, as postulated by Bonke (1992)[91]; the food selection series of action frameworks and the theory of reasoned action or planned behavior. Therefore, according to them, the selection of these trio class of frameworks indicate their effects in research and reports on food choice and employed in various research on strategies.

According to Bonke (1992)[91] economic ménage frameworks which entails the proposition that ménage who have tight schedule and also economically buoyant set aside higher portion of spending on processed food and little portion on unprocessed foods. This framework originated from that of Becker (1965)[92] to understand the influence of rise or drop in earnings and available time on ways foods are consumed, though inadequacies were found as a result of cultural diversities in consumption of processed foods. Furthermore, according to

Gorton and Barjolle (2014)[81] the adventitious utility framework which entails consumers inclinations for a product based on the number of attributes the products possess which meet the specific needs of consumers compared to alternative products. This framework has been employed in understanding selection of natural and additive-free against regular foods with additives, as also reported by Gracia and De Magistris (2008)[93] and liking with refined olive oil as reported by Cicia *et al*. (2002)[94].

On the other hand, in understanding food selection as a series of action framework by Furst *et al.* (1996)[95], consumer's lifestyle, which entails individual's experiential food eating and food selection model; social (including ménage) influences on way of food selection, and individual specific circumstanced necessity or requirement, as suggested by Sobal *et al.* (2006)[96].

Very importantly, Durmaz and Diyarbakırlıoğlu (2011)[17], Peighambari *et al.* (2016)[86], and Kaya (2016)[89] believed behavior of consumers are complex to comprehend, as they are evolving and hence, the importance of comprehending their motivations, predilection and what constitute their necessities. They further reported that consumers' behavior could be anticipated based on personal viewpoint, emotional makeup, intention, nature and manner of learning.

Cognitive Theories

The theory of reasoned action, which thereafter became theory of planned behavior by Ajzen and Fishbein (1980)[97]; Fishbein and Ajzen (1975)[98]; Connors *et al.* (2001)[99]; Ajzen (2015)[100] and Khayeri *et al.* (2019)[101] is most well-known of the numerous postulations which are clearly related to definite subconscious and unconscious influence and deliberate action plan to achieve change in behavior. The theory is founded on the assumption that behavior is clearly evoked by intents, which consequently are affected by mindset and beliefs in an individual consumer's values and manage likelihood, and in the decision of people whose

views are essential to them. However, Honkanen *et al*. (2005)[102] and Verbeke and Vackier (2005)[103] reported that in their studies, past experiences are more essential in influencing food choice, than attitude and beliefs.

Furthermore, the theory of reasoned action which was established by Ajzen and Fishbein (1980)[97] was on the basis of credence of direct factor that prognosticate behavior of an individual is a behavioral intention. Behavioral pre-planning (intention) hangs on an individual's frame of mind towards such conducts, actions and the values of other people. Frame of mind reveals credence about behavioral aftermath in conjunction with an assessment of the results of that action, while subjective norms bring up the social pressures received by an individual to act in a particular manner as they are motivated or inspired to conform to another people's disposition.

As a result of the theory of reasoned action and theory of perceived behavior, it was drawn from suggestions of Ajzen and Fishbein (1980)[97] that consumer's actions were reported not to be directly influenced by frame of mind or good suggestions/attitude, rather it modifies the behavioral intentions (motives) which, consequently, frame their behavior. As reported by Otuedon (2016)[104], the elements that explicate the individual's resolution or choice to purchase a food product are demographic; external or environmental- societal values (social and cultural), cost-effectiveness and opportunity cost (economic), political, legal or regulations; and internal- motivation and inspiration, knowledge (tacit- acquired or experiential knowledge, and codified knowledge- explicit), cognizance, worth, moral/ethics, frame of mind, emotion, situation, reliability, buying scale of preference, and product functionality, performance or attributes, as perceived (taste perception, inclusive).

There is particularity of food selection to consumers, as Steenkamp (1993)[41] suggested that food product preference and selection cannot be generalized, and this becomes very relevant in a diverse population like Nigeria. Petrovici *et al*. (2004)[105] reported a consumer

research conducted to explore factors that influence Romanians food selection through a adjusted form of the theory of reasoned action. Popovic *et al*. (2019)[106], under attitudinal theory reported that personal experiential knowledge greatly influenced consumers' behaviors than general knowledge (attitude or point of view) which are not personal.

As Grubb and Grathwohl (1967)[40] self-concept theory of consumers psychology needs have been reported to be essential, therefore, in other words, knowledge, which is associated to self-concept or introspection is. Personal experience (experiential knowledge) of a food product is crucial in an individual's buying decision. Education is also important as studies reveal that the level of education can affect buying behavior and consumers predilection. In addition, Popovic *et al*. (2019)[106] has reported that attitude (frame of mind) drifts with time as recent information or discoveries which deliver knowledge unfold, therefore affecting prognostication of consumer's food buying decisions.

Based on theory of perceived behavior of Ajzen (1991)[107] that behavior of an individual is directed by behavioral beliefs, regulating beliefs and directed beliefs. As reported by Peighambari *et al*. (2016)[86], Petrovici *et al*. (2004)[105], and Popovic *et al*. (2019)[106], consumers buying pattern was understood through the comprehension of motivation to an attitude that led to their buying behavior; individual's perception or awareness of social regulating influences, or applicable societal credence on restrictions to carrying out such behavior; and the beliefs of an individual about the existence of elements that may enhance or debar carrying out the behavior.

According to Theodoridou *et al*. (2017)[108] who employed theory of reasoned action of Fishbein and Ajzen (1975)[98], they reported a more straightforward perspective of consumers' behavior in the situation of examining the aftermath of their actions prior to decision-making (as suggested by Ajzen and Fishbein, 1980)[97], and thereafter applied such outcomes in their behavior. However, Ajzen (1991)[107] reported that theory of reasoned action had some

limitations in associating intention and behavior. On the other hand, Tsourgiannis (2014)[109] and Gupta and Ogden (2009)[110] reported the theory of planned behavior (Ajzen, 1991)[107] framework that describes that an individual's intent to act greatly influences the action. Bakti *et al.* (2019)[111] employed the theory of planned behavior in buying health-giving food as it relates to how young consumers perceive it. Being an important theory to understand and prognosticate their actual behavior through the firmness of their behavioral intention. In the situation of purchase intention, a firmer intention has been reported to result in a higher likelihood of buying behavior.

Alam and Sayuti (2011)[112] reported their study on buying intentions regarding Halal foods, while Bakti *et al*. (2019)[111] reported on functional foods. Halim and Hameed (2005)[113] described buying intention as a circumstance whereby a consumer select a particular product, and/or chooses to purchase the specific product in thereafter. Furthermore, Wekeza and Sibanda (2019)[114] reported their studying on buying intention of organically cultivated foods. Attitude, an essential element in the product buying series of action, was described by Ajzen (1991)[107] as the way an individual evaluates a product, either by approving or disapproving it. It builds the consumers frame of mind towards the product.

Popovic *et al.* (2019)[106], under attitudinal theory, suggested that it is not enough to know, but to do or act, as overall, attitude portray consumers' impression of a product. Reports were made on observations which linked the influence of attitude on behavioral intention by Alam and Sayuti (2011)[112] on Halal food buying; Ajzen (2015)[100] on food consumption resolution; Bakti (2019)[111] and Sumaedi *et al*. (2016)[115] on communal vehicle use; and Rana and Paul (2017)[116]; Vehapi and Dolićanin (2016)[117]; Paul and Rana (2012)[118], Shepherd *et al.* (2005)[119] and Conner *et al.* (2002)[139] on healthy eating.

Rana and Paul (2017)[116]; Vehapi and Dolićanin (2016)[117]; Paul and Rana (2012)[118]; and Shepherd *et al.* (2005)[119] reported the effect of attitude on organic foods as it becomes relevant

to this study which focuses on food flavors which are food additives in processed foods. Furthermore, Popovic *et al.* (2019)[106] reported demographics, consumer viewpoints, knowledge of environmental influences of packaging, optic artist impressions/representation, functionality, cross-cultural diversity, and affordability, as elements that influence consumers' decisions to buying food in eco-friendly packaging. Suki (2013)[120]; Zakersalehi and Zakersalehi (2012)[121]; Kaufmann *et al.* (2012)[122]; Finisterra do Paço *et al.* (2009)[123]; Memery *et al.* (2005)[124]; Ruiz *et al.* (2001)[125] reported the effects of demographics (age, gender, knowledge) on food buying preference.

Subjective Norm

Ajzen (1991)[107] suggested that subjective norm is an element that is consumers' perception of peers' coercion to act or not. McDermott *et al.* (2015)[126], Venkatesh and Davis (2000)[127] and Manning (2009)[128] reported how consumers' behavior were influenced by consumers' social surroundings. There are influencers in buying (that is the actual consumers of the food), and social influencers of buyers. Ham *et al.* (2015)[129] reported their research on the two kinds of subjective norms in predicting Southeastern European consumers' purchasing intention towards green food. They concluded that descriptive norms (how others behave) significantly serves as predictors of purchase behavior, and the amalgamation of social norm (perception of how other should behave) and descriptive norm raises the chances of consumers' purchase intention towards green food.

Some researchers reported association of instinctive norm and behavioral intention and these include Bakti *et al.* (2020)[130]; Bakti *et al.* (2019)[111]; Sumaedi *et al.* (2016)[115]; Alam and Sayuti (2011)[112]; and Halim and Hameed (2005)[113]; while Khayeri *et al.* (2019)[101]; Chen (2017)[131]; McDermott *et al.* (2015)[126]; and Connor and White (2010)[132] confirmed the influence of instinctive norm on behavioral intention. Consequently, Chen (2017)[131] used the theory of planned behavior framework for prognosticating consumers' food choices and consumption

behavior, and to speculate communal intention to take no chances on consuming foods with additives.

Regarding viewpoints toward perceived behavioral control of the ingestion of food containing additives, the effect of recognized risk was reported to be essential in understanding an individual consumer's intention in order to be careful to do away with foods with certain additives. Awareness of an individual consumer of food additive misconduct and their recognized risk influence their attitude toward consuming such foods and drinks, were reported in their studies.

Perceived Behavioral Control

Perceived behavioral control was described by Ajzen (1991)[107] as the essential element that impacts consumers' behavior, being consumers' perception of the simplicity or awkwardness of carrying out an action that is considered to be important. In other words, he reflected consumers' capabilities to take actions, as it was associated with resource, good occasions, and threats, as huge resources or good occasions to take actions or lesser threats would lead to a firmer intention to take actions.

Ajzen (2015)[100]; Alam and Sayuti (2011)[112]; Conner *et al*. (2002)[139] have reported their findings on impacts of perceived behavioral control on behavioral intention. In the situation of organic foods – foods without additives. Chen (2017)[131], Rana and Paul (2017)[116]; Vehapi and Dolićanin (2016)[117]; Paul and Rana (2012)[118], Shepherd *et al.* (2005)[119] reported their findings on the research on organic foods and on similar ones, regarding consumers' behavioral intention, being impacted with perceived behavioral control. On the other hand, Kaufmann *et al.* (2012)[122], and Paul and Rana (2012)[118] reported that health and educational status, and availableness from demographic elements affected consumer's attitude towards purchasing organic food in a positive way. General contention of purchasers for natural food is greater than processed food but the extent of contentment differs with various elements. In addition,

perception of organic products was reported to be an element that accounts for consumers' buying behavior towards organic foods by Rana and Paul (2017)[116]; Vehapi and Dolićanin (2016)[117]; Paul and Rana (2012)[118], Shepherd *et al.* (2005)[119]. Furthermore, Vehapi and Dolićanin (2016)[117] reported that consumers' practical contact with or discovery of risk of food and health, accessibility, development status of the country and enlightening experience from elements that relate with the structures of population influenced consumer's attitude towards buying organic foods, in a positive manner.

Furthermore, the findings of Rana and Paul (2017)[116] and Suki (2013)[120] revealed that consumers that were concerned about healthy diets and lifestyle had increasing fondness for organic foods more than processed foods. The attitude change of the contemporary consumers was majorly affected by the increasing events of lifestyle-related illnesses. The request to buy organic food to ameliorate the standard of life was reported to have impacted on sales and marketing operations of business. Therefore, it was reported that consumers might have cognitive transformation and develop purchase behavioral reaction due to the impact of inner (intrinsic) motivation from wellness inclination, and extrinsic motivation (events of food-related risk). Based on risk, natural and well-being framework, the development of organic buying behavior of consumers had reportedly undergone the phases of intrinsic and extrinsic motivation (wellness inclination and events of food-related risk), cognitive tasks, and consumer reaction; the buying behavior.

Field and Industry Description

Food flavors (flavorings) are described by Trasande *et al.* (2018)[417] and Paula Neto *et al.* (2017)[407] as food additives which are added to processed foods to impact, improve, and/or retain their taste, thereby making them more appealing, as they make it easy to situate products to get the attention of a target market group. Various food flavors are added for distinct reasons which include new product development and/or improvement on existing products. According

to Yang and Lee (2019)[133]; Sirangelo, T.M. (2019)[134], flavor, as an attribute, is the sensory profile of food that is detected by the gustatory and olfactory sense. Various flavorings consist of synthetic components which give them strong flavor impact in food over a long period of time.

Allied Market Research (2017)[6] suggested that rising consumers' quest for convenience in food all over the world is the major driver for worldwide flavors. This is explained by transforming consumers' lifestyle and eating behaviors. However, rising apprehension in risks as they relate consumers' health and strict regulations might hinder the expansion of worldwide flavors market, as consumers' predilection are drifting from synthetic flavors. Nevertheless, emerging markets like Nigeria, would hopefully, unlock present-day opportunities to the main flavor manufacturing organizations which play in the market.

According to Reineccius (1996)[135], to a great level, food acceptability hangs on its flavor delivery. Food flavorings are synthesized from natural and/or chemical aromatized materials, with the main aim of improving the acceptability of a resulting food by imparting a chosen flavor, or to change the existing flavor, or conceal an unwanted flavor. Consequently, processed foods and drinks are improved in taste and made more appealing. In addition, Reineccuss (1996)[135] reported that elements that influence the level of acceptability of a food or drink product are numerous and complicated. Consumers' final choice and level of acceptability depend on sensory attributes- aroma, taste, appearance, consistency, and texture, and the level to which consumers are stimulated. Consumers' sensitivity has been reported to be very crucial as well.

According to Mondor Intelligence (2020)[136] and Radiant Insights, Inc (2018)[137], food and drink remain the supreme interest to everyone, as they provide energy and hydration, which are requirement to life. However, the first impression and continuous successful performance of most products are greatly influenced by consumers' positive response to such products.

Reineccuss (1996)[135] reported food flavor industry developed well over a century, and came up from natural extracts manufacturers, while later the technology of synthetic aromatized compounds evolved from Europe, and later in United States of America.

Zion Market Research (2020)[17] reported that flavor industry is a well-developed one in the world. The flavor industry expanded as some bigger flavor manufacturing companies set up local manufacturing sites for better performance and efficiency in meeting the growing needs of the industry. Furthermore, Zion Market Research (2020)[17] reported that flavor market is region-specific, as the demand for some specific flavors are different with region, hence, food flavor manufacturing companies focus on thickly populated regions, which are North America, Asia-Pacific, Europe, Middle East, and Africa. In the same way, Nigeria, which is reported by National Population Commission (2018)[36] to have large population with diverse consumers, has peculiar consumers food choice specificity.

Radiant Insights, Inc. (2018)[137] and Allied Market Research (2017)[6] reported that rising demand in food and drink flavors, and invariably in the flavor market, is driven by ceaseless innovation. Rise in urbanization and disposable income favors the growth of the industry due to drift in consumers' lifestyle towards consumption of processed foods and drinks which require food additives (such as food flavors). These elements give rise to food flavor demands and expansion of the industry. On the other hand, according to Allied Market Research (2017)[6], increasing demands for healthy foods and clean-labelled foods from the perspective of natural and synthetic food additives; the cost of manufacturing natural flavors; and shelf-stability of natural flavors are the main constraints for the global flavor market. Globally, some artificial additives such as some synthetic flavors are being substituted with natural flavors which have been mentioned to be carcinogenic.

MarketsandMarkets (2015)[138] reported that flavor market value growth forecast for the next five years from year of report was 5.4 per cent, while Wood (2019) reported 4.8% value

growth and about 32% increase in revenue in six (6) years from the year of report. The worldwide flavor market is divided and intensely competitive, with numerous flavor manufacturing organizations as market players existing at different levels-regional and national. The main global market players, which are also dominant in Nigeria, have employed various growth strategies, such as to innovate, develop, acquire and expand their businesses. These strongest and leading multinational players in flavor industry as reported by Leffingwell and Associates (2018)[9] are Givaudan, Firmenich, Symrise, IFF and others.

Nigeria- An Emerging Market with Diversity

According to Christy (2019)[33], Worldbank Group (2019)[30], and Jones and Edwards (2008)[35], Nigeria, is an emerging market, which has some features of a developed market, but is yet to fully meet its standards, as it is growing to become one in the future. It is one of the emerging markets, which are rapidly growing in the worldwide economy. As a result of this, many foreign organizations are eager to invest in such developing markets and include such markets in their cluster to develop long-term revenue generation and tackle business challenges. According to the report of Varella (2020)[a 140], Nigeria's economy is diverse, and mainly private and government owned. Being an emerging economy, it is owned by low mid-incomes, which according to the illustrations of Prahalad (2009)[141] and Sheth (2011)[142], make the highest proportion of consumers who are in small earning class in this economy and make up the base/foot of earning pyramids, hence, contribute most that is absorbed into the economy, and its growth.

In Africa, Nigeria is one of the leading countries, which has the greatest Gross Domestic Product, which Africa WorldBank Group (2019)[30] reported to have expanded by 5% every year from 2000 and 2014, and to over $400 Billion in 2019, as reported by Varella (2020)[a140] . According to Toh (2016)[143] the critical moment for the current expansion in region of Sub-Saharan Africa started in the past decade. Though it is not same across this region, as poor

economic development is being recorded in over thirty percent of the countries, Nigeria is one among others with retained relatively good growth, as compared with the more developed countries within the region. In addition, according to Jones and Edwards (2008)[35], the biggest petroleum trader in the region, with United States is Nigeria.

Africa Rising (2011)[144] reported that after years of retarded development in Africa, the continent now is opportune to come after Asia, as the continent's passion for technology is growing, and health of numerous Africans is booming. As reported by The Economist (2013)[145] and Africa Rising (2011)[144], the buoyant economy explains why it has now become one of the global most rapidly growing continents. Furthermore, Brooks (2018)[146] identified the economic elements that enable economic growth in Africa as foreign investment and the growing middle class. It was reported that from year 2000, African countries became more open to international investors, while Carmody (2011)[147] reported that leveraging the natural endowments in Africa, the new investments which include those from the five countries, South Africa, India, Brazil, China, Russia, explains its export reverberation.

Corral *et al*. (2015)[148] reported the increasing attentiveness of middle class in numerous developing countries like Nigeria, which was quite challenging to identify. Establishing on current standpoint to explicate middle class, they determined its magnitude in Nigeria, as well as understanding poverty limit, using published data on expenditure, thereby arriving at expenditure boarder way of below NGN 400 per day. Furthermore, they reported the significant increase in the magnitude of middle class from 2003 and 2013. Melber (2016)[149] reported that though investment of multinational organizations has been rapid in Africa, it has been tough to group economic middle class of consumers. It becomes important to focus on the economic middle class of developing countries like Nigeria, as Corral *et al.* (2015)[148] has reported that they are the performer in moulding the social, economic and political landscape, therefore, growing middle class has become a major feature in emerging markets like Nigeria. Therefore,

it is central to the growth of Nigeria economy, and invariably economic emergence of Nigeria is linked to emergence of its middle class. Consequently, in estimating the magnitude of middle class and its relevance, the economic perspective is essential to a large extent.

In Nigeria, as reported by World Bank Group (2016)[150], the last decade of rapid economic developed has produced a blossom class of experts and employees, while entrepreneurship has been improved in many sectors. The Africa Development Bank published the first detailed report on middle class in Africa, using boarder way of consumption per capita per day of not more than twenty dollars ($20), and having three sub-groups within the group on the same basis, as floating, low mid-class and up mid- class. Furthermore, it was reported that a little over thirty percent (30%) of the entire economic class of Nigeria fell in the middle class (AfDB, 2011)[151]. On the other hand, The Standard Bank (2014)[152] published an estimation of the magnitude of the middle class in some selected countries in Africa, that there has been tremendous increase over a decade, with Nigeria having highest share. In addition, it was unveiled that due to lack of employment and government policies, the middle-class now exists across all spheres.

As reported by McKinsey (2014)[153] in estimating the magnitude of the middle class in Nigeria, there was increase in population and magnitude, as about eight million households had income of about eight thousand dollars ($8,000) per year. The growth of the middle class in Nigeria has been replicated by a general change of consumption style, as many there are many new market entrants who are foreign investors in different sectors (food sectors inclusive) and have introduced foreign form of middle-class commercialization. More Nigerians shop at commercial and super stores (McKinsey, 2014)[153]. Regarding the definition of middle class, Corral *et al*. (2015)[148] employed the pattern of Lopez-Calva and Ortiz-Juarez (2011)[154] to describe middle class from the perspective of extent of household susceptibility to poverty. In a similar way, Ferreira *et al*. (2013)[155] estimated household middle class in developing

countries like Nigeria, be employing and establishing poverty boarder line based on household income and consumption frequency.

From geographical perspective, Varella (2020)[b156] reported that in 2019, some Northern Nigerian states recorded the highest number of people subsisting beneath the destitution line, while the least rates were from South and South-Western states of Nigeria, with Lagos having the least across the country. Currently, about forty percent (40%) of the population of Nigeria subsisted in destitution, based on less than one hundred and forty naira (NGN 140) established as boarder line for destitution. Furthermore, Varella (2020)[b156] reported that Nigeria had one of the greatest inflation rates across the world in 2019, as revealed by rise in Consumer Price Index indicating decline in buying power of Nigerians. In addition, it was reported that about one quarter of population of Nigeria was unemployed, as at 2018.

National Population Commission (2018)[36] reported that Nigeria's population was about 200 million, with different characteristics among people, ethnicity, culture, language, faith/belief and socio-economic group, as reported by Encyclopædia Britannica, Inc (2018)[37]. According to Archibong (2018)[157], and Jones and Edwards (2008)[35], the highest populated country in Africa, Nigeria, which has above fifty percent (50%) of the entire population of West Africa, with various customs, ethnicity (above two hundred ethnic groups) and beliefs, is full of heterogeneity. In addition, Nigeria is a country among few with the highest difference in ethnicity globally. Hausa and Fulani mostly occupy the western and central parts of Northern region; east of the Northern region Northeast is occupied by the Kanuri; Yoruba occupies the west of Southern region; Ibo occupies the east of the Southern part; and the south of the Southern Nigeria is occupied by tribes such as Ijaw, Ibibio, Itshekiri and other minor ethnic groups.

According to the reports of Varella (2020)[c158] about fifty percent (50%) of Nigeria population are below the age of nineteen years, with age four and below being the age group

with greatest population, and there is not significant difference in population based on gender. Population of people between five and nine was next largest, and population with least value is sixty years and above. According O' Neill (2023)[159] in 2021, Nigeria population was made up of about 22.43 % of young age adult group (19-39 years); 14.43 % for middle age adult group (40-59 years); and 2.98 % for young age adult group (60-70 years).

Trends in Consumers Food Behavior

According to Hanus (2018)[88], in recent times, consumers' food behavior has been evolving, and this has been linked to both intrinsic and environmental elements. These have been reported to have impact on some crucial new developments and occurrences, among which is globalization, which invariably have effects on strategies, more importantly, marketing strategies, which food organizations have established.

Furthermore, Hanus (2018)[88] reported that other trends in food consumers behavior are consideration of convenience (disposable time), wellness, as also suggested by Thompson and Moughan (2008)[160], Wekeza and Sibanda (2019)[114]; and natural food products consumption; usage of environmentally-friendly products and packaging (Prothero *et al*., 2010)[161]. In addition, Costa and Jongen (2006)[162], and Tkaczyk and Kołuda (2013)[163] suggested that consumers curiosity and knowledge regarding food safety (product expiration, allergen content, nutrition facts, food composition and information on label or food product packs), and 'borrowing' foreign food products, are the trend of food consumers' behavior.

In addition, Hanus (2018)[88] and Tkaczyk and Kołuda (2013)[163] suggested that these new shifts in food consumers behaviors notably affect the marketing strategy of food companies in the food industry, and much more for an international organization, whose objectives are to make available product offerings in different markets and distribute them, in a manner that satisfy procurers. Coupled with these, technological advancement come up with

Figure 1

Ethnic Groups in Nigeria
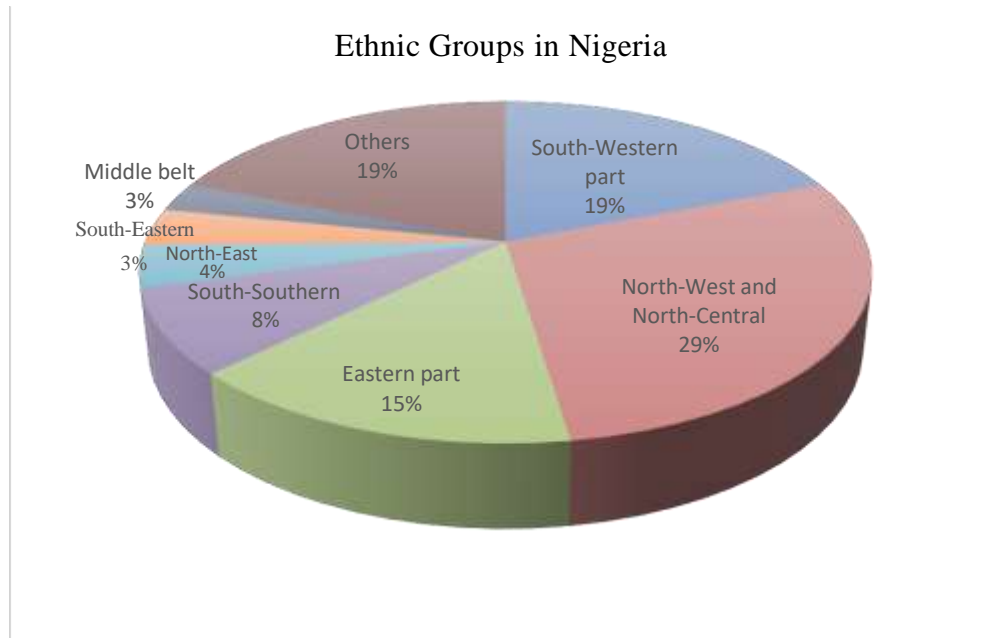
Source: (Modified) Encyclopædia Britannica, Inc. (2018)[37], *Nigeria;* and (modified)

Archibong (2018)[157], Historical Origins of Persistent Inequality in Nigeria.

Reference to Appendix I

the situation that makes consumers seek products that meet their different requirements, based on its level of importance.

Globalization has been reported by Kearney (2010)[164]; Harjadi *et al.* (2020)[165]; Samimi and Jenatabadi (2014)[166] to be evident in the trendy consumers style and series of actions of food consumption across different cultures.

Globalization in Nigeria

According to Eze (2014)[167], globalization, the mutually dependent relationship among countries in different aspects with the aim of economic growth, enhance is exchange of culture and alignment of different beliefs. It refers to the convergence of different people, cultures and establishment, and the series of action for their integration across the globe. According to Onwuka and Eguavoen (2007)[168], globalization entails interdependence among countries, and the main drivers are technological advancement, government policy and competitive activities. Eze (2014)[167] reported that as globalization has multiple phases, which are from political, environmental social, technological, legal, economic, and cultural perspectives. It has been reported that acculturation enables a developing country like Nigeria, to understand and fully utilize breakthrough of other countries so as to improve its own peculiar culture and ethics, devoid of missing its distinguishing features. Consequently, local and foreign cultures are integrated, as suggested by Akinola (2018)[169] who emphasized on the essence of political dimension in the success of globalization in Nigeria.

According to Schwartz *et al.* (2010)[170] and Kuo (2014)[171], culture, the entirety of the lifestyle of a group of people, is revealed in their past life/record, belief, principles, ethics, and feeding/food. It is the common style of life, in terms of perception, assessment and reasoning, which is developed from the alignment of mechanical and mental way of behaving and results from interaction with others and the surrounding. It is what differentiates people but is it is dynamic, hence evolves with time and age. In addition, according to Zidafamor (2016)[60] and

Maehler *et al.* (2019)[172], the two dimensions of culture; enculturation and acculturation, influence people in either or both ways. Enculturation, the series of action through which an individual gets to know about culture by birth, involves person-to-person, or generation-to-generation transmission of common ethics, faith and behavior of the participants of a group. Therefore, it may involve in-born or inherent cultural traits.

On the other hand, acculturation, the series of action by which there is culture-to-culture transmission of attributes, brings forth a new trait in cultures that align. In a nutshell, it entails acquiring cultural traits, without loss of peculiar and distinctive features. According to Mason and Dunung (2012)[173], invariably, there is integration of foreign and local perception, which results in local comprehension of worldwide drifts or insights. They further reported that acculturation means intercultural or across the culture association, which levels cultural differences, as it unifies cultural, social, religious and tribal biases. Itumo (2016)[174]; Adesina (2012)[175], and Onwuka and Eguavoen (2007)[168] reported that monocultural economy which Nigeria practically limits its benefits of globalization despite it the fact that it boosts the country's economy through foreign investments and employment of Nigerians.

Contextual Influences of Diversity on Food Taste Choice

Food flavor and taste are qualities in food, but based on different cultures, there are different expectations (Wright *et al.*, 2001)[65]. Xazela *et al.* (2011)[176] reported that the technique employed in food processing affects the flavor and can be used to classify them culturally as the case may be. Food variation in regions are basically different in the larger flavor principle.

The elements of geography, history, economy and religion of any culture all determine its food choices. Influences of tradition on food preference is more preserved in developing countries. Furthermore, according to Drewnowski (1997)[177] and Savage *et al.* (2007)[178], social ties (family bond inclusive) influence food preference significantly, as the importance of cordial association has been found to be very high in making and sustaining long-term

association, which alongside trust are crucial to the manner in which people relate. The quest for identification through food consumption is exhibited in the manner in which consumers come together as a group. In addition, it has been discovered that believably authentic tastes are founded on social constructions which are being elaborated over age. Therefore, the impression that food tastes are influenced by antecedent circumstances or family standard and communal set of actions. Bourdieu (1984)[179] ascribed the love of working group for sweetness to necessity, which results from insufficient level of satisfaction. Invariably, love of sweet taste in middle group can be traced to acquired taste from parents who are from working group.

Consumer Food Choices/ Preferences

According to Bonke (1992)[91]; Sobal *et al.* (2006)[96] and Rozin (2006)[180], decisions on food choice are repeated, multiple-phased, circumstantial, dynamic and intricate, and result in ways consumers act towards food, in different aspects like where and what they procure, put together, present, provide, reveal, keep, eat, and store, eat, and reorganize. Rozin (2006)[180] and Bartkiene *et al.* (2019)[181] suggested that food choice entails selection, liking, inclinations and food and drinks consumption, with the consideration of the type of food people eat, the way they eat, the time and the frequency of what they eat, the place they eat, with whoever they eat and other forms of their food and their eating behavior. It is emblematic, and therefore, reveals the economic and social state as it conveys predilection, identification and cultural significance.

According to Sobal *et al*. (2006[96]; 2009[182]), food preferences are critical in consumer request from food vendors, manufactures and distributors in the food system. Food choices involve types of food nutrients and materials that are ingested which invariably have effects on consumers state of health and life. In addition, it has physiological, economic, social, cultural, cognitive and health relevance to consumers. Wright *et al*. (2001)[65] reported the effect of culture on food taste predilection and the consequences for consumer studies. They explored

the origin of some subcultural food taste predilection and consumption in some specific countries.

Taste has been reported to be an expression of societal resources. According to Hanus (2018)[88] and Bartkiene *et al*. (2019)[181], a general suspicion of reason of the aspect of taste preference makes it become essential in putting into consideration the deep levels of human food taste predilection on the basis of cultural situation in marketing strategy.

Drewnowski (1997)[177] and Wright *et al*. (2001)[65] reported that food consumption is essential not only as a way of nourishing the body but in addition, to establish exchange of trade and create cultural connections among countries. Functions of food consumption are numerous, as it serves as a way of relaxation for personal indulgence or as a center for bonding in social gathering and with family, which consequently play some parts in the overall personal and social feeling or perception of well-being. Furthermore, from inception, according to Kearney *et al*. (2000)[183] and Sobal *et al.* (2006)[96], food taste predilection has been well connected to cultural evolution. It is associated with consumers lifestyle, traditional faith, community-based disposition and ideas of attributes of religious and social groups.

On the other hand, Lo *et al*. (2009)[184], and Drewnowski and Darmon (2005)[185] reported the effect of economy on food choice. As consumers become more economically buoyant, they change from meeting necessities that are mere physiological to satisfying those that are societal and emotional (as represented by Maslow's theory) which are molded by their country and groups they are members of. As suggested by Hanus (2018)[88], it becomes paramount to understand that usually, in an evolving world, conflicts exist between ethics and point of views which are connected with established indigenous cultures and the new offerings from other countries.

Factors and Dynamics in Food Behavior

As reported by Hanus (2018)[88]; Franchi (2012)[186]; and Sobal *et al*. (2006)[96], numerous forms of suppositions apply to decision making in food, and these are from the point of view of social disposition, reality, clarity and focus. They give insights but not full explanation of food choice decision. According to Devine (2005)[187], food predilection is also affected by individual and cultural way of thinking, and restrained by immediate situation and resources. Family settings which entail household leadership, presence of offspring, state of health of members, and the household members roles in food selection, have effects on food security and healthy living of the family and healthy living.

In addition, Sobal and Bisgoni (2009)[188] and Sobal *et al.* (2006)[96] employed constructivist perspectives to establish a framework of food choice series of action that arranges a wide range of factors and dynamics concerning food behaviors. Their theory entails the supposition that consumers obtain their own knowledge and take their decision through direct experience. Hanus (2018)[88]; Franchi (2012)[186]; and Sobal *et al*. (2006)[96] suggested that work life affects food choices in a number of ways, such as influences of resources (available time and money) on food choice.

Furst *et al*. (1996)[95] established the model of food preference series of action, an influential approach on the basis of balanced framework. This model comprises of the lifetime impacts and personal structure. Sobal and Bisgoni (2009)[188] and Sobal *et al.* (2006)[96] reported that food preference series of action model includes the life experiences which initiate and create a food preference direction/track through passage, crucial moments, timing, and situation. In addition to these are individual and cultural factors that affect ways of thinking regarding food selection, and an individual system that builds food selection values, arranges and equilibrate values, segment foods and circumstances, and builds or modifies food selection plan of action and program. Furthermore, they reported that these components of the

framework actively interrelate in decision making of food selection which results in food behaviors, as not just one framework has complete explanation of decision making in food behavior. They therefore, concluded the requirement of many perspectives including constructivist reasoning.

Food Preference Trajectory

Furst *et al*. (1996)[95] suggested the essence of comprehending food preference direction, tracks and course in order to have deep understanding of present-day food consumption style. This entails understanding an individual's lifetime regular thoughts, reasoning, ideas, fondness, feelings, approach and plan of action. In general, consumers are people who establish food choices in numerous techniques by diligently choosing based on the specific food to eat, and the time, place, way/manner, and people to eat with. As reported by Malter *et al*. (2020)[189], people grow and evolve over time they are transformed by their surroundings, hence, they individually establish life trajectory which entails earlier and current eating experiences and circumstances, and projections about future probabilities.

Furthermore, Kabir *et al.* (2018)[190], and Gorton and Barjolle (2014)[81] suggested that food choices are not static but change with time, and that an individual obtains more experiences over time which change with situation in which he or she finds himself/herself. Therefore, it is appropriate to employ a life trajectory technique to comprehend food choice as it goes well with evolution of natural way of life with transforming social, economic, environmental, behavioral and cultural situation in which the person eats. According to Sobal and Bisgoni (2009)[188], Sobal *et al*. (2006)[96], Devine (2005)[187], and Devine *et al.* (1998)[191], every latest food choice experience builds on an individual's life trajectory and transforms following food choices to be made. Very importantly, persistent circumstances, past experience and parental upbringing (Devine *et al.*, 1998)[191] and familiarity (Jeong and Lee, 2021)[15] have

been reported to influence food choice decision of food consumers, as they also shift in life and these become their food choice pattern.

Furthermore, Devine (2005)[187] reported the effect of environmental changes on food choice trajectory, such that, as the environments (physical environment inclusive) within which life trajectory evolution takes place, people form individual food choice course in line with the change, and this happens at distinct times in their lifetime. According to Gorton and Barjolle (2014)[81], and Sobal *et al.* (2006)[96], the understanding of transformation in the food choice course of groups of people makes it possible to comprehend effects of communal, economic and food structure directions on food preferences. Consequently, Sobal *et al.* (2006)[96] and Rozin (2006)[180] reported that these passage of transformation and crucial moments cause changes in household function, materials, health or situations in manners that also change individual food systems, thereby, most likely leading to slight alteration of food choice patterns.

Sobal *et al.* (2006)[96] (in Shepherd and Raats, 2006)[192] suggested that there is construction of fresh individual food systems which starts unrelated food choice course with the particular measure of an occurrence affecting food choices and/or the way it may affect food choices. They further suggested the approach of employing current frameworks to understand food preference, and this include the theory of planned behavior and theory of social cognition. Furthermore, Rozin (2006)[180] presumed that biological, anatomical, sensory, cognitive, psychological and sociocultural effects and series of actions are engaged in making food choices. Conner and Armitage (2006)[193] reported framework that presumed that an essential series of action in choosing foods is the establishing of food choices on the basis of cognitions and social deliberations.

As suggested by Wethington and Johnson-Askew (2009)[194], timing entails the time some crucial moments (like specific transition) occurs in the life trajectory of an individual.

This has to do with the important need at a particular time that necessitated the drastic change in food choice decision, to embrace healthier food choice trajectory, which might be lacking in the current food choice course.

Individual Food System – Individualistic Food Preference

According to Caswell and Yaktine (2013)[195], there are many factors that work to transform specific food choices. Therefore, food choice series of action framework of an individual life trajectory entails some factors. According to KoÈster and Mojet (2006)[196], and Gorton and Barjolle (2014)[81], a lifetime point of view provides a basis for putting into consideration differences in personal and situational impacts on food choices. Every factor changes over time during the lifetime of the person making food choices; interrelates with other factors; and is operational in the individual food system of the person as he/she is being involved in particular eating activities. Caswell and Yaktine (2013)[195]; Sobal *et al.* (2006)[96] and Devine (2005)[187] reported that established standards/ethics/value/belief are acquired through acculturation and socialization and are culturally learned through family. These norms guide in food choice concerning their acceptability based on ethnicity and/or culture of the social groups' individual belong to. This could be from religious or health point of view.

Furthermore, Bartkiene *et al.* (2019)[181] and Sobal *et al.* (2006[96]; 2009[182]) reported that the characteristic or personality (make up) of the individual is a factor that influence specific development of food choices. It is in the form of their gene, sensitivity to sensory attributes, mood, fears, taste/flavor predilection, and relational elements like identities. These individual attributes can be inborn or acquired over time from social groups (or family) an individual belongs to. On the other hand, Azetsop and Joy (2013)[197]; Caswell and Yaktine (2013)[195]; Evans (2011)[198]; and Bove *et al.* (2003)[199] reported how individuals make distinct decisions on food preference from others on the basis of prioritizing their individual factors above other factors. Bisogni *et al.* (2002)[200] suggested food consumers develop individual food and eating

identification, that portray the image of themselves as a particular kind of eater and use such to transform their particular food choices. As reported by Hetherington (1996)[201] certain individuals experience strong appetite for certain foods and prolong state of such individual changes in their food choices.

Furthermore, availability of materials and resources for individuals influence the food choices, as they select foods based on available resources like finance, time, capability and capacity. Therefore, according to household production model by Becker (1965)[92], households integrate direct and indirect resources which are expended (directly or indirectly); time and raw materials to yield household consumables. As there are different types of individuals, allocation of household resources would be done based on household needs. Consequently, food consumers make food choices based on the household predilection and available resources.

As reported by Sobal *et al.* (2006)[96], Bove *et al.* (2003)[199], and Sobal and Bisogni (2009)[188], social elements, such as families and social groups, create the opportunity to dine and wine together, thereby, building eating tie-ups and influence food choice. Sobal *et al.* (2006)[96] suggested that the environment and surroundings (physical inclusive), regulations, weather and climatic conditions and social an individual influence their food choice. This entails the food and nutrition arrangement from where available foods for individuals are chosen; the manner of food preparation; and place of presentation of the foods.

Constructing Food Choice Values

According to Smart and Bisogni (2001)[202], food values are individually established understanding as it relates to food based on individual's emotion. Food choice values are also evolving with time, and with life experience, it moulds food choices. Figure 2 shows the features of individual system. In the reports of Connors *et al.* (2001)[99] and Smart and Bisogni (2001)[202] food values were flavor; comfort; monetary value; well-being; self-actualization; satiety; variety and connection, and these persistently unfold as prominent among many people.

Figure 2

Features of the Individual Food System

Individual Food System
*Establishing Food Choice Values
* Grouping of Foods and Situations
* Value Settlement
* Evaluating Contending values
* Plan of Action for Repetitive Occurrences
Controlling Relationship

Well-being   Taste

Monetary value   Other

Comfort

Food preference
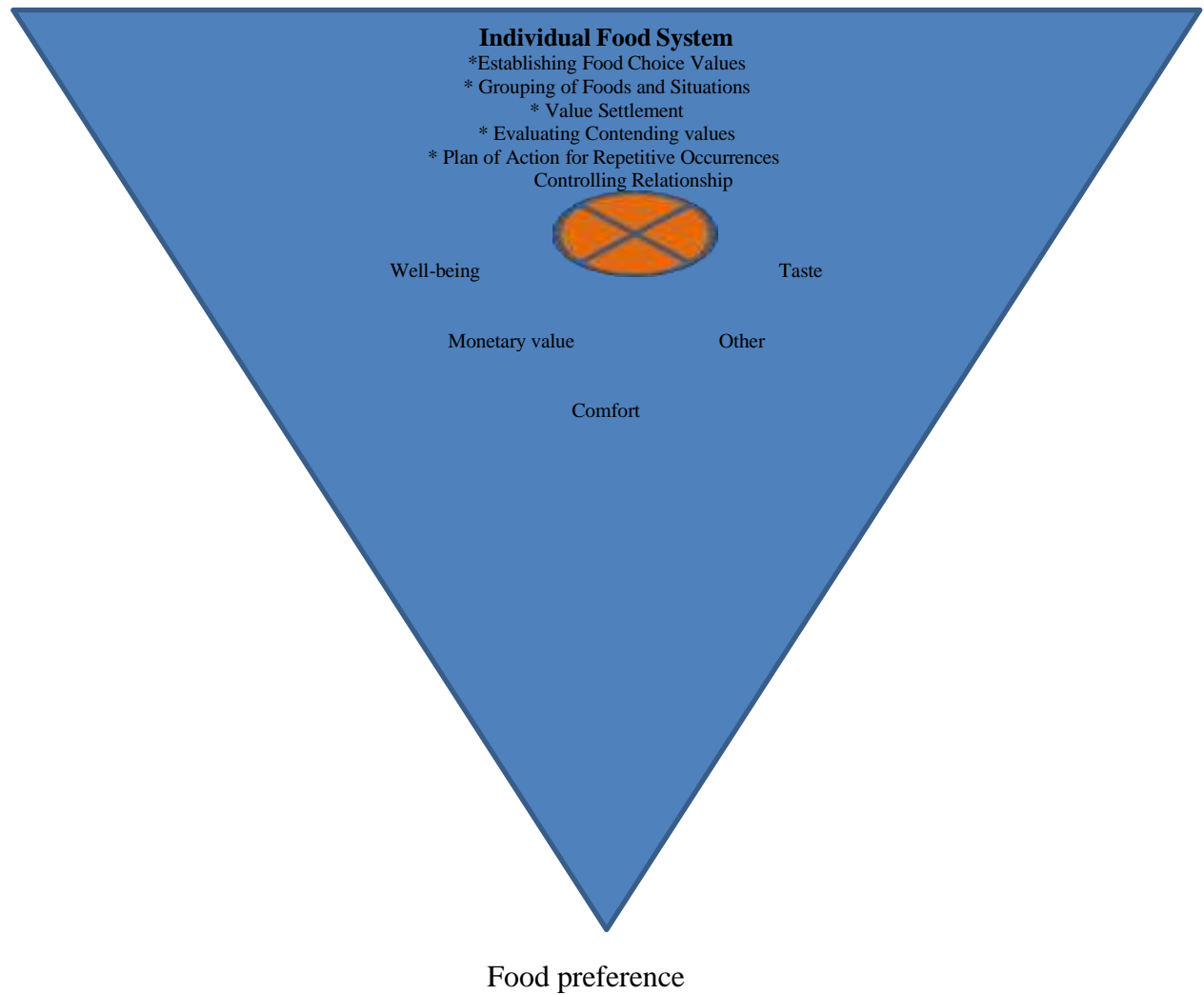
Source: (Modified) Connors *et al*. (2001)[99]

Studies of Pechey and Marteau (2018)[203] and Castro *et al*. (2018)[204] confirmed that food consumers choose from a collection of available foods at the point of procurement; hence, they are restricted to what are available, which are affected by situations (health reasons) or cultural factors that may be political, environmental, social, technological, legal, and economic. According to Eertmans (2001)[205], taste is the food choice value which portrays the primary predilection that consumers connect to their sensory perceptiveness in food and drink. Individuals employ 'taste' to express various foods and drinks attributes that influence their food satisfaction and abhorrence, which include the way food appear (and their colour), the aroma, flavor, texture or consistency, and other attributes. Individual taste preferences evolve with time. As suggested by Liem and Russell (2019)[206], and Petit *et al*. (2016)[207], taste serves as the minimum criterion for food or drink acceptability as many consumers will not eagerly eat or drink any without a good taste.

According to Hanus (2018)[88], convenience, also known as ease, a food value entails time and energy required by consumers to have the food ready for consumption. Convenience is a thought consumer have in making food choices and has become a trend in consumer behavior. It was described as an individual discernment on the cost of spending time and energy to get ease and satisfaction from a specific food or drink. As suggested by Falk *et al*. (1996)[208]; Connors *et al*. (2001)[99] ; Smart and Bisogni (2001)[202] ; Bisogni *et al*. (2002)[203] on what gives ease to consumers varies with age, economic status, social status, and in general, the peculiar requirements of different consumers. The thoughts of convenience also depend on the processing technology.

As explained by Devine (2005)[187] and Devine *et al*. (1998)[191], cost, the food value which describes the monetary thoughts people build in relation to food choices, depends on financial capability of individual consumer. In addition to the reports of Furst *et al*. (1996)[95], Drewnowski and Darmon (2005)[185] and Lo *et al*. (2009)[184], they suggested that the value of

cost entails idea of worth, as consumers with low disposable incomes, though price-sensitive, may not consider a product too costly because of the worth they perceive is attached to it. To them, the worth of such foods might be health and satiety. In relation to these, Smart and Bisogni (2001)[202]; Falk *et al*. (2001)[209]; Blue *et al*. (2016)[210]; and Hanus (2018)[88], reported that well-being, a value which describes food choice built in connection to health, entails possession of attributes that support digestion, high nutrition, longevity, performance, growth, weight control, low calories (sugar-free and low fat content) and prevention and management of illnesses. Therefore, depending on social perception, foods are categorized as either advantageous or detrimental to human health.

Furthermore, Hanus (2018)[88] reported that healthy nutrition is a trend in food consumers' behavior. Devine (2005)[187] described social bonding as the way individuals put the concerns of others into consideration in a social setting. It was further reported to entail making food choices because of others who might be affected, thereby considering other people's requirements, predilection and thoughts. This was also supported in the report of Bove *et al*. (2003)[199] that individual's needs and choice are sacrificed for social bonding. As food is pivotal to family tie-ups, the household food head or decision maker of what are to be purchased and consumed in the family considers the peculiarity, needs and predilection of other household members (Devine, 2005[187]; Bove *et al*., 2003[199]).

Other values that are thought in regards of food choice entail personally defined level of food quality, variegation, food safety, religious restrictions, ethnic identification and environmental factors such as waste management (Connors *et al*., 2001[99]; Furst *et al*., 1996[95]).

Constructing Classification

Connors *et al*. (2001)[99] and Furst *et al*. (2000)[211] reported that under eating relationship, on the basis of consumers' food choice values, this is a way food consumers categorize foods and eating circumstances, to unravel and understand food choices, especially in complicated

situations. Consequently, understanding food choices would require an important food choice series of action (value negotiation) whereby the most important food choice values are given preference to in the eating circumstance (Connors *et al*., 2001[99]; Furst *et al*.,1996[95]), whereas balancing would be employed to counterbalance the discord and effects of the various values under consideration in making food choice.

The Influence of Age on Food Choices

According to Gorton and Barjolle (2014)[81], food choice and its various values change over time and throughout lifetime. They suggested that taste is very important to all ages, but certain tastes are more essential to certain ages. To children, they do not have understanding of cultural and social restrictions, taste perception is very essential, thereby, their age affects their food choices. They have strong predilection for sweet, tasty and flavorful foods, while they abhor sour and bitter tastes. Furthermore, Zakersalehi and Zakersalehi (2012)[121]; Finisterra do Paço *et al*. (2009)[123]; Memery *et al*. (2005)[124]; Ruiz *et al*. (2001)[125] reported the effects of age on consumers food preference and behavior.

According to Appleton *et al*. (2018)[212] and Drewnowski *et al*. (2012)[213], teenagers are fond of sweet and creamy flavors which are commonly found in processed foods/drinks, with their peers having strong influence on them. At young adulthood, taste still becomes very important but financial values and ease become important in food choice. As they grow older, their parents or guidance influence their food choices. According to them, other food choice values become important, such as social restrictions, well-being, and cost, while in old age, taste does not matter so much, but well-being and cost.

Furthermore, Slabá (2019)[214] suggested that consumer buying behavior are influenced by age, while Fekete-Farkas *et al*.(2021) reported influence of gender and age on consumer purchasing behavior. According to Slabá, (2019)[214] and Shukla (2014)[215], age, being one of the most essential factors that impacts consumer purchasing behavior, exposes consumers'

lifestyles, thereby making it very important and easy to distinguish and define their choices (Rani and Elliot, 2013)[216]. Consumers' age affect their purchasing behaviors, and evolve with time through some series of actions that are related to motivation (Ogundijo *et al*., 2022[18]; Drolet *et al*., 2019)[217].

Furthermore, Alhammadi *et al*. (2021)[22] and Petrovici and Ritson (2006)[23] suggested that consumers' habits change with age and time, leading to evolving needs for products and services. This explains how age is an essential factor to be considered in consumer behavior investigation (Broeckhoven *et al*., 2021[218]; Spence and Youssef 2021[219]). Consequently, essence of aging consumers moves with their evolving food choices patterns, affecting their buying decision (Alhammadi *et al*., 2021)[22]. Food choices and consumers' behavior becomes essential across different age groups of target consumers so that researchers can provide information for informed decisions to be made for products that will be satisfactory to consumers.

The Influence of Acculturation on Food Choices

Food choices change in numerous forms as consumers migrate from a culture to the other (Maehler *et al*., 2019[172]; Kim and Alamilla, 2019[220]; Kuo, 2014[171]; Schwartz *et al*., 2010)[170]. Consumers move from the indigenous way of doing things in respect of food selection to foreign way, and/or vice versa, and this movement entails imbibing foreign foods and food flavors, and replacing raw materials and processing techniques. There is integration of both local and foreign attributes for better acceptability to consumers (Maehler *et al.*, 2019[172]; Schwartz *et al.*, 2010)[170]. However, consumers retain their preferred sensorial attributes in foods, though indigenous, for reasons -food choice values, such as taste, satisfaction, well-being and preservation of cultural identification. Consequently, through acculturation, food choices are influenced.

Bonke (1992)[91] analysed the effect of availability of resources (disposable income and time) on food choices. It was observed that consumers who are deficient in time and buoyant in finance have predilection for convenient foods (processed foods), which are relatively more costly than regular meals. It was also reported that households with limited financial resources but having sufficient disposable time have preference for regular meals (unprocessed meals). On the other hand, Bonke (1992)[91] suggested that the level of education of consumers influences their food choice/pattern, using Sweden and Denmark as case study. He reported that with greater level of education, food choices tend towards less of regular meals, while it tends towards more of regular meals when the number of household appliances increases, as it saves time in food preparation.

According to KoÈster and Mojet (2006)[196], predilection for certain foods are similar among some individuals but there may be differences in food choice pattern due to differences in eating circumstances and in their exposure over a lifetime. On the other hand, food choices could be affected by knowledge at a psychological and deliberate level. Information on labels of food packs and the promotion of well-being through healthy food by awareness creation influences food choice as consumers consider some food products as being unsafe and not healthy. KoÈster and Mojet (2006)[196] suggested that food choice is basically an acquired decision, as in taste, at birth, there is an inborn detestation of bitterness in food, while there is eagerness for sweetness. Liem and Russell (2019)[206] and Liem and De Graaf (2004)[221] added that the dislike for a specific taste (like bitterness) can be learnt through frequent exposure to foods/drinks that have such taste, and taste perception differs with individuals (Singh and Seo, 2010)[422].

Similarly, Jeong and Lee (2021)[15] reported to influence of familiarity of consumers to certain tastes/flavor on their ability to detect them and on their food choice decision.

Strategies Based on Consumers' Food Choices

According to Connors *et al*. (2001)[99], Falk *et al*. (1996)[208] and Furst *et al*. (1996)[95], strategies are the action plans which people create for the food they consume and the way they consume foods in recurring circumstances. They clarify food preference and consequently, the strategies on the choices consumers make develop over time.

By removing the psychological performance and time needed for consumers to make their choice, food preference comes forth from early deliberate food preference decisions for a particular circumstance and over time. Therefore, it is now not as conscious as before, because there is recurrence of circumstance.

Blake and Bisogni (2003)[222] reported that the action plans in an individual food system are compatible with the cognitive series of actions for distinct behavioral circumstances. Therefore, according to Falk *et al*. (2001)[209] and Connors *et al*. (2001)[99], action plans employed to execute food preference in reoccurring situations can be categorized on the basis of the kind of examination utilized for the strategy, which can be individual's value, habit, removal, restriction, replacement, inclusion and alteration. In addition, Connors *et al*. (2001)[99] suggested that concentrating on one value shows prioritization to it, such that in food choice situation, there is no negotiation, while there is habitual or automatic decision in food choice, as the decision-making series of action is standardized for reoccurring circumstances. Hence, certain factors are excluded in some specific circumstances' food choice series of actions.

As reported by Sobal *et al.* (2006)[96], there is restriction in the use of certain factors to facilitate food choice series of action, as it entails determining tolerance level which will not be exceeded. Replacement entails value negotiation to achieve better outcome, and inclusion is concerned about introducing food ingredients to meet some particular values. Alteration entails changing some components to achieve better results, or a predetermined value.

According to Alcantara-Pilar *et al*. (2015)[223], marketing action plan aims at extending to and meeting the needs of consumer, by putting into consideration culturally-different target market. Table 1 below shows the few strategies to be adopted based on consumers' needs, food choices and preferences.

Gefen and Heart (2006)[224] reported that the individuals' culture has effects on their behavior as consumers, while Craig and Douglas (2011)[225]; Engelen and Brettel (2011)[226] and Okazaki *et al*. (2010)[227] researched on across-culture research in the line of business management and marketing, due to the globalization of markets. According to Usunier (1993)[228] beliefs, ethics and tradition are the elements of culture that affect the global marketing, as they influence consumption behaviors and buying behavior of an individual, who according to Doole and Lowe (2008)[229] explained buys product based on his own culture. Furthermore, Alcantara-Pilar *et al*. (2015)[223] suggested that as the culture of where a consumer resides influences his buying decision series of action, organizations need to modify its strategy towards it.

In addition, from marketing point of view, Doole and Lowe (2008)[229] established a basis for assessing culture and defined it in the context of attractiveness in terms of colour and brand attraction that are acceptable to the local culture of target customers. Alcantara-Pilar *et al*. (2015)[223] reported that different cultures attach different meanings to colours, while the language, values, and religious, educational, political, technological and legal factors affect the culture which determine the marketing strategy to be employed by any organization.

Table 1

Few Action Plans for Clarifying Food Preferences

Strategies Based on Consumers Food Choice	Consumers Preference
Concentrating on one value and need/motivation which might be	Procuring and consuming
· Product cost (self-esteem need)	Affordable food/drink products
· Product taste/flavor (self-actualization need)	Food products that give satiety through taste and flavor
· Well-being (health benefits/safety/ nutrition need)	Safe and/or nutritious products, and those with functional benefits
· Social bonding- (need for social acceptance and family ties/love)	Accepted products to every member of the group or family, such as Halal-conforming products
· Ease/convenience- (physiological/fundamental need for survival)	Processed foods to quench hunger for survival; ease-to-assess and available-to-use and consume products
Concentrating on consumer food choice habits	Buying for
· *Standardization*	Habitual routine consumption due to satisfaction, brand loyalty
Exclusion	
· Elimination	Elimination of some additives due to health concerns/awareness
· Free from some ingredients	Exclusion of some components due to personal reasons, such as status- unnatural
· Ban	Avoiding to consume certain foods/drinks due to social reasons
Restraint	
· Restriction	Regulated periodic consumption
· Adjustment	Strictly purchasing at regulated price (only within fixed target price)
· Reduction	Regulated quantity consumption due to health reasons/awareness
Replacement	Replacing with more acceptable additives/ingredients/components
Inclusion	
· Support	Including products to support overall performance, such as using packed tomato paste with fresh tomatoes every time.
· Intensify	Including products to intensify performance, such as flavor to boost overall flavor of the food

Source: (Modified) Falk *et al*. (1996)[208]

Figure 3

Elements of Culture
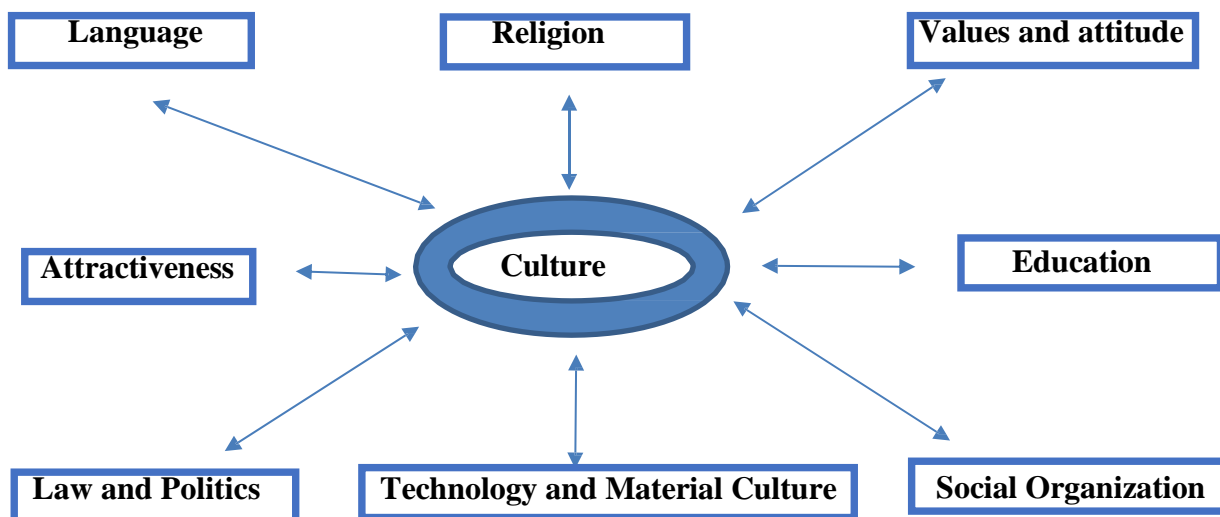
Source: (Modified, Carter (1997)[230]. The Cultural Environment. FAO)

External Influencing Factors in Consumers Market

As explained by Keegan and Green (2013)[231]; Kotler *et al.* (2005)[232] and Keegan and Schlegelmilch (2001)[233], operation in international market differs from local market, therefore, the need to understand foreign market for the success of the business of an organization. According to Doole and Lowe (2008)[229], the external elements that impact on the performance of an organization in its industry and market include politics of the country and international countries involved; environment where the organization plays; and social, technological and legal elements of the industry, and national and international market.

Social Effects

According to Keegan and Green (2013)[231]; Kotler *et al.* (2005)[232]; Doole and Lowe (2008)[229], and Keegan and Schlegelmilch (2001)[233], the social effect, which is also linked to the indigenous and/or cultural effect entails the ethics, faith, understanding, conception, notion, idea, way of life, language, behavior and attitude of the people in the specific market, which are established by various associations consumers belong. These reports indicate that various predilections influence consumers' demands and needs, and invariably the consumption and usage of such products and pattern of advertisement. Hence, Keegan and Schlegelmilch (2001)[233] emphasized the essence of sensitivity to social differences.

As suggested by Kotler *et al.* (2005)[232], it becomes essential to put into consideration different indigenous social diversities (and in language) and their impact across local places because of how they affect the decisions and productivity of an organization. These will aid in making informed decision as to developing strategy for every specific market. According to Doole and Lowe (2008)[229], migration and changes (increase or decrease) in populace, signifying social evolution, therefore, global organizations ought to take cognizance of these differences.

Legal Effects

As described by Keegan and Green (2013)[231] and Doole and Lowe (2008)[229], global marketing considers global legal environment- both the local and foreign regulations. The indigenous regulations are for the specific home local market, which are essential in regulating exportation, while the international regulations moderate global trade, and very importantly, the specific regulations and compliance of the countries (markets) to which products will be sold. These are important as they affect marketing strategies that work in the global market. Product conformance in a specific market might be non-conformance in another market, such as acceptable limit to some ingredients, or complete absence of certain food ingredients, as regulated by the government of the country where they want to play, as suggested by Kotler *et al*. (2005)[232].

Economic Effects

According to Keegan and Green (2013)[231]; Doole and Lowe (2008)[229]; Kotler *et al.* (2005)[232] and Keegan and Schlegelmilch (2001)[233], the economic growth of a country greatly affects strategies that organizations will use to thrive in such a market. Customers' disposable income and buying capability are crucial in influencing the economy of the country and invariably, it determines their buying pattern. Doole and Lowe (2008)[229] reported that as the extent of 'wealth' and its distribution vary with countries, so are the strategies to be employed by organizations in these countries differ. The local and foreign economy of a country influence its capability to play both at local and international level. These information guide international organizations to access the 'pros' and 'cons', hence, the strategies to employ for each country based on its economy. Pricing strategies become highly dependent on the economic influences of the market.

In addition, Keegan and Green (2013)[231]; Doole and Lowe (2008)[229] and Keegan and Schlegelmilch (2001)[233] reported that the awareness of the economic policies and peculiarities,

competitive activities, suppliers of alternative products, will enable an international organization to make informed decisions to gain competitive edge and as well as satisfy the customers in the target markets.

Political Effects

As suggested by Hadjikhani *et al*. (2019)[234], political effects entail policies set up by the government of the particular country, which make up the political environment where international and/or local organization plays. Policies vary with government from time to time and place to place. Kotler *et al.* (2005)[232] and Doole and Lowe (2008)[229] suggested that policies have effect on the organizations' marketing series of actions. Furthermore, Kotler *et al.* (2005)[232] reported that organization needs to be conversant with the political threats, levies, taxes, tariffs, and other regulations and restrictions of a country. Countries with less political threats are more prone to attract global investors, so also are the stages of political advancement or attainment of a country or a region. They suggested that political state of a country should be understood and planned with, as an unstable state makes the organization liable to other risks which ordinally it would not have been exposed to in its local or domestic market.

According to United Nations Economic Commission for Africa (2020)[235], trade barriers are taken away through unions of countries formed, such as ECOWAS (Economic Community of West African States) from which member states benefits. There are, therefore, market and trade policies unification, such that members states have free-trade benefits, however, foreign organizations from countries outside this zone operate under more stringent conditions. Political conditions/situations of global marketing influence the series of actions of an international organization in the aspect of market, business and product development.

Technological Effects

Hanus (2018)[88] suggested that technological effects entail those that create the opportunity or threats to technological advancement as it relates to market and product

development. As reported by Kotler *et al.* (2005)[232], the speed and consistency in technological advancement is high and therefore, it takes dynamism and flexibility for an organization to meet the changes, consequently, they influence global marketing greatly in evolution, expansion and having a worldwide marketplace. Furthermore, technological improvement is seen in virtually all the stages of marketing series of actions, and organization would obtain information from market and perform business functions internationally through technology (Hanus, 2018[88]; Tkaczyk and Kołuda, 2013[163]). Therefore, the technological stage of the environment where an organization will play and its versatility with technology would greatly determine the strategy such an organization will develop to excel.

Consequently, an international organization needs to be flexible to improve its advancement in technology and be able to compete well in the industry, keep its position and meet consumers' needs (Doole and Lowe, 2008)[229]. Technological advancement is cost and time saving through effective communication, awareness creation and product distribution (Hanus, 2018)[88.]

Global Marketing Mix Covering Diversity

Torelli and Rodas (2016)[236]; Otuedon (2016)[104]; and Leonidour *et al.* (2002[237]; 2010[238]) reported that with advancement in globalization, there is more rapid physical movement, which makes the world seem smaller, and due to technology, people physically and virtually migrate very easily. Consequently, there is effective worldwide integration among different consumers and organizations across distinct countries, just as there is increase in cultural diversity in global market, and invariably, drastic evolution to consumers demands and what are supplied. Furthermore, the focus to any successful marketing strategy is providing means to get to consumers and attract them (Alcantara-Pilar *et al.*, 2015)[223]. In the situation of different pool of consumers, effort needs to be channeled towards promotion to better captivate customers.

They reported the action plans connected to promotion of products to focus markets which is culturally different and came up with solutions that are innovative for international products.

Marketing strategies are based on elements - product, price, promotion, and placement, which are suitable to target market, as described by Doole and Lowe (2008)[229]. Both new entrants and existing players require flexibility to change to the requirements and needs of different markets and consumers. There is dominance of marketing mix model despite market expansion and direction, external evolution and evolving knowledge (Otuedon, 2016[104]; Constantinides, 2006[239]). Integration of marketing elements enables an organization to identify the unique selling point of its product and brand. These "Four P's" of marketing are influenced as an organization transit through diverse phases to gain dominance in the global market. Integration of product development, promotional innovation, effective distribution (placement) and sound pricing method facilitate the success of marketing. Figure 4 below refers to marketing element mix.

Furthermore, as suggested by Keegan and Green (2013)[231]; Doole and Lowe (2004)[368] and Keegan and Schlegelmilch (2001)[233], promotion aids in positioning the organization, hence, products can be modified to suit the diverse tastes of focus markets. Consequently, different formulations are used for different markets, while same product packaging in individual country is used with the inscription of their local languages, and seen as identical as others in the country's market.

According to Kotler and Armstrong (2012)[240] and Tanner and Raymond (2012)[241], a global company requires defining its focus markets and products that will perform best with consumers. Manner of product introduction into market is essential, considering the entry price point and channels of distribution. Promotional series of action for international market can vary from visual media and internet, such that products are placed in accessible places to target market and effective communication is made accordingly.

Figure 4

Marketing Element Mix
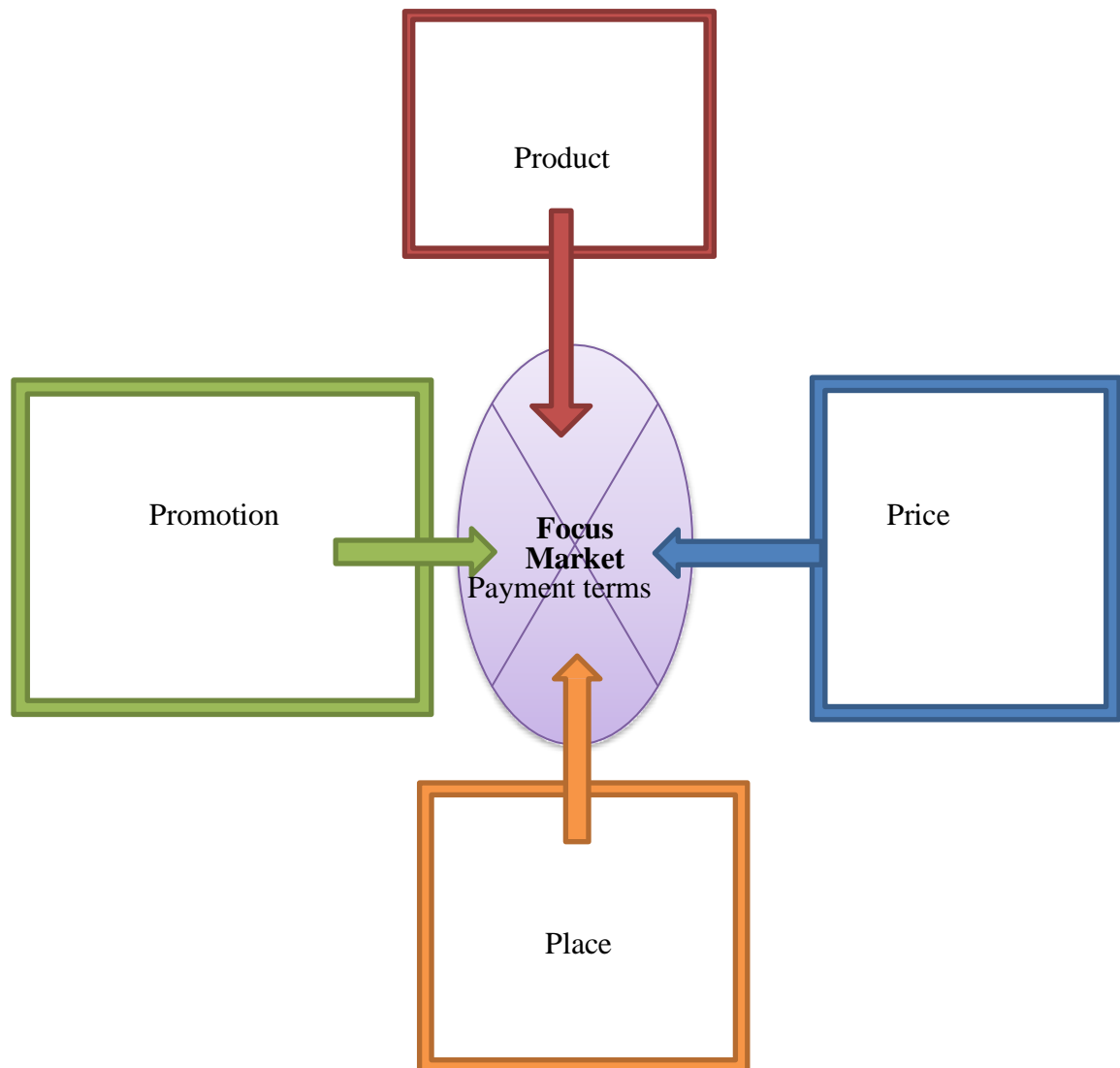
Source: (Modified, Doole and Lowe, 2008)[229]. *International Marketing Strategy*

Promotion

As suggested by Keegan and Green (2013)[231], an organization shapes its awareness creation and other marketing components based on the peculiarities (culture, language, and environmental factors) of target markets. Brand or product promotion takes place after product is developed (Badi, 2015[242]; 2018[243]). It takes lot of attention in an international organization's budget, as the success of the product and brand lies very much on it. Through aligned and effective marketing communications cost of promotion is drastically reduced.

Furthermore, according to Pour *et al*. (2012)[244], and Goi (2009)[245], as a result of fast evolving force of globalization, the difference between marketing in the home country of the global organization and that in outside markets is varnishing rapidly. This is partly explained by integration and changing of marketing series of action to meet the peculiar and diverse needs of the international marketplace so as to retain being competitive in home country and as well successful in outside market. Such evolutions have made international organizations to tailor-make their global marketing integration for diverse markets, on the basis of the culture, which cuts around their local languages, peculiar needs, policies, religion, values, tradition, education, and technology (Keegan and Green, 2013)[231]. Indigenous languages, appearance (color), and religious faith influence series of action to be employed to promote products in diverse countries.

Furthermore, in order to succeed in executing global marketing action plan, a foreign organization needs to ensure promotional series of actions align with the situation; - internal and external elements of the target markets (Badi 2015[242]; 2018[243]). For global promotion, it is paramount to equilibrate the organization's economies of scale in an innovative manner, effective communication with customers, and sustained momentum.

As reported by Obasan *et al.* (2015)[49], the observable characteristics of Nigerian population, which are the target customers' demographics, include their physical, economic,

and occupational traits. Just as Ekerete (2001)[51] reported that in international marketing, diversity in language is essential to understand for effective promotional campaigns, and overall success in the global marketplace, it becomes much more important in a target market where there are diverse local languages, such as in a country like Nigeria with over 250 tribes with different languages.

Onkvisit and Shaw (2009)[246] and Otuedon (2016)[104] reported that promotion is impacted by differences in language, culture, legal, government policies, economy, competitive activities, and media obtainability or availableness. These invariably serve as the basis for modifying the advertisement, the manner of presentation, labeling, and communication combination.

In addition, in some situations, Otuedon (2016)[104] suggested that advertisement is done in the native language of the target market, while products are labeled accordingly, whereas in some situations, it could be major modifications, which will be quite costly. According to the report of McAlister *et al.* (2016), effective advertisement entails creativity that are captivating to customers, having understood the values, culture and predilections of the particular target market. Product branding will be made attractive and other aspects of advertisement are modified accordingly.

Products

As reported by Obasan *et al.* (2015)[49]; Vrontis and Thrassou (2007)[247] and Onkvisit and Shaw (2004)[246], worldwide promotion facilitates products by involving or adopting unvaried marketing series of action, hence, harmonious brand image is promoted. However, there is the need to constantly meet the evolving behavior of customer to marketing mix components. Marketing issues related to promotion and product require attention to be strong, and to gain competitive edge in the competitive global marketplace. Therefore, an international organization requires flexibility to evolving local market direction of movement, food choice

or preference, and peculiar needs (Onkvisit and Shaw, 2004)[246]. Very importantly, flexibility to evolving local market requires comprehending various factors related to the target markets, such as demographics, knowledge, and beliefs of consumers, and other environmental factors.

Furthermore, according to Harjadi *et al*. (2020)[165], the product's orientation regarding local competitors affects the product's final profit margin. International organization, therefore, puts into consideration how to orientate their products in international marketplace, such that the products are not thought as being too expensive, or too cheap, but being in the mid-point according to target consumers' demographics.

In addition, to enter into worldwide marketing, an organization would choose either to standardize its product for all markets; change its present product to make it suitable for every market; come about entirely new products for different markets; or integrating differences in distinguished markets into just one product that would be introduced into global market (Czinkota and Ronkainen, 2004)[248]. Similarly, it was reported in the findings of Loukakou and Membe (2012)[249] on strategies for product adaptation for international QSR companies, where McDonalds was used as case study, with the aim of integrating standardization and adaptation strategies. In addition, Nguyen (2011)[250] described the effects of cultural differences in global marketing of an entertainment and QSR Vietnamese company which aimed at entering French and Japanese market. The report suggested a strategic marketing plan to be made to so as to balance betwixt standardization and adaptation of marketing mix for the organization, in order to attain the cultural requirements of both focus consumers. Specifically, Aaker and Keller (1990)[251] reported that adaptation of product for an organization through brand extension has been very benefitting to numerous organizations.

In addition, Monga and John (2007)[252] reported effects of diversity in culture among consumers on their perception of product fit in brand extension across Eastern and Western cultures. On the other hand, Themistoklis Altintzoglou *et al*. (2016)[253] reported the findings on

the conducted research to unveil differences in consumption patterns of food products -sushi and sashimi between consumers in two different countries; Norwegians and Japanese.

Placement

According to Egede (2013)[70] placement- the routes to disseminate products and make them available, is influenced by external factors, as well as other marketing elements. The ways of regulating businesses differ from country to country, such as wholesalers-retailers relationship in meeting consumers' needs. Therefore, it was reported that the policies, economy and technological factors of a country affect the promotional integration of a product. Very importantly, Onkvisit and Shaw (2004)[246] suggested that the nature of the product determine the distribution medium to be used.

In addition, as Özer and Köse (2013)[254] and Ghauri and Cateora (2011)[255] have reported that a consumer's values result from his tradition, religion, faith and restrictions which were acquired over time; hence, the understanding of the external markets and customer demographics, international organizations, would enable the international organization use the knowledge to place products where customers are responsive.

Pricing

According to Otuedon (2016)[104]; Kotler and Armstrong (2012)[240]; Tanner and Raymond (2012)[241] and Nicholson and Snyder (2012)[256], price in worldwide marketing strategies is being affected by distribution channels, promotional tactics, and product features. It varies with markets and can be well managed with the knowledge of cost contributors such as transportation, custom duties/expected tariffs and policies, and economic change in the target country. Kotler and Armstrong (2012)[240] suggested that establishing price in global business is very essential as markets (countries) differ, hence, the manner of operating businesses in these countries. The performance and productivity of an organization is measured by sales, revenue generation, and profit making; which are all dependent on price

offering. Numerous researchers, among whom are Kotler and Armstrong (2012)[240] and Tanner and Raymond (2012)[241], have reported that consumers' purchasing pattern and their purchasing series of action are to a great extent influenced by price.

As reported by Tanner and Raymond (2012)[241], international organizations need to comprehend changing elements which have effects on their action of putting price on their products. These elements which affect profit making in global market, and therefore, should be put into consideration while establishing price are cost; price flexibility of demand; competitive activities; kind of product and the industry; foreign interchange rate swing; product dissemination process; situation of production plant; situation and nature of foreign market; and policies in foreign markets. Therefore, in establishing price of a product, and much more in an international market, cost is extremely crucial, as suggested by Kotler and Armstrong (2012)[240]. The fundamental indicating point for establishing prices is the cost of production and freight charges. Advertisement costs, overhead and operating costs; rental costs, are all to be considered such that the organization makes profit.

Consequently, price flexibility of demand should be understood as it affects the manner at which price fluctuation has effects on customer demand for a particular product, when all other factors are same. It, therefore, estimates the receptivity of amount demanded by customers to a drift in price, as explained by Nicholson and Snyder (2012)[256]. In the situation where consumers' demand for an international product is flexible, the international organization could give lesser price, while if demand is inflexible, price could be established at a high rate. Therefore, as suggested by Kotler and Armstrong (2012)[240], flexibility of demand has effects on pricing, and this serves to evaluate the effect of price increase or decrease on sales made, revenue generated and profitability.

In addition, according to Tanner and Raymond (2012)[241], competitive activities regarding pricing and sale significantly affect the manner at which an international organization

will establish its price. Therefore, they pointed the need to measure the extent of competition in global market, because high competition attracts low price, and vice versa. They added that response of competitors to price drift, their product offerings, and aggressive nature of the market which either places the organization in the position as price dictator, also influence the price at which a product will be sold.

Furthermore, Kotler and Armstrong (2012)[240] suggested that the kind of product and industry are very important in affecting the local and international price-setting action. As suggested by Nicholson and Snyder (2012)[256], for unique products which do not have alternatives, or those with a technological superiority, or a greatly tailor-made products, an international organization is very likely to resist price tussle. If otherwise, an international organization would have to assess its price-setting series of actions as it monitors competitive activities regarding pricing, so it does not fall out of competitiveness due to high price offerings to customers.

Additionally, based on the report of Onkvisit and Shaw (2004)[246], economic elements such as foreign interchange rate swing, return charge, inflation, and price regulations have effects on price-setting actions. An important price-setting challenge, which cannot be overlooked is the currency to be employed for invoicing. If there is swing in foreign interchange rate and this has catastrophic effect on businesses of international organizations, most importantly, in emerging markets which is susceptible to high interchange rate volatility.

According to Kotler and Armstrong (2012)[240], Tanner and Raymond (2012)[241] and Nicholson and Snyder (2012)[256], the kind of product dissemination medium or distribution process, and its cost need to be borne in mind as they influence the global price-setting series of actions. The involvement of wholesalers or distributors in the dissemination channel would be decided, or direct business through its own affiliate for better price management, and

through technological advancement which better promotes distribution. In their opinion, extra costs are incurred when wholesalers are involved.

Furthermore, Otuedon (2016)[104] suggested that a multinational organization needs to carefully decide on location/situation of its business, the need to disperse its manufacturing facilities to prevent business is greatly impacted by eventualities due to external environment where the production is situated, hence avoid unnecessary cost.

Marketing Strategy Based on Diversities in Consumers Market

Boryana and Bert (2010)[257]; Larimo and Kontkanen (2010)[258]; Alimien and Kuvykait (2008)[259]; Waheeduzzaman and Dube (2004)[260]; and Ryans *et al*. (2003)[261] are among several other researchers who have reported the need for organizations to choose between adaptation and standardization strategies, or to implement both. Figure 5 below shows marketing mix and strategic approach. Though the prescriptive literature emphasizes a universal view of practice of a 'one-size-fits-all", Murray *et al*. (2002)[262] reported that there is diversity in marketing practice differs among many organizations. Many researchers have reported the part of culture in consumer behavior, but Manrai *et al.* (2016)[263] have gone further to report their findings on the influence of globalization on multiple-culture consumer behavior.

Hollensen (2001)[264] suggested that product is the most convenient component of marketing to standardize, while Onkvisit and Shaw (2004)[246]; and Ozsomer and Simonin (2004)[265] described product standardization as a technique where attributes of products are kept similar, and such products are sold to different markets outside the country of origin or manufacture.

Hofstede's theory affects the selection of standardization or adaptation of the communication and orientation of the company. He explored if connection exists between target consumers' culture and the selection of a marketing action plan. Consequently, Hofstede (2001[266];1980[267]) postulated theory with belief that culture affects the selection of a strategic

technique, focusing on defined dimensions of culture to understand customers cultures and in understanding their reactions to new products and on to adapt or standardize their marketing mix.

Erdogmus *et al*. (2010)[268]; Czinkota and Ronkainen (2012)[269]; and Nashwan (2015)[270] reported effect of marketing strategy on the performance of an organization, and the implementation of standardization and adaptation marketing strategy. Furthermore, from the reports of Boryana and Bert (2010)[257]; Larimo and Kontkanen (2010)[258]; Alimien and Kuvykait (2008)[259]; Waheeduzzaman and Dube (2004)[260]; and Ryans *et al*. (2003)[261], the level of practice of adaptation and standardization of some international organizations differs. These two identified marketing strategies were reportedly to be coexistent and then found that there were different levels of integration of both strategies. It was concluded that the impact of aligning both strategies has a global and advanced continuance, and the connection with real consumer attitudes and choices differs significantly. The disparity of consumer behavior among different markets and within same market arises from particular integration of group and individual attributes.

Standardization Strategy

As suggested by Erdogmus *et al*. (2010)[268]; Czinkota and Ronkainen (2012)[269]; and Nashwan (2015)[270], the series of action of marketing entails the concepts and technique employed in arranging and executing marketing resolutions/choices. On the other hand, Obasan *et al.* (2015)[49] suggested that standardization approach entails employing is same marketing plans of action across many countries or region on marketing components; proposed product, promotion, price quote, and distribution series of action selected.

Figure 5

Marketing Mix and Strategic Approach

Marketing Mix	Product	Price	Promotion	Place

Strategic approach | Standardization | Adaptation |

Culture
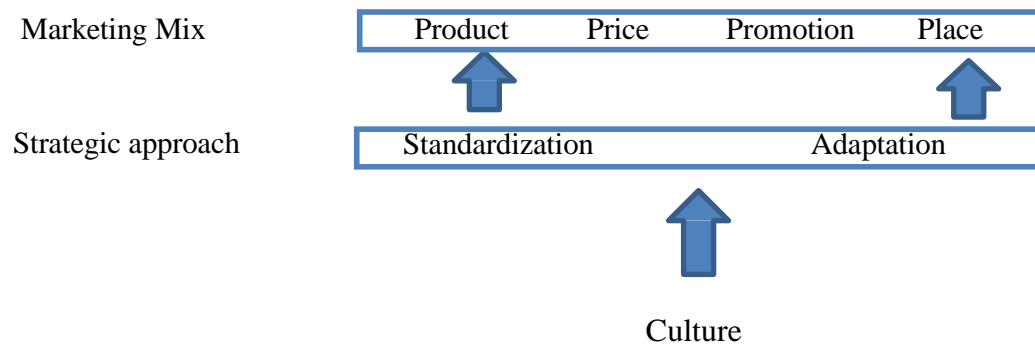
Source: (Modified) Doole and Lowe (2008)[229]

According to Vrontis and Thrassou (2007)[247]; Onkvisit and Shaw (2004)[246], as soon as an international organization considers extending its activities to a foreign market, such requires marketing series of action of either employing adaptation and/or or standardization of its marketing elements. Any of the marketing elements are standardized and/or adopted, and the degree of standardization-adaptation approach that an organization can employed varies (Lim *et al.*, 2006). Vrontis and Thrassou (2007)[247]; Ozsomer and Simonin (2004)[265] reported their research on standardization marketing approach which entails multinational companies' uniform way of employing the marketing mix across regions and countries in order to reduce landing costs and orientate a worldwide corporate image. Standardization approach was reported to be on the basis of the assumption that the world is getting more uniform and correlative, and that consequently, food preference based on taste and cultures are becoming uniform. Furthermore, standardization approach is based on the assumption that consumers across the globe are having common predilection, and inclination, which invariably in conjunction with aligning cultures and toning down barriers, would facilitate sale of standardized products through implementation of standardized marketing action plans by international organizations.

As suggested by Onkvisit and Shaw (2009)[246], standardization of promotion, as a marketing element, entails using same awareness creation and communication in the global market, for all customers across the world who need same product for same objectives. However, in the situation where there are wide differences among the different markets, it becomes very essential to modify promotion to suit these markets, despite the international organization incurs more cost by not standardizing it. It all depends on finding a more way effective means of cost saving with the adaptation strategy.

Furthermore, an organization should choose strategy based on the magnitude and capacity of the immediate/target market, hence, similar to embracing a high- and low-level

unification (Chung, 2009[271]). In the research conducted and reported by Chung (2009)[271] on over seventy (70) organizations in European Union, it was concluded with the theory that without other direct factors, the system of decision making in an organization, which could be high or low, has a high tendency to indirectly influence its standardization marketing strategy. Therefore, it is believed that it helps retain uniform product or brand image and identity across the globe. In addition, there is uniformity and cost reduction in advertising operations (materials and channel) across the globe. Standardization, therefore, concede concentration on some specifics, allowing focus on common components, and putting forward economies of scale and uniform orientation.

Unfortunately, in spite of such economies of scale, diversity in culture and socio-economic factors among countries tend to draw back standardization approach. This, therefore, necessitates flexibility to each market, in order to meet their peculiar needs. According to Ansah (2016)[80], in whatever situation, the resolution on standardizing or adapting approach should be on the basis of probable financial give back and threats associated for each of the choices. Complete standardization of all the marketing elements could result in failure in the situation where there are peculiar needs to be met for target customers.

Adaptation Strategy

Wei and Yazdanifard (2014)[272]; Vrontis and Thrassou (2007)[247]; and Ozsomer and Simonin (2004)[265] reported their research that adaptation approach was presented to match the peculiarity of every local market. Furthermore, adaptation of the product was reported to be an approach that entails modification of any or all the marketing elements to suit the external markets in order to gain more competitive edge (Nashwan, 2015[270]; Czinkota and Ronkainen, 2012[269]; Erdogmus et al., 2010[268]).

Wei and Yazdanifard (2014)[272] also reported that adaptation entails 'adapting' to the environment, differences and peculiarity of target consumers in terms of product attributes,

branding, communication and pricing, as the case may be. Adaptation involves tailor-making action plans for distinct regions and countries based on the identified peculiar factors, such as taste and predilection, financial buoyancy, level of education, national trade policies, and legal and religious restrictions (Ryans *et al*., 2003)[261].

As suggested by Otuedon (2016)[104], pricing adaptation concentrates on modifying marketing elements to accommodate price requirements of target customers based on the external market factors due to economic state of the region/country, hence, policies, transportation costs, governmental price controls, and custom duties/tariffs. Boryana and Bert (2010)[257] reported their findings on the importance of distribution as marketing element on which the successful implementation of standardization and adaptation strategies depend. They added that culturally, remote channel practices, non-flexibility of channel agent, and global operative decentralization prevent an organization more from implementing standardization distribution strategy in worldwide markets than in implementing standardization product, price, and promotional strategies.

According to Afriyie *et al*. (2018)[273], Lages and Montgomery (2004)[274] and Leonidou *et al.* (2002)[237], distribution adaptation is connected to modifying of the distribution channel of an organization to the international market, while promotion (orientation) is connected to the modification of distribution operations and drive designed for the particular foreign market. The influencers of decision to standardize or adapt the distribution medium of an international organization include the nature of consumers; product offering; wholesalers or distributors; and the environment (political, economic, social, technological, legal, other external elements) (Wei and Yazdanifard, 2014[272]; Ryans *et al*., 2003[261]). As a result of these, distribution is the most variegated in global marketing mix, as explained by Otuedon (2016)[104] and Onkvisit and Shaw (2004[246];2009[276]), as there is diversity in customers (consumers) disposable income, their buying pattern and in distribution systems and framework.

As suggested by Otuedon (2016)[104], the extent of being involved by an organization in distribution medium; the type of products (product offering) and size of sales might influence the decision of the organization to adapt distribution medium to different global markets. The extent of adaptation also varies on the basis of how well set up the business of the organization is. According to Ryans *et al*. (2003)[261], the comprehension of every part of global distribution medium is crucial to enable the organization to make informed decision towards strategy to be employed in order to achieve profitability, productivity and high performance in the global market. Being a component of marketing mix, there needs to be alignment with other components; price, product offering, and promotion.

Furthermore, Otuedon (2016)[104] reported that it becomes necessary for a multinational organization which has understood the peculiarity of the external environment (political and economic factors) of the country to decide on situation of its manufacturing hub, to prevent business is greatly impacted by eventualities related to political and/or economic crisis. Powers and Loyka (2010)[277] pointed out the degree to which single marketing mix factors was adapted for international markets; and found out that the manner of an organization, its industry, and its target consumers determine the extent of adaptation series of action. They investigated organizations that were based in United States which played in global markets. They concluded that adaptation strategy was highest for channel, and then price, promotion and product in that order.

In addition, they reported that product and promotion adaptation were determined by consumers and customers; price, by customers/consumers and industry; and channel by the organization itself. These reports were considered useful to comprehend and implement the degree of required adaptation for international organizations in the global market. Certain researchers (Afriyie, 2018[273]; Akgün, 2014[46]; Brei *et al.,*2011[278]; Omar, 2008[279]) are of the opinion that what matters most is the extent to which adaptation strategy should be employed,

and not if or if not to employ standardization or adaptation approach. Therefore, the extent of adaptation of the product and orientation has been reported to have greatly affected the manner of operation of an international organization, its products, the industry where it plays, and the features of the foreign marketplace. Furthermore, they opine the concurrent employment of both marketing strategies such that the extent of each of them is based on the internal and environmental elements of the country or region.

According to Wei and Rashad (2014)[272]; Chung *et al.* (2012)[280]; Brei *et al.*(2011)[278]; Vrontis and Thrassou (2007)[247], and international organizations require to concurrently concentrate on the aspects where international standardization need to be employed, and aspects where modifications (to local contents) are required. They added that marketing elements of both strategic approaches would then be integrated. This enables effective satisfaction of local customers as well as the international organization. Akgün *et al.* (2014)[46] reported that in spite of growing benefits of global marketing for organizations' survival, expansion of productivity and sustainability in competitive and evolving global marketplace, more emphasis is on concentrating on challenges related to local knowledge.

Loukakou and Membe (2012)[249] researched on marketing action plan for McDonald, a global Quick Service Restaurant company regarding aligning both standardization and adaptation approach, while Nguyen (2011)[250] researched on a Vietnamese Quick Service Restaurant organization and a company that plays in entertainment industry, which plan to enter foreign markets- France and Japan. These researchers discovered influence of diversity in culture in international marketing, and therefore suggested integration of both approaches, adaptation and standardization. Their findings would enable them to achieve the peculiar cultural prerequisite of each of the target markets.

Furthermore, Da Silva and Santos (2020)[281] reported their findings on influence of marketing mix elements on Portuguese exportation of wine. They found out that while all other

elements were adapted to the global market, the product (its internal features) should be standardized. However, Tantong *et al.* (2010)[282] reported positive outcome from product adaptation and customer focus on exportation, and more outcome obtained in smaller organizations than larger ones, which according to Alimien and Kuvykait (2008)[259] could be linked to decision-making series of action. According to Encyclopædia Britannica, Inc (2018)[37], and Archibong (2018)[157], there is diversity in culture as there are over two hundred and fifty (250) ethnic groups, and three (3) basic religions in Nigeria. The largest groups are the Hausas and Fulani, which have cultures which are completely different from all others, which are the Yorubas and the Ibos. Across Nigeria, behaviors that are approved in some geographical regions and among some tribes may be disapproved in another.

Ekerete (2001)[51] identified how culture influenced the marketing strategies employed by certain international organizations who played in some industries in Nigeria. He discovered the extent to which these components of culture influenced the activities of these organization, and their method to overcome the issues. Furthermore, Oyedele and Firat (2019)[68] reported strategies that international organizations employ in an emerging market (Nigeria) through exploratory qualitative research method. They identified flexibility in marketing strategies to be employed in Nigeria due to its complexities.

Summary

Culture is very penetrating and prevalent, and very complicated to understand. It serves as the basis for diversities in people (consumers) as it is linked to both internal (consumers' demographics) and external (environmental) factors that influence their behavior. Elements of culture, as suggested by Carter (1997)[230] include attractiveness, technology, law, religion, language, values and social organization. Therefore, culture is described in any of these contexts. A consumer's values result from his tradition, religion, faith and restrictions which were acquired over time. According to KoÈster and Mojet (2006)[196]; Sobal *et al*.

(2006)[96] the individual food system is the series of action through which a person builds or establishes food choices, putting into consideration ethics and norms, and using other psychological series of action for choosing foods. individual food systems can be specifically essential to concede in countries or regions where food alternatives for eating are numerous and there are some controls that restrict or influence the food choice people make.

Food consumers build basic food preference values; imaginarily categorize foods and eating circumstances based on these values; give priority to food preference values in particular circumstances (value negotiation) and equilibrate how foods are eaten as required and wanted. Decision on food preference in recurring situations become simple through building of action plans which lead to habits or pattern in decision making and food behaviors.

Individual food systems are evolving as they are influenced and therefore, are responsive to fresh or latest lifetime occurrence, and invariably the circumstance an individual encounter impacts food choice made by such person. Numerous forms of suppositions apply to decision making in food, and these are from the point of view of social disposition, reality, clarity and focus. Some consumers stick to their cultural food preference because they want to keep the identity.

Food predilection are also affected by individual and cultural way of thinking, restrained by immediate situation and resources. Family settings, which entail household leadership, presence of offspring, state of health of members, and the household members roles in food selection, have effects on food security and healthy living of the family and healthy living. As people grow and evolve over time they are transformed by their surroundings, hence, they individually establish life trajectory which entails earlier and current eating experiences and circumstances, and projections about future probabilities. Therefore, taste preference changes with age.

Food choices are not static but change with time. There is effect of environmental changes on food choice trajectory, such that, as the environments (physical environment inclusive) within which life trajectory evolution takes place, people form individual food choice course in line with the change, and this happens at distinct times in their lifetime. Food consumers choose from a collection of available foods at the point of procurement; hence, they are restricted to what are available, which are affected by cultural factors that are political, environmental, social, technological, legal, and economic. Food choices change in numerous forms as consumers migrate from a culture to the other. They move from the indigenous way of doing things in respect of food selection to foreign way, and/or vice versa. It also entails imbibing foreign foods and food flavors, replacing raw materials and processing techniques.

Under motivation theory, the level of arousal that was just right for some, might change as there is recurring exposure to the impulse that produce the arousal. Hence, uniqueness may fade with time. The postulations on decision and choice, and they entail the employment of postulations on planned behavior to food preference (eating and drinking decision making). The theory of reasoned action, which thereafter became theory of planned behavior by Ajzen and Fishbein (1980)[97]; Fishbein and Ajzen (1975)[98] and Ajzen (2015)[100] is most well-known of the numerous postulations which are clearly related to definite subconscious and unconscious influence and deliberate action plan to achieve change in behavior.

The theory is founded on the assumption that behavior is clearly evoked by intents, which consequently are affected by mindset and beliefs in an individual consumer's values and manage likelihood, and in the decision of people whose views are essential. However, Honkanen et al. (2005)[102] and Verbeke and Vackier (2005)[103] reported that in their studies, past experiences are more essential in influencing food choice, than attitude and beliefs.

According to Falk et al. (1996)[208], Furst et al. (1996)[95] and Connors et al. (2001)[99] strategies are the action plans which people create for the food they consume and the way they

consume foods in recurring circumstances. They clarify food preference by removing the psychological performance and time needed for thought about food preference, as they come forth from early deliberate food preference decisions for a particular circumstance and over time is now not as conscious as before, as there is recurrence of circumstance

In establishing strategies, there is need to concentrate on food choice values, and there might be need for value negotiation such that some values are (or a value is) prioritized above others. Food choice values include cost, taste, well-being, social bonding, ease and indulgence. According to Larimo and Kontkanen (2010)[258] and Ryans *et al.* (2002)[261], the importance of overseas sales in business up and running of an organization has taken much attention, and much more attention is being given to strategies to be employed by such organizations in overseas and global markets. The extent or way of combining standardization and adaptation is still very crucial, as in close to last six decades till date, various research have been done on these marketing strategies.

According to Alcantara-Pilar *et al*. (2015)[223], marketing action plan aims at extending to and meeting the needs of consumer, by putting into consideration culturally different target market. Marketing strategies are based on elements which are product, price, promotion, and placement, which are suitable to target market, as described by Doole and Lowe (2008)[229]. Standardization approach assumes that the world is getting more uniform and correlative, and that consequently, food preference based on taste and cultures are becoming uniform. However, adaptation involves tailor-making action plans for distinct regions and countries based on the identified peculiar factors, such as taste and predilection, financial buoyancy, level of education, national trade policies, and legal and religious restrictions.

The disparity of consumer behavior among different markets and within same market arises from particular integration of group and individual attributes; and influences the choice of marketing strategy to employ, whether adaptation, or standardization, or mixed.

Descriptors

Food choice; food preference; buying decision; food predilection; food choice values; personal food system; individual food system; consumers; emerging market; Nigeria; demographics; culture; marketing element; diversity; marketing strategy; adaptation; standardization; integration; marketing mix; marketing mix components

CHAPTER 3: RESEARCH METHOD

Introduction to the Section

Kushta *et al.* (2018)[283] suggested that consumer behavior is paramount in comprehending market dynamics and marketing itself. According to Swarbrooke and Horner (2007)[284], consumer behavior entails the actions and connected individual person's activities in purchasing and utilizing economic goods and services.

Effects of consumers diverseness on purchasing behavior is a threat to global marketing, in spite of global marketing amalgamation in current-day business promotes ease of using same marketing strategy in international manufacturing organizations and enhances a model that is established across the world.

The research problem is that there is lack of publication on food flavor preference among Nigerian manufactured food consumers; elements that influence their preference and effects of diversities on their purchasing pattern and international marketing mix plan-adaptation or standardization, in Nigeria, being an emerging economy, for the sake of promoting worldwide marketing. There is need to unveil the peculiar predilection for food taste and flavor among Nigerian consumers, gain intelligence on flavor market shares, purchasing behaviors and international marketing mix for Business-to-Business in Nigerian flavor industry.

According to Kushta *et al*. (2018)[283], in consumer behavior there were two considerations- the psychological aspect of formation of opinion and metrics aspect of meeting the requirement in an existing environment. The most common theory from this viewpoint is Utility Theory which suggests that consumers choices are made on the basis of the outcomes they look forward to in their decisions. Consumers are considered as logical decision makers who are basically particular about self-interest.

Research Approach and Design

As suggested by Creswell (2014)[56], research process employed involved research philosophy, research approaches, research methods, and research design. In this research, based on the research problems, objectives and nature of study, mixed method research approach and design was employed.

Research Philosophical Viewpoint

As suggested by Creswell (2014)[56], post-positivism research philosophy was employed based on the belief that causes determine effects or outcomes. Kushta *et al.* (2018)[283] reported employing same philosophy due to the need to discover the causes that influenced findings in their study on consumer behavior. Furthermore, post-positivism reduces or simplifies the ideas, separate set to examine, variables, hypotheses and research questions, hence it is reductionistic. As it entails developing statistical course of action of observations and understanding individual's behavior, it is based on the belief that existing theories need to be tested for proper understanding of some occurrences. Therefore, in the study, research began with a theory, and then gathering of data to test the theory.

Research Approach

As reported by Creswell (2002)[55], mixed method research approach was employed due to the objectives of the research to guide and give clarity to research that was to be undertaken. This approach was aimed at making enquiry that would entail gathering both quantitative and qualitative data, integrating them, and using well-defined outlines that might necessitate philosophical suppositions and theoretical structure. The key supposition of this type of enquiry was that the integration or amalgamation of qualitative and quantitative approaches produced an additional 'whole' and detailed comprehension of a research problem than either approach singly.

This mixed method research was used in this study, as guided by Bryman (2006[284]); Creswell (2002)[55] and Tashakkori and Teddlie (1998[285]; 2003[286]), while other researchers named it as multiple methods (Brannen, 1992[287]); multi-strategy (Bryman, 2004[288]); and mixed methodology research (Creswell, 2002[55]; Tashakkori and Teddlie, 2003[286]).

Qualitative research was conducted to corroborate the quantitative research findings, and to better comprehend and make clear the reasons for the occurrence of observations made in Nigerian food flavor industry (food flavor consumption in processed and packed foods in Nigeria).

As suggested by Creswell (2014)[56], qualitative research approach was employed to explore and comprehend the interpretation individuals or groups give to a social or human issue, and to understand consumer behavior (Kushta *et al*., 2018)[283]. The aim of this research was to provide information by precisely gathering an array of variables so as to arrange/group the intricacy a set of situations that congregate to result in a specific occurrence, circumstance or event. Data gathering in this research was through interviews (in-depth and elite interviews) and focus group discussion, with the objective of the methodology to offer detailed and detailed investigation of an event, occurrence or circumstance.

The qualitative research approach entailed purposeful sampling, collection of open-ended data, analysis, interpretation, and report writing. The series of action of this research involved transpiring questions and course of action, data particularly gathered in the respondent's setting, data analysis logically done from specific to general, and making meaningful elucidation of the findings, such that this research employed inductive research approach. The culminating written report has an easy-to-modify structure.

In addition, the qualitative research approach was employed to unveil the demographics of Nigeria population, and the pattern, frequency and attitudes of Nigerian consumers of processed (flavored) and packed foods/drinks.

Furthermore, according to Creswell (2014)[56], quantitative research approach was employed to test objective theories (deductively) by investigating the association among variables, which consequently, were quantified to enable analysis of numbered data by employing statistical system. It entailed the series of action of gathering, analyzing, interpreting, and reporting the outcome of the investigation. This research involved pinpointing the sample of respondents from Nigeria population, identifying and stating design type, gathering and analyzing information obtained, presentation of findings, interpretation, and reporting the research in a congruous way.

As suggested by Creswell (2002)[55] due to the kind of research objectives and questions, quantitative research approach was the main research approach to evaluate hypotheses on existing postulated theories. This helped to understand what happens in food flavor industry in terms of purchasing and consumption of processed (flavored) and packed foods in Nigeria. Therefore, deductive research approach was employed since there are strong theories on differences of consumer behaviors on the basis of diversities in gender, ethnicity/culture, age, religion/belief and socio-economic class. This research methodology was expected to provide clear and direct responses to "what" made observation so, rather than the reason, the time, and the manner that were linked to observations made. Through this research methodology, information about the current situation of consumer buying patterns were obtained but not the detail of reason for the situation.

Therefore, according to Creswell (2002)[55], mixed method research approach was used so that both research methods would complement each other. Descriptive research methodology was employed by both qualitative and quantitative approach (McCombes, 2022[289]). Using descriptive research methodology provided information by accurately obtaining an array of variables so as to analyze and express the features of the variables that were further analyzed;- buying behavior/ trend; food flavor manufacturing organizations

and manufacturing organizations of processed and packed foods; and individuals (consumers of (flavored) processed and packed foods); and motivating factors in consumer's buying decision.

Survey research approach was specifically employed in the quantitative research. According to Check and Schutt (2012)[290], data were collected from representative sample of individuals of the population of Nigeria through their responses to the questions in the questionnaire. This involved gathering and analyzing numerical information, with the aim of uncovering patterns and means, form predictions, test hypotheses and association, and to draw to a general conclusion findings of the research to larger Nigeria population.

Questionnaire survey was used as a data collection tool in order to obtain information that identified the particular situation of the investigation, as it made it possible to generate large data that were later analyzed for means, trend, and frequencies. Consequently, it was possible to describe the demographics of Nigeria population, and understand the lifestyle of Nigerian consumers, motivations and constraints towards processed (flavored) and packed foods/drinks, level of satisfaction and purchasing behavior.

In the quantitative aspect of this mixed research, as suggested by Earl (2010)[59], method of collection of information to be employed for quantitative part of the research was that which enabled gathering of numerical data with the use of structured research tools - questionnaires and computer software, which had close-ended questions.

Online questionnaires was employed for distant respondents and those who preferred online survey because of pandemic, while paper-based (physical) questionnaires were administered to others. Data was collected from 5,064 respondents by employing structured research instruments and presented in numerical forms, as results were on the basis of the large sample sizes that represent Nigerian population which are consumers of processed and packed

foods (and beverages). This research was conducted such that samples would be replicable, reliable, and generalizable, employing close-ended questionnaires.

Research Design

The mixed method approaches have become very important recently (Zohrabi, 2013)[291], as putting together two methods- qualitative and quantitative methods, might give deeper insights into the research than employing only one method (Dawadi *et al.,* 2021)[292]. According to Poth and Munce (2020)[293], mixed-methods design was employed to enable integration of both data sources, and the synergism of both would help to explore deeply the consumers' behavior.

In this study, both qualitative and quantitative data obtained gave deeper insights in the direction of research objectives and research questions (Dawadi *et al*., 2021[292]; Maxwell, 2016[294]), and give complete view of consumers' behavior to reveal gaps for future research (Dawadi *et al*., 2021[292]; Venkatesh *et al*., 2013[293]).

Furthermore, the mixed method research design was employed in this study as reported by Edmond and Kennedy (2017)[295], such that quantitative and qualitative research methodologies were used together to gain deeper insight into Nigerian consumers' needs, peculiarity and purchasing behaviors based on demographic. Based on suggestion of Creswell and Pablo-Clark (2011)[296], a convergent parallel design was employed such that both quantitative and qualitative research were conducted simultaneously at the same stage of research process, research data were analyzed separately but results were interpreted collectively. Through survey using quantitative and qualitative research approaches, Slavica *et al*. (2019)[297] described the influence of age and family structure on the decision of activities in a tourist destination, while Yilmaz and Belbag (2016)[298] predicted consumers behavior for purchasing remanufactured products. Research were based on extant theories and the hypotheses were either rejected or accepted.

The concurrent triangulation approach or convergent parallel approach (Castro *et al.*, 2010)[299], is perhaps, mostly employed among other mixed research method models (Creswell, 2014)[56]. In this study, data were concurrently gathered quantitatively and qualitatively, at the same stage. Thereafter, the information obtained were compared to determine they converged, differed or could be corroborated, through cross-validation.

In this mixed research model, as two different methods were used; quantitative and qualitative, the model served to eliminate shortcomings in one method with the strength in the other, or to synergize both for more comprehensive and detailed findings. Both methods are equal in weight, and the interpretations were merged for comparison and/or combination, and explained side by side.

This was an experimental survey research design which was conducted to study and test cause-and-effect associations between dependent and independent variables, as suggested by Bevans (2022)[300]. In this research design, a set of plans/course of action to systematically test the hypotheses was created, as independent variables were manipulated, as subjects were allotted to strata, dependent variables were measured. As the independent variable was varied, irrelevant variables were checked so they would not interfere with the variables that were of interest, while dependent variables were being monitored. Therefore, the internal validity was high and consequently, the conclusions that were made about the causation.

Figure 6

The Basic Structure for The Research- Interrelationship of Research Philosophy, Method,

Approach and Design
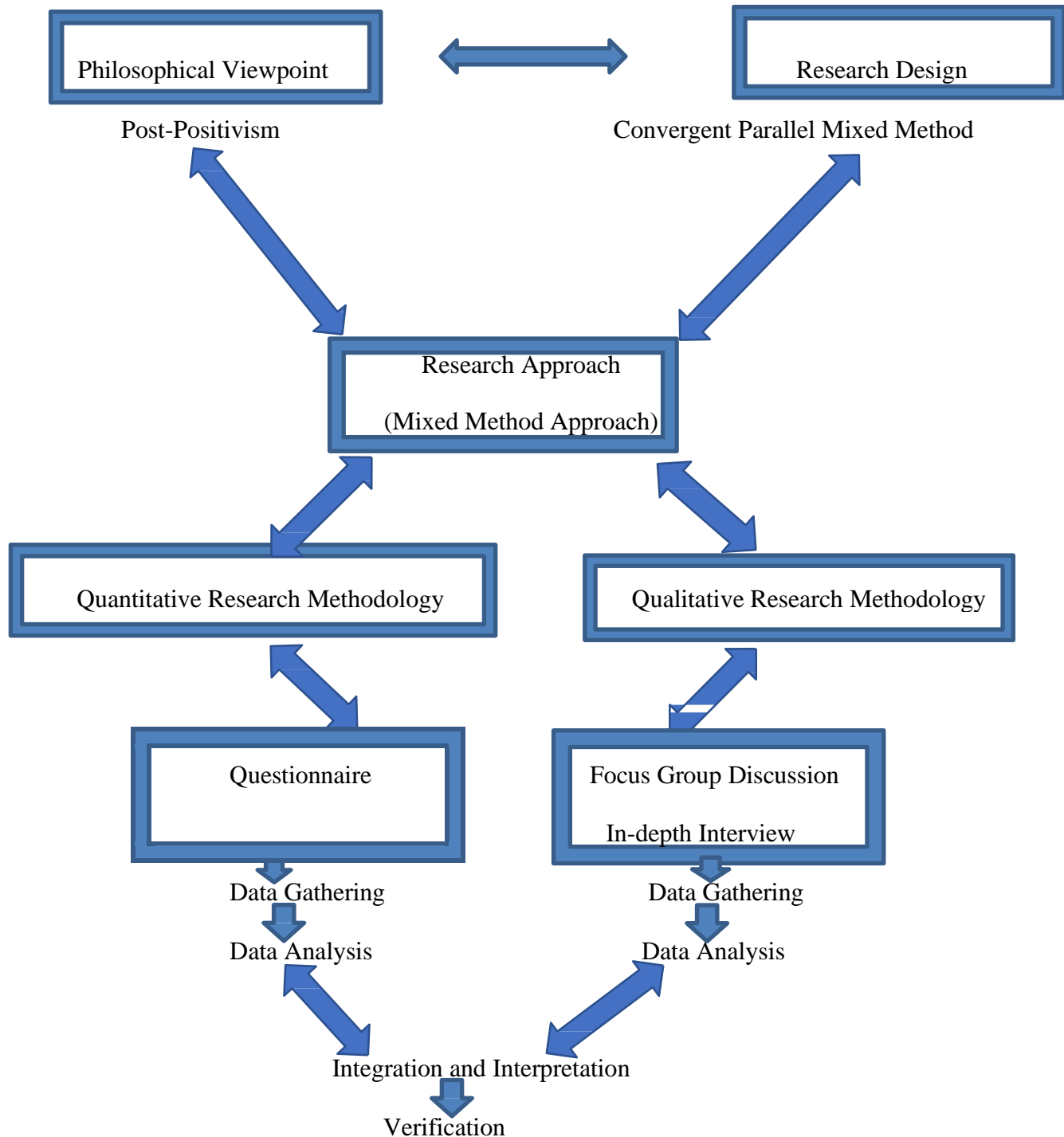
Source: (Modified) Creswell (2014:35)[56]. Research Design. Qualitative, Quantitative, and

Mixed Method Approaches

Population and Sample of the Research Study

As the level of processing differs from minimal to heavy (Monteiro *et al*., 2018)[301], Ojewale (2020)[406] reported that it is difficult for Nigerians to avoid the consumption of any form of processed foods/drinks. Most processed foods/drinks are ready-to eat while the rest are intermediate products which are used in further food preparation such as cooking aids (bouillon cubes/tablets, seasoning powder). Processed foods/drinks categories include biscuit, crackers, bread, snacks, breakfast cereals, dairy products, spreads, carbonated soft drink, still drinks, chocolate drinks, coffee drinks, and malted drinks. Consequently, target population in this study were Nigerians- male and female who were between the age range- 19-70 years. This population is of interest to capture the views of different regional native groups/regions which make up Nigeria population based on the different age groups- 19-39 years, 40-59 years and 60-70 years, and based on gender. Respondents in the questionnaire survey, and participants in the focus group discussion, therefore, were either male or female Nigerians, who were within the age range of 19-70 years.

Participants in the in-depth and the elite interviews (qualitative research) were adults within the age range of 19-70 years, and were those who were experts/professionals in the processed (flavored) and packed foods/drinks industry and those who have been in food flavor industry in Nigeria for not less than five years.

Target population was considered appropriate to answer the research problem and purpose with the focus of unveiling the effects of diversity on purchasing behaviors of Nigerian consumers towards processed and packed foods/drinks, and the marketing strategy which are employed by international food flavor manufacturers. Furthermore, respondents were considered to be appropriate to provide lacking information on effect of diversity across Nigerian consumers based on demographics, their taste predilection, needs/motivations and factors which influence their purchase decisions.

Determining the ideal sample size was crucial in planning this study to achieve appropriate power to detect statistical significance. Consequently, power analysis would help reduce the chance of the occurrence of accepting a false hypothesis namely, Power or Type II errors by the assumption that there was an existing relationship which was not so.

As the sample size was the most essential factor which determines the power of the tests - linear regression, t-test, analysis of variance on the difference of mean at the desired significance level, and principal component analysis, the larger the sample size the better it was for this study. Therefore, sample size employed in this study was determined basically on the need to give enough statistical power (precision), such that as confidence level increased, margin error decreased and accuracy increased. In other words, power increased with sample size for this study, hence, sample size was as high as 5,064 respondents.

Significance testing entailed using statistical method to discover if the samples taken were actually from the desired population or they were by chance, as determined by the set alpha level, 0.05, below which p-value fell, analysis indicated statistical significance. Regression analysis was employed to conclude if true relationships existed between a dependent and independent variable(s), such that null hypothesis was rejected while alternative hypothesis was accepted when regression coefficient was significant (at 0.05 level of significance). In order to check if the sample was representing the features of the population so as to use for further analysis, there would be significance as the 0.05 level, or else, it was not a representative of the population.

Data obtained in pilot study were analysed for statistical significance to see if sample was representing the characteristics of population of Nigerian consumers of processed (flavored) and packed foods/drinks. Significance was employed for the inferential analyses carried out - linear regression analyses, t-test and analyses of variance on the mean difference, and chi-square test. Interpretation of power of statistic which was based on significance helped

to either nullify or accept the hypotheses, while hypothesis was assumed to determine and detect differences which were evaluated using a two-tailed test.

Sampling Techniques

An essential part of this research was the selection for samples that would be representative, so it would be valid to draw inferences from data gathered on them. A typical Nigerian consumes one form of processed (flavored) and packed foods/drinks or the other. Sample selection- sampling, entails choosing a subgroup of Nigerians from within the statistical population, to evaluate features of the whole Nigerian population.

As this research approach is mixed method, Schreuder *et al*. (2001)[415] has suggested integration of sampling techniques as this would enhance in establishing cause-effect relationship.

In addition, the research scope and validity of conclusion/deduction were put into consideration, and these determined the sample choice and sampling technique used. Furthermore, bearing in mind the research objectives, mixed research approach and both probabilistic and non-probabilistic sampling methods were used.

Probability Quantitative Sampling Research: Stratified Random Sampling

Stratified random sampling was employed in the selection of representative samples, which was crucial so that valid inferences could be drawn from data that were generated from them. Having defined the target population, it was divided into subgroups, named strata, such that every one among the target population would fall into one subgroup. The characteristic with which the target population would be divided was chosen as nativity of Nigerian consumers, as every one must be a native of one regional native location. This method was employed because each subgroup would have different mean values for the various variables that were being studied. Due to the diversity in Nigerian consumers- the target population (19-70 years), stratified random sampling reflected the diversities, as they were divided into the strata based the diversity in the target population.

As the target population was grouped mainly based on regional native locations, and samples were drawn from the six different geopolitical zones of Nigeria which represented the different regional native locations in Nigeria. Therefore, stratified sampling allowed for more concise measure of dependent and independent variables that were being measured in this study, so as to achieve less variance within every subgroup, and consequently, less variance for the target population, at large. In addition, employing stratified sampling made it easy to obtain data from various subgroups.

Furthermore, based on other multiple features- age group and gender, target population was stratified such that every one could be distinctly matched in just one subgroup. Therefore, in this study, strata were obtained for six (6) regional native locations (South-Southern, South-Eastern, South-Western, North-Central, North-Eastern, and North-Western); three (3) age groups (19-39 years; 40-59 years; and 60-70 years), and two (2) gender (male and female). Having stratified for all, there were thirty-six (36) strata in all. Each subject fell into just one strata among the thirty-six (36). Furthermore, into these strata fall other demographics-monthly earning, religion, educational status, marital status, family size, regional home location, and regional birth location.

As suggested by Cohen *et al.* (2013)[54], sample frame from which subjects will be drawn are Nigerians within the age group (19-70 years). The entire sample size was large enough to make it possible to bring out statistical deductions about each of the subgroups.

Furthermore, according to Thomas (2022)[309], another simple sampling -probability sampling technique, was employed to select subjects from within each of the strata. Data were obtained on the variables employed to understand the lifestyle, motivations, constraints and purchasing behavior of the subjects.

Furthermore, as suggested by Thomas (2022)[309] and Parsons (2017)[310], stratified sampling was employed on the basis of simple random sampling. Strata was formed ideal

sample allotment among the strata was done. Sampling technique was in line with research questions and hypotheses, so that it was used to evaluate relevant theories identified in this research. As the objective of this sampling was more than to obtain samples that represent the bigger population of market professionals in flavor industry and food industry, a sample was drawn through stratified random sampling.

Employing random stratified sampling was expected to make possible comparison of findings by stratum, and population would be classified into relevant strata and a sample would randomly be drawn from each stratum.

Reliability and validity of research instrument employed was considered by conducting a pilot study involving respondents which constituted a little above 10% of the entire target number of respondents across the six regional native locations, gender and age groups, and to determine the degree to which the questionnaire would measure and capture information for which it was designed.

Internal validity entails agreement and consistency of the research findings with what truly exists, and reinforcing the validity of data and findings, data was collected through more than one qualitative technique; focus group discussion, in-depth interview and elite interview. Furthermore, through triangulation of data from qualitative and quantitative research methods, findings are validated or confirmed. Random sampling was used in this study such that samples with high internal validity were generated while with adequately analyzed generated data, generalization could be made to the population of Nigeria population, from which samples were taken.

External validity entails ensuring the relevance and connection of the research findings in other situations using other respondents. Using stratified random sampling, generalization of findings in the study to entire Nigerian consumers of processed (flavored) and packed foods/drinks was made possible. Administered questionnaire contained questions to gain

insight in purchasing behavior and predilection of Nigerian consumers of processed foods (and beverages), based on demographics.

Figure 7 below is the diagram which shows eight tribal makeups; south-southern, eastern, middle belt, north-east, south-west, south-east, north-west and north-central, and others (as suggested by Encyclopædia Britannica, Inc., 2018[37] and Archibong, 2018[157]).

Figure 8 reveals the official geopolitical zones in Nigeria, which are tantamount to the major ethnic groups in Figure 7. These six zones (as suggested by Encyclopædia Britannica, Inc., 2018[37] and Archibong, 2018[157]), which in this study are being referred to as regional native group were not grouped just on the basis of geographic location, rather they were grouped based on similarity in regional nativity and in history of politics.

Figure 7

Historical Origins of Persistent Inequality in Nigeria
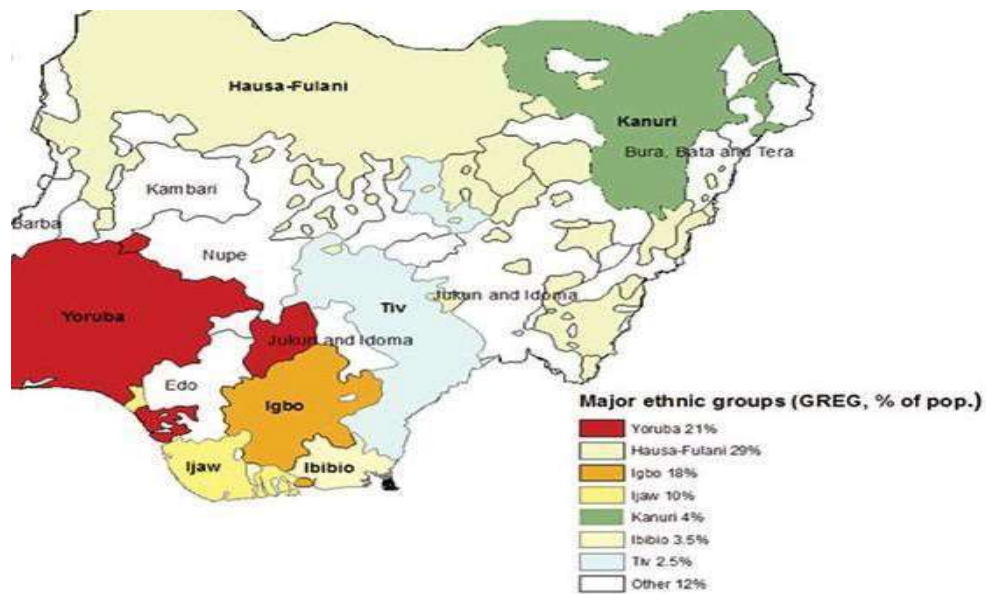
Source: (Modified) Archibong (2018)[157]. Historical Origins of Persistent Inequality in Nigeria.

Figure 8

Geopolitical Regions in Nigeria

Source: (modified) Bakare (2015) [404]

See **Appendix I** for states that constitute the six regional native groups

The different target sub-groups for the identified groups:

- *Age classification*

Age (19-70). According to Varella (2020)[a140], Nigeria has one of the youngest

populations in the world, and fifty percent (50%) of its population is aged under 19

years.

Using age intervals and age groups reported by Horng *et al*. (2001)[412], from age 19-70, the

below groups would be used;

- Young adults (19-39 years)

- Middle age adults (40- 59 years)

- Old adults (60 -70 years)

About 120 participants would be required per age group above.

- *Economic classification*

Disposable Income: **Monthly earning**

- Less than NGN50,000 per month

- NGN50,000 – less than NGN100,000 per month

- NGN 100,000 – less than NGN 250,000 per month

- N250,000 - less than NGN 500,000 per month

- Above 500,000 per month

- *Educational classification*

- Non-graduate

- Graduate

- *Religious classification*

- Christianity

- Islam

- Traditional

- Atheism

- ***Classification based on health concern***

- Weight control

- High nutrition

- High blood pressure

- High blood Sugar level

- Others

- ***Social group membership***

- Professional group membership

- Ethnic identification / membership

- Other social bonding groups

- ***Gender***

- Female

- Male

The objectives of segmenting respondents was to obtain detailed information about individual differences in consumers.

Non-Probability Sampling: Purposive Sampling (Qualitative Research)

As suggested by Andrade (2021)[311], purposive sampling technique was considered to be effective in this study on specific cultural locations, using knowledgeable participants (as it is with those who understand what processed (flavored) and packed foods/drinks are). Therefore, members of Nigeria population who were able to provide the required information was the focus.

Purposive sampling was employed to sample Nigerian population where small samples were required, such as in stakeholder interview which was conducted qualitatively. My goal was to get reliable information from very few samples of stakeholders which would have been streamlined, and use my judgement to select the individual respondent which would be representative of the specific interest, as the process was guided by the research purpose and objectives, and by my knowledge in food and food flavor industry.

In addition, purposive sampling involved conducting interviews for already identified participants, so as to rule out the risk of omitting those who were very important. Identified participants that were considered important to interview were chosen professionals/experts working in processed and packed food (and beverage) manufacturing companies and international food flavor organizations (across different departments- product development, production, sales and marketing, and procurement), and those in the field of food science and technology (professional members of Nigeria Institute of Food Science and Technology).

Sampling was, therefore, done on the basis of designation, duties and experience in food industry and food flavor industry. Different means of communication was employed to gain knowledge from participants through straightforward questions in surveys and questionnaires. This was, however, done with caution not to pressurize them to give information. Crucial information obtained by them was meant to give more insight to findings that were obtained in quantitative research, as this took place prior to in-depth interview with the elite (top managers).

Non-Probability Sampling for Qualitative Research: Interview for Data Collection

The structured open-ended style employed for the interview facilitated understanding the attitudes of interviewees (participants), as in-depth information were provided to further enhance validity. In this study, interview was very useful for exploration, corroboration and verification. Though it was time-consuming and expensive, the quality of information obtained

through interview was worthwhile. Participants were carefully selected for the in-depth interview and elite interview to obtain valid and reliable information based on their experience, knowledge and expertise in the food and food flavor industry in Nigeria.

Under this research, different communication skills were employed to obtain knowledge from participants. As suggested by Tansey (2007)[312], non-probability sampling approach was used in sampling participants for elite interview, who are top management of international organizations that manufacture international food flavors and play in the industry in Nigeria for minimum of five years; local organizations that manufacture processed and packed foods (and beverages), and market experts. Identified international flavor manufacturing organizations included those reported as global leaders by Leffingwell and Associates (2018)[9].

The in-depth interview was a one-on-one meeting which was setup to give full picture of each participant's opinion and knowledge on food flavor industry and Nigerian consumers' purchasing behaviors. The interview was structured (just as the interview questions) to facilitate control of data gathering, and it was time bound. Therefore, attentiveness was crucial. This interview was aimed at giving insight to the way of reasoning of Nigerian consumers of processed and packed foods (and beverages) and to draw conclusions about the characteristics and behavior of the bigger population.

Information obtained through process tracing technique was used to pinpoint reasons for some consumer behaviors and for some marketing strategies employed by international flavor manufacturing organizations, and other processes that cause such reactions, at each stage of process. In other words, it was employed to find the how potential cause (such as price competitiveness and product attributes) affect a particular change in consumer purchasing behavioral trend. Initial tests conducted (purposive sampled qualitative research and survey -

quantitative research) was applied to investigate the degree at which the potential cause has influenced the changes.

Changes in consumer purchasing behavior (either positive or negative) was of interest and was aimed to be predicted as a change that could actually exist. The series of actions that led to the changes aimed to be identified and noted and checked if they relate to any relevant theory (theories). Upon confirmation, then the cause-and-effect relationship are established, as well as findings that support the relationship.

Materials and Instruments of Research Tools

The importance of employing concurrent (or convergent parallel) mixed method research approach was to understand the influence of diversity of Nigerian consumers of processed food and beverage consumers on their buying patterns, understand the causative factors of diversities in markets, and on marketing plans that would be used by international flavor manufacturing companies in Nigeria. As this research was on hypothetical theory on marketing mix element, which are promotion, product, price and place, it revealed the way various categories of Nigerian consumers of processed foods and beverage react to individual marketing elements. Consequently, observations made guided to make informed decision on strategy employed, which was adaptation or standardization, or even integration of both.

Well-defined theory exists on diversity of consumer purchasing behavior based on demographics. Consequently, as deductive research approach was employed to understand this theory and its outcome on flavor consumption in processed food and beverages flavors produced in Nigeria, each of quantitative research approach and qualitative research approach was the basic point of view. Qualitative research approach employed the use of detailed one-on-one interviews and focus group discussion to unveil relationships among factors, and those which cause occurrences linked to consumer behaviors in flavor industry.

The aspect of quantitative research approach employed investigated and analysed the Nigerian consumers' behavior (purchasing pattern) across a range of age 19-70 years; different ethnic situation, event or occurrence, at the level of individuals, organizations or groups, at other situations. The objective of conducting this study was to investigate the stated research problem, and on the other hand, qualitative research study was designed to solve the identified research questions.

Considering the research problem below are some points to in designing qualitative study:

- Specific information to be obtained on respondents.

- Methods to be used to generate the data or obtain the information.

- Method to be used to select participants to involve.

- Method to be used to ensure participants give required information.

- Possible problems to be encountered.

This was an experimental research which involves primary research where there was involvement of human individuals, data obtained from questionnaire and interview would be analysed.

Quantitative Method Data Collection Tool- Questionnaire

In the quantitative research methodology employed, questionnaires were shared to participants who were sampled from sub-group of the target population- Nigerians. These participants were sampled through stratified random sampling technique, such that target population who were between the age 19-70 years were stratified based on their regional native locations.

According to Johnson and Christensen (2014)[313], a research questionnaire is a self-report data-gathering tool which is administered to every participant in survey. Having in mind the goal of designing the questionnaire which are to comprehend the viewpoints of study

participants about variables linked to the research objectives, questionnaire for the survey was designed in line with this goal. It was borne in mind to construct questions that would provide clear data about what the perception of research participants, as they are connected to research objectives. In this study, original data generation was the goal to enable me understand the sub-group of Nigerian population which are involved in food chain and have the understanding of what food flavorings are in processed and packed foods/drinks, and data that would enable me test research hypotheses. Having researched existing literature, there was no report of effect of diversity on the purchasing behavior of Nigerian consumers of processed (flavored) and packed foods and drinks, and the effect of diversity on global marketing strategies for food flavor industry in Nigeria. It became essential to be broad in questions to unveil every important part which would be relevant to participants to share, hence, questionnaire was designed carefully and thoughtfully.

Furthermore, pilot study was conducted with the interview to determine its suitability to capture all relevant questions in order to ensure it provide the required information. Very importantly, the research participants were understood, as this was paramount in designing and to the effectiveness of the questionnaire. Simple and unambiguous questions were included to ensure clarity, precision and brevity, considering the different age group (19-70 years) and educational status, cultural background. Questionnaire were designed to ensure participants felt comfortable to participate in the survey, and not feel they were in an examination setting. Suggestive questions were avoided in the questionnaire to encourage sharing their candid opinion. The survey questionnaire was structured, and designed for the survey to have fixed response options, based on the suggestions of Earl (2010)[59]. Closed-ended questions were required so participants could choose from a few responses which had been predetermined. Previous reports made on Nigerian consumers gave some indications on some specific packed foods/drinks in some specific locations in Nigeria on their purchasing behaviors. The closed-

ended questions in this survey became appropriate as there was already an idea of the depth of the variables, being measured, based on past reports. Consequently, data collection was employed such that numerical data were gathered using structured research tools-questionnaires and computer software, with close-ended questions. Questions were presented in such a way to address the research problem. Online questionnaires were administered for remote participants, while face-to-face paper-based survey were conducted, by administering questionnaires. This invariably reduces bias as participants were not in direct touch with me, the researcher. The questionnaire enabled all participants to respond in the same manner using same categories of response which do not overlap, thereby facilitating standardized quantitative statistical analysis. Data obtained were nominal, ordinal, interval and ratio data, as described by Johnson and Christensen (2014)[313], and Abramson and Abramson (2008)[314], to establish relationships between two variables. Numerical rating scales were used to generate numerical data which measured the below;

- Level of social bonding influence on their purchasing decision towards processed (flavored) and packed foods/drinks

- Frequency of purchase and consumption of processed (flavored) and packed foods/drinks

- Budget for processed (flavored) and packed foods/drinks

- Importance of flavor and taste in processed (flavored) and packed foods/drinks

- Level of satisfaction derived from processed (flavored) and packed foods/drinks

Furthermore, according to Earl (2010)[59] and Creswell (2002)[55], provision of well-defined research questions which require objective responses were made and every section of the study were well-designed before data were collected. Findings were made on the basis of big sizes of sample which represents the population (Nigerians) and were arranged in tables and graphical representation. Very importantly, the study were used to give future prediction,

test theory, to examine cause and effects and to extend generalization of theory. According to Paniagual (2019)[331], in this research, hypotheses were to be confirmed (accepted) or rejected.

As suggested by Creswell (2002)[55], questionnaire was designed such that data gathered would respond to research questions. Furthermore, questionnaire was designed to generate numerical data which were statistically analysed, as correlation between the two variables within the data, and association between two factors at a time. Carefulness was ensured to ensure questionnaire was suitable to generate the required, relevant and desired information that were credible. Adequacy of questionnaire was checked in pilot study prior to the actual study.

Qualitative Methods of Data Collection

On the other hand, qualitative methods of data collection was done to find out what factors (demographics and/or needs) affect taste preference; and why such factors do. As data collection is a crucial aspect of all research studies, unreliable means of gathering data would result in incredible findings, hence, extra care was taken.

The qualitative methods of data collection employed are shown below.

Focus Group Discussion

This was employed to point out the credence and opinion (in terms of value- cost, taste, well-being, ease, social-bonding -:religious beliefs inclusive) of a selected group of people that would represent each of the groups, on the specific topic of food choice/ predilection and consumption, and purchasing behavior (food choice habits; exclusion; elimination; restraints; replacement; inclusion) of food flavors in processed and packed foods and beverages.

According to Morgan (1996)[315] focus group interview (based on regional native group and age groups), research technique enhanced the gathering of qualitative data through group discussion, on the predetermined title on consumer behavior and purchasing pattern for flavors used as additives in processed food and beverages. In addition, there was room to obtain

information on the background of participants, as they shared their social and cultural experiences (age, gender and education).

Focus group interview/discussion conducted was virtual, and it was aimed at unveiling the peculiar preference for food taste and flavor among Nigerian consumers and buying patterns. There are eight regional/tribal makeup; south-southern, eastern, middle belt, north-east, south-west, south-east, north-west and north-central, and others, as suggested by Encyclopædia Britannica, Inc. (2018)[37] and Archibong (2018)[157]. Minimum of 18 participants were required per regional native group which was stratified under age and gender, as respondents were segmented so as to obtain detailed information about individual differences in consumers.

Focus group discussion was employed as the major phase of exploration to bring up matters, to precede in-depth interviews. As participants would not be coerced, focus group discussion is an essential methodology that would be employed to explore and examine the way Nigerian consumers of processed foods and beverages think, the reason behind the way they think, and what actually they think regarding essential matters related to their food consumption, preference and behavior.

Based on the suggestion of Liamputtong (2011)[316], this methodology was a suitable technique to investigate stories, ideas, experiences and beliefs of individual Nigerian consumer. As the respondents were able to bring up their own viewpoints and enquiries regarding their individual needs relating to the subject of discussion, it became easier to gain access to various ways Nigerians pass information across in their day-to-day living. This consequently facilitated knowledge capturing from individuals which ordinarily would not have been easy to achieve with straightforward questions such as in surveys and questionnaires. It became very easy to enter the "world" of participants as focus group discussion gave room to obtain insight of a

large range of viewpoints about consumption of flavors in processed food and beverages and the way their insights interact.

Furthermore, this methodology was very ideal to explore complex matters on Nigerians pattern of behavior and what motivates their buying decision. The focus group interview was useful to give prior understanding or knowledge of the opinion, thoughts, feelings and interpretations of Nigerian consumers of processed foods, and in exploring the extent of difference between the description they gave about the topic and what they actually do, hence understand their way of life. This methodology was suitable to have the views of numerous Nigerian food consumers who belong to ethnic minority class, and those who belong to marginalized group.

In addition, virtual focus group discussion was considered for some categories of participants in order to shorten duration of research fieldwork, and to make it easier and safer (because of Covid-19 pandemic) to bring individual participants from various geographical locations together, to facilitate recording of discussion and to encourage anonymous participation (if required by participants). As suggested by Liamputtong (2011)[316], matters under consideration in focus group discussion were within the suggested range of numbers of participants 6-10. Discussion was planned with ideal questions, while participants consent was obtained for recording. Ethical considerations were put in place such that there was earlier signed consent form, findings were made confidential and anonymity was considered for participants that would want it. Rule of engagement and role of focus group discussion moderator was well spelt out.

One-On-One In-Depth Interview

In-depth interview, a flexible tool for data collection, as described by Cohen *et al*. (2013)[54], was employed to enable multiple sensual means to be employed such as oral, non-

oral, vocalized and perceived by the sense of hearing. Interviewing facilitated creation of a situation that was dynamic as it enhanced accessibility to crucial information which ordinarily were not readily available but were very relevant and insightful. Interview was employed to test hypotheses; gather data in survey; and sample the opinion of respondents. Being identified to be used in conjunction with other method (quantitative research method) in undertaking this research, it was used as an explanatory means to enable distinguish variables and associations. For interview, selected representative of enough incidentally chosen international flavor-manufacturing organizations which currently play in Nigerian flavor industry for at least five years. Furthermore, selected representatives of top management (and decision makers) of processed foods and beverage manufacturing organization were interviewed. This was a one-on-one discussion and in-depth interview designed to obtain a comprehensive understanding of an individual Nigerian respondent's view about food flavor consumptions and buying behavior. Participants for in-depth and one-on-one interview were professionals or experts in the food flavor industry; and top management in processed food and beverage industry. Interview was virtual, and it was aimed at unveiling the peculiar preference for food taste and flavor among Nigerian consumers, buying patterns and gain knowledge on flavor market shares. The course of action for the arrangement of interview for this research was to design the interview plan prior to the real interview; preparing the interview (putting into in place some ethical considerations); carrying out the interview to get responses from interviewees, paying attention and writing down matters that were brought up. Questions asked were simple, comprehensible, well-defined, non-suggestive but provided a range of non-answers, looking for ease in asking questions from general to particular, and from particular to general.

Operational Definition of Quantitative Variables

Reference is therefore, made to the research questions and hypotheses of this study as shown below:

Hypotheses

H1: There is no relationship among the needs of Nigerian consumers of processed (flavored) and packed foods/drinks

H2: There is no relationship between personal attitude of Nigerian consumers and their willing intention to purchase processed (flavored) and packed foods/drinks

H3: There is no relationship between subjective norms (perceived social pressure) and the decision of Nigerian consumers to purchase processed (flavored) and packed foods/drinks

H4: Perceived behavioral control are not positively related with Nigerian consumers' intention to purchase processed (flavored) and packed foods/drinks

Questions

Q1: What is the relationship between the characteristics of food flavors and the purchasing behaviors of Nigerian consumers of processed (flavored) and packed foods/drinks?

Q2: What is the relationship between demographics of Nigerian consumers, their needs and buying pattern and preference for processed (flavored) and packed foods/drinks?

Q3: What is the essence of diversities of Nigerian consumers of processed and packed foods and drinks in developing marketing strategies for food flavor industry in Nigeria?

Q4: What is the essence of purchasing behavior of Nigerian consumers of processed and packed foods and drinks in developing marketing strategies for food flavor industry in Nigeria?

Furthermore, in this study, as suggested by Johnson and Christensen (2014)[313] and Malhotra and Birks (2007)[317], qualitative approach was meant to examine, unveil, provide understanding and detailed explanation of the findings. Data obtained through this approach, being non-statistical, were intended to unveil characteristics, attributes, patterns, keynotes, concepts and themes.

In addition, as reported by Barmola and Srivastava (2010)[318] that the function of a consumer behavior or action is central to every strategy for marketing, focus was on understanding the effect of consumer diversities on consumer behavior, which invariably affects marketing strategy of any food flavor manufacturing organization.

On the other hand, according to Malhotra and Birks (2007)[317], primary research methods can be qualitative or quantitative in description, and quantitative research approach can be correlational (Bhandari, 2002)[319], and/or experimental in design (Bevans, 2002)[300]. Quantitative approach was meant to evaluate the data by employing some kind of statistical analysis to test for the strength of association between some variables, and to check hypotheses and predict and generalize findings to Nigerian population of consumers of processed and packed foods and drinks. Data obtained, being statistical, were analysed to discover statistical associations. As data were analysed statistically to unveil relationships which are statistical in nature, variables which are involved in such relationships are first identified.

As described by Johnson and Christensen (2014)[313], and Malhotra and Birks (2007)[317], a variable is feature which can employ different values or categories. Educational level and age group have been widely studied, and they vary from high to low; from non-graduate to postgraduate, and young age group to old age group, respectively. In addition, gender, a category which varies is being widely studied, and this can be either male or female, and each of them is constant. Age is quantifiable variable but religion is categorical variable.

Construct/Variable 1. Description/Operational Definition- Categorical variable

According to Johnson and Christensen (2014)[313], nominal scale is the first and simplest scale of measurement. In this study, nominal scales used were categorial variables which were named based on categorical classification; gender, religion, regional native group, regional home location, regional birth location, marital status, and educational status. They vary by type or kind.

Construct/Variable 2. Description/Operational Definition- Quantitative variable

Quantitative variable varies in extent, degree, level or amount. This is quantifiable variable. There are ordinal scale of measurement which are based on give ranking, while interval scale of measurement is based on ranking but at equal interval level. Ratio scale of measurement entails giving scale based on ratio, such as in respondents' age group, monthly earning, family size, and level of satisfaction scores.

Construct/Variable 3. Description/Operational Definition- Independent variable

An independent variable causes change occurrence in other variables. Occasionally, it is manipulated. In this study, the levels of treatments to which manipulation was made are stated below;

Independent variables

***Age group**

(19-39 -young adults; 40-59-middle adults; 60-70-old adults)

***Gender**

(male; female)

***Regional native group**

(North-west; North-east; South-east; south-west; south-south; north-central)

***Education level**

(non-graduate; graduate; postgraduate)

***Monthly income**

(less than 50,000; 50,000-less than 100,000; 100,000-less than 250,000; 250,000-

less than 500,000; above 500,000)

***Religion**

(Islam; Christianity; Traditional; Others)

* **Family size**

***Birthplace (region of birth):**

(Northern, Southern; Eastern; Western and F.C.T/middle belt/Central)

***Home regional location:**

(Northern, Southern; Eastern; Western and F.C.T/Middle Belt/Central)

Construct/Variable 4. Description/Operational Definition- Predictor variable

Predictor variables are those naturally occurring variables which vary among individual

respondents and that are assumed to have an impact on the dependent variable. Being the only

different factor, they were used as the indicator for reason for differences in consumer

behaviors. In this study, predictor variables were variables which provided information on any

of the above listed dependent variables concerning consumers' purchasing behaviors towards

processed and packed foods and drinks. They predict the outcome of the dependent variables,

hence, the study.

Predictor variables, as broadly reported by Naseri and Elliot (2011)[320] in their study in

the US, and are demographics of consumers which included education, income, marital status,

family size, age, regional home and native locations, and gender of consumers. Report of Liu

and Zheng (2019)[321] indicated that predictor variables were consumers orientation and

education towards health and safety, which invariably would influence consumer purchasing

decision towards organic food. On the other hand, predictor variables reported by Yilmaz and

Belbag (2016)[298] and Waheed and Mudassir (2015)[322] on consumer behavior were level of

education and income. Therefore, in this study, in summary, consumer demographics are considered to be the predictor variables, which included level of education, age, gender, birthplace, religion, regional native group, home regional location, and monthly income of respondents which were expected would influence purchasing behavior of Nigerian consumers towards processed and packed foods and drinks.

Construct/Variable 5. Description/Operational Definition- Dependent variable

A dependent variable is assumed to be affected by independent variables. It is dependent on the independent or predictor variables. A cause-and-effect association between an independent variable and a dependent variable exists in the situation where variation in independent variables tends to result in variation in the dependent variable.

According to Andrade (2021)[311] a significant association between an independent and dependent variable does not necessarily show cause-and-effect, hence, variables were operationalized such that the manner of measurement would be explained. Variables were conceptualized in various ways to better understand the study.

Dependent variables in this study are intended to be measured, being outcome variables.

* **Types of social groups** (professional group; ethnic identification group; other social
bonding groups)

* **Social bonding influence** (regular/often; none at all; seldom; others)

* **Hobbies** (cooking; wining and dining; reading; traveling; games/sport)

* **Frequency of purchase and consumption** (two or more times daily; once a day; about
three times weekly; once weekly)

* **Desired factors in processed and packed foods and drinks** (convenience; price
(affordability); delicacy and palatability due to taste and flavor, and availability)

***Who decides what to purchase and consume in the family?**

* **Buying constraints** (religious; health; cultural; nutritional; financial constraints)

* **Most important buying constraint** (religious; nutritional; health; financial and

    cultural constraints)

* **Most desired attribute in processed and packed foods and drinks** (appearance,

    taste/flavor, price, health benefits and/or safety, ease to use)

* **Health concerns** (weight control; high nutrition; high blood sugar; and high blood

    pressure)

* **Place of purchase** (supermarket; retail outlet; on-the-go from hawkers; and open

    market)

* **Buying decision process** (spontaneous; after inspection on pack; enquiry from

    friends/colleagues/others; after price comparison)

* **Budget** (within the price range of most brands; can accommodate a little above; can

    accommodate much more)

* **Importance of flavor and taste** (very important; moderately important; slightly

    important; neither important nor unimportant; not important)

* **Best two food flavors** (spices; beef/chicken/seafood; dairy; chocolate/malt; nuts)

* **Best drink flavors** (spices; dairy; chocolate/malt; fruits)

* **Level of satisfaction** (very dissatisfied; not satisfied; neither satisfied nor dissatisfied;

    satisfied; very satisfied)

Study Procedures

       There are no publications on effect of diversity on purchasing behavior of consumers
of processed and packed foods, across the variegated market, Nigeria, therefore, the need for
primary research to generate primary data. Primary data were obtained using research methods-
focus groups, interviews and surveys. With the fact that UREC approval was obtained to
commence the research, pilot study was conducted first with the approved questionnaires to
test its adequacy to study was obtained. Using UREC approved informed consent form,

participation consent was obtained from participants before questionnaires were filled and prior to interviews and focus group discussions. The sample size was 5,064 respondents which were assessed through stratified sampling, as this entailed grouping the Nigeria population unto smaller groups majorly based on their geopolitical zones and/or regional native locations. Having split Nigeria population into strata basically by regional native locations, sample size from each subpopulation was determined. Consequently, through further random sampling of each strata, there were concise conclusions as each subpopulation was well represented in the sample.

According to Creswell (2002)[55], numerical data that were obtained were later analysed statistically. As reported by Chrysochou (2017)[308], nature of data determined the analytical method to be employed, hence, gathered data were analysed for testing of hypotheses and respond to research questions and objectives of the study. Independent and dependent variables were identified and separated, and analysed for correlation, and cause-and-effect relationships, while control was ensured to avoid false inferences.

Furthermore, triangulation of data obtained from quantitative and qualitative techniques strengthened the validity of the research findings. Administered questionnaire were designed such that questions would provide insight in buying behavior and preference of Nigerian consumers of processed foods (and beverages), based on demographics. Based on suggestion of Thomas (2022)[309], stratified random sampling enabled generation of high internal validity, so as to be able to generalize the findings to Nigeria population. Both online questionnaires and paper-based questionnaires were employed in order to ensure accessibility of participants-both distant and close respondents, and for participants who for one reason or the other preferred online survey. The most important concerns were the pandemic across the country, and insecurity especially in some Northern parts of the country due to insurgence.

For the qualitative research, purposive sampling was employed as described by Andrade (2021)[311], in this study on because of scope of study which involved cultural locations of Nigerian consumers. Participants who had the understanding of what processed (flavored) and packed foods/drinks are were carefully accessed for the elite and in-depth interviews. UREC-approved informed consent form was shared to gain consent from participants prior to interview. These participants were identified as professionals in the food industry in Nigeria, based on their popularity as experts in the industry and field of food science and technology (professional members of Nigeria Institute of Food Science and Technology). Furthermore, these interviews involved top stakeholders of processed (flavored) and packed foods/drinks manufacturing organizations and food flavor manufacturing organizations which play in Nigerian food flavor industry for not less than five (5) years. Both in-depth and elite interview were conducted with the goal of obtaining reliable information from very few samples of experts, using my judgement to choose the individual participant that represented the particular interests, and overall research objectives.

Ethical Assurances

Being a research which involves human participants as subjects, ethnical measures and considerations were put in place, by protecting the interests of participants and that of their society, by being transparent and debriefing. As suggested by Benatar and Singer (2000)[323] on getting required informed consent from respondents in accordance to their values, informed consent was obtained from respondents (using UREC generated Informed Consent Form) before questionnaires were filled and prior to interviews and focus group discussions. Participants were encouraged to skip any question (s) there were not comfortable answering, and as they also were made to know they could withdraw from further participating in the survey, discussion or interview, if they did not fill comfortable to continue to, without any consequence.

Ethical considerations put in place entailed putting the interviewee first by ensuring potential harm is taken off, hence, ensuring confidentiality and obtaining permission to audiotape and/or videotape. An ideal environment was created as friendly and safe seating and suitable gesture, in order to make the interview a constructive experience for the respondents. Research ethical concerns considered were obtaining informed consent from participants without being coerced, anonymous participation was considered if required participants wanted it; while transparency or sincerity, integrity, fairness, respect for participants and their privacy were being protected. Still putting these ethical practises in place even after data collection as participants information have been collected, potential dangers or harm are removed while their secrets and interests are protected, safeguarding them from conflicts of interesting, as deceit and disloyalty are avoided. It was borne in mind to promote self-worth and not make participants feel bad after participation.

As suggested by Frankfort-Nachmias and Nachmias (1992)[324] essence of costs/benefits ratio was considered to handle ethical dilemmas. Questions raised by individual participants were addressed, such as benefits they could derive from the research (Yearby, 2004)[325], all doubts were cleared, and assurance was given on their safety either they decided to continue to participate or not.

Furthermore, ethical practices are being put in place focusing on ethical principles, at each stage from research design, through selection of research instrument and sample, data gathering and analysis, and to distribution of research findings. As reported by Stone (2018)[326]; and Dana and Lawrence (2007)[327], ethical principles on which focus are made are autonomy, beneficence, nonmaleficence and justice. According to Podsakoff *et al.* (2012)[328], research was conducted such as to promote equality while eliminating all bias including sampling, as everyone in the target population stood the chance of participating. According to Creswell (2014)[56], this invariably would promote reliability and validity of research outcome.

Data Collection and Analysis

Quantitative Methods of Data Analysis

As suggested by Check and Schutt (2011)[290], survey research entails gathering of data from a sample of respondents through their feedbacks to questionnaire questions. As this study was intended to study the features of Nigeria population, and to explore their viewpoints, thoughts, feelings, intentions, beliefs and, as a whole gather information on their way of thinking.

Survey research amalgamates taking representative samples from whole population, drawing research questions, gathering and analysis of data and analysis. Questionnaire was used in the quantitative part of this study, bearing in mind simplicity and clarity for comprehension by respondents, while both paper-based and online questionnaires were employed to facilitate participation and speed (Chrysochou, 2017)[308]. As suggested by Zohrabi (2013)[291], because conclusions made from findings in quantitative research determine the accuracy, credibility and validity of the research study, the state of the respondents was carefully put into consideration.

Furthermore, being guided by Malhotra and Birks (2007)[317], considering participant factors where anonymity was perceived, online (computer-assisted) administration of questionnaire was considered ideal for most of them, and on the other hand, considering the task factor where response rate was very essential, hand administration (paper-based) of questionnaires became suitable. In this study, a combination of online and paper-based questionnaire administration was therefore, employed. Google form was used for the online questionnaire. Caution taken in drawing samples (participants) from the sub-group of Nigeria population which entailed being methodological about the way research participants were reached through random sampling using enough sample size and about the medium of questionnaire administration. Questionnaire was designed such that the data gathered could be

analysed with ideal statistical method. Bias could take several forms and this was checked. This includes preventing sampling bias in selection of respondents, in respondents' way of responding to questions and choosing responses, and in analysing of data.

As suggested by Burns and Grove (2005)[58], quantitative aspect of analysis of this research entailed methodical gathering, analysis and exposition of statistical values/data obtained from samples drawn from population, such as in the case of the large Nigeria population in this study. Quantitative research technique was employed to put to test these research hypotheses, make projections and draw results from this research where representative Nigeria population of age range 19-70 years, male and female and across the six geopolitical zones of Nigeria. Findings were generalized to the entire Nigeria population.

As raw data were loaded with unseen information, they could not have been interpreted without analysis. The numerous data generated were, therefore compiled, illustrated and basically analyzed by checking relationships between (or among variables) through correlations, relative frequencies, or differences between means.

Consequently, these statistics were used to represent the main characteristics of the numerical information that were gathered in this study. Exploratory data analysis was done to make eyeballing of data possible. As there were measures through descriptive values such as mean, mode (highest frequencies), standard deviation, direct abridged and virtual illustrations in the form of graphs, charts, and cross tabulations. Outliers were detected when such existed, and their cause of any outlying score (outlier) which were investigated to have resulted from recording error. This was done to prevent poor data correlation.

Furthermore, statistical hypothesis test was carried out to determine if a variable would probably result from a distribution or not, and to estimate if the data from sample drawn was representative of whole Nigerian population.

According to Paniagual (2019)[331]and Burns and Grove (2005)[58], statistical tests that were employed in this study to analyse quantitative data, based on the objectives, the type of data obtained and how they were gathered, were shown below:

Mean

$$\text{Mean } \bar{X} = \frac{\Sigma f X}{n}$$

Mean value represents the average scores of the group. It is a representation of the sum of all the values in data set divided by the number of values in the data set (Speelman and McGann, 2013)[332]. As large data were collected, mean was employed to summarize as a single value describing the representation in a meaningful manner, which also helps in data comparison (Manikandan, 2011)[333].

According to Lacey and Luff (2009)[57], additional analysis would advance on earlier outcomes, as it identified themes and associations in the obtained data by performing analysis of variance (ANOVA).

Alpha Level (P-value). This statistical analysis test was employed to determine if significance existed, and when such existed, it determined it in a way that acceptance or rejection of hypothesis would depend on the level of significance (named α- alpha level). Alpha level was set at 5% (0.05) level, designated as α= 0.05 showing significance level which p- value gave in the analysis of the data obtained in this study. It sheds light on how confident it that the outcomes have not been gotten on probability, confidence level defining the threshold at which Type I Error (a false positive which means rejecting a null hypothesis that is actually true) was accepted. It, therefore, measured precision, because the lesser the significance level the more accurate. This was that at $p = 0.05$ (which is 5%) there was 95% certainty that the result was not obtained by probability, hence, it was statistically significant.

ANOVA (Analysis of Variance) was used to describe/compare the association between a number of groups. According to Frost (2015)[334], it is a parametric statistical test (means)

which was employed, as it assumed the variables of the Nigerian population distributions from which research samples and data were taken. As it functions really well with large sample size, with skewed and/or continuous data and non-normal distributions, with its strong statistical power, ANOVA has the ability to detect a significant effect when one is truly existent. In this study, one way ANOVA was employed to determine significant difference ($P<0.05$) among and within different age groups; gender; education; marital status; tribe; religion; birthplace; family size; monthly earnings; 'who decides what are bought and consumed in the family'; constraints to buying; most desired attributes in processed and packed foods; place of purchase; buying decision process; budget; importance of taste and flavor; best food and drink flavors; and level of satisfaction. All these variables (predictor and dependent variables) were analysed for significant ($P<0.05$) difference on regional native group basis- north-east; north-west; north-central; south-west; south-south and south-east.

  T-Test. According to Frost (2015)[334], it is a parametric statistical test (means) which was employed to determine if the means of two groups (gender- male and female) were statistically different from each other, within each regional native group and across all regional native groups as a whole. T-test showing the main effect of independent variables on dependent variables. In this study, dependent variables are reflections of the needs, preferences, lifestyle and purchasing pattern of Nigerian consumers of processed (flavored) and packed foods/drinks, which also are the purchase intention drivers.

  The higher the values of t-score, the larger the difference which exists between the data sets of male and female, and vice versa. The T-test is a logical and deductive statistic employed to determine if the means of two groups are equal, and/or to detect significant difference between them, and how they associate (Snedecor and Cochran, 1989)[335]. It is therefore, used for testing the hypothesis while it uses statistical values (P-value) and degree of freedom to

determine significance, such that it is reported as t (degree of freedom) = t-value, p = value that is significant (which is < 0.05, as alpha significance level).

The null hypothesis for the independent t-test is that the means from the two separate groups are equal:

$$H_0: M_1 = M_2$$

In this study, it was checked to reject the null hypothesis and accept the alternative hypothesis, meaning to check if means were not equal, having set the significance level at $p<0.05$

$$H_A: M_1 \neq M_2$$

T-test has determined true difference between the means of male and female Nigerian consumers in terms of an attribute- t(degree of freedom)= t value, p=p-value.

Chi-Square Test. It is an nonparametric test which was employed to determine if there was no association between the rows and columns in a data table and between or among groups of categorical data (Singhal and Rana, 2015)[336], and the likelihood of the observed or obtained distribution fitting into the expected or theoretical distribution (Wuensch, 2011)[337]. It entails testing hypothesis using p-value to determine the statistical significance. Null hypothesis is rejected if calculated chi-square is higher than chi-square critical value, but it fails to reject the hypothesis if calculated chi-square if lesser (Kim, 2017)[338].

Pearson's Correlation

This test would involve both one-tailed and two-tailed hypothetical tests where hypothesis would either be accepted or rejected on the basis of comparison of the mean of a group to a given value of x. Correlation measures the association between variables, which is either positive or negative, for change in same or opposite direction, respectively. Tests of hypothesis was used to determine significance and how strong the association is (Schober *et al*., 2018)[426].

*For one-*tailed test, comparison of the mean of a group to a given value of x entailed using only a side of the distribution. This was such that when null hypothesis showed mean was $\leq$ x, then alternative hypothesis showed mean > x.

*For two-*tailed test, comparison of the mean of a group to a given value of x entailed any side of the distribution. This would be that for the null hypothesis, the mean was equal to x. Pearson Correlation was employed to evaluate correlation between minimum of two continuous variables, with the Pearson's correlation value being between 0.00 (no correlation) and 1.00 (perfect correlation). Correlation evaluation was done among dependent variables and predictor variables, and between both variables.

Multiple Regression Analysis. Regression analysis was used to make prediction of the outcomes and changes in dependent variables, on the basis of the association which exist between dependent and independent variables (Ali and Younas, 2021)[339]. Regression analysis was used to provide insights on significant relationship and measure the strength between independent and dependent variables (Sarstedt and Mooj, 2014)[340]. This statistical technique was employed to analyse the relationship between an individual variable and many independent variables, in order to predict the purchasing behavior of Nigerian consumers of processed (flavored) and packed foods/drinks through the known values of the drivers of purchase intention.

Principal Component Analysis (PCA). Furthermore, since the study entails lots of diverse measures, factor analysis was employed to detect underlying construct, and common factor that will closely explain the variation and correlation among a set of variables (Watkins, 2018)[341]. Using the concept of correlation, separation from the strongly correlated ones with each other from others which were weakly correlated were done to form factors (Bachaus *et al.*, 2021)[342].

As reported by Jolliffe and Cadima (2016)[343], principal component analysis statistical technique was used for the large sets of data with numerous features, adapting and translating for easy analysis by reducing their dimension, and capturing most essential information but reducing loss of information by creating new variables. As an analysis technique which changes the size of the data presentation, it made identification, description and interpretation of findings easy. The Eigen value indicator of greater than 1 (>1) was employed to identify the initial factors, as described by Shrestha, N. (2021)[344], emerging with less but most influencing factors.

In this study, principal component analysis and its approaches had an essential part in other statistical methods employed- correlation (Vichi and Saporta, 2009[345]; Jolliffe 2002[346]). Depending on the set of data, the new variables namely *Principal Components* are made. *Principal Components* are referred to as the linear amalgamation of the central variables x*j. Enumeration was done for covariance matrix, and for eigenvectors and eigenvalues of the covariance matrix to recognize correlations and the principal components, respectively (Jolliffe and Cadima, 2016)[343].

Loading plot is used to identify and differentiate variables with highest effect on every component, such that loading ranging from -1 to + 1, as such close to any of them have strong effects, while loading near '0' show variable with weak effect on the component.

Quantitative Software for Data Analysis. As reported by Blaikie (2003)[347], because huge numerical data were generated through quantitative research, it would become very strenuous to analyse without the aid of computer software packages. Both Excel and SPSS (The Statistical Package for Social Science) were be employed to analyse data, and produce reports, graphs and lines, on the basis of data analysed.

Approaches in Qualitative Methods of Data Analysis

Qualitative data analysis is non-statistical, intended to recognize characteristics and viewpoints of respondents. Qualitative Data Analysis (QDA) which is the set of series and course of action was employed to transform data obtained through qualitative studies into some forms of understanding of purchasing behaviors of Nigerian consumers of processed and packed foods and drinks, which was being investigated. These series of actions were rooted on an expository ideology which entails assessing the relevant and representative setting of qualitative data.

Furthermore, qualitative data analysis was intended to investigate and gain in-depth understanding of situation - the findings from quantitative research. Substantial amount of words was generated by interviews or observational data which required to be described and summarized. The questions asked were intended to find associations between various identified ideas or behavior, and/or to connect such life background, beliefs and features of respondents such as age, gender, regional nativity, education, monthly earning, religion and place of birth. Therefore, data obtained were checked, read through and listened to gain for familiarity.

Transcription of audio-recorded material was done, while data were organized and indexed (coded) for ease in retrieval and recognition, while anonymity was assigned to data that are sensitive. Ideas were recognized and noted, while categories were developed. Associations between categories were then identified, while ideas and categories were re-analysed, while amalgamation of prior knowledge was done, and theories were developed. Theories were tested against the data gathered, and reports were made, incorporating ideal quotes from interviews.

Inductive analytical approach. Pope and Mays (2006)[348] suggested that in qualitative research, interpretation with subjectivity was required, but choice were made among some theoretical approaches to be employed. Inductive approach of data analysis was employed in this mixed method research where qualitative research was also an important aspect of the

inquiry to shed more light on Nigerian consumers' buying behavior across six (6) regional native groups and people of different demographical features. Therefore, based on the suggestion of Lacey and Luff (2009)[57], in-depth analysis of qualitative data was employed which entails improvement of concepts or keynotes and categories. Theories were developed and arising theories or concepts were used and checked to categorize data as associations between and among the groups. For the analysis of the data collected, two comprehensive forms of analysis were employed;

Qualitative Content Analysis Approach. This analysis approach was employed to enumerate the times a specific word or concept arise or is mentioned during discussion or interview of participants, which were in line with preference, desired attributes, buying constraints. Content analysis is partly quantitative because data obtained were statistically analysed.

Thematic Qualitative Analysis Approach. As suggested by Braun and Clarke (2006)[349], thematic analysis approach was employed to detect, assess, and report patterns or concepts within data, by sorting, classifying and illustrating data in in-depth manner. Furthermore, as reported by Boyatzis (1998)[350], it shed more lights on various parts of the research topic, by concentrating and identifying the measure of indexing which is crucial. Unit of indexing was very important in information obtained from respondents for easy accessibility and interpretation of the situation. The concept was tagged and identified, however, time of occurrence, features of concept for easy recognition and how to exclude it was captured.

Furthermore, all measures of data were gathered from sentences or phrases, which refer to preferences, buying constraints and desired attributes were given a specific code, extricated and tested further. As suggested by Braun and Clarke (2006)[349], familiarization with the data was done to detailed understanding. The frequency of their consumption of processed and packed foods, and other measures, including participants talk of constraints to buying

indicating that even when they would have liked to buy and consume processed and packed foods and drinks, they could not do as they would have liked. In addition, others included level of satisfaction, such that understanding of Nigerian consumers who are dissatisfied have strong constraints; and of attributes of what makes good taste to different target groups as related to the level of satisfaction the consumers have in available processed and packed foods and drinks in Nigeria market. These questions resulted in themes which could eventually be developed such as 'buying but never satisfied'.

Furthermore, as reported by Braun and Clarke (2006)[349], it was ensured that data were adequately analysed; such that there were no discrepancies between data and declaration made about it; while data gathering enquiries were not used as themes that were written up. As themes detected were strongly connected to the data in inductive approach, the series of action of coding takes place without 'forcing' the data into already existing theory or concepts. According to Boyatzis (1998)[350] there would be evolution of priori (inductive) indexes by first detecting theoretical parts that could be employed as initial indexes to arrange the data. Theory-driven coding was employed such that association to the theoretical framework of the study was looked out for.

Furthermore, as suggested by Braun and Clarke (2006)[349], there would be conversance with the data, and this would entail transcription of data and field notes, reading over again the data, and bearing in mind the initial points. Based on the proposals of Boyatzis (1998)[350] and Braun and Clarke (2006)[349], theory-driven coding was conducted by indexing data in an organized manner within every interview and across the whole data compilation which are useful to each priori code (inductive code). Based on report of theory-driven codes were reviewed and the context of the data was revised, carrying out additional data-driven coding. As reported by Boyatzis (1998)[350] and Fereday and Muir-Cochrane (2006)[351] further coding was done at this level non-restricted by a priori code. Inductive (data-driven) codes was

earmarked to the data while as reported by Boyatzis (1998)[350], evaluating and revamping (*priori* codes and inductive data-driven) codes and extra coding were conducted in the situation of the data.

In summary, as suggested by Braun and Clarke (2006)[349], and Fereday and Muir-Cochrane (2006)[351], thematic qualitative analysis approach entails seeking for themes, compilation of indexes and related data into prospective themes. According to the report of Braun and Clarke (2006)[349], themes was revised to ensure they were connected to the indexed fragments (level 1); the whole data set (level 2) as well as establishing the restricted 'portray' of the analysis. Therefore, as reported by Fereday and Muir-Cochrane (2006)[351], these were done to determine the credibility of the themes. Furthermore, as suggested by Braun and Clarke (2006)[349], scholarly report was generated based on complete evaluation of relevant research questions, and literature.

Triangulation

Triangulation is the method that would be employed to achieve validity and reliability of research findings, according to the suggestion of Richie and Lewis (2003)[352]. It is the main approach employed to evaluate the findings of this study. Focus group interviews and individual interviews were conducted with Nigerians (male and female) between the age 19-70 years and across the six (6) regional native groups based on the research tools-questionnaires, focus group discussion and in-depth and elite interviews. According to Chrysochou (2017)[308], data obtained from focus group discussion are products of individual view and interactions of participants in the group, as influenced by one another, thereby, generating rich data in the normal atmosphere to participants.

Field or pilot testing of instrumentation to be used (questionnaire) was done through which responses from about one-fifth of the initial sample size of target respondents were

obtained. Online questionnaire and hand-administered questionnaires were both used to gather information from respondents. Prior to the main study, the pilot study was conducted with a set of participants for a period of three weeks to do a pre-test of the proposed research design (and questionnaire) and its execution to detect inadequacies and potential problems, thereafter, modified the design accordingly, as suggested by Chrysochou (2017)[308].

Consequently, through the pilot study, the number of regional native groups was modified to six, in the actual study, which is tantamount to eight regional native groups, while the sample size was increased substantially to 5,064 respondents in order to ensure participation of respondents from all the required demographical backgrounds. However, the data from the pilot study was separated from the actual study. In addition, as participants from Northern Nigeria did not want to physically gather with researcher to be audio or tape-recorded (due to current insecurity issue in Nigeria), virtual focus group discussion was held and recorded via zoom meeting.

In order to ensure validity of processes and methods, triangulation was employed as suggested by Yin (2003)[367] and Brannen (2005)[353], using numerous sources of data/information obtained from more than two methods which were questionnaires, focus groups, and in-depth interview. This entailed obtaining in-depth information and understanding from different perspectives on the research with the aim to unveil Nigerian consumers' purchasing behavior towards processed and packed foods and drink, as influenced by demographics.

Consequently, according to Creswell (2002)[55] and Patton (2002)[354], triangulation enabled comparison of data, therefore, increasing reliability by reducing and improving the level of trust or confidence in qualitative results, and validating the entire outcomes or result of the mixed research, as error from method was reduced. In other words, the objective of conducting pilot study was to compare analysed data with those obtained in actual study for

verification by checking, firstly for validity- if each of the research tool (questionnaire) and the research method could achieve the research objectives. Furthermore, pilot study was conducted to have a basis of comparison with the actual study so as to check for reliability, that is, consistency of the findings, and to check if whether the results obtained can be generalized to the Nigerian population.

The opinions of the focus group discussion participants and the findings were triangulated with the survey questionnaire results and the in-depth interview transcripts from professional experts. Therefore, the triangulation procedure was carried out at different stages to concentrate on ultimate results based on different perspectives. In my opinion, based on the suggestion of Chrysochou (2017)[308], pilot study being first conducted, and afterwards, actual study began, this research becomes cross-longitudinal, as data obtained were large from over 800 respondents of different age groups, gender, socio-economic classes from different regional native groups across Nigeria. The data obtained were large and structured from large sample size so as to increase credibility to be representative of the population of Nigeria consumers of processed (flavored) and packed foods/drinks.

Summary

According to Creswell *et al*. (2003)[355], concurrent or convergent parallel mixed method research approach was employed due to the objectives of the research to guide and give clarity to research that was being undertaken. Descriptive and experimental research methodology were employed for qualitative and quantitative approach, respectively, with the objective to provide information by accurately obtaining an array of variables so as to analyze and express the features of the variables that would be studied;- buying behavior/ trend; food flavor manufacturing organizations and manufacturing organizations of processed and packed foods; and individual consumers of processed (flavored) and packed foods; and the motivating factors in consumers' buying decision.

Furthermore, this research is based on concurrent (or convergent parallel) mixed method research design, as guided by Edmond and Kennedy (2017)[295], consequently, it aims to conduct the quantitative research and qualitative research simultaneously, while results are evaluated separately but interpreted together (Creswell and Pablo-Clarke, 2011)[296]. Deeper insight is got through the combined interpretation.

Consequently, as suggested by Creswell (2014)[56], quantitative research approach part of this study would test objective theories and/or hypotheses (deductively) by investigating the association among variables, which consequently, were quantified to enable analysis of numbered data by employing statistical system. Questionnaire survey as a data collection tool was employed in order to obtain information that identify the particular situation of the investigation. This approach entails the processes of collecting, analyzing, interpreting, and reporting the outcome of the investigation. It connects to pinpointing a sample of Nigerian consumers of processed and packed foods and drinks and the population with age group 19-70 years of Nigerians; identifying and stating design type; gathering data and analyzing information were obtained; presentation of findings; interpretation, and reporting the research in a congruous way with study.

Simultaneously, qualitative research approach being employed is aimed to comprehend and make clear ideas and the reasons for the occurrence of observations made in Nigerian food flavor industry (food flavor consumption in processed and packed foods in Nigeria). As suggested by Creswell (2014)[56], qualitative research approach was explored to comprehend the interpretation individuals or groups give to a social or human issue. Based on the report of Kushta et al. (2018)[283], through case study qualitative research methodology, in-depth analysis of a group of individuals (group of professionals in flavor manufacturing industry; and in processed food and beverage manufacturing industry) were done, hence, consumer behavior was better understood. This was possible through precise gathering of an array of variables so

as to arrange/group the intricacy of a set of situations that congregate to result in a specific occurrence, circumstance or event- buying and consumption of processed (flavored) and packed foods/drinks. The process of this case study research entailed purposeful sampling, collection of open-ended data, analysis, interpretation, and report writing. Qualitative data were arranged after transcription of audio-recorded information, and information extracted from interview were coded for identification and retrievability. The patterns were recognized and themes were made from categorized codes.

Target population in the research were Nigerian consumers of processed and packed foods (and beverages) across Nigeria, within the age group 19-70 years, classified into the six geopolitical zones into which Nigeria is divided as the sample frame for consumers of processed and packed foods (and beverages). Therefore, stratified random sampling technique was employed. With the goal of selecting samples from the sub-group, from which inference were drawn from data gathered on them (Cohen *et al*., 2013[54]; Earl, 2010[59]).

Participants were reached with online and hand-administered questionnaires, through Gatekeeper (Nigeria Institute of Food Science and Technology (NIFST), hence, it made it easier to access respondents from the six geopolitical zones, which are referred to as regional native groups, and are tantamount to the eight (8) geographical locations in Nigeria. Questionnaire was designed such that the data gathered could be analysed with ideal statistical method. Bias was checked, which could take several forms, such as preventing sampling bias in selection of respondents, in respondents' way of responding to questions and choosing responses; and in analysing of data.

Furthermore, there was diverseness in data collection which entailed the use of online and paper-based questionnaire distribution, and making the online questionnaire available for a good period of time, while reminder was sent through gate keeper at interval. UREC-

approved structured open-ended questions and close-ended questionnaires for focus group discussion and in-depth interview, and survey questionnaire were administered respectively.

Pilot study was conducted first before the actual study, while approved questionnaires were used. Stratified random sampling was employed such that participants are grouped into smaller sub-groups on the basis of common features, like income, age, education, and others listed below. Employing this sampling made it possible to compare findings by demographics, and sub-population were classified into relevant demographic and samples were drawn from each demographic group.

Stratified random sampling is popularly employed and most applicable in population research to ensure generalization of research findings. Stratified random sampling was done to obtain representative samples, being essential for valid inferences to be drawn from data obtained and analysed. This sampling technique was employed to reflect the diversities of Nigeria population. Having defined the target population of Nigerians between the age 19-70 years, male and female across the six geopolitical locations, there was division into subgroups, named strata, basically on the basis of regional native location, in a way that every subject belonged to only one subgroup. In all, 5,064 respondents participated in the quantitative research approach. Due to the large diversities, which include gender; age group; regional native, birth and home locations; educational status; marital status; monthly earning; family size; health concerns; buying constraints, the data obtained were, therefore analysed using Principal Component Analysis, to streamline data set into smaller set of variables so as to detect trends, as it unveiled relationship between dependent and independent variables, and trends, and among other variables.

Method triangulation was employed to achieve validity and reliability of research findings. In the qualitative research part of this study, focus group discussion was conducted

across the six regional native locations; south-southern, south-eastern, north-eastern, south-western, north-western and north-central. In-depth interview, a flexible tool for data collection, was employed using professionals, top management (and decision makers) who were purposively sampled. They had a least five years work experience in Nigeria food flavor and processed (flavored) and packed foods/drinks.

In spite the shortcomings of the qualitative research part of this study, through method triangulation so the credibility of the study was improved according to the suggestion of Andrade (2021)[311], and Jager *et al*. (2017)[356]. The power of quantitative test was increased by increasing the sample size to 5,064 participants. Therefore, as many participants as possible were recruited but within the defined deliberately limited to the particular sociodemographic sub-groups (age group – 19-70 years; gender- male or female; regional native location; regional home location; who are Nigerian consumers of processed (flavored) and packed foods/drinks)

Furthermore, statistical hypothesis test was carried out to determine if a variable would probably result from a distribution or not, and to estimate if the data from sample drawn was representative of whole Nigerian population. Having compiled then, they were illustrated and analysed by checking for relationships between (or among variables) through correlations, relative frequencies, or differences between means. as all variables (predictor and dependent variables) were analysed for significant ($P < 0.05$) difference on regional native group basis-North-East; North-West; North-Central; South-West; South-South and South-East.

As suggested by Frost (2015)[334], parametric statistical tests to test group means;- T-test and one-way ANOVA (Analysis of Variance) for significance of overall model, with 95% confidence level; and Pearson's coefficient correlation to examine the type and extent of relationship among variables-independent and dependent. In addition, regression analysis was used to examine ways variables change in relation to change in one another, and check for relationship and make predictions of the dependent variables through the independent

variables. Data were analysed using Principal Component Analysis on multiple features to streamline and simplify data and keep trends. As a result of the high dimensional data generated, Principal Component Analysis was used to streamline and simplify the data, summarizing the features. Variables include age group, gender, marital status, educational status, regional birth location, regional home location, family size, health concerns, desired factors, most desired attributes, and buying constraints. Quantitative data was therefore, analyzed to make interpretation possible.

Exploratory data analysis was done to make eyeballing of data possible. As there were measures through descriptive values such as mean, mode (highest frequencies), standard deviation, direct abridged and virtual illustrations in the form of graphs, charts, and cross tabulations. Outliers was detected, and the cause of any outlying score (outlier) which occurred from recording error, was investigated, to in order to prevent poor data correlation.

Conclusions made is extended to the larger population from where the represented samples were drawn. On the other hand, qualitative data analysis, which is non-statistical and intended to recognize characteristics and viewpoints of respondents, was done. Qualitative Data Analysis (QDA) was employed to transform data obtained through qualitative studies into some forms of understanding of purchasing behaviors of Nigerian consumers of processed and packed foods and drinks, to investigate and gain in-depth understanding of situation - the findings from quantitative research. Substantial amount of words was generated by interviews or observational data which required to be described and summarized.

Transcription of audio-recorded material was done, while data was organized and indexed (coded) for ease in retrieval and recognition, while anonymity was assigned to data that were sensitive. Ideas were recognized and noted, while categories was developed. Approaches in analysis included inductive analytical approach; qualitative content analysis approach; and thematic qualitative analysis approach to determine pattern, sort and categorize

features.

Ethical practices were put in place bearing in mind ethical principles, throughout the research process as being factored in the research design, from selection of research tool and sample, and data gathering and analysis, to distribution of research findings. Such ethical practices as reported by Stone (2018)[326] and Dana and Lawrence (2007)[327], included autonomy as requested by some participants; goodwill, avoiding harm to participants by putting them first; and fairness. Having obtained informed consent, online questionnaires was employed for distant respondents and those who prefer online survey because of pandemic, while face-to-face questionnaires would be administered to others.

Reliability and validity of research instrument employed was considered by conducting a pilot study involving over 80 respondents, which constituted about 20% of the entire target number of respondents. An online questionnaire was administered to determine the extent to which this research instrument would yield the same results when the actual study was conducted. In addition, pilot study was conducted to determine if the questionnaire measured what it was designed to.

CHAPTER 4: FINDINGS

There is attention on Nigeria as a emerging market in the global food and food flavor industry. However, though Nigerian food and beverage industry is large it is underdeveloped. Having the ideal marketing strategy is key to the development of the industry, as well as food flavor industry, as it is not a matter of 'one size fits all'. The basis for having the relevant marketing strategy for Nigerian food flavor and processed (flavored) and packed food/drink industry is understanding the peculiarities and demographics to understand their purchasing behavior, their relationships and effect on marketing strategies.

As there were no reports on taste predilections, lifestyle and diversities of Nigerian consumers of processed (flavored) and packed foods/drinks before now, this study has provided the missing information. Therefore, the essence of this mixed method research was to explore the impact of diversity in demographics of Nigerian food consumers on their buying patterns, investigate elements that are responsible for differences in markets, and to arrive at suitable marketing strategy for international flavour manufacturing organizations in Nigeria.

Comprehending the motivational factors and constraints towards the purchasing intention of Nigerian consumers makes it possible to understand their willingness and interest in future purchase and consumption, and to predict their purchase behavior. Needs of Nigerian consumers and their tendency – purchase intention drivers, to purchase and consume products, on the basis of their demographics, have been unveiled in this study.

Furthermore, this study was conducted on the framework of motivational theory and cognitive theories to unveil motivations (purchase intention drivers) and constraints, and other influences in the purchase intention of Nigerian consumers towards processed (flavored) and packed foods/drinks, based on demographics-gender, age group, social group membership, educational status, marital status, regional home location, regional birth location, regional home location, family size, and monthly income. The level of satisfaction derived by Nigerian

consumers in the available processed (flavored) and packed foods/drinks and the importance attached to food/drink taste and flavor in processed (flavored) and packed foods/drinks have been revealed.

In this study, the scope of processed (flavored) foods and drinks includes foods/drinks which contain either natural or synthetic flavorings to boost their overall acceptance to consumers. They are ready-to-eat (RTE) foods and ready-to-drink (RTD) drinks/beverages, taste makers such as seasoning powder, tomato paste, bouillon, and baked foods such as cakes, bread. Furthermore, they include confectioneries such as gummies, candies, butter cream, and dairy- ice cream, yoghurt, milk shake, and spread- margarine, chocolate spread, butter, mayonnaise.

Nigeria is a thickly populated and multi-cultural country which requires to be studied to understand the effects of diversities in consumers on purchasing behavior towards food flavors in processed and packed food and drink products; and effects of demographics and purchasing behavior on marketing strategies. Food flavors are ingredients that enhance taste and impact flavors into processed and packed foods and/or drinks. Consumers' needs and motivation varies and are in hierarchy of importance and priority, hence, Nigerian consumers tend to want more than taste and flavor enhancement and impartation.

As a result of diversity among Nigerians consumers of processed (flavored) and packed foods/drinks, understanding the peculiarity of each consumer sub-markets and effects of diversities on what constitutes satisfaction becomes paramount to the business of international food flavor manufacturers in Nigeria. Understanding the influence of demographics of Nigerians on their taste predilection and purchasing behavior towards processed and packed foods and/or drinks would be useful to international organizations to facilitate applying same marketing strategies or modifying marketing strategies. Ultimately, as it is required in modern

businesses, to promote global marketing, and this includes international flavor manufacturing organizations.

The representation of consumers of processed (flavored) and packed foods/drinks in Nigeria based on culture, ethnicity, age, gender, faith and socio-economic class were studied. This study on Nigerian consumers' demographics have unveiled variegation in culture (regional native zone, regional home location, regional birth location), social group membership (ethnic, religion, profession), marital status, family size, health concerns, monthly earnings (dispensable income), level of education, gender, and age, and their effects on their taste predilection and purchasing behavior towards processed foods and drinks. Each of these factors served as the basis of classifying Nigerian consumers in this study.

As the influence of demographics of Nigerian processed (flavored) and packed food on their buying behavior was studied, constraints to the purchasing intention of Nigerian consumers towards processed and packed foods and drinks based on their demographics, have also been revealed. These constraints were religious, health, cultural, nutritional, and financial. Religious sects in Nigeria are mainly Islam, Christianity, and Traditional, while research findings revealed that Islam had the highest and most strict constraints and hold on Nigerian consumers of processed and packed foods which had to do with Halal restrictions, but very little or no restrictions were indicated to exist in Christianity. Research findings revealed that there were constraints due to cultural backgrounds of Nigerian consumers, hence, regional native zone, ethnical bonds and family ties had influence on the purchasing decision and consumption of some consumers. These unveiled the effect of social bond on consumers' purchasing behavior based on the influence of social group consumers they belong and family members, while the person (s) who decides (decide) what the whole family consumes and who influences Nigerian consumers of processed and packed foods and drinks the most in their buying decision, were also revealed.

Health concerns of Nigerian consumers of processed and packed foods and drinks influence their choice and purchasing behavior, and these include weight control, high interest in high nutrition (supplementation) and food safety, high blood pressure control and high blood sugar control. The influence of demographics on these health concerns were revealed and that weight control was the concern most consumers, regardless of their age, gender, regional native zone, home location, birth location, educational and marital status.

The purchasing process of Nigerian processed, and packed foods is revealed, indicating the length of time it takes to make a purchasing decision by Nigerian consumers of processed and packed foods and drinks- whether it spontaneous (impulsive buying without prior intention); after enquiry from friends/family members; after inspection on the product has been made; or after considering or comparing prices of similar products or their substitute. Based on each class of consumers, the importance of flavor and taste of processed and packed foods and drinks is unveiled to understand to what extent food flavors influence their decision to buy and consume them. In addition, the best flavor categories in food and drinks are unveiled, to understand the taste predilection of Nigerian consumers of processed and packed foods and drinks, based on demographics.

The extent of effect of socio-economic class Nigerian consumers belong on their choice of processed and packed foods and drinks were measured. In addition, the typical budget for the purchase of packed foods/drinks were determined, if it is within the price range of most common brands in the product categories; or can accommodate a little above the price range, or can accommodate much more above the price range, if they have other benefits. Therefore, the most desirable attributes of processed and packed foods and drinks were determined to understand what other attributes can add value to processed and packed foods, which could be product quality (improved appearance, enhanced or preferred taste/flavor, health benefitting

properties and/or safety); price (affordability); placement (availability); packaging; or convenience (ease to use).

The place of purchase of processed, and packed foods and drinks were determined based on regional zones and among different classes of consumers. Place of purchase could be supermarket, retail outlets (on the street), on-the-go from hawkers in traffic, and open market, while the level of satisfaction of consumers are determined.

This cross-cultural population has an incredible diversity, uniqueness and twist in food taste preference and restrictions, which has affected the purchasing decision of Nigerian consumers towards processed and packed foods and drinks. It is, therefore, important not to downplay the influences of diversities that exist in Nigeria, as an emerging market, as they are pivotal in the formulation or adoption of marketing strategies by international manufacturers of food flavors, to sustain their business. The attributes of food flavors which influence the buying behaviors of Nigerian consumers of flavored foods were revealed.

Therefore, taste predilection of Nigerian food consumers has been understood as being specific to consumers which may not be generalized (Steenkamp,1993)[41], and purchasing behavior of Nigerian consumers of processed and packed foods and drinks has been understood as a process (Rabontu and Boncea, 2007[52]; Loudon and Della Bitta, 1979[44]). In addition, in the light of self-concept theory (Grubb and Grathwohl, 1967)[40] the factors which influence consumers food choices are being understood based on the satisfaction they derive from taste and price (Schiffman and Kanuk, 2000)[53]. The makeup of Nigerian consumers and that of what food/drink they make choice of are being understood. These understandings shed light on the required marketing strategies to be formulated and/or employed for the success of global organizations which have local presence or play in an emerging yet multicultural market like Nigeria. This research gives marketing insight based on the theory of marketing mix elements- price, product, place, packaging, and promotion.

From the questionnaires administered and in-depth interviews with professionals in food and flavor industry in Nigeria, current marketing strategies employed by international manufacturers of flavor industry in Nigeria were unfolded. In addition, the relationship between demographics of Nigerian consumers of flavored foods on marketing strategies of manufacturers of food flavors were unveiled. The standardized and adapted marketing strategies employed by some international manufacturers of food flavor were also revealed. Data obtained in this study were gathered through quantitative research method and qualitative research method using both online and direct questionnaire administration, and interviews (one-on-one; focus group discussion), respectively.

Through Pearson's correlation coefficient, the 'robustness" and direction of a linear association between two variables were determined. Oneway ANOVA compares the means of at least two independent groups so as to determine if statistical evidence which are related to population means are significantly different.

This study provides some missing information on the particular taste and flavor predilection of Nigerians and what influence(s) (motivate or restrict) their food choices, as it relates to food flavor in processed and packed foods/drinks, in the light of marketing elements and consumer segmentation based on demographics. Ultimately, information is provided on marketing strategies that are being employed, and that are to be adapted and standardized by existing and new players in food flavor manufacturing industry in Nigeria.

Trustworthiness of Research Findings

An essential part of this research in reporting data was to clearly recognize the means by which the trustworthiness of the data was stable. In the quantitative research part of this study, trustworthiness entailed credibility, transferability, dependability, and confirmability. However, statistical methods were employed to indicate validity and reliability of research findings in the quantitative research, while methodological strategies were adopted in the

qualitative research to ensure credibility and trustworthiness of the study findings, by ensuring ongoing interpretative assessment on method to obtain enough profundity and applicability of data gathering and analysis, and explaining biases which might have influenced findings. These personal biases could have come from sampling, data collection and interpretation. In order to avoid bias in data collection, continuing evaluation on method to obtain enough credence (Morse *et al*., 2002), careful reporting was done to bespeak an explicit findings stream and by ensuring consistent and clear data interpretation and thought process (Long and Johnson, 2000)[356]. Consequently, another researcher (tutor) will be involved to eliminate or lessen bias as suggested by Sandelowski (1993)[357].

Furthermore, as suggested by Slevin and Sines (2000)[358], congruities and differences across responses of participants were sought for to ensure various perspectives are illustrated, while 'loaded' word for illustration of participants' responses have been used to substantiate findings. According to Shenton (2004)[359], as trust worthiness in qualitative research addresses credibility, clear portrayal of taste predilection, constraints to buying of processed and packed foods, and buying behaviors of Nigerian consumers is presented, as they are procedures employed in conducting research are clear enough to make transferability easy and possible. Transferability of findings has been ensured such that they can be compared, as they are made applicable under similar study situation (Nigerian consumers of processed and packed foods and drinks) as others. In-depth description of finding has, therefore, been made. Credibility was obtained through triangulation as information were obtained from different sources- methods (quantitative and qualitative research methods), sources (focus group discussion and in-depth interviews).

In addition, dependability was secured by giving detailed description of the methodology to enable the study to be repeatable by another researcher and arrive at similar results. In other words, it is the degree to which reproducibility is possible using same method.

Engaging professionals in the field to evaluate and examine the undertaking has helped to establish dependability. To achieve confirmability, the research findings have just been reported as illustrated in analyzed data, and transcription was on the bases of records obtained.

Confirmability is ensured by admitting the ideology and presumptions of the research in the study and describing the manner the variable models meet the presumptions of the statistical tests and recognize any possible shortcomings to translation or validity of the data gathering and analysis. As it measures the degree of my objectivity as the researcher, such that findings are 'purely' on the basis of responses of respondents and not any possible prejudice or personal reasons. Each stage of data analysis has been provided to show a rationale for the conclusions made.

In this study, triangulation was employed to show that the research study's findings are credible. In the qualitative part of this research, focus group and in-depth interviews were conducted, and the findings were compared.

Reliability and Validity of Data

According to Cohen *et al.* (2018)[54] reliability and validity are the degree to which research outcomes (data) are void of measurement error. In the quantitative research part of this study, the methods employed to secure trustworthiness are reliability, internal validity, external validity, and objectivity. Reliability of the research tool employed in this study also include internal consistency and interrater reliability. As reliability targets the general consistency of the measurement tool employed in this research. The reliability of online questionnaire and hand-administered questionnaire employed for this research was measured by first conducting pilot test with them, to be sure similar results would be obtained when the actual study would be conducted on the Nigerian consumers of processed and packed foods/drinks, under similar conditions. This is aimed at checking the reliability of the data gathering tool (questionnaire) in obtaining what is aimed at- research questions and hypotheses.

Internal consistency, measures the extent to which the questionnaire and research design measures the aimed concepts/theories consistently (Muijs, 2011[360]; Jackson, 2003[361]; Creswell, 2002[55]), while interrater reliability also measure reliability across researchers, hence another researcher (tutor) is involved to check the reliability of the findings. As reliability entails consistency within the procedures/methods employed, validity entails credence and accuracy in portraying the research findings. As only a reliable measurement can be confirmed valid. Validity of the research instrument was measured by employing pilot test/study prior to actual/main study, and results were checked for the ability to generalize findings to Nigerian population.

Pilot test was conducted to evaluate the procedures for recruiting respondents, mode of administering the questionnaire, and data collection series of actions, as suggested by Fraser *et al*. (2018)[362]. As it is essential to evaluate the reliability or consistency of the research instrument, pilot testing of tools to be employed (questionnaire) was done through which responses from about one-tenth of the sample size of target respondents of actual study were collected. Before the main study, the pilot study was carried out with the set of participants for a period of three weeks to do a preliminary test of the proposed research design and questionnaire, and its execution to check validity and reliability so as to detect inadequacies and potential problems, as suggested by Chrysochou (2017)[308].

As the reliability and validity of a measure is not established by any single study, hence, it continued in actual study. Questionnaires were adjusted to obtain required information, and hand-administration of questionnaires was also considered because not all potential respondents had access to internet to complete the online questionnaire. Thereafter, the design was modified accordingly, online questionnaire and hand-administered questionnaires were both employed to obtain information from participants. As a consequence, through the pilot

study, regional native groups was increased to six, in the actual study, which is equivalent to eight regional native groups. Furthermore, number of participants (respondents) was increased considerably from 400 to 5,064 respondents in order to increase the magnitude of sample effect size as larger number of respondents from all the demographical backgrounds, were required to participate. The larger the effect size the stronger the relationship between two variables.

Furthermore, as physical gathering to be audio or tape-recorded was not considered unsafe and insecure by some respondents from Northern Nigeria, through zoom meeting, virtual focus group discussion was done and recorded. A chi-squared distribution was carried out on data obtained, as suggested by Whitehead (2015)[363] to identify indicators of likelihood of existing relationships between variables.

Validity of this research enables to check if findings are appropriate and meaningful, and if study is useful at all. The validity of the research tool gives the indication of the extent to which it measures what the study is meant or designed to measure. Food researchers, experts and professionals were interviewed on the findings obtained on quantitative research on effect of diversities of Nigerian consumers of processed and packed foods, their taste predilection and the marketing strategies employed by flavor companies. This was aimed at evaluating the quality of this research and its applicability in food and flavor industry in Nigeria. The integrity in which this study was conducted was, therefore determined, by ensuring the credibility of findings in association with qualitative research.

Triangulation was used to achieve validity and reliability of research findings, as suggested by Richie and Lewis (2003)[352], hence, it was the major approach used to evaluate the findings of this study. According to Long and Johnson (2000)[356] and Sandelowski (1993)[357], data triangulation was carried out by obtaining data from different sources and standpoints. Method triangulation (Kuper *et al*., 2008[364]; Fraser and Greenhalgh, 2001[365]) was conducted

by using different methods, to obtain an in-depth set of results (Patton, 1999)[366] about this study on Nigerian consumers and effect of diversity on their purchasing behavior and marketing strategies by international flavor manufacturers.

Furthermore, information gathered from focus group discussion are results of each participant's views and the interactions among group members in the atmosphere that was normal to them. The focus group members influenced one another, consequently, the discussion brought about rich data. Triangulation was employed as suggested by Yin (2003)[367] and Brannen (2005)[353], to ensure validity of processes and methods, by employing more than two methods of data collection, and these were online and hand-administered questionnaire, focus group discussion, and in-depth interview. According to Creswell (2002)[55] and Patton (2002)[354], through triangulation data were verified, trustworthiness was ensured as reliability was checked. Ultimately, the whole outcome becomes validated as error from research is reduced. The aim of carrying out pilot study was to guide if the tools were workable and would be effective to measure what it was meant to do, hence, validity- if each of the research tools (questionnaire) and the research method could attain the research objectives. In addition, pilot study was carried out to have a basis for checking reliability, for generalization of sample to the Nigerian population. In the quantitative research part of this study, reliability, the method used to establish trustworthiness was achieved by examining the consistency of data collection tools- online questionnaire and hand administered questionnaire in delivering a set of similar measurements or responses. In addition, consistency of data obtained is checked. This kind of reliability is the internal consistency. Reliability is crucial in quantitative research because it serves as a basis for validity, and measures whether this study obtains the same results every time.

Results

Description of Participants Based on Demographics. With reference to **Appendices II, III, IV, V and VI** the demographics of participants of the study were described.

Research Hypothesis 1

H₀₁: There is no significant relationship among the needs of Nigerian consumers of processed (flavored) and packed foods/drinks

Table 2 and Table 3 show the relationship among the needs of Nigerian consumers of processed (flavored) and packed foods and drink. There was order of priority and interconnection in the needs of respondents which are survival (physiological) needs, safety/health/well being, social bond, self-esteem and self-actualization. Once the most important need is met, the next important need follows, and this is the order. The needs of Nigerian consumers motivate them to purchase and consume processed (flavored) and packed foods/drink. These needs are interconnected and are in order of priority, firstly and basically to meet survival needs (physiological) which is indicated in frequency of purchase and consumption, most desired factors and desired attributes. Having satisfied the physiological needs, the next on priority is safety/well-being need, which is expressed consumers' as health concern, and next is need of sense of belonging which is indicated as social group membership, buying constraints and most important constraints.

Need of self-esteem is met through who decides what are purchased and consumed in the family, place of purchase, buying decision process, budget, and importance of flavor and taste. After the need of self-esteem is met, there comes need of self-actualization which is met through hobbies, best food flavor and best drink flavor which give a sense of fulfilment and satiety. These needs have some relationships such that at 0.01 level (2-tailed), health concerns of Nigerian consumers (health/safety/wellness needs) have a very weak positive correlation each with social group (need for sense of belonging) (r=0.095) and place of purchase (need for

self-esteem)(r=.132), while social group and place of purchase correlated positively (.125). At 0.05 level (2-tailed), social group membership correlated negatively with frequency of purchase and consumption (r=-.080), with hobbies (r=-.073), with best drink flavor (r=-.073) and positively with buying constraints (r=.079), but at 0.01 level (2-tailed) it has a positive correlation with best food flavor (r=.115).

Buying constraints has positive correlation (r=.074) with most important constraint at 1.5 level (2-tailed) but has a negative correlation (r=-110) with best drink flavor at 0.01 level (2-tailed). Most important constraint has a positive correlation (r=.109) with buying decision process at 0.01 level (2-tailed); but at 0.05 level (2-tailed) has a positive correlation with each of best drink flavor (r=.086) and best food flavor (r=.079).

Furthermore, at 0.05 level (2-tailed), importance of food/drink taste and flavor has a positive correlation with (r=.071) with most desired attribute; while at 0.01 level (2-tailed) it has a positive correlation each with place of purchase (r=.154), buying decision process (r=.104), while best food flavor has positive correlation (r=.211) with best drink flavor. Place of purchase has a positive correlation (r=.083) with buying purchase decision, at 0.05 level (2-tailed).

Table 2

Relationship Among Needs of Nigerian consumers of Processed (Flavored) and Packed

Foods/Drinks

Needs in order of priority		Health concern	Social Group	Hobbies	Desired Factors	Buying constraints	Most important constraint	Most desired attribute
	Frequency of purchase and consumption	-0.052	**-.080***	0.027	0.021	0.004	0	-0.017
	Desired Factors	-0.044	0.047	-0.008	1	0.065	-0	0.021
Physiological needs	**Most desired attribute**	-0.019	-0.01	0.027	0.021	0.037	0.052	1
Safety/well-being need	**Health concern**	1	**.095****	0.067	-0.044	-0.004	-0.03	-0.019
	Social Groups	**.095****	1	**-.073***	0.047	**.079***	0.051	-0.007
	Buying constraints	-0.004	**.079***	0.041	0.065	1	**.074***	0.037
Need of sense of belonging	**Most important constraint**	-0.027	0.051	-0.048	-0.004	**.074***	1	0.052
	Who decides	-0.02	0.013	-0.033	-0.053	-0.025	0.021	0.058
	Place of Purchase	**.132****	**.125****	0.003	0.001	-0.043	-0.01	-0.042
	Buying decision process	0.022	0.036	-0.013	0.031	-0.026	**.109****	0.024
	Budget	-0.009	-0.03	-0.039	0.005	-0.002	-0.01	-0.023
Need of self-esteem/worth	**Importance of flavor and taste**	0.058	0.024	0.019	0.004	-0.037	-0.03	**.071***
	Hobbies	0.067	**-.073***	1	-0.008	0.041	-0.05	0.027
Need of self-actualization	**Best food flavor**	0.025	**.115****	-0.022	0.024	-0.008	**.086***	-0.041
	Best drink flavor	-0.027	**-.073***	-0.008	0.023	**-.110****	**.079***	0.034

*Correlation is significant at the 0.05 level (2-tailed)

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

Table 3

Relationship Among Needs of Nigerian consumers of Processed (Flavored) and Packed

Foods/Drinks

Needs in order of priority		Place of Purchase	Buying decision process	Budget	Importance of flavor and taste	Best food flavor	Best drink flavor
	Frequency of purchase and consumption	**-.069***	-0.005	-0.003	-0	-0.03	0.04
	Desired Factors	0.001	0.031	0.005	0	0.024	0.02
Physiological needs	**Most desired attribute**	-0.042	0.024	-0.023	**.071***	-0.04	0.03
Safety/well-being need	**Health concerns**	**.132****	0.022	-0.009	0.06	0.025	-0
	Social Groups	**.125****	0.036	-0.026	0.02	**.115****	**-.073***
	Buying constraints	-0.043	-0.026	-0.002	-0	-0.01	**-.110****
Need of sense of belonging	**Most important constraint**	-0.011	**.109****	-0.01	-0	**.086***	**.079***
	Who decides	.072*	0.007	0.062	0.03	-0	-0
	Place of Purchase	1	**.083***	0.051	**.154****	0.042	-0
	Buying decision process	**.083***	1	0.053	**.104****	0.038	0.03
	Budget	0.051	0.053	1	-0	-0.01	-0
Need of self-esteem/worth	**Importance of flavor and taste**	**.154****	**.104****	-0.01	1	0.032	-0.1
	Hobbies	0.003	-0.013	-0.039	0.02	-0.02	-0
Need of self-actualization	**Best food flavor**	0.042	0.038	-0.006	0.03	1	**.211****
	Best drink flavor	-0.01	0.028	-0.003	-0.1	**.211****	1

*Correlation is significant at the 0.05 level (2-tailed)

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

Research Question 1

Q1: What is the Relationship Between The Characteristics of Food Flavor and The Purchasing Behavior of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks?

Figure 9 shows the qualitative findings on taste and flavor predilection of Nigerian consumers of processed (flavored) and packed foods/drinks. Taste and flavor preference of Nigerian consumers is presented based on gender, marital status and regional native group. Indulging and intensely sweet taste and flavors; dairy flavor in food and drink; fruity flavor; brothy, savory flavor and taste; local spices; chocolate/malty taste and flavor in food and drink are identified as the basic flavor and taste directions across different demographics in Nigeria.

Research Question 2

Q2: What is The Relationship Between Demographics of Nigerian Consumers, Their Needs, Preferences and Buying Pattern?

Figure 10 and Figure 11 show the thematic analyses of the qualitative findings made to understand reasons for buying and consuming processed (flavored) and packed foods/drinks; and the relationship among demographics of Nigerian consumers, their needs, preferences and buying pattern, respectively.

Codes assigned to interview extracts – Interview Question: What are your reasons for buying and consuming processed (flavored) and packed foods/drinks?

Qualitative analysis of focus group information coded/indexed are shown in Appendix VII to Appendix XVIII. The themes of responses to each question were identified and categorized (in colors where applicable).

Reasons Nigerian Consumers Buy and Consume Processed and Packed Foods/Drinks. Regardless of the demographics of Nigerian consumers findings reveal that convenience (ease, simplicity, time-saving, instant, fast, multiple usage, availability on-the-go)

shows as the theme of what motivate them to buy and consume processed and packed foods/drinks, while nutrition is next, as processed and packed foods/drinks are perceived to be enriched and therefore, serve as vehicle for fortification, and for safety from hygiene perspective. Furthermore, processed and packed foods/drinks are perceived by some as readily-available cost-saving solutions that are instant, cooking aids and 'suppress hunger'.

Most Appealing Attributes in Processed and Packed Foods/Drinks to Nigerian Consumers. Depending of demographics of Nigerian consumers, the most desired attributes in processed (flavored) and packed foods/drinks vary as appearance, taste/flavor, price, health benefits and /or safety, and ease to use.

Who Decides What are Purchased and Consumed in The Family. Across all demographics, in every home, the woman- wife or mother decide what are purchased and consumed in the family, even though responses from quantitative aspect of the study indicated buying is self-decisive. It was revealed that only those who are male and are single/unmarried or separated/divorced and leave alone take purchasing decisions themselves.

What is the Decision Buying Process? Figure 12 shows the purchasing decision process of Nigerian consumers towards processed (flavored) and packed foods/drink, which varies with demographic.

Who and what influence purchasing decision? Results revealed that self-decision based on need and self-decision based on affordability greatly influence consumers buying decision, which becomes their behavior after series of consistent reason-based/guided decision or action in buying and consuming the products.

What is the importance of food taste and flavor? Level of importance Nigerian consumers attribute to food taste and flavor as high generally, regardless of demographics.

Figure 9

Taste and Flavor Predilection of Nigerian Consumers of Processed (Flavored) and Packed

Foods/Drinks

Taste/Flavour Predilection of Nigerian Consumers of Processed (Flavoured) and Packed Foods/Drinks
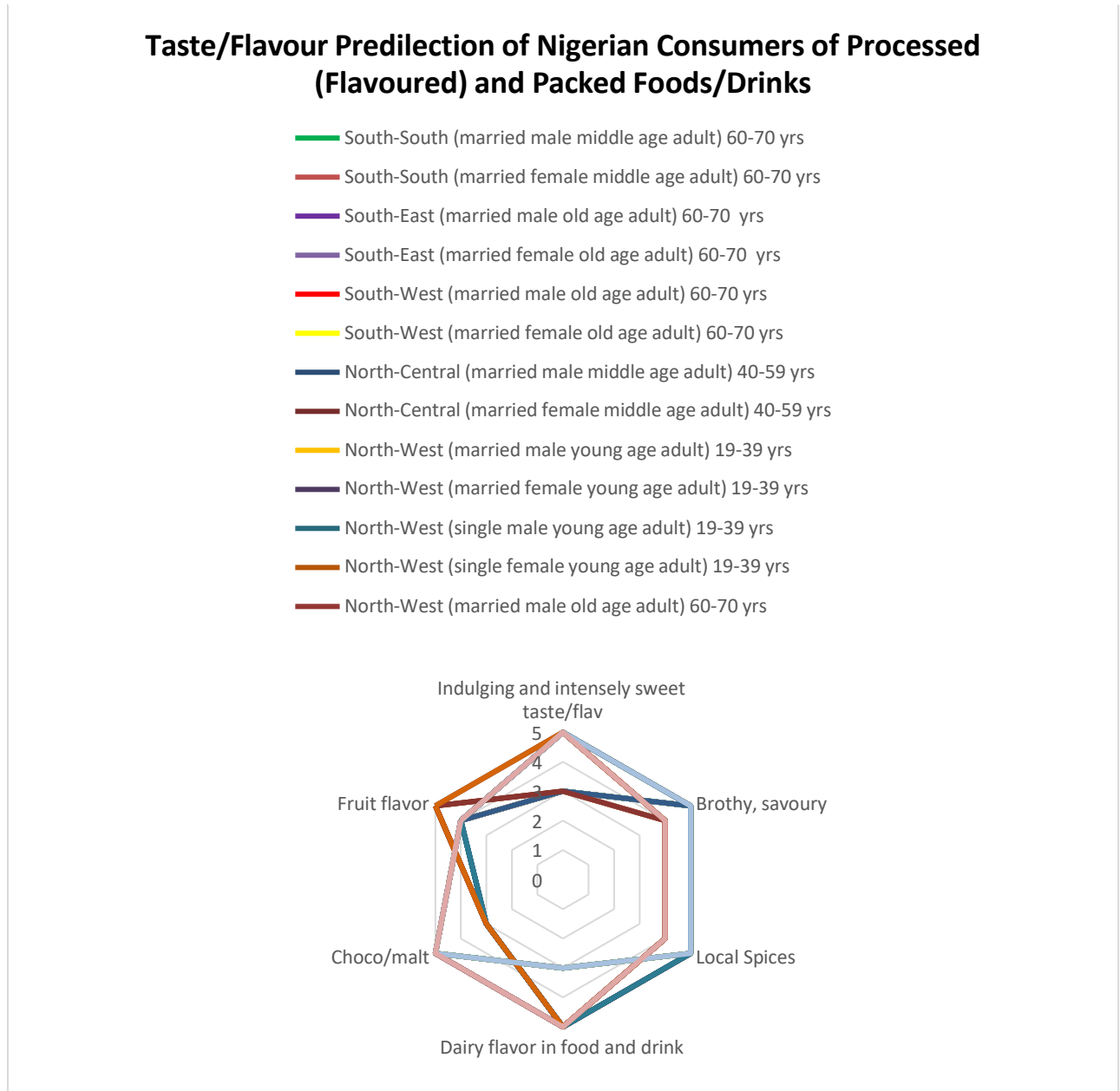
Q1: What is the Relationship Between The Characteristics of Food Flavor and The Purchasing

Behavior of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks?

Figure 10

Relationship among Nigerian consumers' needs in processed (flavored) and packed foods/drinks

Regional Native Groups (Locations)	Theme- convenience (physiological needs)								Theme (safety/well-being need)	Theme (social bond/family tie need)		Theme (Esteem)	Theme (self-actualization need)
	Ease	Convenience	Simplicity	Time-saving	Instant	Fast	Multiple usage	Availability, on-the-go	Hygiene /Safety	Nourishment	Family /social entertainment	Cost-saving	Flavor and Taste Impartation
South-West (young age adult) 19-39 yrs	X	X		X	X					X	X	X	X
North-Central (young age adult) 19-39 yrs	X	X		X	X	X		X	X		X	X	X
South-East (middle age adult) 19-39 yrs	X	X		X				X		X	X	X	X
North-East (young age adult) 19-39 yrs	X							X	X	X	X	X	X
North-West (young age adult) 19-39 yrs	X	X		X	X			X	X	X	X	X	X
South-South (young age adult) 19-39 yrs	X	X						X	X	X	X	X	X
North-Central (middle age adult) 40-59 yrs	X	X		X	X	X		X	X		X	X	X
South-East (middle age adult) 40-59 yrs	X							X		X	X	X	X
South-South (middle age adult) 40-59 yrs	X	X						X	X	X	X	X	X
North-East (middle age adult) 40-59 yrs	X			X				X	X	X	X	X	X
South-West (middle age adult) 40-59 yrs	X	X		X	X				X		X	X	X
North-West (middle age adult) 40-59 yrs	X							X	X		X	X	X
South-South (middle age adult) 60-70 yrs	X	X	X	X	X	X	X	X	X	X	X	X	X
South-East (old age adult) 60-70 yrs	X	X		X	X	X			X		X	X	X
South-West (old age adult) 60-70 yrs	X	X		X	X				X	X	X	X	X
North-West (old age adult) 60-70 yrs	X	X		X				X	X	X	X	X	X
North-East (old age adult) 60-70 yrs	X							X	X	X	X	X	X

Q2: What is The Relationship Between Demographics of Nigerian Consumers, Their Needs, Preferences and Buying Pattern?

Thematic Analysis- Qualitative Findings

Codes assigned to interview extracts – Interview Question: What are your reasons for buying and consuming processed (flavored) and packed foods/drinks?

Figure 11

Relationship among Nigerian consumers' needs in processed (flavored) and packed foods/drinks

Regional Native Groups (Locations)	Physiological need	Safety need		Need for Social bond/sense of belonging	Esteem need		Self-actualization need		
	Convenience	Health	Naturalness	Local taste	Nutrition (Enrichment)	Affordability	Appealing appearance	Satiety	Peculiar or unique taste
South-South (middle age adult) 60-70 yrs	X		X	X	X	X			X
South-East (old age adult) 60-70 yrs	X	X	X	X	X			X	X
South-West (old age adult) 60-70 yrs	X	X	X	X	X	X	X		X
North-Central (middle age adult) 40-59 yrs	X	X		X		X			X
North-West (young age adult) 19-39 yrs	X	X		X		X			X
North-West (old age adult) 60-70 yrs	X	X		X		X	X		X
North-West (young age adult) 19-39 yrs	X	X		X		X	X		X
North-East (old age adult) 60-70 yrs	X	X		X		X			X
South-East (middle age adult) 40-59 yrs	X	X	X	X	X	X	X	X	X
North-East (young age adult) 19-39 yrs	X	X		X		X			X
South-South (middle age adult) 40-59 yrs	X	X	X	X	X	X			X
South-East (middle age adult) 19-39 yrs	X	X	X	X	X	X		X	X
South-South (middle age adult) 19-39 yrs	X	X		X	X	X			X
North-East (middle age adult) 40-59 yrs	X	X		X		X			X
South-West (middle age adult) 40-59 yrs	X	X		X	X	X	X		X
South-West (young age adult) 19-39 yrs	X	X		X	X	X	X		X
North-Central (young age adult) 19-39 yrs	X	X		X		X			X
North-Central (old age adult) 60-70 yrs	X	X		X		X			X

Q2: What is The Relationship Between Demographics of Nigerian Consumers, Their Needs, Preferences and Buying Pattern?

Thematic Analysis- Qualitative Findings

Codes assigned to interview extracts – Interview Question: What is (are) most appealing to you in processed (flavored) and packed foods/drinks

Figure 12

Purchasing Decision Process of Nigerian Consumers Based on Demographic
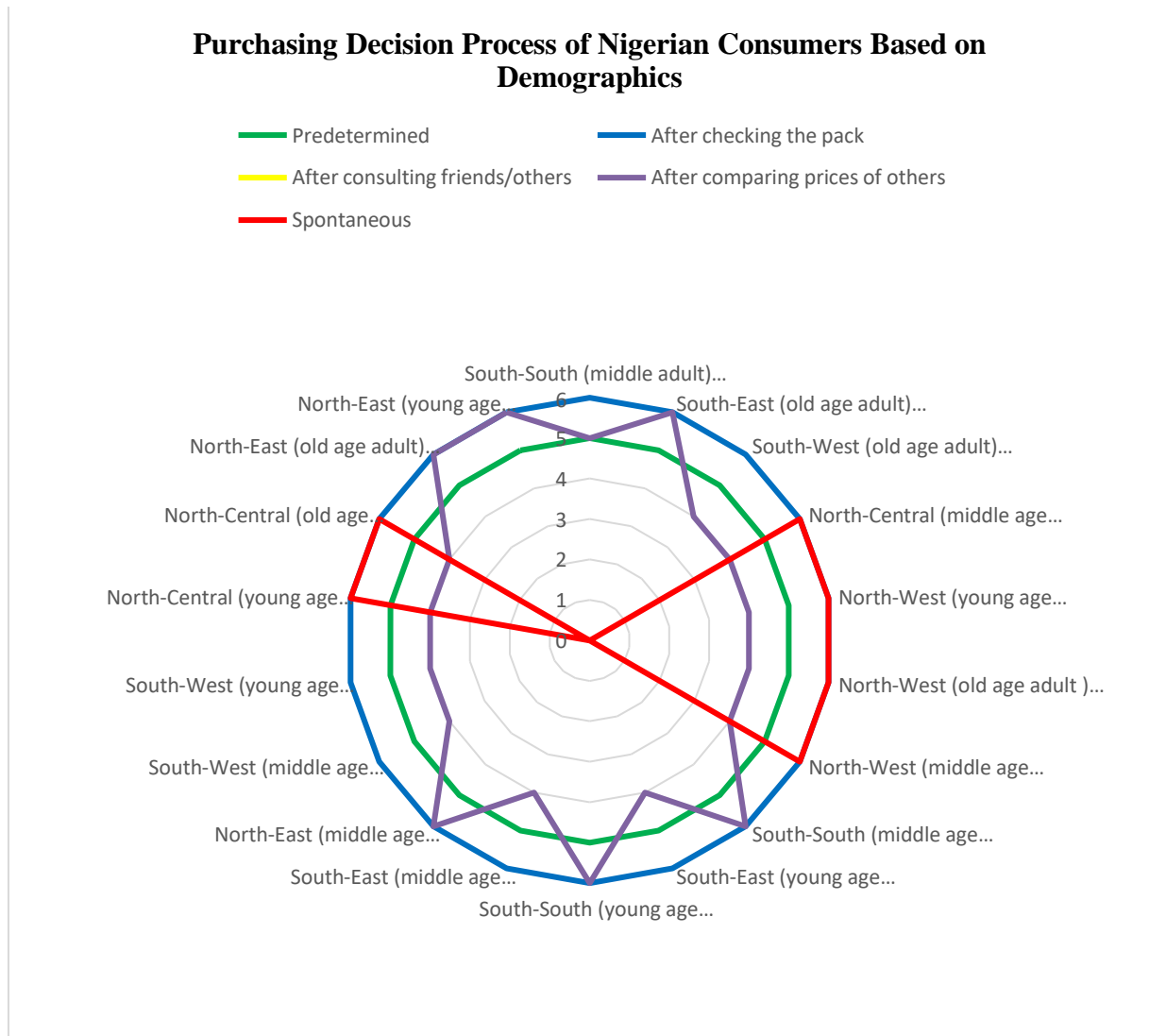
Purchasing Decision Process of Nigerian Consumers Based on Demographics

Q2: What is The Relationship Between Demographics of Nigerian Consumers, Their Needs, Preferences and Buying Pattern?

Thematic Analysis- Qualitative Findings

Codes assigned to interview extracts – What is the purchasing decision process?

Research Hypothesis 2

H$_{02}$: There is no significant relationship between personal attitude of Nigerian consumers and their willing intention to purchase processed (flavored) and packed foods/drinks

Consumers have personal makeup which entails their demographics, personal needs, lifestyle and buying pattern and preference .

Lifestyle of participants as it relates to health concerns, hobbies, frequency of purchase and consumption of processed and packed foods and drinks, and constraints to purchase and consumption of processed and packed foods and drinks. Appendices XIX to XLII show that lifestyle of respondents based on their different demographics.

Influence of Demographics on Health Concerns of Nigerian Consumers of Processed and Packed Foods/Drinks. Influence on health concern is shown in Appendices XXI (gender), XXII (regional home location), XXIII (regional native locations), XXIV (age group), XXV (educational status) and XXVI (marital status).

Influence of Demographics on Hobbies of Nigerian Consumers of Processed and Packed Foods/Drinks. Influence on hobbies is shown in XXVII (age group), XXVIII (gender), XXIX (regional native location), XXX (educational status) and XXXI (marital status).

Influence of Demographics on Frequency of Purchase and Consumption of Processed (Flavored) and Packed Foods/Drinks by Nigerian Consumers. Influence on is shown in XXXII (gender), XXXIII (age group), XXXIV (regional home location), XXXV (educational status), XXXVI (marital status), XXXVII (regional native location) and XXXVIII (gender).

Influence of Demographics on Constraints of Nigerian Consumers Towards Purchasing and Consumption of Processed (Flavored) and Packed Foods/Drinks. Influence on constraints towards purchasing and consuming processed (flavored) and packed foods/drinks is shown in Appendices XXXVIII to XLIII.

Influence of Demographics on Most Important Constraints of Nigerian Consumers Towards Purchasing and Consumption of Processed (Flavored) and Packed Foods/Drinks. Influence of educational status of Nigerian consumers on their most important constraints towards purchasing and consuming processed (flavored) and packed foods/drinks is shown in Table 4 and figure 13; while Table 5 and figure 14 show influence of their marital status. Furthermore, Table 6 and figure 15 represent effect of their regional native location; and Table 7 and figure 16 represent effect of regional native location.

Table 4

Lifestyle of Participants: Most Important Constraints to Buying and Consuming Processed and Packed Foods/Drinks Based on Educational Status

Most important constraint			
Education		Frequency	Percent
	Religious constraint	318	26.6
	Nutritional & Health reasons	**612**	**51.2**
Non-Graduate	Financial reasons	144	12.1
	Cultural Beliefs	120	10.1
	Total	1194	100
	Religion	294	12
	Nutritional & Health reasons	**1320**	**53.8**
Graduate	Financial reasons	570	23.2
	Cultural Beliefs	270	11
	Total	2454	100
	Religion	102	7.2
	Nutritional & Health reasons	**930**	**65.7**
Postgraduate	Financial reasons	258	18.2
	Cultural Beliefs	126	8.9
	Total	1416	100

Figure 13

Lifestyle of Participants: Most Important Constraints to Buying and Consuming Processed and Packed Foods/Drinks Based on Educational Status

Percentage Nigerian Consumers With Most Important Buying Constraints on Processed and Packed Foods/Drinks based on Educational Status
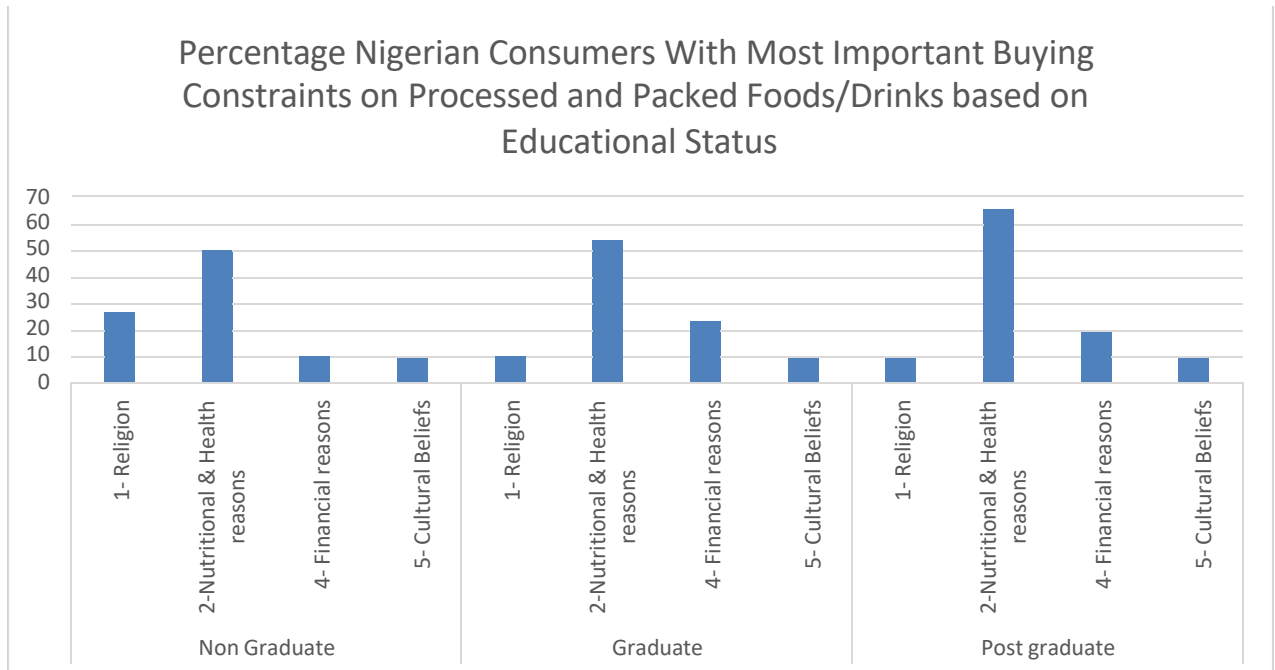
Table 5

Lifestyle of Participants: Constraints to Buying and Consuming Processed and Packed

Foods/Drinks Based on Marital Status

Buying constraints			
Marital Status		Frequency	Percent
Married	1. Religious constraints	228	7.3
	2- Health constraints	**966**	**30.7**
	3- Cultural beliefs (constraints)	60	1.9
	4- Nutritional reasons	594	18.9
	5- Financial reasons (affordability)	318	10.1
	6- All of the above	306	9.7
	Multiple constraints	672	11.4
	Total	3144	100
Not married	1. Religious constraints	144	8.5
	2- Health constraints	**450**	**26.6**
	3- Cultural beliefs (constraints)	42	2.5
	4- Nutritional reasons	**396**	**23.4**
	5- Financial reasons (affordability)	186	11
	6- All of the above	150	8.9
	Multiple constraints	324	19.1
	Total	1692	100
Prefer not to say	**2- Health constraints**	**30**	**27.8**
	4- Nutritional reasons	**30**	**27.8**
	5- Financial reasons (affordability)	18	16.7
	6- All of the above	6	5.6
	Multiple constraints	24	22.1
	Total	108	100
Separated/divorce	**2- Health constraints**	**54**	**45**
	3- Cultural beliefs (constraints)	12	10
	4- Nutritional reasons	**30**	**25**
	6- All of the above	12	10
	Multiple constraints	12	10
	Total	120	100

Figure 14

Lifestyle of Participants: Constraints to Buying and Consuming Processed and Packed Foods/Drinks Based on Marital Status

Percentage Nigerian Consumers With Buying Constraints on Processed and Packed Foods/Drinks based on Marital Status
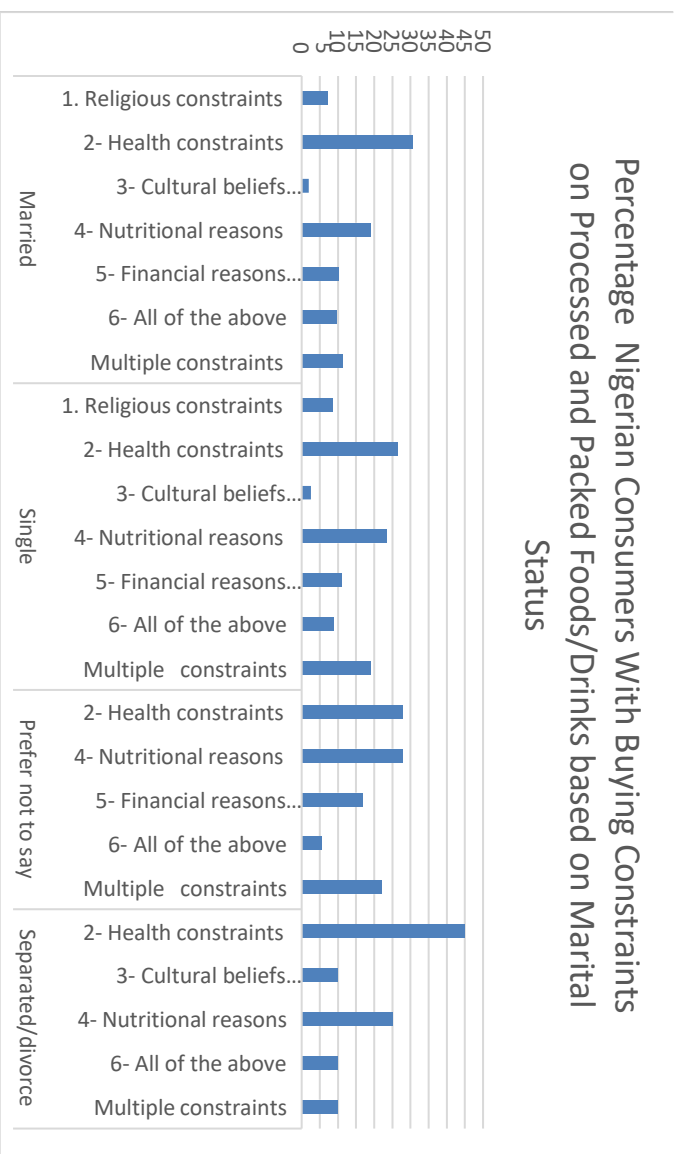
Table 6

Lifestyle of Participants: Constraints to Buying and Consuming Processed and Packed

Foods/Drinks Based on Regional Native Zone

Buying constraints		
Region	Frequency	Percent
1. Religious constraints	**186**	**37,3**
2- Health constraints	60	12
3- Cultural beliefs (constraints)	6	1,2
North West 4- Nutritional reasons	72	14,5
5- Financial reasons (affordability)	24	4,8
6- All of the above	72	14,5
Total	498	100
1. Religious constraints	60	5
2- Health constraints	**318**	**26,6**
3- Cultural beliefs (constraints)	12	1
South West **4- Nutritional reasons**	**234**	**19,6**
5- Financial reasons (affordability)	120	10,1
6- All of the above	102	8,5
	1194	100
2- Health constraints	**222**	**32,7**
3- Cultural beliefs (constraints)	12	1,8
South South **4- Nutritional reasons**	**138**	**20,4**
5- Financial reasons (affordability)	54	8
6- All of the above	60	8,8
Total	678	100
1. Religious constraints	48	7
2- Health constraints	**240**	**34,8**
3- Cultural beliefs (constraints)	54	7,8
North Central **4- Nutritional reasons**	**168**	**24,3**
5- Financial reasons (affordability)	60	8,7
6- All of the above	66	9,6
Total	690	100
1. Religious constraints	60	3,9
2- Health constraints	**558**	**36**
3- Cultural beliefs (constraints)	30	1,9
South East **4- Nutritional reasons**	**342**	**22,1**
5- Financial reasons (affordability)	174	11,2
6- All of the above	108	7
Total	1548	100
1. Religious constraints	18	3,9

North East			
	2- Health constraints	**102**	**22,4**
	4- Nutritional reasons	**96**	**21,1**
	5- Financial reasons (affordability)	**90**	**19,7**
	6- All of the above	66	14,5
	Total	456	100

Figure 15

Lifestyle of Participants: Constraints to Buying and Consuming Processed and Packed Foods/Drinks Based on Regional Native Zone
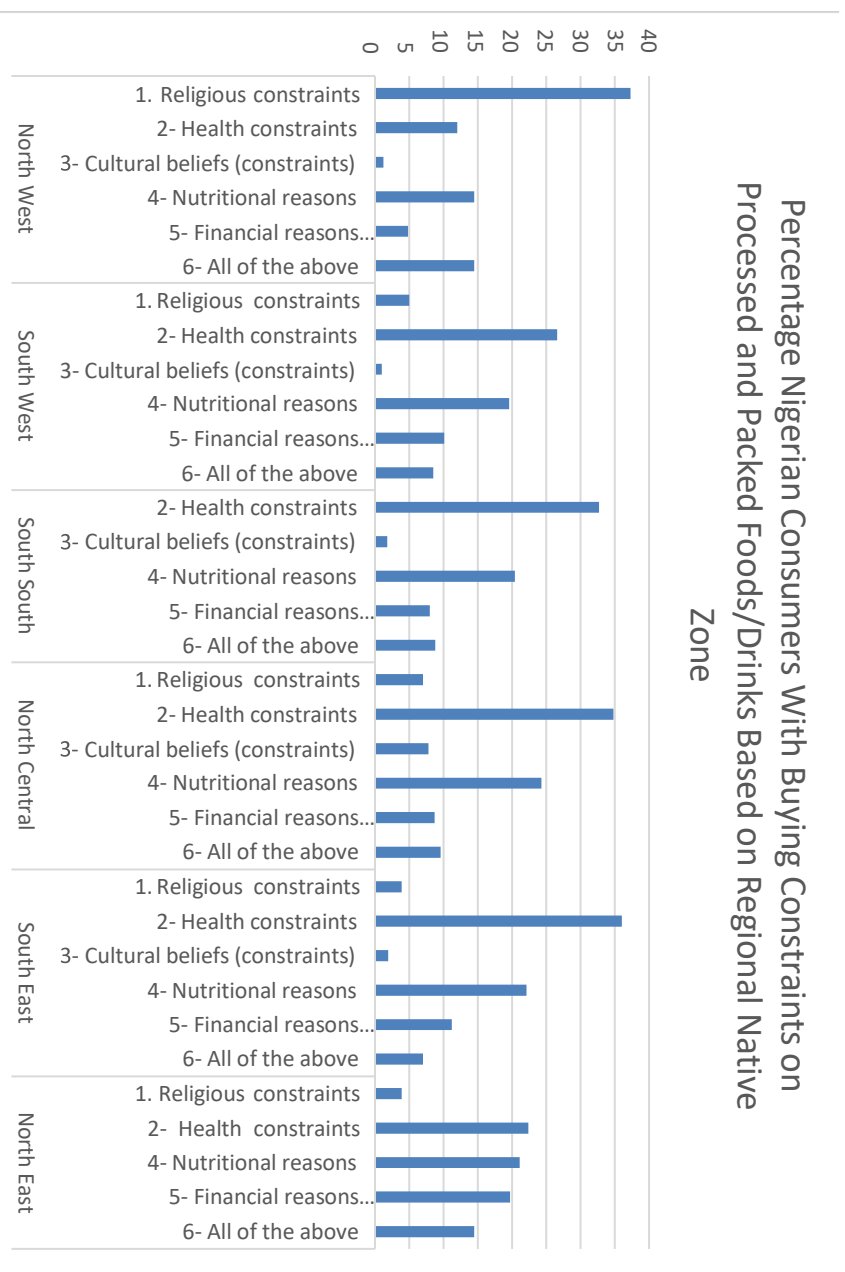
Table 7

Lifestyle of Participants: Most Important Constraints to Buying and Consuming Processed and Packed Foods/Drinks Based on Regional Native Zone

	Most important constraint		
Regional Native Zone		Frequency	Percent
North West	**Religion**	330	**66.3**
	Nutritional & Health reasons	108	**21.5**
	Financial reasons	42	8.4
	Cultural Beliefs	18	3,6
	Total	498	100
South West	Religion	126	10.6
	Nutritional & Health reasons	702	**58.8**
	Financial reasons	216	18.1
	Cultural Beliefs	150	12.6
	Total	1194	100
South-South	**Nutritional & Health reasons**	420	**62**
	Financial reasons	198	29.2
	Cultural Beliefs	60	8.8
	Total	678	100
North Central	Religion	60	8.7
	Nutritional & Health reasons	468	**67.8**
	Financial reasons	108	15.7
	Cultural Beliefs	54	7.8
	Total	690	100
South East	Religion	126	8.1
	Nutritional & Health reasons	948	**61.3**
	Financial reasons	330	21.3
	Cultural Beliefs	144	9.3
	Total	1548	100
North East	Religion	72	15.8
	Nutritional & Health reasons	216	**47.4**
	Financial reasons	78	17.1
	Cultural Beliefs	90	19.7
	Total	456	100

Figure 16

Lifestyle of Participants: Most Important Constraints to Buying and Consuming Processed and Packed Foods/Drinks Based on Regional Native Zone
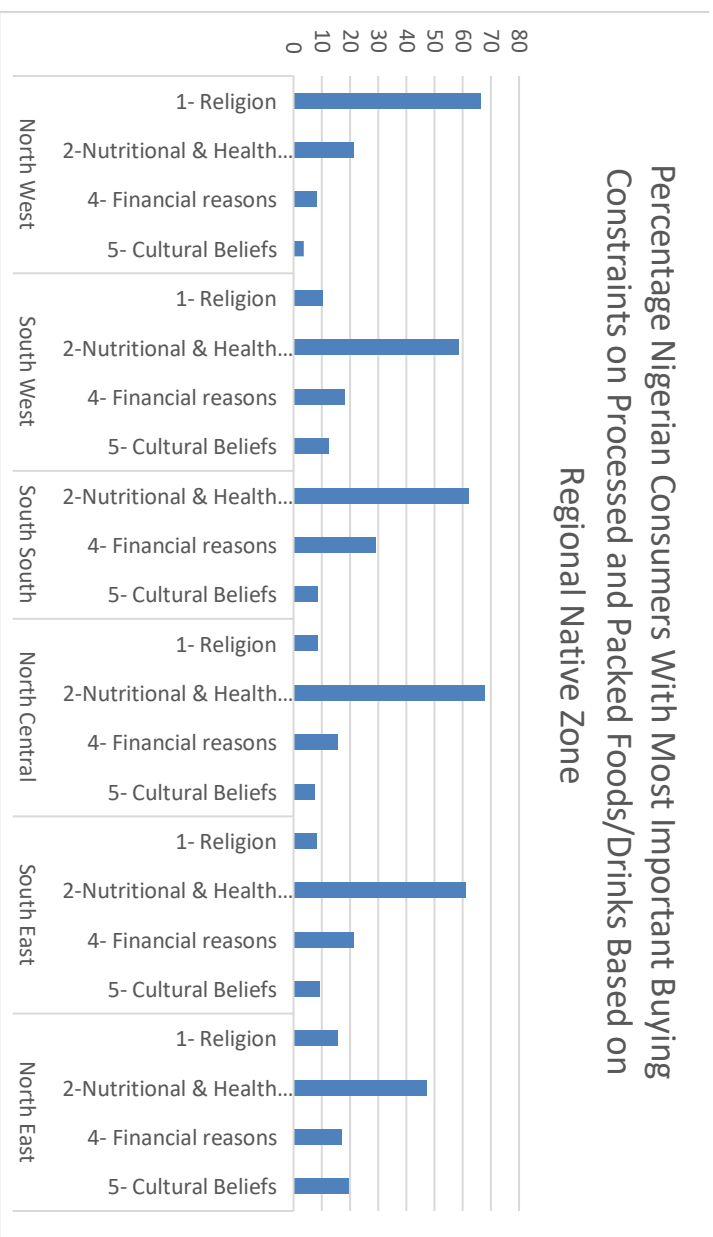
These dependent variables are reflections of the needs, preferences, lifestyle, purchasing pattern and purchase intention drivers of Nigerian consumers of processed (flavored) and packed foods/drinks, and they vary with their demographics as shown below (Tables 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17), as there were significant (p<0.05) differences between and/or among mean values of the independent variables.

Table 8 presents the T-test showing that gender of Nigerian consumers has main effect on dependent variables- hobbies- $t(5063)=-2.224$, $p=0.026$; buying constraints towards processed (flavored) and packed foods/drinks- $t(5063)=2.412$, $p=0.016$; and level of satisfaction derived from processed (flavored) and packed foods/drinks - $t(5063)=2.21$, $p=0.027$. As they vary with gender, there were significant (p<0.05) differences between mean values for male and female consumers based on dependent variables, and the higher the values of t-score, the larger the difference which exists between the data sets of male and female, and vice versa.

Therefore, the null hypothesis that the means from the male and female groups are not equal is accepted because there is significant difference (p<0.05) in the mean values of Nigerian consumers based on their gender for each of the dependent variables

H_0: $M_1 \neq M_2$ is accepted for mean values of male and female for each of these variables.

Table 9 shows the summary of Analysis of Variance (ANOVA) indicating the main effect of age group of respondents on dependent variables - their social group membership $[F(2, 5,063)\ 3.457,\ p=0.032]$, extent of social group influence $[F(2, 5,063)\ 3.502,\ p=0.031]$, hobbies $[F(2, 5,063)\ 29.556,\ p=0.000]$, frequency of purchasing and consumption of processed (flavored) and packed foods/drinks $[F(2, 5,063)\ 8.762,\ p=0.000]$, desired factors in processed (flavored) and packed foods/drinks $[F(2, 5,063)\ 16.62,\ p=0.000]$, who in the family decides what are purchased and consumed based $[F(2, 5,063)\ 4.309,\ p=0.014]$, buying constraints

towards processed (flavored) and packed foods/drinks [F(2, 5,063) 7.747, p=0.000], and best drink [F(2, 5,063) 14.225, p=0.000].

Therefore, the null hypothesis is accepted because there is significant difference (p<0.05) in the mean values of age groups of Nigerian consumers for each of the dependent variables

H_0: $M_1 \neq M_2 \neq M_3$ is accepted for mean values of age groups (19-39; 40-59; 60-70) for each of the dependent variables

Table 10 shows the summary of Analysis of Variance (ANOVA) indicating the main effect of regional home location of respondents on dependent variables- their monthly earning- [F(4, 5,010) 5.347, p=0.000]; their health concerns [F(4, 5,034) 10.719, p=0.000]; their hobbies [F(4, 5,034) 13.04, p=0.000]; their the frequency of purchase and consumption [F(4, 5,016) 7.954, p=0.000]; in desired factors [F(4, 5,034) 12.15, p=0.000]; in their constraints in buying [F(4, 5,028) 6.589, p=0.000]; in place of purchase [F(4, 5,034) 3.833, p=0.004]; in the importance attached to food/drink flavor and taste [F(4, 4968) 4.571, p=0.001]; in the best drink flavor [F(4, 4974) 4.441 p=0.001]; and in level of satisfaction derived [F(4, 5022) 4.238, p=0.002].

Therefore, the null hypothesis is accepted because there is significant difference (p<0.05) in the mean values of regional home location of Nigerian consumers for each of the dependent variables.

H_0: $M_1 \neq M_2 \neq M_3 \neq M_4 \neq M_5$ is accepted for mean values of regional home location (Northern, Western, Eastern, Southern, FCT/Middle Belt/Central) for each of these dependent variables.

Table 11 shows the summary of Analysis of Variance (ANOVA) indicating the main effect of educational status of Nigerian consumers on dependent variables- their hobbies- F[(2, 5028) 21.82 p=0.00]; in the frequency of purchase and consumption- F [(2,

**5016) 9.383, p=0.00]; in desired factors in processed (flavored) and packed foods/drinks-
F[(2, 5028) 5.11, p=0.006]; in who decides what is purchased and consumed in family-
F[(2, 5028) 3.864, p= 0.021], in the most important constraint- F[(2, 5028) 6.046, p= 0.002];
in most desired attribute – F[(2, 5028) 8.793, p=0.00]; and importance of flavor and taste
– F[(2, 4962) 6.186, p=0.002].**

Therefore, the null hypothesis is accepted because there is significant difference
(p<0.05) in the mean values of educational status of Nigerian consumers for each of the
dependent variables- hobbies, frequency of purchase and consumption, desired factors, desired
factors, who decides, most important constraint, most desired attribute and importance of flavor
and taste.

H$_0$: M$_1$ ≠ M$_2$ ≠ M$_3$ is accepted for mean values of educational status (non-graduate,
graduate and postgraduate) for each of these dependent variables.

**Table 12 shows the summary of Analysis of Variance (ANOVA) indicating the
main effect of marital status of Nigerian consumers on dependent variables; health
concerns- F[(3, 5040) 3.089 p=0.026]; who decides what are purchased and consumed in
the family- F [(3, 5040) 5.866, p=0.001]; importance attributed to food/drink flavor and
taste - F[(3, 4974) 3.842, p=0.01]; best drink flavor– F[(3, 4980) 6.842, p=0.000]**

Therefore, the null hypothesis is accepted because there is significant difference
(p<0.05) in the mean values of marital status of Nigerian consumers for each of the dependent
variables- health concerns, who decides, importance of flavor and taste and best drink flavors.

H$_0$: M$_1$ ≠ M$_2$ ≠ M$_3$ is accepted for mean values of marital status (single/unmarried,
married and separated/divorced) for each of these dependent variables.

**Table 13 shows the summary of Analysis of Variance (ANOVA) indicating the
main effect of tribes of Nigerian consumers on dependent variables- monthly earning-
F[(62, 4662) 1.782 p=0.000]; health concerns- F [(62, 4686) 2.129, p=0.000]; hobbies- F**

[(62, 4686) 2.465.=0.00]; frequency of purchase and consumption- F [(61, 4674) 4.189, p= 0.000; desired factor- F [(62, 4686) 3.623, p=0.000].

Therefore, the null hypothesis is accepted because there is significant difference (p<0.05) in the mean values of tribes of Nigerian consumers for each of the dependent variables - monthly earning, health concerns, hobbies, frequency of purchase and consumption, and desired factors in processed and packed foods/drinks

H_0: $M_1 \neq M_2 \neq M_3$ ….. $\neq M_{63}$ is accepted for mean values of tribes for each of the dependent variables

Table 14 shows the summary of Analysis of Variance (ANOVA) indicating the main effect of regional native location of Nigerian consumers on dependent variables- **their monthly earning- F[(5, 5004) 6.723 p=0.000]; health concerns- F[(5, 5028) 5.271 p=0.000]; extent of social group influence- F[(5, 5004) 3.671 p=0.003]; hobbies -F[(5, 5010) 6.348 p=0.000]; frequency of purchase and consumption- F[(5, 5010) 6.348 p=0.000]; desired factors- F[(5, 5028) 7.11 p=0.000]; buying constraints- F[(5, 5022) 3.231 p=0.000]; most important constraints- F[(5, 5028) 12.134 p=0.000]; place of purchase- F[(5, 5028) 5.216 p=0.000]; importance of flavor and taste -F[(5, 4962) 3.408 p=0.005]; level of satisfaction -F[(5, 5016) 3.241 p=0.007].**

Therefore, the null hypothesis is accepted because there is significant difference (p<0.05) in mean values of regional native locations for each of the dependent variables.

H_0: $M_1 \neq M_2 \neq M_3 \neq M_4 \neq M_5 \neq M_6$ is accepted for mean values of regional native locations (North-East, North-West, North-Central, South-South, South-East, South-West) for each of these dependent variables.

Table 8

Summary of T-Test Showing the Main Effect of Gender of Nigerian Consumers on Dependent Variables

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Monthly Earning	0.471	5,063	0.638	0.04	-0.125	0.204
	0.47	4157	0.638	0.04	-0.125	0.205
Health concerns	-0.805	5052	0.421	-0.063	-0.216	0.09
	-0.782	4157	0.434	-0.063	-0.22	0.095
Social Groups	0.949	5052	0.343	0.069	-0.074	0.212
	0.987	4961	0.324	0.069	-0.068	0.206
Extent of social group influence	-0.064	5028	0.949	-0.004	-0.119	0.112
	-0.064	4922	0.949	-0.004	-0.119	0.111
Hobbies	**2.224**	**5052**	**0.026**	**0.222**	**0.026**	**0.418**
	2.229	**4861**	**0.026**	**0.222**	**0.026**	**0.417**
Frequency of purchase and consumption	1.476	5046	0.14	0.112	-0.037	0.261
	1.476	4818	0.14	0.112	-0.037	0.261
Desired Factors	-0.013	5052	0.989	-0.002	-0.234	0.231
	-0.013	4807	0.989	-0.002	-0.234	0.231
Who decides	-1.249	5052	0.212	-0.1	-0.257	0.057
	-1.244	4751	0.214	-0.1	-0.258	0.058
Buying constraints	**2.412**	**5046**	**0.016**	**0.254**	**0.047**	**0.461**
	2.435	**4967**	**0.015**	**0.254**	**0.049**	**0.459**
Most important constraint	-1.544	5052	0.123	-0.132	-0.3	0.036
	-1.559	4967	0.119	-0.132	-0.298	0.034
Most desired attribute	0.959	5052	0.338	0.08	-0.084	0.245
	0.956	4766	0.339	0.08	-0.085	0.245

Place of Purchase	-0.763	5052	0.446	-0.06	-0.215		0.095
	-0.757	4648	0.449	-0.06	-0.217		0.096
Buying decision process	-0.907	5052	0.365	-0.065	-0.205		0.075
	-0.909	4848	0.364	-0.065	-0.204		0.075
Budget	0.963	5052	0.336	0.049	-0.051		0.15
	0.966	4879	0.334	0.049	-0.051		0.15
Importance of flavor and taste	0.883	5052	0.378	0.054	-0.066		0.173
	0.885	4866	0.376	0.054	-0.065		0.172
Best food flavor	1.739	5052	0.082	0.123	-0.016		0.261
	1.737	4795	0.083	0.123	-0.016		0.262
Best drink flavor	-0.281	5052	0.779	-0.02	-0.157		0.117
	-0.279	4677	0.78	-0.02	-0.158		0.118
Level of satisfaction	**2.21**	**5052**	**0.027**	**0.155**	**0.017**		**0.292**
	2.196	**4688**	**0.028**	**0.155**	**0.016**		**0.293**

Table 9

Summary of Analysis of Variance (ANOVA) Showing the Main Effect of Age Group of Nigerian Consumers on Dependent Variables

	ANOVA					
		Sum of Squares	df	Mean Square	F	Sig.
Monthly Earning	Between Groups	11.738	2	5.869	2.340	.097
	Within Groups	2098.804	5,060	2.508		
	Total	2110.542	5,063			
Health concerns	Between Groups	157.786	2	78.893	1.207	.299
	Within Groups	54951.663	5,060	65.341		
	Total	55109.449	5,063			
Social Groups	**Between Groups**	**482.435**	**2**	**241.218**	**3.457**	**.032**
	Within Groups	58685.529	5,060	69.781		
	Total	59167.964	5,063			
Extent of social group influence	**Between Groups**	**7.363**	**2**	**3.682**	**3.502**	**.031**
	Within Groups	879.951	5,060	1.051		
	Total	887.314	5,063			
Hobbies	**Between Groups**	**6255.233**	**2**	**3127.616**	**29.556**	**.000**
	Within Groups	88993.537	5,060	105.819		
	Total	95248.769	5,063			
Frequency of purchase and consumption	**Between Groups**	**59.185**	**2**	**29.593**	**8.762**	**.000**
	Within Groups	2830.213	5,060	3.377		
	Total	2889.398	5,063			
Desired Factors	**Between Groups**	**1056.221**	**2**	**528.111**	**16.620**	**.000**
	Within Groups	26724.068	5,060	31.777		
	Total	27780.289	5,063			

Who decides	**Between Groups**	**15.749**	**2**	**7.874**	**4.309**	**.014**
	Within Groups	1536.786	5,060	1.827		
	Total	1552.534	5,063			
Buying constraints	**Between Groups**	**2182.133**	**2**	**1091.066**	**7.747**	**.000**
	Within Groups	118305.663	5,060	140.840		
	Total	120487.795	5,063			
Most important constraint	Between Groups	3.369	2	1.684	1.105	.332
	Within Groups	1282.176	5,060	1.525		
	Total	1285.545	5,063			
Most desired attribute	Between Groups	12.956	2	6.478	1.893	.151
	Within Groups	2878.308	5,060	3.422		
	Total	2891.264	5,063			
Place of Purchase	Between Groups	6.624	2	3.312	2.538	.080
	Within Groups	1097.333	5,060	1.305		
	Total	1103.957	5,063			
Buying decision process	Between Groups	.871	2	.435	.410	.663
	Within Groups	889.704	5,060	1.060		
	Total	890.575	5,063			
Budget	Between Groups	.144	2	.072	.131	.877
	Within Groups	461.736	5,060	.552		
	Total	461.881	5,063			
Importance of flavor and taste	Between Groups	3.576	2	1.788	2.339	.097
	Within Groups	634.515	5,060	.764		
	Total	638.091	5,063			
Best food flavor	Between Groups	.837	2	.418	.179	.836
	Within Groups	1956.325	5,060	2.343		
	Total	1957.162	5,063			

Best drink flavor	**Between Groups**	**28.196**	**2**	**14.098**	**14.225**	**.000**
	Within Groups	823.583	5,060	.991		
	Total	851.779	5,063			
Level of satisfaction	**Between Groups**	**11.081**	**2**	**5.540**	**4.535**	**.011**
	Within Groups	**1024.977**	**5,060**	**1.222**		
	Total	1036.058	5,063			

Significant difference at $p < 0.05$

Table 10

Summary of Analysis of Variance (ANOVA) Showing the Main Effect of Regional Home

Location of Nigerian Consumers on Dependent Variables

Oneway ANOVA					
		Sum of Squares	df	Mean Square	F	Sig.
Monthly Earning	**Between Groups**	**52.713**	**4**	**13.178**	**5.347**	**0**
	Within Groups	2057.83	5010	2.464		
	Total	**2110.54**	**5010**			
Health Concerns	**Between Groups**	**2679.26**	**4**	**669.816**	**10.719**	**0**
	Within Groups	52430.2	5034	62.491		
	Total	55109.4	5038			
Social Groups	Between Groups	145.599	4	36.4	0.517	0.723
	Within Groups	59022.4	5034	70.348		
	Total	59168	5038			
Extent of social group influence	Between Groups	6.044	4	1.511	1.432	0.222
	Within Groups	881.27	5010	1.055		
	Total	887.314	5014			
Hobbies	**Between Groups**	**5574.89**	**4**	**1393.72**	**13.04**	**0**
	Within Groups	89673.9	5034	106.882		
	Total	95248.8	5038			
Frequency of purchase and consumption	**Between Groups**	**105.931**	**4**	**26.483**	**7.954**	**0**
	Within Groups	2783.47	5016	3.33		
	Total	2889.4	5020			
Desired Factors	**Between Groups**	**1521.12**	**4**	**380.281**	**12.15**	**0**
	Within Groups	26259.2	5034	31.298		
	Total	27780.3	5038			
Who decides	Between Groups	4.561	4	1.14	0.618	0.65
	Within Groups	1547.97	5034	1.845		
	Total	1552.53	5038			
Buying constraints	**Between Groups**	**3673.84**	**4**	**918.46**	**6.589**	**0**
	Within Groups	116814	5028	139.396		
	Total	120488	5032			
Most important constraint	Between Groups	9.957	4	2.489	1.637	0.163
	Within Groups	1275.59	5034	1.52		
	Total	1285.55	5038			
Most desired attribute	Between Groups	12.954	4	3.238	0.944	0.438
	Within Groups	2878.31	5034	3.431		
	Total	2891.26	5038			

Place of Purchase	Between Groups	19.812	4	4.953	3.833	0.004

	Within Groups	1084.15	5034	1.292		
	Total	1103.96	5038			
Buying decision process	Between Groups	8.699	4	2.175	2.064	0.084
	Within Groups	881.876	5022	1.054		
	Total	890.575	5026			
Budget	Between Groups	2.613	4	0.653	1.188	0.315
	Within Groups	459.268	5010	0.55		
	Total	461.881	5014			
Importance of flavor and taste	**Between Groups**	**13.787**	**4**	**3.447**	**4.571**	**0.001**
	Within Groups	624.304	4968	0.754		
	Total	638.091	4972			
Best food flavor	Between Groups	7.151	4	1.788	0.764	0.549
	Within Groups	1950.01	4998	2.341		
	Total	1957.16	5002			
Best drink flavor	**Between Groups**	**17.87**	**4**	**4.468**	**4.441**	**0.001**
	Within Groups	833.909	4974	1.006		
	Total	851.779	4978			
Level of satisfaction	**Between Groups**	**20.567**	**4**	**5.142**	**4.238**	**0.002**
	Within Groups	1015.49	5022	1.213		
	Total	1036.06	5026			

Significant difference at P<0.05

Table 11

Summary of Analysis of Variance (ANOVA) Showing the Main Effect of Educational Status of Nigerian Consumers on Dependent Variables

	ANOVA	Sum of Squares	df	Mean Square	F	Sig.
Monthly Earning	Between Groups	5.769	2	2.884	1.144	0.319
	Within Groups	2102.06	5004	2.52		
	Total	2107.83	5006			
Health concerns	Between Groups	181.96	2	90.98	1.39	0.25
	Within Groups	54865.1	5028	65.472		
	Total	55047.1	5030			
Social Groups	Between Groups	127.415	2	63.708	0.906	0.405
	Within Groups	58924.3	5028	70.315		
	Total	59051.7	5030			
Extent of social group influence	Between Groups	6	2	3	2.842	0.059
	Within Groups	880.254	5004	1.055		
	Total	886.253	5006			
Hobbies	**Between Groups**	**4710.53**	**2**	**2355.26**	**21.82**	**0**
	Within Groups	90454.9	5028	107.941		
	Total	95165.4	5030			
Frequency of purchase and consumption	**Between Groups**	**63.402**	**2**	**31.701**	**9.383**	**0**
	Within Groups	2824.33	5016	3.378		
	Total	2887.73	5018			
Desired Factors	**Between Groups**	**334.67**	**2**	**167.335**	**5.11**	**0.006**

			df			
	Within Groups	27440.5	5028	32.745		
	Total	27775.2	5030			
Who decides	**Between Groups**	**14.083**	**2**	**7.041**	**3.864**	**0.021**
	Within Groups	1526.98	5028	1.822		
	Total	1541.06	5030			
Buying constraints	Between Groups	179.453	2	89.726	0.624	0.536
	Within Groups	120287	5022	143.712		
	Total	120466	5024			
Most important constraint	**Between Groups**	**18.162**	**2**	**9.081**	**6.046**	**0.002**
	Within Groups	1258.69	5028	1.502		
	Total	1276.85	5040			
Most desired attribute	**Between Groups**	**59.345**	**2**	**29.672**	**8.793**	**0**
	Within Groups	2827.97	5028	3.375		
	Total	2887.32	5030			
Place of Purchase	Between Groups	4.108	2	2.054	1.568	0.209
	Within Groups	1097.87	5028	1.31		
	Total	1101.98	5030			
Buying decision process	Between Groups	3.85	2	1.925	1.823	0.162
	Within Groups	882.996	5016	1.056		
	Total	886.846	5018			
Budget	Between Groups	0.054	2	0.027	0.049	0.953
	Within Groups	459.11	5004	0.55		
	Total	459.164	5006			
Importance of flavor and taste	**Between Groups**	**9.393**	**2**	**4.697**	**6.186**	**0.002**
	Within Groups	627.933	4962	0.759		
	Total	637.327	4964			

Best food flavor	Between Groups	3.062	2	1.531	0.655	0.52
	Within Groups	1943.89	4992	2.336		
	Total	1946.96	4994			
Best drink flavor	Between Groups	4.69	2	2.345	2.305	0.1
	Within Groups	842.263	4968	1.017		
	Total	846.953	4970			
Level of satisfaction	Between Groups	0.945	2	0.473	0.384	0.681
	Within Groups	1029.45	5016	1.231		
	Total	1030.4	5018			

Significant difference at P<0.05

Table 12

Summary of Analysis of Variance (ANOVA) Showing the Main Effect of Marital Status of Nigerian Consumers on Dependent Variables

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Monthly Earning	Between Groups	18.983	3	6.328	2.529	0.056
	Within Groups	2091.56	5016	2.502		
	Total	2110.54	5019			
Health concerns	**Between Groups**	**601.374**	**3**	**200.458**	**3.089**	**0.026**
	Within Groups	54508.1	5040	64.891		
	Total	55109.4	5043			
Social Groups	Between Groups	96.939	3	32.313	0.459	0.711
	Within Groups	59071	5040	70.323		
	Total	59168	5043			
Extent of social group influence	Between Groups	1.936	3	0.645	0.609	0.609
	Within Groups	885.378	5016	1.059		
	Total	887.314	5019			
Hobbies	Between Groups	529.244	3	176.415	1.564	0.197
	Within Groups	94719.5	5040	112.761		
	Total	95248.8	5043			
Frequency_of_purchase_and_consumption	Between Groups	16.04	3	5.347	1.557	0.198
	Within Groups	2873.36	5022	3.433		
	Total	2889.4	5025			
Desired_Factors	Between Groups	189.567	3	63.189	1.924	0.124
	Within Groups	27590.7	5040	32.846		

	Total	27780.3	5043			
Who_decides	**Between Groups**	**31.858**	**3**	**10.619**	**5.866**	**0.001**
	Within Groups	1520.68	5040	1.81		
	Total	1552.53	5043			
Buying_constraints	Between Groups	113.401	3	37.8	0.263	0.852
	Within Groups	120374	5034	143.474		
	Total	120488	5037			
Most_important_constraint	Between Groups	3.046	3	1.015	0.665	0.574
	Within Groups	1282.5	5040	1.527		
	Total	1285.55	5043			
Most desired attribute	Between Groups	7.789	3	2.596	0.756	0.519
	Within Groups	2883.48	5040	3.433		
	Total	2891.26	5043			
Place_of_Purchase	Between Groups	9.161	3	3.054	2.343	0.072
	Within Groups	1094.8	5040	1.303		
	Total	1103.96	5043			
Buying_decision_process	Between Groups	1.347	3	0.449	0.423	0.736
	Within Groups	889.227	5028	1.061		
	Total	890.575	5031			
Budget	Between Groups	0.736	3	0.245	0.445	0.721
	Within Groups	461.145	5016	0.552		
	Total	461.881	5019			
Importance_of_flavor_and_taste	**Between Groups**	**8.751**	**3**	**2.917**	**3.842**	**0.01**
	Within Groups	629.34	4974	0.759		
	Total	638.091	4977			
Best food flavor	Between Groups	2.576	3	0.859	0.366	0.777

	Within Groups	1954.59	5004	2.344		
	Total	1957.16	5007			
Best drink flavor	**Between Groups**	**20.526**	**3**	**6.842**	**6.832**	**0**
	Within Groups	831.253	4980	1.002		
	Total	851.779	4983			
Level of satisfaction	Between Groups	9.524	3	3.175	2.592	0.052
	Within Groups	1026.53	5028	1.225		
	Total	1036.06	5031			

Significant difference at P<0.05

Table 13

Summary of Analysis of Variance (ANOVA) Showing the Main Effect of Tribes of Nigerian Consumers on Dependent Variables

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Monthly Earning	**Between Groups**	**262.719**	**62**	**4.237**	**1.782**	**0**
	Within Groups	1847.82	4662	2.378		
	Total	2110.54	4724			
Health_concerns	**Between Groups**	**7968.38**	**62**	**128.522**	**2.129**	**0**
	Within Groups	47141.1	4686	60.36		
	Total	55109.4	4748			
Social_Groups	Between Groups	1995.86	62	32.191	0.44	1
	Within Groups	57172.1	4686	73.204		
	Total	59168	4748			
Extent_of_social_group_influence	Between Groups	62.602	62	1.01	0.951	0.584
	Within Groups	824.712	4662	1.061		
	Total	887.314	4724			
Hobbies	**Between Groups**	**15588.2**	**62**	**251.422**	**2.465**	**0**
	Within Groups	79660.6	4686	101.998		
	Total	95248.8	4748			
Frequency_of_purchase_and_consumption	**Between Groups**	**713.709**	**61**	**11.7**	**4.189**	**0**
	Within Groups	2175.69	4674	2.793		
	Total	2889.4	4735			
Desired_Factors	**Between Groups**	**6205.9**	**62**	**100.095**	**3.623**	**0**

		Sum of Squares	df	Mean Square	F	Sig.
	Within Groups	21574.4	4686	27.624		
	Total	27780.3	4748			
Who_decides	Between Groups	156.247	62	2.52	1.41	0.024
	Within Groups	1396.29	4686	1.788		
	Total	1552.53	4748			
Buying_constraints	Between Groups	24783.7	62	399.737	3.258	0
	Within Groups	95704.1	4680	122.698		
	Total	120488	4742			
Most_important_constraint	Between Groups	186.999	62	3.016	2.144	0
	Within Groups	1098.55	4686	1.407		
	Total	1285.55	4748			
Most_desired_attribute	Between Groups	114.154	62	1.841	0.518	0.999
	Within Groups	2777.11	4686	3.556		
	Total	2891.26	4748			
Place_of_Purchase	Between Groups	112.99	62	1.822	1.436	0.018
	Within Groups	990.967	4686	1.269		
	Total	1103.96	4748			
Buying_decision_process	Between Groups	83.165	62	1.341	1.294	0.069
	Within Groups	807.409	4674	1.036		
	Total	890.575	4736			
Budget	Between Groups	46.79	61	0.767	1.438	0.019
	Within Groups	415.091	4668	0.534		
	Total	461.881	4729			
Importance_of_flavor_and_taste	Between Groups	64.995	62	1.048	1.408	0.024
	Within Groups	573.096	4620	0.744		
	Total	638.091	4682			

	Between Groups	60.316	62	0.973	0.397	1
Best food flavor	Within Groups	1896.85	4650	2.448		
	Total	1957.16	4712			
	Between Groups	75.028	62	1.21	1.201	0.145
Best drink flavor	Within Groups	776.751	4626	1.007		
	Total	851.779	4688			
	Between Groups	86.236	62	1.391	1.141	0.22
Level of satisfaction	Within Groups	949.822	4674	1.219		
	Total	1036.06	4736			

Significant difference at P<0.05

Table 14

Summary of Analysis of Variance (ANOVA) Showing the Main Effect of Regional Native Locations of Nigerian Consumers on Dependent

Variables

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Monthly_Earning	**Between Groups**	**81.769**	**5**	**16.354**	**6.723**	**0**
	Within Groups	**2028.77**	**5004**	**2.433**		
	Total	**2110.54**	**5009**			
Health_concerns	**Between Groups**	**1680.24**	**5**	**336.049**	**5.271**	**0**
	Within Groups	**53429.2**	**5028**	**63.758**		
	Total	**55109.4**	**5033**			
Social_Groups	Between Groups	671.653	5	134.331	1.924	0.088
	Within Groups	58496.3	5028	69.805		
	Total	59168	5033			
Extent_of_social_group_influence	**Between Groups**	**19.107**	**5**	**3.821**	**3.671**	**0.003**
	Within Groups	**868.207**	**5004**	**1.041**		
	Total	**887.314**	**5009**			
Hobbies	**Between Groups**	**6116.41**	**5**	**1223.28**	**11.501**	**0**
	Within Groups	**89132.4**	**5028**	**106.363**		
	Total	**95248.8**	**5033**			
Frequency_of_purchase_and_consumption	**Between Groups**	**105.808**	**5**	**21.162**	**6.348**	**0**
	Within Groups	**2783.59**	**5010**	**3.334**		
	Total	**2889.4**	**5015**			
Desired_Factors	**Between Groups**	**1130.49**	**5**	**226.099**	**7.11**	**0**

	Within Groups	**26649.8**	**5028**	**31.802**		
	Total	**27780.3**	**5033**			
Who_decides	Between Groups	19.069	5	3.814	2.084	0.065
	Within Groups	1533.47	5028	1.83		
	Total	1552.53	5033			
Buying_constraints	**Between Groups**	**2281.77**	**5**	**456.354**	**3.231**	**0.007**
	Within Groups	**118206**	**5022**	**141.226**		
	Total	**120488**	**5027**			
Most_important_constraint	**Between Groups**	**86.788**	**5**	**17.358**	**12.134**	**0**
	Within Groups	**1198.76**	**5028**	**1.43**		
	Total	**1285.55**	**5033**			
Most_desired_attribute	Between Groups	31.605	5	6.321	1.852	0.1
	Within Groups	2859.66	5058	3.412		
	Total	2891.26	5063			
Place_of_Purchase	**Between Groups**	**33.318**	**5**	**6.664**	**5.216**	**0**
	Within Groups	**1070.64**	**5028**	**1.278**		
	Total	**1103.96**	**5033**			
Buying_decision_process	Between Groups	9.359	5	1.872	1.776	0.115
	Within Groups	881.216	5016	1.054		
	Total	890.575	5021			
Budget	Between Groups	2.779	5	0.556	1.01	0.411
	Within Groups	459.102	5004	0.55		
	Total	461.881	5009			
Importance_of_flavor_and_taste	**Between Groups**	**12.883**	**5**	**2.577**	**3.408**	**0.005**
	Within Groups	**625.208**	**4962**	**0.756**		
	Total	**638.091**	**4967**			
Best2food_flavor	Between Groups	8.201	5	1.64	0.7	0.623

	Within Groups	1948.96	4992	2.343		
	Total	1957.16	4997			
Best2drink_flavor	Between Groups	7.495	5	1.499	1.47	0.197
	Within Groups	844.284	4968	1.02		
	Total	851.779	4973			
Level_of_satisfaction	**Between Groups**	**19.703**	**5**	**3.941**	**3.241**	**0.007**
	Within Groups	**1016.36**	**5016**	**1.216**		
	Total	**1036.06**	**5021**			

Significant difference at P<0.0

Table 15 shows the summary of Analysis of Variance (ANOVA) indicating the main effect of birth location of Nigerian consumers on dependent variables- their monthly earning- [$F_{(4, 5008)}$ 6.429, p=0.000]; health concerns - [$F_{(4, 5032)}$ 3.755, p=0.005]; hobbies- [$F_{(4, 5032)}$ 3.755, p=0.005]; frequency of purchase and consumption- [$F_{(4, 5032)}$ 3.755, p=0.005]; desired factors- [$F_{(4, 5032)}$ 3.755, p=0.005]; buying constraints- [$F_{(4, 5032)}$ 3.755, p=0.005]; level of satisfaction- [$F_{(4, 5020)}$ 4.905, p=0.001.

Therefore, the null hypothesis is accepted because there is significant difference (p<0.05) in mean values of regional birth location for each of the dependent variables- monthly earning, health concerns, hobbies, Frequency of purchase and consumption, desired factors, and buying constraints towards processed and packed foods/drinks among consumers from five regional birth locations (Northern, Southern, Western, Eastern and FCT/Middle Belt/Central) of Nigerian consumers

H_0: $M_1 \neq M_2 \neq M_3 \neq M_4 \neq M_5$ is accepted for mean values of regional birth location for each of the dependent variables.

Table 16 shows the summary of Analysis of Variance (ANOVA) indicating the main effect of family size of Nigerian consumers on dependent variables- their buying constraints- $F_{[(9, 4986)]}$ 1.962, p=0.041]; best food - $F_{[(9, 4962)]}$ 1.991, p=0.038]; and level of satisfaction - $F_{[(9, 4986)]}$ 2.384, p=0.011].

Therefore, the null hypothesis is accepted because there is significant difference (p<0.05) in mean values of family size for each of the dependent variables- their buying constraints, best food flavor and level of satisfaction.

Therefore,

H_0: $M_1 \neq M_2 \neq M_3 \neq M_4 \neq M_5 \neq M_6$ is accepted for mean values of family size for each of those dependent variables.

Table 15

Summary of Analysis of Variance (ANOVA) Showing the Main Effect of Birth Location of Nigerian Consumers on Dependent Variables

	ANOVA	Sum of Squares	df	Mean Square	F	Sig.
Monthly_Earning	**Between Groups**	**63.119**	**4**	**15.78**	**6.429**	**0**
	Within Groups	2047.13	5004	2.455		
	Total	2110.25	5008			
Health_concerns	**Between Groups**	**970.044**	**4**	**242.511**	**3.755**	**0.005**
	Within Groups	54126.8	5028	64.59		
	Total	55096.8	5032			
Social_Groups	Between Groups	344.111	4	86.028	1.226	0.298
	Within Groups	58823.6	5028	70.195		
	Total	59167.7	5032			
Extent_of_social_group_influence	Between Groups	4.541	4	1.135	1.072	0.369
	Within Groups	882.773	5004	1.058		
	Total	887.313	5008			
Hobbies	**Between Groups**	**4160.06**	**4**	**1040.01**	**9.593**	**0**
	Within Groups	90850.6	5028	108.414		
	Total	95010.7	5032			
Frequency_of_purchase_and_consumption	**Between Groups**	**42.394**	**4**	**10.598**	**3.108**	**0.015**
	Within Groups	2846.94	5010	3.41		
	Total	2889.33	5014			
Desired_Factors	**Between Groups**	**961.198**	**4**	**240.299**	**7.508**	**0**
	Within Groups	26819.1	5028	32.004		

	Total	27780.3	5032			
Who_decides	Between Groups	2.595	4	0.649	0.352	0.843
	Within Groups	1545.17	5028	1.844		
	Total	1547.76	5032			
Buying_constraints	**Between Groups**	**1804.47**	**4**	**451.118**	**3.181**	**0.013**
	Within Groups	118683	5022	141.795		
	Total	120487	5026			
Most_important_constraint	Between Groups	26.044	4	6.511	4.333	0.002
	Within Groups	1259.18	5028	1.503		
	Total	1285.23	5032			
Most_desired_attribute	Between Groups	59.188	4	14.797	4.379	0.002
	Within Groups	2831.97	5028	3.379		
	Total	2891.16	5032			
Place_of_Purchase	Between Groups	35.351	4	8.838	6.937	0
	Within Groups	1067.62	5028	1.274		
	Total	1102.97	5032			
Buying_decision_process	Between Groups	2.828	4	0.707	0.667	0.615
	Within Groups	886.202	5016	1.06		
	Total	889.03	5020			
Budget	Between Groups	1.347	4	0.337	0.61	0.656
	Within Groups	460.272	5004	0.552		
	Total	461.619	5008			
Importance of flavor and taste	Between Groups	19.947	4	4.987	6.739	0
	Within Groups	611.956	4962	0.74		
	Total	631.903	4966			
Best food flavor	Between Groups	5.574	4	1.394	0.594	0.667

	Within Groups	1950.75	4992	2.345		
	Total	1956.33	4996			
Best drink flavor	Between Groups	7.806	4	1.952	1.925	0.104
	Within Groups	839.601	4968	1.014		
	Total	847.408	4972			
Level of satisfaction	Between Groups	23.723	4	5.931	4.905	0.001
	Within Groups	1010.79	5016	1.209		
	Total	1034.52	5020			

Significant difference at P<0.05

Table 16

Summary of Analysis of Variance (ANOVA) Showing the Main Effect of Family Size of Nigerian Consumers on Dependent Variables

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Monthly_Earning	Between Groups	23.912	9	2.657	1.057	0.393
	Within Groups	2084.5	4974	2.514		
	Total	2108.41	4983			
Health_concerns	Between Groups	1042.44	9	115.826	1.785	0.067
	Within Groups	54046.3	4998	64.881		
	Total	55088.7	5007			
Social_Groups	Between Groups	191.583	9	21.287	0.301	0.975
	Within Groups	58969.9	4998	70.792		
	Total	59161.5	5007			
Extent_of_social_group_influence	Between Groups	3.493	9	0.388	0.364	0.952
	Within Groups	883.82	4974	1.066		
	Total	887.313	4983			
Hobbies	Between Groups	833.719	9	92.635	0.818	0.6
	Within Groups	94383.9	4998	113.306		
	Total	95217.6	5007			
Frequency_of_purchase_and_consumption	Between Groups	50.411	9	5.601	1.638	0.1
	Within Groups	2837.39	4980	3.419		
	Total	2887.8	4989			
Desired_Factors	Between Groups	461.664	9	51.296	1.564	0.122
	Within Groups	27318.6	4998	32.795		

	Total	27780.3	5007			
Who_decides	Between Groups	8.513	9	0.946	0.511	0.868
	Within Groups	1543.36	4998	1.853		
	Total	1551.87	5007			
Buying_constraints	Between Groups	1645.19	9	182.799	1.28	0.244
	Within Groups	118819	4992	142.812		
	Total	120464	5001			
Most_important_constraint	Between Groups	24.207	9	2.69	1.78	0.068
	Within Groups	1258.89	4998	1.511		
	Total	1283.1	5007			
Most_desired_attribute	Between Groups	30.632	9	3.404	0.991	0.446
	Within Groups	2860.17	4998	3.434		
	Total	2890.8	5007			
Place_of_Purchase	Between Groups	6.904	9	0.767	0.582	0.812
	Within Groups	1097.05	4998	1.317		
	Total	1103.96	5007			
Buying_decision_process	**Between Groups**	**18.462**	**9**	**2.051**	**1.962**	**0.041**
	Within Groups	869.02	4986	1.046		
	Total	887.482	4995			
Budget	Between Groups	7.299	9	0.811	1.48	0.151
	Within Groups	454.343	4974	0.548		
	Total	461.642	4983			
Importance_of_flavor_and_taste	Between Groups	8.742	9	0.971	1.269	0.25
	Within Groups	629.112	4932	0.765		
	Total	637.855	4941			
Best food flavor	**Between Groups**	**41.506**	**9**	**4.612**	**1.991**	**0.038**

		SS	df	MS	F	Sig.
	Within Groups	1915.65	4962	2.316		
	Total	1957.16	4971			
Best drink flavor	Between Groups	7.109	9	0.79	0.774	0.641
	Within Groups	840.299	4938	1.021		
	Total	847.408	4947			
Level of satisfaction	**Between Groups**	**26.062**	**9**	**2.896**	**2.384**	**0.011**
	Within Groups	1009.42	4986	1.215		
	Total	1035.48	4995			

Significant difference at P<0.05

Table 16 shows the summary of Analysis of Variance (ANOVA) indicating the main effect of family size of Nigerian consumers on dependent variables- their buying constraints- $F_{(9, 4986)}$ 1.962, p=0.041]; best food - $F_{(9, 4962)}$ 1.991, p=0.038]; and level of satisfaction - $F_{(9, 4986)}$ 2.384, p=0.011].

Therefore, the null hypothesis is accepted because there is significant difference (p<0.05) in mean values of family size for each of the dependent variables- their buying constraints, best food flavor and level of satisfaction.

Therefore,

H_0: $M_1 \neq M_2 \neq M_3 \neq M_4 \neq M_5 \neq M_6$ is accepted for mean values of family size for each of those dependent variables.

Table 17 shows the summary of Analysis of Variance (ANOVA) indicating the main effect of religion of Nigerian consumers on dependent variables- their extent of social group influence-$F_{(3, 5016)}$ 2.662, p=0.047]; frequency of purchase of purchase and consumption- $F_{(3, 5022)}$ 3.094, p=0.026]; most important constraint - $F_{(3, 5040)}$ 18.534, p=0.00]; place of purchase - $F_{(3, 5040)}$ 4.164, p=0.006]; importance of flavor and taste- $F_{(3, 4974)}$ 4.443, p=0.004]; and level of satisfaction- $F_{(3, 5028)}$ 2.699, p=0.045].

Therefore, the null hypothesis is accepted because there is significant difference (p<0.05) in mean values of religion of Nigerian consumers for each of the dependent variables- extent of social group influence, frequency of purchase and consumption, desired factors, and buying constraints towards processed and packed foods/drinks.

H_0: $M_1 \neq M_2 \neq M_3 \neq M_4$ is accepted for mean values of religion on each of the dependent variables

Table 17

Summary of Analysis of Variance (ANOVA) Showing the Main Effect of Religion of Nigerian Consumers on Dependent Variables

	ANOVA					
		Sum of Squares	df	Mean Square	F	Sig.
Monthly_Earning	Between Groups	17.175	3	5.725	2.286	0.077
	Within Groups	2093.37	5016	2.504		
	Total	2110.54	5019			
Health_concerns	Between Groups	337.938	3	112.646	1.728	0.16
	Within Groups	54771.5	5040	65.204		
	Total	55109.4	5043			
Social_Groups	Between Groups	67.456	3	22.485	0.32	0.811
	Within Groups	59100.5	5040	70.358		
	Total	59168	5043			
Extent_of_social_group_influence	**Between Groups**	**8.397**	**3**	**2.799**	**2.662**	**0.047**
	Within Groups	878.918	5016	1.051		
	Total	887.314	5019			
Hobbies	Between Groups	720.738	3	240.246	2.135	0.094
	Within Groups	94528	5040	112.533		
	Total	95248.8	5043			
Frequency_of_purchase_and_consumption	**Between Groups**	**31.692**	**3**	**10.564**	**3.094**	**0.026**
	Within Groups	2857.71	5022	3.414		
	Total	2889.4	5025			
Desired_Factors	Between Groups	200.087	3	66.696	2.031	0.108

	Within Groups	27580.2	5040	32.834		
	Total	27780.3	5043			
Who_decides	Between Groups	12.166	3	4.055	2.211	0.085
	Within Groups	1540.37	5040	1.834		
	Total	1552.53	5043			
Buying_constraints	Between Groups	196.914	3	65.638	0.458	0.712
	Within Groups	120291	5034	143.374		
	Total	120488	5037			
Most_important_constraint	**Between Groups**	**79.81**	**3**	**26.603**	**18.534**	**0**
	Within Groups	1205.74	5040	1.435		
	Total	1285.55	5043			
Most_desired_attribute	Between Groups	9.87	3	3.29	0.959	0.411
	Within Groups	2881.39	5040	3.43		
	Total	2891.26	5043			
Place_of_Purchase	**Between Groups**	**16.176**	**3**	**5.392**	**4.164**	**0.006**
	Within Groups	1087.78	5040	1.295		
	Total	1103.96	5043			
Buying_decision_process	Between Groups	2.262	3	0.754	0.711	0.545
	Within Groups	888.313	5028	1.06		
	Total	890.575	5031			
Budget	Between Groups	1.625	3	0.542	0.984	0.4
	Within Groups	460.256	5016	0.551		
	Total	461.881	5019			
Importance_of_flavor_and_taste	**Between Groups**	**10.097**	**3**	**3.366**	**4.443**	**0.004**

	Within Groups	627.995	4974	0.758		
	Total	638.091	4977			
Best food flavor	Between Groups	2.019	3	0.673	0.287	0.835
	Within Groups	1955.14	5004	2.344		
	Total	1957.16	5007			
Best drink flavor	Between Groups	3.578	3	1.193	1.167	0.321
	Within Groups	848.201	4980	1.022		
	Total	851.779	4983			
Level of satisfaction	**Between Groups**	**9.917**	**3**	**3.306**	**2.699**	**0.045**
	Within Groups	1026.14	5028	1.225		
	Total	1036.06	5031			

Significant difference at P<0.05

Table 18, Figure 17 and Figure 18 present mean scores showing Nigerian consumers' classes of needs; and comparison of needs and influences in processed (flavored) and packed foods/drinks based on demographic.

Mean scores of needs of Nigerian consumers are compared based on demographics, and they reveal that respondents who are of middle age group, of Western and Southern regional home location, that are postgraduate, of Western or Southern regional birth location, indicate highest need for self-actualization which reflect in their keen interest of games/sport as hobbies. Regarding monthly earning, female respondents who are of old age adult (60-70 years); of Western and FCT/Middle belt/Central Nigeria regional home location; that are postgraduate; separated/divorced; of FCT/Middle Belt/Central Nigeria regional birth location; whose family size is two, indicate the highest and lowest monthly earnings among others. These same demographics of respondents indicate their need of self-esteem as shown in their monthly earning. On the other hand, respondents who are female; of Northern, Eastern and FCT/Middle belt/Central Nigeria regional home location; separated/divorced; of Western and FCT/Middle belt/Central Nigeria regional birth location; and of family size two have the highest budget for processed (flavored) and packed foods/drinks, hence, highest need for self-esteem.

Other family members decide what are purchased and consumed in the family of female respondents than in male respondents; while middle age and old age adults, other family members decide more than they decide by themselves.

Regardless of the social group, influence in female is less than in male; least in middle age group adults; least in Western and FCT/Middle belt/Central Nigeria regional home location but highest in Eastern regional home location; least in postgraduate; least in divorced/separated consumers; highest respondent of Northern and Eastern regional birth location but lowest in

Western and FCT/Middle belt/Central Nigeria regional birth location. These reflect their various need for sense of belonging in social groups.

Social group membership need varies with demographics. It tends towards high need of professional group membership for middle age group adult consumers and lowest for old age group adults; while cultural group membership need is highest for old age group adults but lowest for middle age group adult consumers. Furthermore, professional membership need is highest for postgraduate, less for graduate and least for non-graduate consumers.

Cultural group membership need is highest for consumers whose regional home location is Eastern Nigeria, and for separated/divorced consumers. Professional membership need is highest for consumers whose regional birth location is Northern Nigeria, but least for those of Eastern and FCT/Middle Belt/Central Nigeria.

Female respondents show less safety/health/well-being needs than male respondents. Young adult respondents indicated less need for health/wellness and safety, middle age respondents indicated highest need, while old age adult respondents showed least need. Respondents whose regional native location is Western Nigeria indicated highest need for health/wellness and safety, followed by those of Southern and Northern regional birth location.

Graduate and postgraduate respondents indicated higher need for health/wellness and safety. Married respondents show high need for safety/health/well-being, as well as single/unmarried respondents, however, separated/divorced respondents indicate least need for safety/health/well-being. Respondents whose regional birth location are Western and Southern indicate highest need for safety/health/well-being, so as respondents whose family size is 6 and above.

Table 18

Mean Scores Showing Nigerian Consumers' Classes of Needs in Processed (Flavored) and Packed Foods/Drinks Based on Demographics

		Mean Scores of Nigerian Consumers' Needs in Processed (Flavored) and Packed Foods/Drinks						
		Psychological needs (necessity for survival)	Safety/health/well-being	Sense of belonging/social bond			Esteem/Status	Self-actualization
		Most desired factors	Most desired attribute	social group membership	extent of social group influence	Who decides what are purchased and consumed in the family	Monthly income	Hobbies
Gender	Male	3.31	4.98	3.56	1.97	1.78	3.35	4.44
	Female	3.33	5.06	3.52	2.11	1.86	3.6	4.10
Age group	Young adults (19-39 years)	3.34	5.42	3.48	2	1.7	3.36	4.38
	Middle age adults (40-59 years)	3.45	5.77	4.55	2.18	1.99	3.55	5.00
	Old adults (60-69 years)	3.07	2.63	2.23	1.91	1.95	3.65	1.69
Regional Home Location	Northern Nigeria	3.34	5.04	3.68	2.08	1.98	3.02	3.39
	Western Nigeria	3.27	6.53	3.87	2.11	1.81	3.38	5.00
	Eastern Nigeria	3.33	3.41	2.87	1.9	1.79	3.83	2.93
	Southern Nigeria	3.52	5.19	3.83	1.96	1.81	3.43	5.00
	FCT or Middle Belt or Central	3.1	3.00	3.05	2.04	1.7	3.66	2.47
Educational status	Non Graduate	2.84	3.99	3.03	1.9	1.72	3.38	2.21
	Graduate	3.46	5.11	3.45	2.03	1.74	3.42	4.76
	Post graduate	3.48	5.73	4.09	2.14	2.02	3.59	5.27

Marital status	Married	3.29	5.06	3.75	2.05	1.95	3.41	4.37
	Not married	3.38	5.22	3.29	1.97	1.55	3.51	4.35
	Prefer not to say	3.72	2.62	3.06	2.22	1.72	3.06	3.62
	Separated/divorce	2.9	3.10	1.92	2.11	2.15	4.3	1.85
Regional birth location	Northern Nigeria	3.15	5.22	4.65	1.99	1.82	3.05	3.81
	Western Nigeria	3.49	5.97	3.51	2.09	1.86	3.46	5.50
	Eastern Nigeria	3.03	3.91	2.91	1.91	1.82	3.81	3.39
	Southern Nigeria	3.76	5.83	3.32	2.07	1.7	3.35	5.00
	FCT or Middle Belt or Central	3.08	2.92	2.90	2.09	1.85	3.78	2.29
Family size	One	2.67	2.33	1.33	2	1.33	3.33	1.50
	Two	3.37	2.66	2.79	2.11	1.74	3.67	3.08
	Three	3.34	5.45	2.84	2.1	1.7	3.62	4.38
	Four	3.19	4.82	3.45	2.01	1.88	3.31	4.42
	Five	3.11	4.68	4.09	1.98	1.84	3.59	3.95
	Six and above	3.53	5.63	3.57	2.05	1.82	3.36	4.71
Religion	Islam	3.11	4.52	3.11	1.83	1.73	3.2	3.53
	Christianity	3.36	5.21	3.67	2.07	1.82	3.53	4.52
	Traditional	3.53	3.18	2.32	1.94	2.59	3	2.47
	Others	3.75	1.88	3.03	2.38	1.5	3.62	3.81

Figure 17

Comparing Nigerian Consumers' Needs and Influences in Processed (Flavored) and Packed Foods/Drinks Based on Demographics
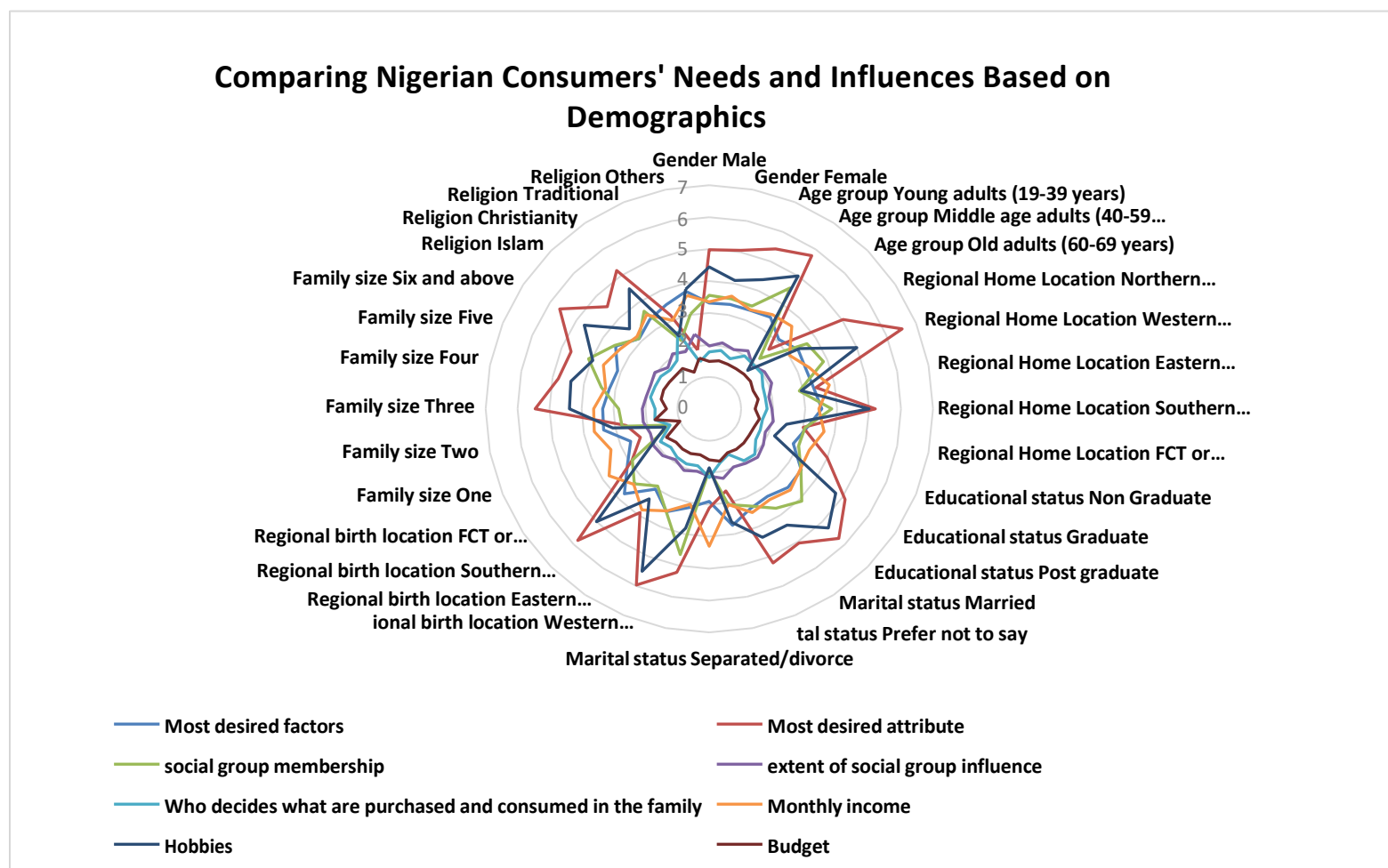
Figure 18

Comparing Nigerian Consumers' Needs in Processed (Flavored) and Packed Foods/Drinks Based on Demographics
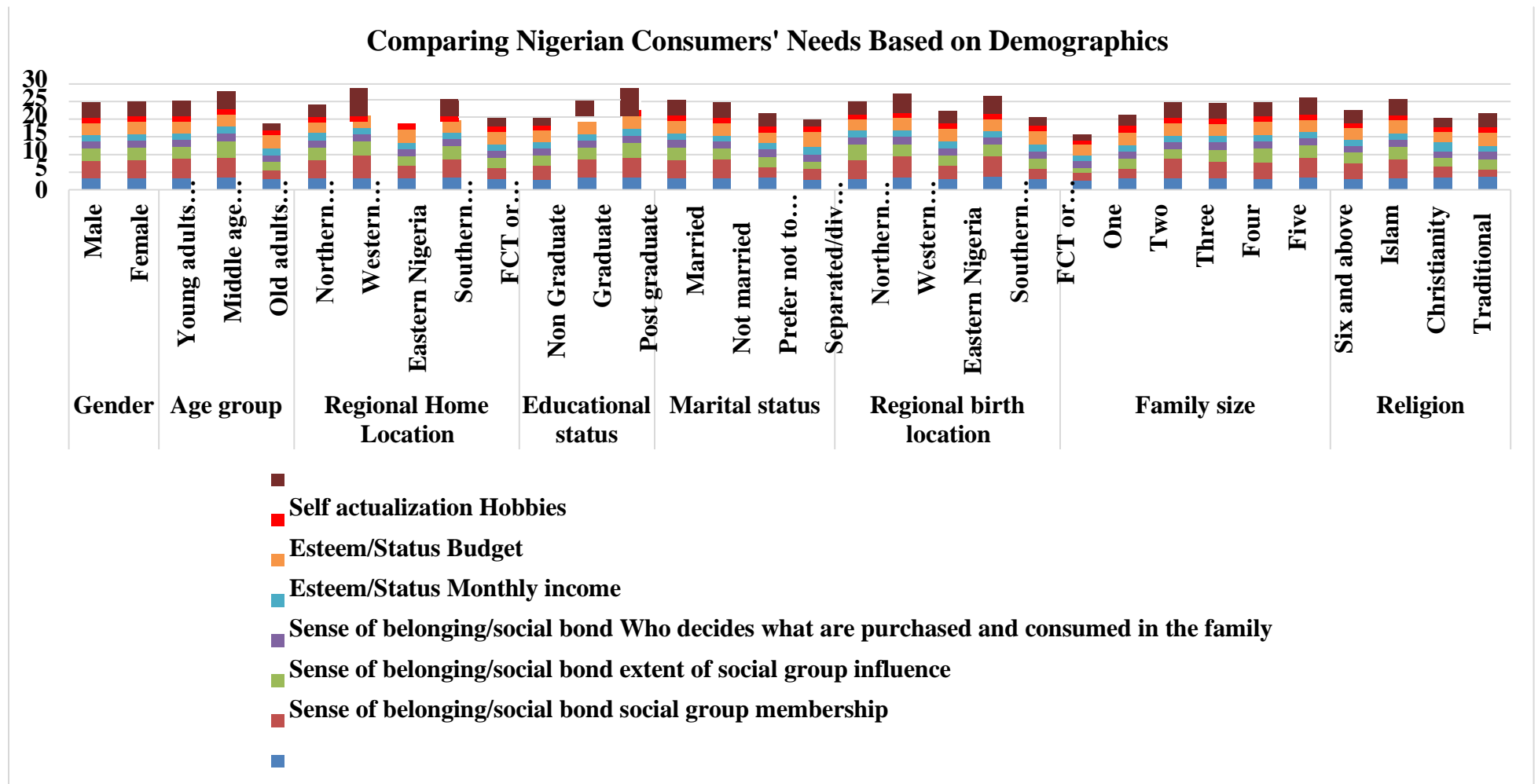
Safety/health/well-being Most desired attribute

Psychological needs (necessity for survivial) Most desired factors

Table 18 presents regression analysis showing cause-effect relationship between predictor variables (demographics) and purchasing intention drivers for Nigerian consumers of processed (flavored) and packed foods/drinks.

Consumers' demographics are the independent variables and the purchase intention drivers for Nigerian consumers of processed (flavored) and packed foods/drinks are dependent variables. Regression analysis has shown how variation in demographics- increase in age group, education, family size, and variation in gender, religion, regional location are associated with changes in the purchase intention. Purchase intention which were significantly associated were consumer level of satisfaction in processed (flavored) and packed foods/drinks; importance ascribed to food/drink flavor; consumers' budget for purchasing processed (flavored) and packed foods/drinks; and social group influence.

Furthermore, Table 18 shows that *in level of satisfaction Nigerian consumers derive from processed (flavored) and packed foods/drinks*, coefficients are statistically different to zero (0) for gender and religion as the t-values and p-values are gender (-2.327,0.02) and religion (2.205,0.028). Unstandardized coefficients reveal the degree to which the dependent variable- level of satisfaction, changes with each of gender and religion of Nigerian consumers, if every other independent variables are made constant. Regarding the effect of gender, the unstandardized coefficient, B, equals to -0.166, which indicates that being female as a Nigerian consumer higher level of dissatisfaction from processed (flavored) and packed foods/drinks is derived than male Nigerian consumer, and vice versa. This helps to predict nature of satisfaction of Nigerian consumers in processed (flavored) and packed foods/drinks based on gender.

On the other hand, regarding the effect of religion, the unstandardized coefficient, B, equals to 0.19, which indicates that being an Islamic Nigerian consumer, higher level of dissatisfaction from processed (flavored) and packed foods/drinks is derived than being a

Christian and traditional Nigerian consumer, and vice versa. This helps to predict nature of satisfaction of Nigerian consumers in processed (flavored) and packed foods/drinks based on their religious beliefs.

Regarding importance ascribed to food/drink flavor and taste, coefficients are statistically different to zero (0) for age group, family size and regional home location as the t-values and p-values are age group (2.265. 0.024), family size (2.150, 0.032) and regional home location (2.180, 0.030). Unstandardized coefficients reveal the degree to which the dependent variable change, and these are level of satisfaction, changes with age group, family size and regional home location of Nigerian consumers.

Regarding the effect of age group, the unstandardized coefficient, B, equals to 0.094, which indicates that as the age group of Nigerian consumer increases, there is decline in level of importance that is ascribed to flavor in processed (flavored) and packed foods/drinks. Consequently, as age group rises to the next level, there is drop to the next lower level of importance to food/drink flavor in processed (flavored) and packed foods/drinks. This helps to predict extent of importance that is ascribed to food/drink taste and flavor in processed (flavored) and packed foods/drinks by Nigerian consumers based on their age group. Regarding the effect of family size, the unstandardized coefficient, B, equals to 0.054, which indicates that as the family size of Nigerian consumer increases, there is decline in importance that is ascribed to flavor and taste of processed (flavored) and packed foods/drinks. Consequently, as family size rises to the next level, there is drop to the next lower level of satisfaction in processed (flavored) and packed foods/drinks. This helps to predict nature of extent of importance that is ascribed to food/drink flavor and taste in processed (flavored) and packed foods/drinks by Nigerian consumers based on their family size.

On the other hand, regarding the effect of regional home location, the unstandardized coefficient, B, equals to 0.049, which indicates that being in the Northern, Western and Eastern

regional home location of Nigeria, Nigerian consumers ascribe high importance to flavor/taste of processed (flavored) and packed foods/drinks, while respondents whose regional home locations are FCT/Middle Belt/Central home location region and Southern Nigeria ascribe very low importance to flavor and taste of processed (flavored) and packed foods/drinks. With Nigerians whose regional home locations are Northern Nigerian ascribing the highest importance to taste and flavor of processed (flavored) and packed foods, those who have FCT/Middle Belt/Central as their regional home location ascribe the least importance to food/drink flavor. This helps to predict level of importance that Nigerian consumers ascribe to flavor and taste of processed (flavored) and packed foods/drinks based on their regional home location.

Furthermore, regarding the effect of regional home location on budget of Nigerian consumers of processed (flavored) and packed foods/drinks, the unstandardized coefficient, B, equals to 0.061, which indicates that being in the Northern, Western and Eastern regional home location of Nigeria, Nigerian consumers have strict budget for processed (flavored) and packed foods/drinks, while respondents whose regional home locations are FCT/Middle Belt/Central home location region and Southern Nigeria have more flexible budget for processed (flavored) and packed foods/drinks. With Nigerians whose regional home locations are Northern Nigerian having the toughest budget for processed (flavored) and packed foods, such that they are not willing to spend beyond their budget even if there are little more benefits while those who have FCT/Middle Belt/Central as their regional home location are most willing to pay higher than the budget for more benefits from processed (flavored) and packed foods/drinks. This helps to predict the budget of Nigerian consumers for processed (flavored) and packed foods/drinks based on their regional home location.

Regarding the effect of regional home location on extent of social group influence on Nigerian consumers of processed (flavored) and packed foods/drinks, the unstandardized

coefficient, B, equals to 0.078, which indicates that being in the Northern, Western and Eastern regional home location of Nigeria, influence of one form of social group influence or the other is more regular on them than those whose regional home locations are FCT/Middle Belt/Central home location region and Southern Nigeria. Northern Nigeria is a region with the highest percentage of Islam-practicing Nigerians, and the influence is high just as there are constraints to consuming some items, while Western Nigeria has high percentage of Islamic Nigerian, but less than Northern region. This helps to predict the extent of social group influence on Nigerian consumers for processed (flavored) and packed foods/drinks based on their regional home location.

Table 19

Summary of Multiple Regression Analysis Among Demographics and Needs, Buying Pattern and Lifestyle of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks

	Model	Unstandardized Coeff.		Standardized Coeff.	t	Sig.
		B	Std. Error	Beta		
	Dependent Variable: Level of satisfaction					
	(Constant)	2.678	0.278		9.635	0
1	**Gender**	-0.166	0.071	-0.081	-2.327	0.02
	Religion	0.19	0.086	0.088	2.205	0.028
	Dependent Variable: Importance ascribed to food/drink flavor and taste					
	(Constant)	1.053	0.239		4.396	0
	Age group	0.094	0.042	0.083	2.265	0.024
	Regional home location	0.049	0.023	0.088	2.18	0.03
	Family size	0.054	0.025	0.075	2.15	0.032
	Dependent Variable: Budget					
1	(Constant)	1.402	0.204		6.863	0
	Regional home location	0.061	0.026	0.104	2.354	0.019
	Dependent Variable: Extent of social group influence					
	(Constant)	1.215	0.233		5.224	0
	Regional home location	0.078	0.022	0.145	3.569	0

Significant difference at P<0.05

Place of Purchase of Processed and Packed Foods/Drinks by Nigerian Consumers Varied with Demographics.

Influence of Demographics on Place of Purchase of Nigerian Consumers of Processed and Packed Foods/Drinks. Influence on place of purchase is shown in Table 20 (gender), Table 21 (gender) Table 22 (educational status), Table 23 (marital status), Table 24 (age group), Table 25 (regional home location), and Table 26 (regional native location). Place of purchase of processed (flavored) and packed foods/drinks vary with demographics of Nigerian consumers.

Influence of Demographics on Buying Decision Process of Nigerian Consumers Towards Processed and Packed Foods/Drinks. Influence on buying decision process is shown in Table 27 (educational status), Table 28 and figure 20 (gender), Table 29 and figure 21 (age group), Table 30 and figure 22 (marital status), Table 31 and figure 23 (regional home location), and Table 32 and figure 24 (regional native location). Buying decision process of Nigerian consumers vary with demographics.

Influence of Demographics on Budget of Nigerian Consumers For Processed and Packed Foods/Drinks. Influence on budget for processed (flavored) and packed foods/drinks is shown in Table 33 and figure 25 (age group), Table 34 and figure 26 (gender), Table 35 and figure 27 (marital status), Table 36 and figure 28 (educational status), Table 37 and figure 29 (regional native location). Demographics of Nigerian consumers influence their budget for processed (flavored) and packed foods/drinks.

Table 21

Place of Purchase and Demography – Gender

	Place of Purchase		
Gender			
		Frequency	Percent
Male	1-Supermarket	1230	43.7
	2-Retail outlet (on the street)	978	34.8
	3-On the go from hawkers	84	3
	4-Open market	510	18.1
	No response	12	0.4
	Total	2804	100.0
Female	1-Supermarket	1026	45.6
	2-Retail outlet (on the street)	672	29.9
	3-On the go from hawkers	34	1.1
	4-Open market	528	23.5
	Total	2,260	100.0

Table 22

Place of Purchase and Demography – Educational Status

Place of Purchase		
Education	Frequency	Percent
Non Graduate		
1-Supermarket	414	34.7
2-Retail outlet (on the street)	468	39.2
3-On the go from hawkers	66	5.5
4-Open market	246	20.6
Total	1194	100.0
Graduate		
1-Supermarket	1134	46.2
2-Retail outlet (on the street)	804	32.8
3-On the go from hawkers	24	1
4-Open market	492	20
Total	2478	100.0
Post graduate		
1-Supermarket	708	50
2-Retail outlet (on the street)	378	26.7
3-On the go from hawkers	18	1.3
4-Open market	300	21.2
No response	12	0.8
Total	1416	100.0

Table 23

Place of Purchase and Demography – Marital Status

Place of Purchase			
Marital Status		Frequency	Percent
Married	1-Supermarket	1446	46
	2-Retail outlet (on the street)	936	29.8
	3-On the go from hawkers	78	2.5
	4-Open market	678	21.6
	No response	6	0.2
	Total	3144	100.0
Not married	1-Supermarket	732	43.3
	2-Retail outlet (on the street)	618	36.5
	3-On the go from hawkers	18	1.1
	4-Open market	324	19.1
	Total	1692	100.0
Prefer not to say	1-Supermarket	54	50
	2-Retail outlet (on the street)	48	44.4
	4-Open market	6	5.6
	Total	108	100.0
Separated/divorce	1-Supermarket	24	20
	2-Retail outlet (on the street)	48	40
	3-On the go from hawkers	12	10
	4-Open market	30	25
	No response	6	5
	Total	120	100.0

Table 24

Place of Purchase and Demography – Age Group

Place of Purchase			
Age group		Frequency	Percent
Young adults (19-39 years)	1-Supermarket	1308	46
	2-Retail outlet (on the street)	942	33.1
	3-On the go from hawkers	72	2.5
	4-Open market	522	18.4
	Total	2844	100.0
Middle age adults (40-59 years)	1-Supermarket	606	45.9
	2-Retail outlet (on the street)	402	30.5
	3-On the go from hawkers	30	2.3
	4-Open market	270	20.5
	No response	12	0.9
	Total	1320	100.0
Old adults (60-69 years)	1-Supermarket	342	38
	2-Retail outlet (on the street)	306	34
	3-On the go from hawkers	6	0.7
	4-Open market	246	27.3
	Total	900	100.0

Table 25

Place of Purchase and Demography – Regional Home Location

Place of Purchase		
Home location	Frequency	Percent
Northern Nigeria		
1-Supermarket	234	31.7
2-Retail outlet (on the street)	276	37.4
3-On the go from hawkers	6	0.8
4-Open market	222	30.1
Total	738	100.0
Western Nigeria		
1-Supermarket	828	47.4
2-Retail outlet (on the street)	528	30.2
3-On the go from hawkers	60	3.4
4-Open market	324	18.6
No response	6	0.3
Total	1746	100.0
Eastern Nigeria		
1-Supermarket	480	49.1
2-Retail outlet (on the street)	216	22.1
3-On the go from hawkers	6	0.6
4-Open market	276	28.2
Total	978	100.0
Southern Nigeria		
1-Supermarket	498	51.2
2-Retail outlet (on the street)	330	34
3-On the go from hawkers	138	14.2
4-Open market	6	0.6
Total	972	100.0
FCT or Middle Belt or Central		
1-Supermarket	216	34.3
2-Retail outlet (on the street)	300	47.6
3-On the go from hawkers	36	5.7
4-Open market	78	12.4
Total	630	100.0

Table 26

Place of Purchase and Demography – Regional Native Location

Place of Purchase		
Region	Frequency	Percent
1-Supermarket	**156**	**31.3**
North West 2-Retail outlet (on the street)	150	30.1
3-On the go from hawkers	54	10.8
4-Open market	138	27.7
Total	498	100.0
1-Supermarket	**576**	**48.2**
2-Retail outlet (on the street)	348	29.1
South West 3-On the go from hawkers	12	1
4-Open market	246	20.6
No response	12	1
Total	1194	100.0
1-Supermarket	**366**	**54**
South-South 2-Retail outlet (on the street)	228	33.6
4-Open market	84	12.4
Total	678	100.0
1-Supermarket	270	39.1
2-Retail outlet (on the street)	**312**	**45.2**
North Central 3-On the go from hawkers	36	5.2
4-Open market	72	10.4
Total	690	100.0
1-Supermarket	**774**	**50**
2-Retail outlet (on the street)	414	26.7
South East 3-On the go from hawkers	6	4
4-Open market	354	22.9
Total	1548	100.0
1-Supermarket	114	25
North East **2-Retail outlet (on the street)**	**198**	**43.4**
4-Open market	144	31.6
Total	456	100.0

Table 26

Summary of Nigerian Consumers' Buying Decision Process and Budget

Purchasing behavior	Frequency	Percent
	N	%
Buying decision process		
Spontaneous	1248	24.6
After inspection on pack	2292	45.3
Enquiry from friends/colleagues/others	552	10.9
After price comparison	960	19.0
Total	5052	100.0
Budget		
Within the price range of most brands	3216	63.5
Can accommodate a little above	1068	21.1
Can accommodate much more	756	14.9
Total	5040	100.0

Table 27

Consumers Buying Decision Process Based on Educational Status

Buying decision process

Education		Frequency	Percent
Non-Graduate	1-Spontaneous	324	27.1
	2-After inspection on pack	420	35.2
	3-Enquiry from friends/colleagues/others	162	13.6
	4-After price comparison	288	24.1
	Total	1194	100.0
Graduate	1-Spontaneous	594	24.2
	2-After inspection on pack	1122	45.7
	3-Enquiry from friends/colleagues/others	294	12
	4-After price comparison	444	18.1
	Total	2454	100.0
Postgraduate	1-Spontaneous	330	23.3
	2-After inspection on pack	750	53
	3-Enquiry from friends/colleagues/others	96	6.8
	4-After price comparison	228	16.1
	No response	12	0.8
	Total	1416	100.0

Figure 19

Consumers Buying Decision Process Based on Educational Status

Percentage of Nigerian Consumers Based on Educational Status Showing Their Buying Decision Process
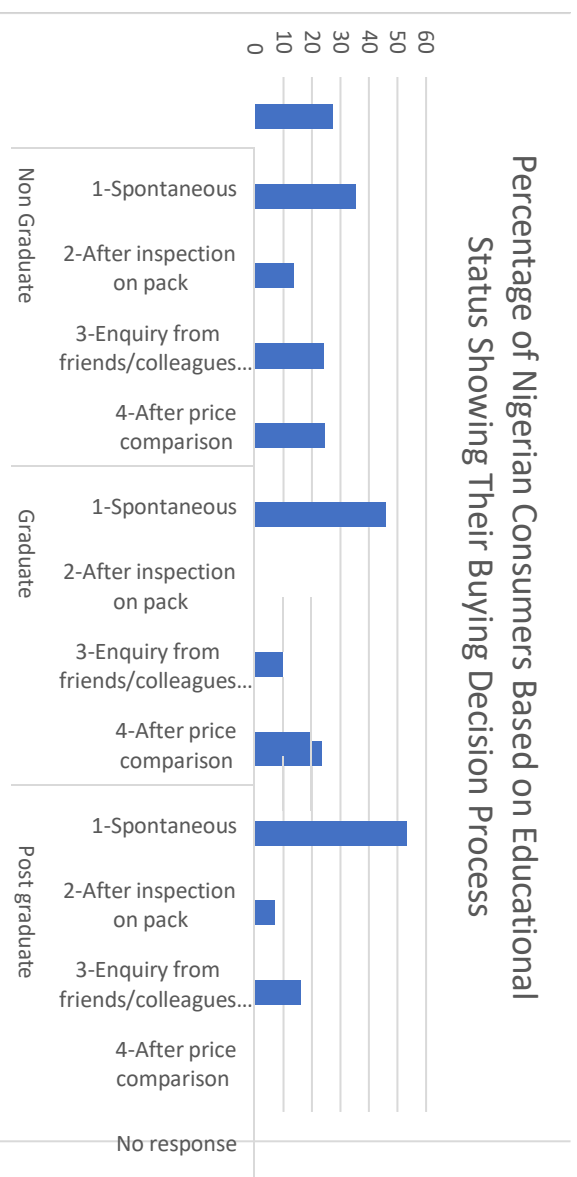
Table 28

Consumers Buying Decision Process Based on Gender

Buying decision process			
Gender		Frequency	Percent
Male	1-Spontaneous	744	26.4
	2-After inspection on pack	1242	44.1
	3-Enquiry from friends/colleagues/others	294	10.4
	4- After price comparison	522	18.6
	No response	12	0.4
	Total	2814	100.0
Female	1-Spontaneous	504	22.4
	2-After inspection on pack	1050	46.7
	3-Enquiry from friends/colleagues/others	258	11.5
	4- After price comparison	438	19.5
	Total	2250	100.0

Figure 20

Consumers Buying Decision Process Based on Gender
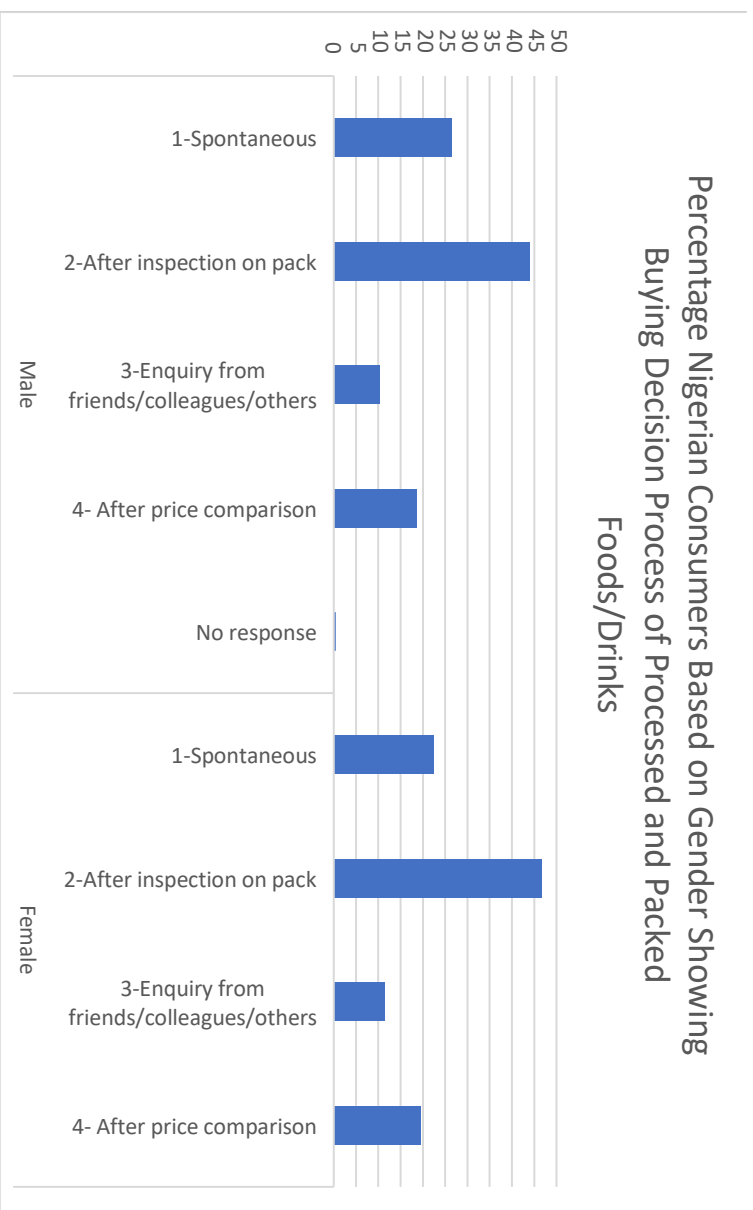
Table 29

Consumers Buying Decision Process Based on Age Group

Buying decision process			
Age group		Frequency	Percent
Young adults (19-39 years)	1-Spontaneous	738	25.9
	2-After inspection on pack	1218	42.8
	3-Enquiry from friends/colleagues/others	300	10.5
	4- After price comparison	582	20.5
	No response	6	0.2
	Total	2844	100.0
Middle age adults (40-59 years)	1-Spontaneous	312	23.6
	2-After inspection on pack	612	46.4
	3-Enquiry from friends/colleagues/others	126	9.5
	4- After price comparison	264	20
	No response	6	0.5
	Total	1320	100.0
Old adults (60-69 years)	1-Spontaneous	198	22.0
	2-After inspection on pack	462	51.3
	3-Enquiry from friends/colleagues/others	126	14.0
	4- After price comparison	114	12.7
	Total	900	100.0

Figure 21

Consumers Buying Decision Process Based on Age Group
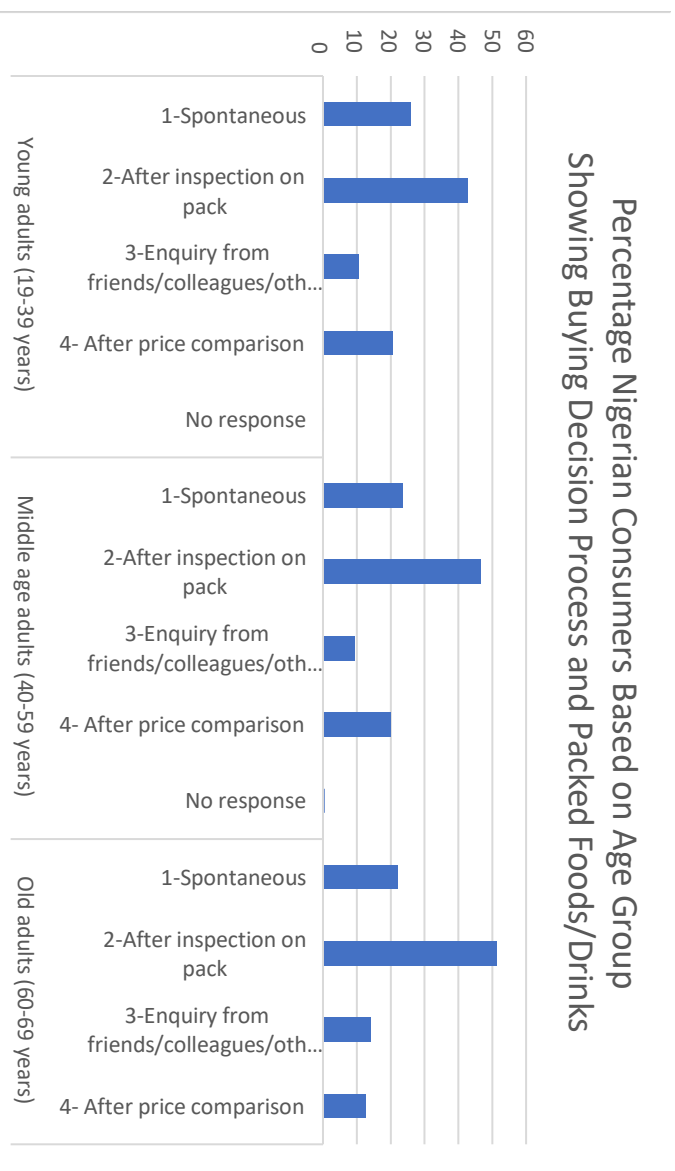
Table 30

Consumers Buying Decision Process Based on Marital Status

Buying decision process			
Marital Status		Frequency	Percentage
Married	1-Spontaneous	756	24
	2-After inspection on pack	1440	45.8
	3-Enquiry from friends/colleagues/others	336	10.7
	4- After price comparison	600	19.1
	No response	12	0.4
	Total	3144	100.0
Not married	1-Spontaneous	444	26.2
	2-After inspection on pack	720	42.6
	3-Enquiry from friends/colleagues/others	204	12.1
	4- After price comparison	324	19.1
	Total	1692	100.0
Prefer not to say	1-Spontaneous	18	16.7
	2-After inspection on pack	60	55.6
	3-Enquiry from friends/colleagues/others	6	5.6
	4- After price comparison	24	22.2
	Total	108	100.0
Separated/divorce	1-Spontaneous	30	25
	2-After inspection on pack	72	60
	3-Enquiry from friends/colleagues/others	6	5
	4- After price comparison	12	10
	Total	120	100.0

Figure 22

Consumers Buying Decision Process Based on Marital Status
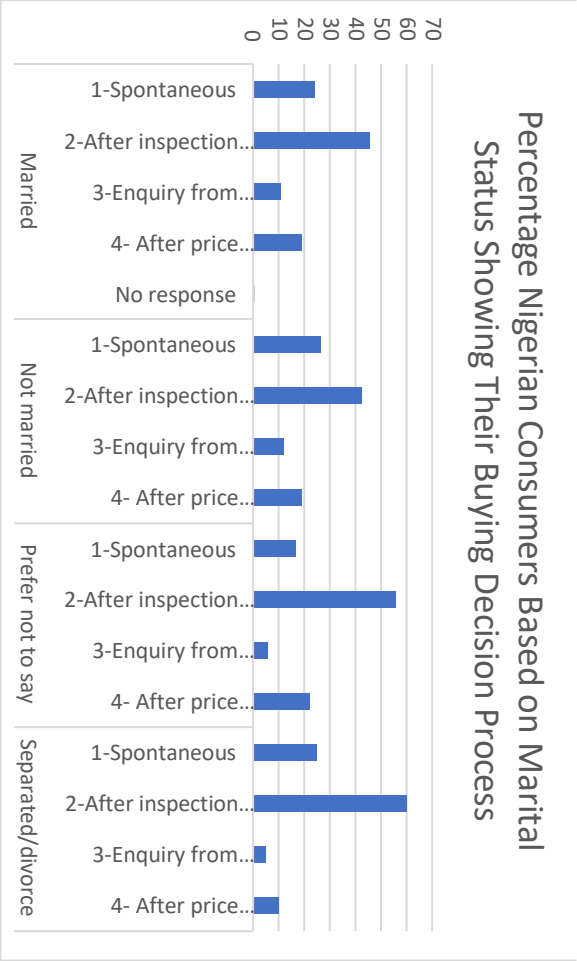
Table 31

Consumers Buying Decision Process Based on Regional Home Location

Home location	**Buying decision process**	Frequency	Percent
Northern Nigeria	1-Spontaneous	168	22.8
	2-After inspection on pack	306	41.5
	3-Enquiry from friends/colleagues/others	72	9.8
	4- After price comparison	192	26
	Total	738	100.0
Western Nigeria	1-Spontaneous	456	26.1
	2-After inspection on pack	840	48.1
	3-Enquiry from friends/colleagues/others	132	7.6
	4- After price comparison	306	17.5
	No response	12	0.7
	Total	1746	100.0
Eastern Nigeria	1-Spontaneous	210	21.5
	2-After inspection on pack	534	54.6
	3-Enquiry from friends/colleagues/others	120	12.3
	4- After price comparison	114	11.7
	Total	978	100.0
Southern Nigeria	1-Spontaneous	204	21
	2-After inspection on pack	426	43.8
	3-Enquiry from friends/colleagues/others	120	12.3
	4- After price comparison	222	22.8
	Total	972	100.0
FCT or Middle Belt or Central	1-Spontaneous	210	33.3
	2-After inspection on pack	186	29.5
	3-Enquiry from friends/colleagues/others	108	17.1
	4- After price comparison	126	20
	Total	630	100.0

Figure 23

Consumers Buying Decision Process Based on Regional Home Location
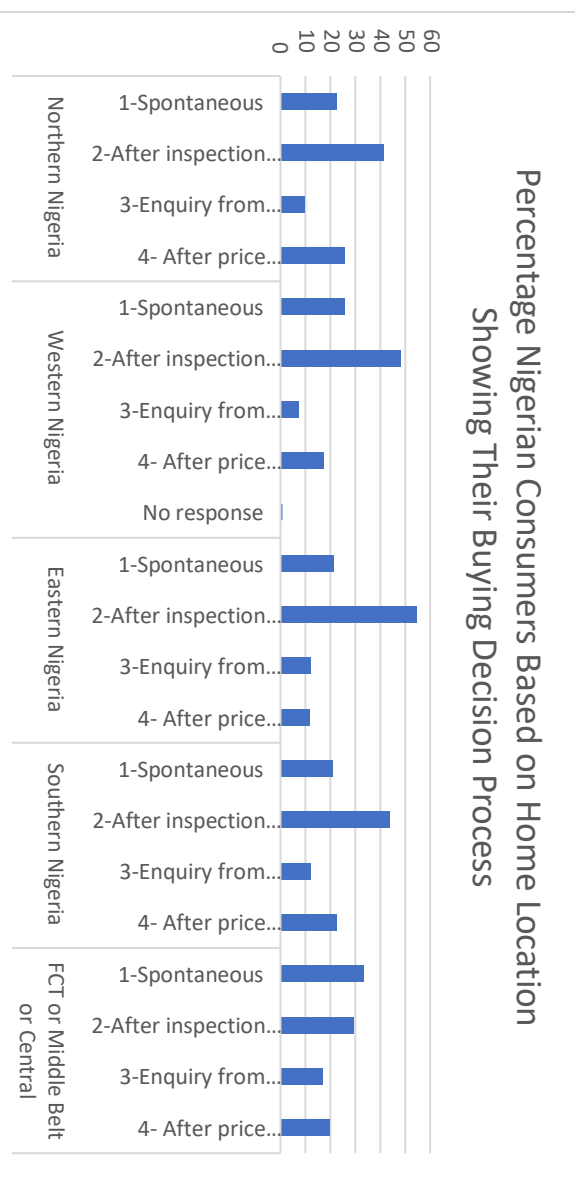
Table 32

Consumers Buying Decision Process Based on Regional Native Location

Buying decision process		
Region	Frequency	Percent
North West		
1-Spontaneous	180	36.1
2-After inspection on pack	186	37.3
3-Enquiry from friends/colleagues/others	54	10.8
4- After price comparison	78	15.7
Total	498	100.0
South West		
1-Spontaneous	264	22.1
2-After inspection on pack	582	48.7
3-Enquiry from friends/colleagues/others	96	8
4- After price comparison	246	20.6
No response	6	0.5
Total	1194	100.0
South South		
1-Spontaneous	198	29.2
2-After inspection on pack	306	45.1
3-Enquiry from friends/colleagues/others	66	9.7
4- After price comparison	102	15
No response	6	0.9
Total	678	100.0
North Central		
1-Spontaneous	216	31.3
2-After inspection on pack	228	33
3-Enquiry from friends/colleagues/others	120	17.4
4- After price comparison	126	18.3
Total	690	100.0
South East		
1-Spontaneous	300	19.4
2-After inspection on pack	804	51.9
3-Enquiry from friends/colleagues/others	162	10.5
4- After price comparison	282	18.2
Total	1548	100.0
North East		
1-Spontaneous	90	19.7
2-After inspection on pack	186	40.8
3-Enquiry from friends/colleagues/others	54	11.8
4- After price comparison	126	27.6
Total	456	100.0

Figure 24

Consumers Buying Decision Process Based on Regional Native Zone/Group

Percentage Nigerian Consumers Based on Regional Native Zone Showing Their Buying Decision Process
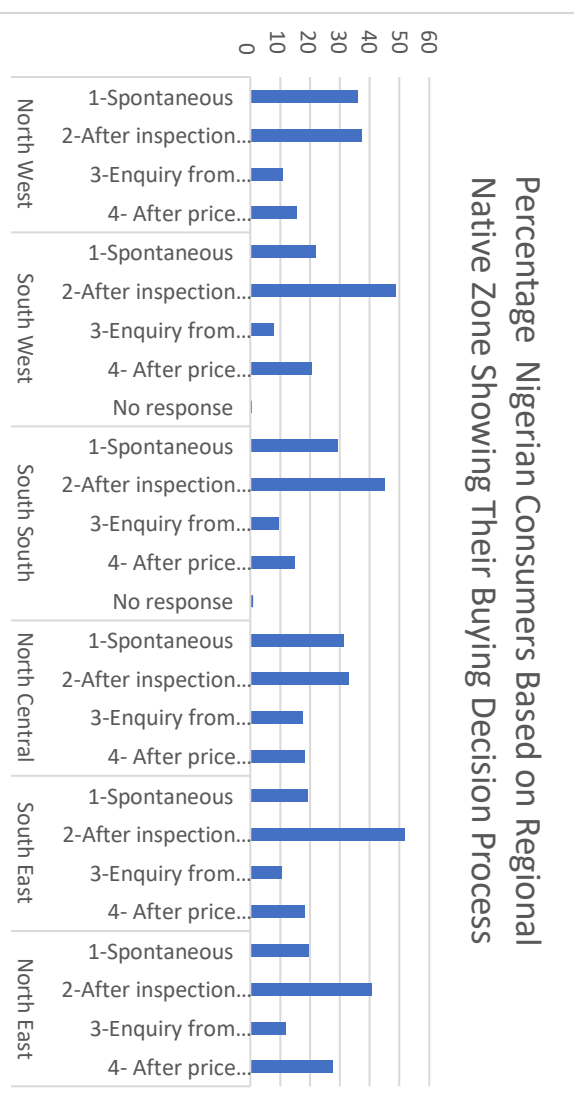
Table 33

Consumers' Budget Based on Age Group

Budget			
Age group		Frequency	Percent
Young adults (19-39 years)	1-Within the Price range of most brands	1830	64.3
	2-Can accommodate a little above	564	19.8
	3-Can accommodate much more	432	15.2
	No response	18	0.6
	Total	2844	100.0
Middle age adults (40-59 years)	1-Within the Price range of most brands	846	64.1
	2-Can accommodate a little above	270	20.5
	3-Can accommodate much more	198	15
	No response	6	0.5
	Total	1320	100.0
Old adults (60-69 years)	1-Within the Price range of most brands	540	60
	2-Can accommodate a little above	234	26
	3-Can accommodate much more	126	14
	Total	900	100.0

Figure 25

Consumers' Budget Based on Age

Percentage Nigerian Consumers Based on Age Group Showing Their Budget for Processed and Packed Foods/Drinks
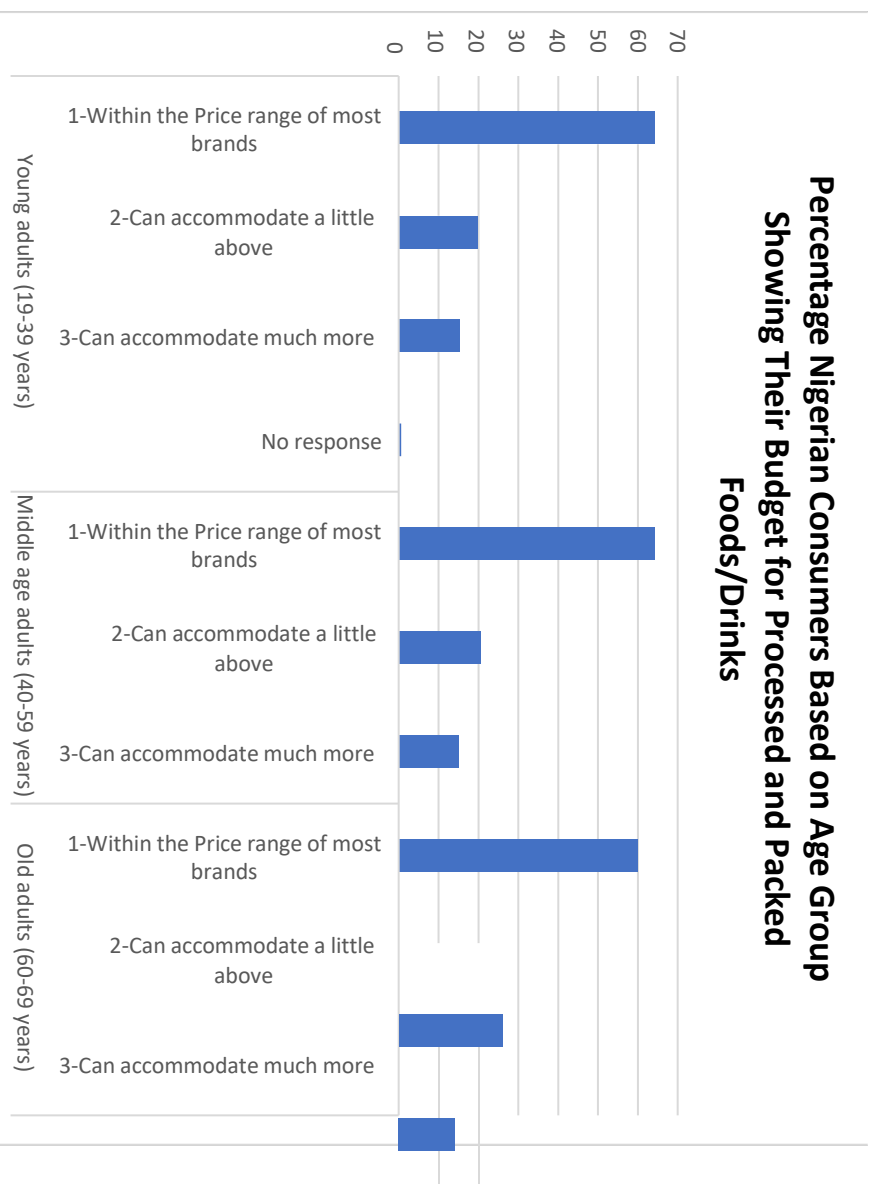
Table 34

Consumers' Budget Based on Gender

Budget			
Gender		Frequency	Percent
Male	1-Within the Price range of most brands	1764	62.7
	2-Can accommodate a little above	684	24.3
	3-Can accommodate much more	348	12.4
	No response	18	0.6
	Total	2814	100.0
Female	1-Within the Price range of most brands	1452	64.5
	2-Can accommodate a little above	384	17.1
	3-Can accommodate much more	408	18.1
	No response	6	0.3
	Total	2250	100.0

Figure 26

Consumers Budget Based on Gender

Percentage Nigerian Consumers Based on Gender, Showing Their Budget for Processed and Packed Foods/Drinks
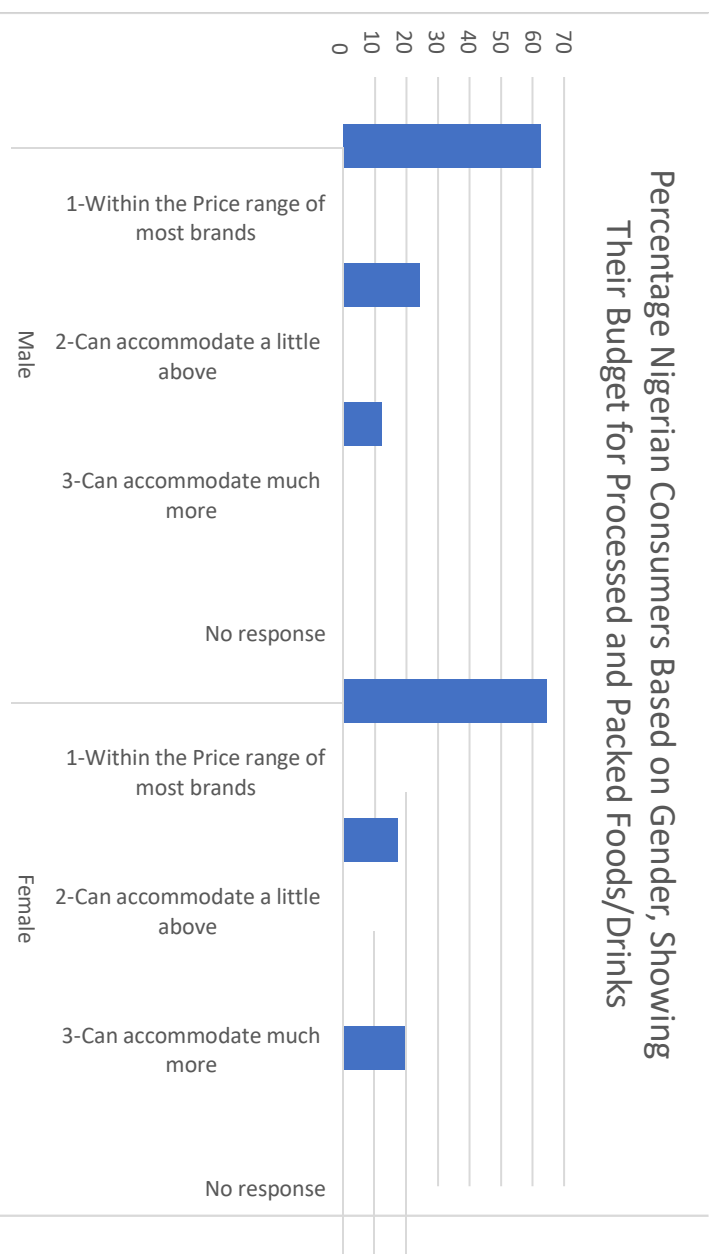
Table 35

Consumers' Budget Based on Marital Status

Budget			
Marital Status		Frequency	Percent
Married	1-Within the Price range of most brands	1986	63.2
	2-Can accommodate a little above	678	21.6
	3-Can accommodate much more	468	14.9
	No response	12	0.4
	Total	3144	100.0
Not married	1-Within the Price range of most brands	1110	65.6
	2-Can accommodate a little above	318	18.8
	3-Can accommodate much more	252	14.9
	No response	12	0.7
	Total	1692	100.0
Prefer not to say	1-Within the Price range of most brands	60	55.6
	2-Can accommodate a little above	24	22.2
	3-Can accommodate much more	24	22.2
	Total	108	100.0
Separated/divorce	1-Within the Price range of most brands	60	50.0
	2-Can accommodate a little above	48	40.0
	3-Can accommodate much more	12	10.0
	Total	120	100.0

Figure 27

Consumers' Budget Based on Marital

Percentage Nigerian Consumers Based on Marital Status Showing Their Budget for Processed and Packed Foods/Drinks
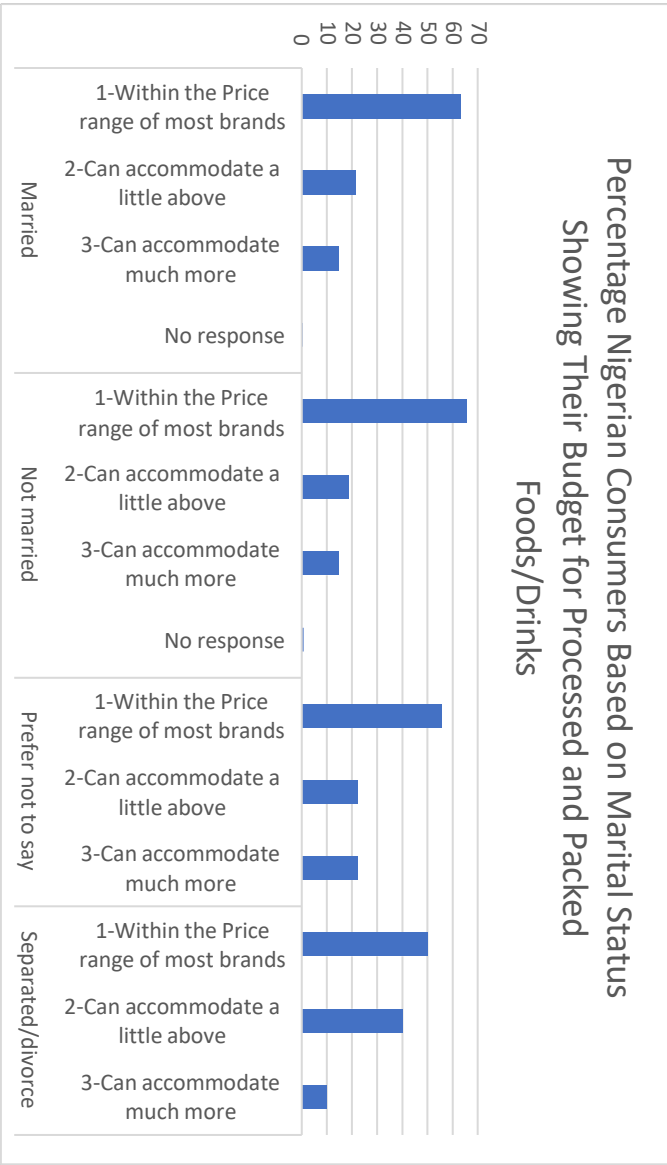
Table 36

Consumers' Budget Based on Educational Status

Budget			
Education		Frequency	Percent
Non-Graduate	1-Within the Price range of most brands	780	65.3
	2-Can accommodate a little above	216	18.1
	3-Can accommodate much more	198	16.6
	Total	1194	100.0
Graduate	1-Within the Price range of most brands	1560	63.6
	2-Can accommodate a little above	510	20.8
	3-Can accommodate much more	360	14.7
	No response	24	1
	Total	2454	100.0
Postgraduate	1-Within the Price range of most brands	876	61.9
	2-Can accommodate a little above	342	24.1
	3-Can accommodate much more	198	14
	Total	1416	100.0

Figure 28

Consumers' Budget Based on Educational

Percentage of Nigerian Consumers Based on Educational Status Showing Their Budget for Processed and Packed Foods/Drinks
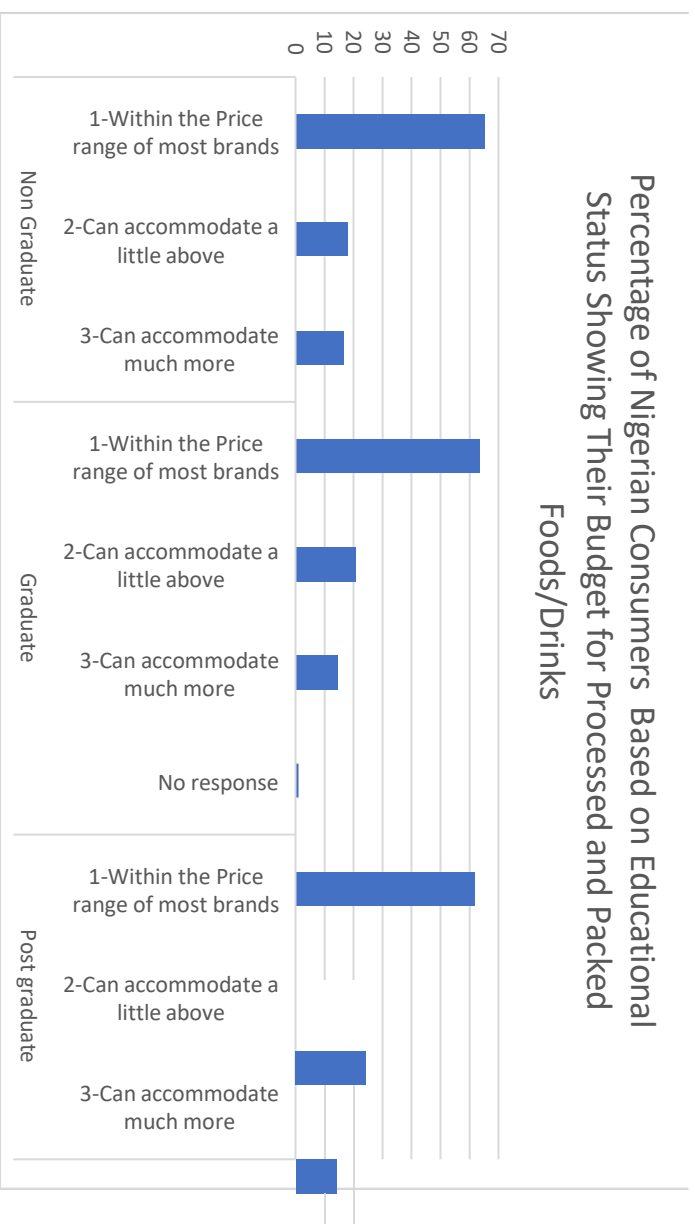
Table 37

Consumers' Budget Based on Regional Native Zone/Group

Budget			
Region		Frequency	Percent
North West	1-Within the Price range of most brands	318	63.9
	2-Can accommodate a little above	114	22.9
	3-Can accommodate much more	60	12
	No response	6	1.2
	Total	498	100.0
South West	1-Within the Price range of most brands	804	67.3
	2-Can accommodate a little above	240	20.1
	3-Can accommodate much more	138	11.6
	No response	12	1
	Total	1194	100.0
South-South	1-Within the Price range of most brands	408	60.2
	2-Can accommodate a little above	126	18.6
	3-Can accommodate much more	144	21.2
	Total	678	100.0
North Central	1-Within the Price range of most brands	396	57.4
	2-Can accommodate a little above	192	27.8
	3-Can accommodate much more	102	14.8
	Total	690	100.0
South East	1-Within the Price range of most brands	996	64.3
	2-Can accommodate a little above	318	20.5
	3-Can accommodate much more	234	15.1
	Total	1548	100.0
North East	1-Within the Price range of most brands	294	64.5
	2-Can accommodate a little above	78	17.1
	3-Can accommodate much more	78	17.1
	No response	6	1.3
	Total	456	100.0

Figure 29

Consumers' Budget Based on Regional Native
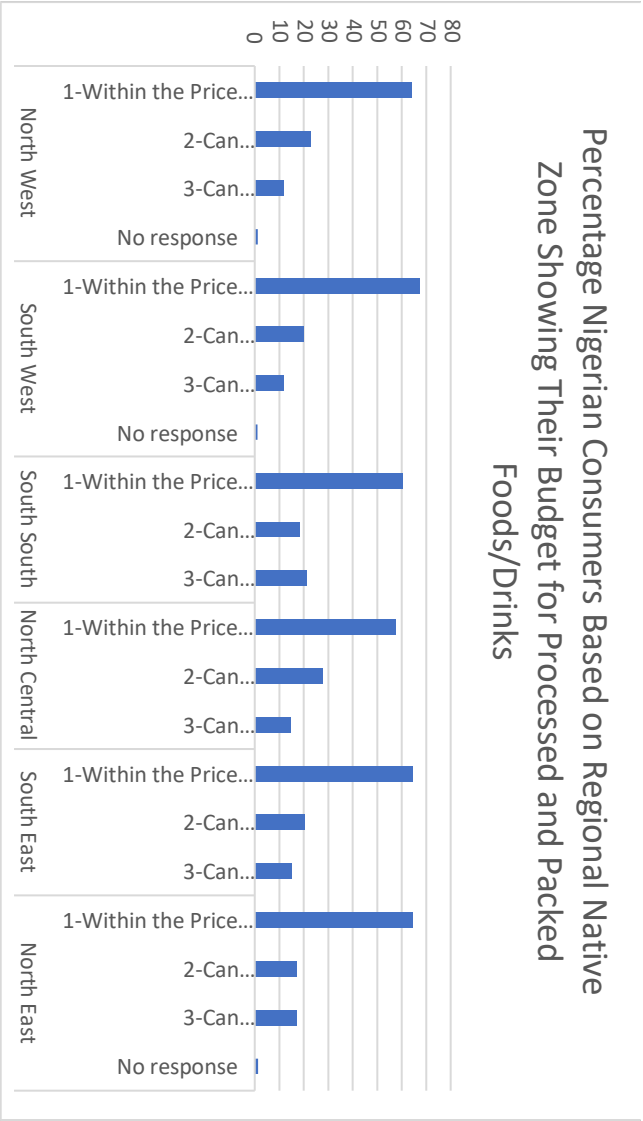
Percentage Nigerian Consumers Based on Regional Native Zone Showing Their Budget for Processed and Packed Foods/Drinks

Taste/Flavor Predilection for Nigerian Consumers of Processed and Packed Foods/Drinks

      Table 38 and figure 30 show the taste/flavor predilection for Nigerian consumers of processed and packed foods and drinks. The table shows flavour predilection of Nigerian processed and packed foods and drinks, and the level of importance attached to taste/flavour of processed (flavoured) and packed foods/drinks. Regardless of demographics, highest percentage (66.8%) of Nigerian consumers consider flavour and taste to be very important, while percentage of consumers chose spice and vegetable flavors as their best flavor for food (about 48%) and best flavor drink (about 54%).

      Table 39 and figure 31 show the taste/flavor predilection for Nigerian consumers of processed and packed foods based on gender. These indicate that there is effect of gender on taste/flavor preference of Nigerian consumers in processed (flavored) and packed foods, as the varying percentage of male and female indicated preference for the different flavors -spices & vegetables flavors; animal meat protein flavors; dairy flavors; nut flavors; and chocolate and malt flavors.

      Table 40 and figure 32 show the taste/flavor predilection for Nigerian consumers of processed and packed drink based on gender. These indicate that there is effect of gender on taste/flavor preference of Nigerian consumers in processed (flavored) and packed foods, as the varying percentage of male and female indicated preference for the different flavors for drinks--spices & vegetables flavors; dairy flavors; fruit flavors; nut flavors; and chocolate and malt flavors.

Table 38

Taste/Flavor Predilection for Nigerian Consumers of Processed and Packed Foods and

Drinks

Flavor Predilection	Frequency	Percent
	N	%
Importance of Food Flavor and Taste		
Very important	3384	66.8
Moderately important	936	18.5
Slightly important	462	9.1
Neither important nor unimportant	156	3.1
Not important	60	1.2
Best Food Flavor		
Spices	2208	47.55
Beef, chicken, seafood (fish, crayfish, prawn, crab)]	1248	26.88
Dairy: Milk, cream, butter flavor]	552	11.89
Chocolate, malt	348	7.49
Nuts: Coconut, groundnut, walnut	288	6.2
Best Drink Flavor		
Spice	2724	54.44
Dairy: Milk, cream	1248	24.94
Chocolate, malt	924	18.47
Fruits flavors	108	2.16

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Figure 30

Taste/Flavor Predilection for Nigerian Consumers of Processed and Packed Foods and

Drinks

Taste/Flavor Predilection of Nigerian Consumers of Processed and Packed Foods/Drinks
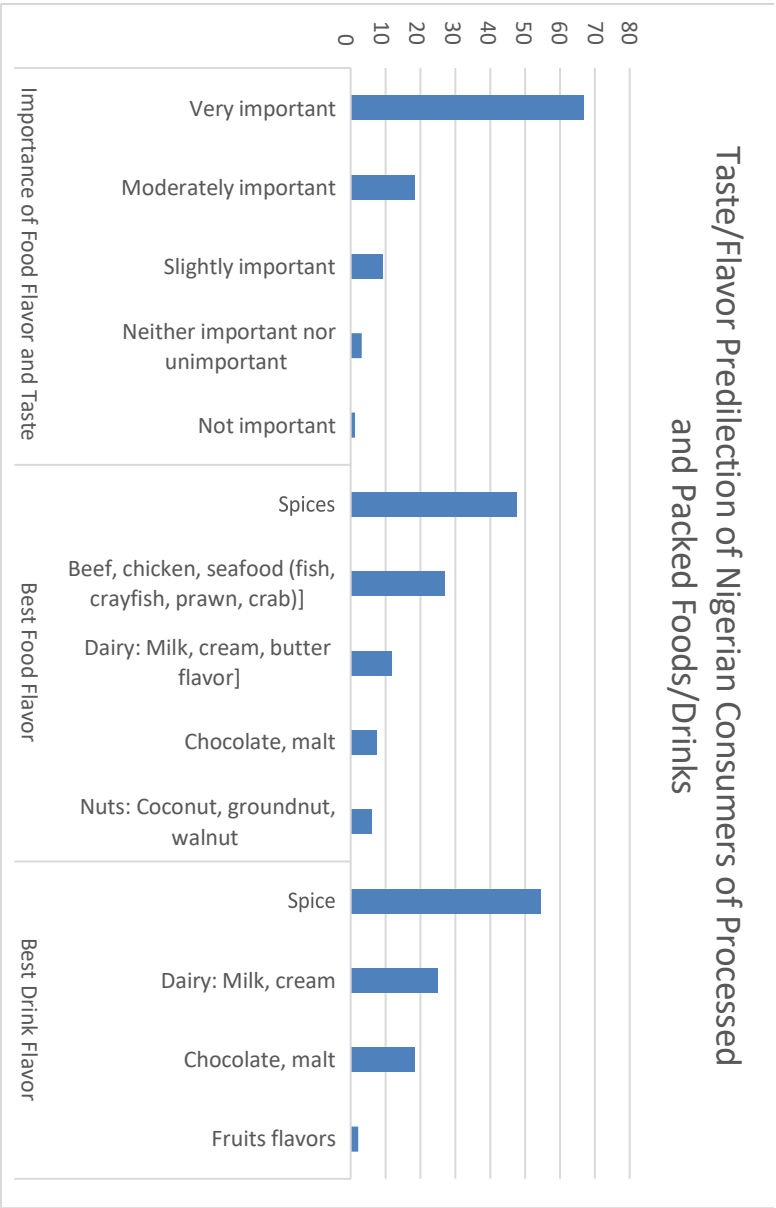
Table 39

Taste/Flavor Predilection for Nigerian Consumers of Processed and Packed Foods Based on Gender

Gender	Best Food Flavors	Percentage
Male	Spices (Spices) and Vegetables	43.5
	Beef, chicken, seafood (fish, crayfish, prawn, crab)	30.1
	Dairy: Milk, cream, butter flavor	12
	Chocolate, malt	7.7
	Nuts: Coconut, groundnut, walnut	6.7
		100
Female	Spices (Spices) and Vegetables	52.2
	Beef, chicken, seafood (fish, crayfish, prawn, crab)	23
	Dairy: Milk, cream, butter flavor]	11.8
	Chocolate, malt	7.3
	Nuts: Coconut, groundnut, walnut	5.7
		100

Figure 31

Taste/Flavor Predilection for Nigerian Consumers of Processed and Packed Foods Based on
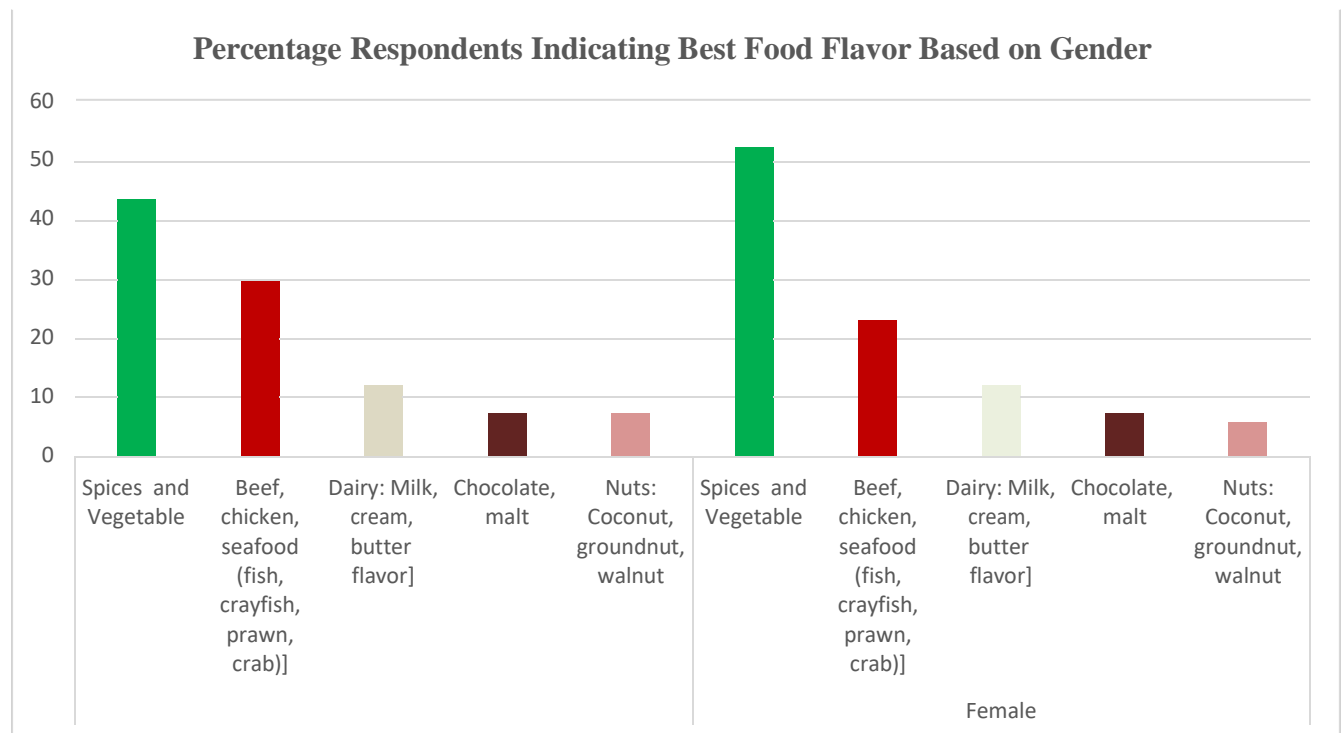
Gender

Table 40

Taste/Flavor Predilection for Nigerian Consumers of Processed and Packed Drinks Based on

Gender

Gender	Best Drink Flavors	Percentage
Male	Spice and Vegetables	50.2
	Dairy: Milk, cream	23
	Chocolate, malt	10.8
	Fruits flavors	16
	Total	100
Female	Spice and Vegetables	49.5
	Dairy: Milk, cream	22.7
	Chocolate, malt	9.9
	Fruits flavors	17.9
	Total	100

Figure 32

Taste/Flavor Predilection for Nigerian Consumers of Processed and Packed Drinks Based on Gender

Percentage Respondents Indicating Best Drink Flavors Based on Gender
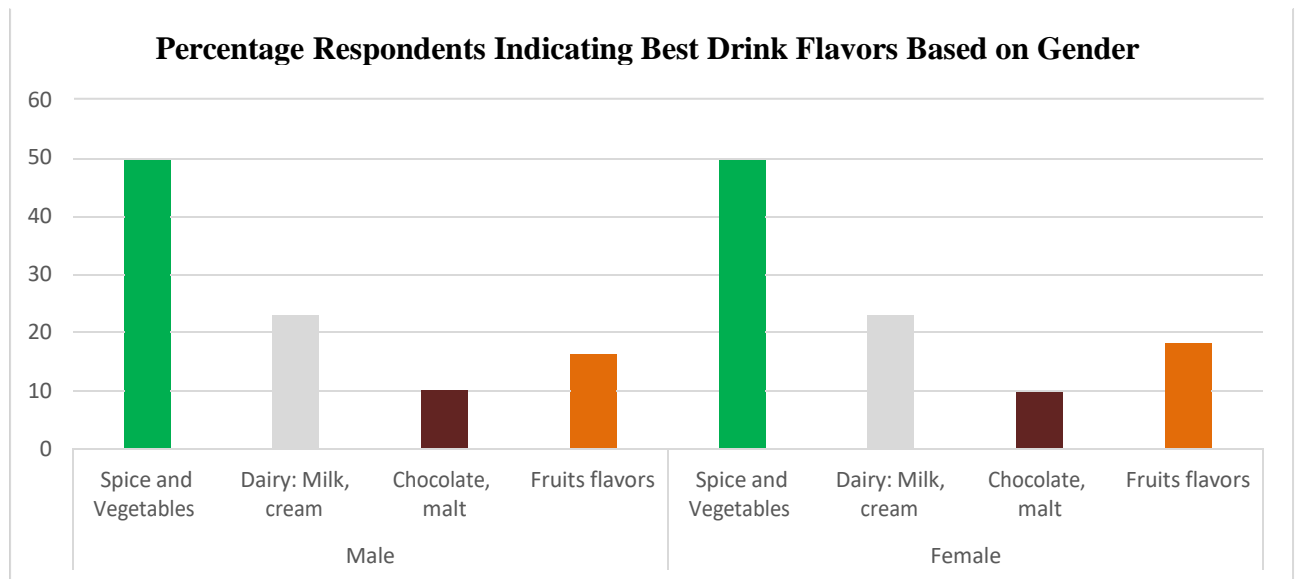
Table 41 shows the relationship among factors of personal attitude of Nigerian consumers and drivers for purchasing intentions for processed (flavoured) and packed foods/drink. There is relationship though, weak, between personal factors of Nigerian consumers and purchase intention driver such as health concern for age group (r=.085), educational status (r=.071) each at 0.05 level (2-tailed); monthly earning (r=.098) at 0.01 level (2-tailed). Furthermore, there is weak negative correlation between hobbies and gender (r=-.076), while desired factor and monthly earning (r=-.081), level of satisfaction and gender (r=-.076); buying constraints with gender (r=-.083) and with monthly earning (r=.075) at 0.05 level (2-tailed).

Meanwhile, there is weak positive correlation of some purchase intention drivers and personal factors- most important constraints and educational status (r=.071); place of purchase and age group (r=.074); importance attributed to food flavor/taste and age group (r=.082), at 0.05 level (2-tailed). Most desired attribute has a weak positive correlation with educational status of respondents (r=.184) at 0.01 level (2-tailed).

Table 41

Relationship Among Factors of Personal Attitude of Nigerian Consumers and Drivers for Purchase Intentions For Processed (Flavored) and

Packed Foods/Drinks

Dependent variables (Purchase Intention Drivers)	Independent Variables (Personal factors)				
	Gender	Age group	Education Status	Marital Status	Monthly Earning
Health concern	0.028	.085*	.071*	-0.018	.098**
Hobbies	-.076*	-0.067	0.041	-0.04	0.017
Frequency of purchase and consumption	-0.051	-0.041	-0.06	0.006	-0.026
Desired factors	0	-0.005	-0.065	0.02	-.081*
Budget	-0.033	0.004	0.011	-0.026	0.06
Best food flavor	-0.06	-0.009	-0.042	0.057	0.044
Best drink flavor	0.01	-.167**	-0.021	.069*	0.009
Level of satisfaction	-.076*	0.046	0.031	0.017	-0.01
Buying constraints	-.083*	-0.002	0.034	0.035	-.075*
Most important constraint	0.053	-0.05	.071*	0.042	-0.025
Most desired attribute	-0.033	-0.026	.184**	-0.025	0.012
Place of Purchase	0.026	.074*	-0.05	0.014	.088*
Buying decision process	0.031	-0.025	-0.063	-0.021	0.006
Budget	-0.033	0.004	0.011	-0.026	0.06
Importance of flavor and taste	-0.03	.082*	0.056	-0.057	0.049
Level of satisfaction	-.076*	0.046	0.031	0.017	-0.011

*Correlation is significant at the 0.05 level (2-tailed)

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

Hypothesis 3

H$_{03}$: There is no significant relationship between subjective norms (perceived social pressure) and the decision of Nigerian consumers to purchase processed (flavoured) and packed foods/drinks

Table 42 shows social group membership of respondents based on gender. All respondents belong to one social group or the other (professional, cultural, religious, and others). Higher percentage of male Nigerian consumers belong to professional groups than female, and also, **higher percentage of male respondents (67.4%) belong to one or more social groups than female (59.2%). Gender influences the social group membership.**

Table 43 shows extent of social group influence on respondents' purchasing decision based on gender. Greater percentage of female consumers than male indicated social group influence.

Table 44 shows social group membership of respondents based on age group. All respondents belong to one social group or the other (professional, cultural, religious, and others. 39.3 – 45.9% of respondents are members of a professional group, while middle age adult had the highest (45.9%) and old adults had the least. However, old adult had the highest (27.3%) cultural group membership, while middle age adult had the least (16.8%).

Table 45 shows extent of social group influence on respondents' purchasing decision based on age group. Based on age group, 30.8% of young adult, 27.7% of middle age adult and 38.7% of old adult responded that there was no social group influence on them.

Table 46 shows social group membership of respondents based on regional home location. Based on regional home location, all respondents belonged to one social group or the other (professional, cultural, religious, and others). 35% of respondents whose home location are Northern Nigeria, 51.9% (Western Nigeria), 47.2% (Eastern Nigeria), 35.2% (Southern

Nigeria) and 34.3% (FCT or Middle Belt or Central Nigeria) were members of professional groups.

Table 47 shows extent of social group influence on respondents' purchasing decision based on regional home location. Based on regional home location, 27.6% of respondents from Northern Nigeria responded there was no influence of social group on them, while 27.8% of Western, 37.4% of Eastern, 36.4% of Southern, and 28.6% of FCT or Middle Belt or Central Nigeria also responded there was no social group influence on them.

Table 48 presented the social group membership of Nigerian consumers of processed and packed foods, based on educational status. Highest percentage of post graduate respondents (54.2%) indicated their membership in professional group with least percentage of them indicating membership to cultural groups (6.4%). The next is graduate respondents in which 44.3% of them belong to professional group and 18.1% belong to cultural group, while non graduate respondents have the least percentage of professional group membership but highest cultural group membership.

Table 49 presented extent of social group influence on Nigerian consumers of processed and packed foods, and based on educational status. About 34% of graduate respondents indicated there is no influence of social group influence in the purchasing decision, while non graduate respondents and postgraduate respondents were 30.7% and 27.5%, respectively who indicated there is no social group influence. Graduate respondents had the highest percentage of consumers who indicated least social group influence, followed by non-graduate respondents. Non-graduate respondents actually have the most regular social group influence.

Table 50 presented the social group membership of Nigerian consumers of processed and packed foods, based on regional native locations. Highest percentage of respondents of South-Eastern regional native location respondents (51.2%) indicated their

membership in professional group, while respondents of South-Western regional native location have the least percentage of them indicating membership to cultural groups (9%) but 47.8% of professional group membership. North-Western regional native location has the highest percentage of respondents who belong to cultural groups (37.6%), North -East (27.6%) and North-Central (27.8%). Cultural group membership is relatively higher in the Northern regions of Nigeria than Southern regions.

Table 51 presented extent of social group influence on Nigerian consumers of processed and packed foods, and based on marital status. Highest percentage of respondents who are separated/divorced (35%) and single (unmarried) (35.1%) indicated that there is no influence of social group influence is on their purchase decision. Next is married respondents of which 28.8% indicated there is no influence of social group on their purchasing decision. About 36% of married respondents, 34.4% of single (unmarried) and 25% of separated/divorced indicated that there is regular influence of social group influence on their purchasing decision.

Table 52 presented extent of social group influence on Nigerian consumers of processed and packed foods, based on regional native location/zone. Range of 31.2 - 35.3% of respondents from all regional native locations except North-Eastern and North-Western indicated that there is no influence of social group influence is on their purchase decision. Respondents of North-Western (25.3%) and North-Eastern (23.6%) regional locations indicated there is no influence of social group influence is on their purchase decision. Range of 28.6 and 33.9% of respondents across South-Western, South-Eastern, South-Southern and North-Central Nigeria indicated that there is regular influence of social group on their purchasing decision. However, 33.9% and 54.2% of respondents whose regional native locations are North-Eastern and North-Western Nigeria, respectively, indicated that there is regular influence of social group on their purchasing decision.

Table 42

Demographics: Social Group Membership of Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Gender

	Social Groups Membership		
Gender	**Social Groups Membership**	**Frequency**	**Percentage**
	Professional group	221	47.1
	Cultural group	95	20.3
Male	Others	88	18.8
	Multiple responses	404	13.8
	Total	469	100
	Professional group	143	38.1
	Cultural group	79	21.1
Female	Others	93	24.8
	Multiple responses	60	16
	Total	375	100.0

Table 43

Extent of Social Group Influence on Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Gender

Extent of social group influence		
Gender	Frequency	Percentage
Male		
1 - Regular/Often	1056	37.5
2 - None at all	798	28.4
3 - Seldom	924	32.8
No response	36	1.2
Total	2814	100
Female		
1 - Regular/Often	690	0.7
2 - None at all	792	35.2
3 - Seldom	714	31.7
No response	54	2.4
Total	2250	100

Table 44

Demographics: Social Group Membership of Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Age Group

Social Groups			
Age group		Frequency	Percent
Young adults (19-39 years)	Professional group	1224	43
	Cultural group	576	20.3
	Others	630	22.2
	Multiple responses	414	14.5
	Total	2844	100
Middle age adults (40-59 years)	Professional group	606	45.9
	Cultural group	222	16.8
	Others	282	21.4
	Multiple responses	210	15.9
	Total	1320	100
Old adults (60-69 years)	Professional group	354	39.3
	Cultural group	246	27.3
	Others	174	19.4
	No response	126	14
	Total	900	100

Table 45

Extent of Social Group Influence on Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Age Group

Age group	**Extent of social group influence**	Frequency	Percent
Young adults (19-39 years)	1 - Regular/Often	996	35
	2 - None at all	876	30.8
	3 - Seldom	912	32.1
	No response	60	2.1
	Total	2844	100
Middle age adults (40-59 years)	1 - Regular/Often	432	32.7
	2 - None at all	366	27.7
	3 - Seldom	498	37.8
	No response	24	1.8
	Total	1320	100
Old adults (60-69 years)	1 - Regular/Often	318	35.3
	2 - None at all	348	38.7
	3 - Seldom	228	25.3
	No response	6	0.7
	Total	900	100

Table 46

Demographics: Social Group Membership of Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Regional Home Location

Social Groups		
Home location	Frequency	Percent
Northern Nigeria		
Professional group	258	35
Cultural group	198	26.8
Others	174	23.6
Multiple responses	108	14.6
Total	738	100
Western Nigeria		
Professional group	906	51.9
Cultural group	234	13.4
Others	384	22
Multiple responses	222	12.7
Total	1746	100
Eastern Nigeria		
Professional group	462	47.2
Cultural group	186	19
Others	150	15.3
Multiple responses	180	19.5
Total	978	100
Southern Nigeria		
Professional group	342	35.2
Cultural group	246	25.3
Others	204	21
Multiple responses	180	19.5
Total	972	100
FCT or Middle Belt or Central		
Professional group	216	34.3
Cultural group	180	28.6
Others	174	27.6
Multiple responses	60	9.5
Total	630	100

Table 47

Extent of Social Group Influence on Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Regional Home Location

Extent of social group influence		
Home location	Frequency	Percent
Northern Nigeria		
Regular/Often	288	39
None at all	204	27.6
Seldom	204	27.6
No response	42	5.8
Total	738	100
Western Nigeria		
Regular/Often	570	32.6
None at all	486	27.8
Seldom	660	37.8
No response	24	1.71
	1746	100
Eastern Nigeria		
Regular/Often	354	36.2
None at all	366	37.4
Seldom	252	25.8
No response	6	0.6
	978	100
Southern Nigeria		
Regular/Often	324	33.3
None at all	354	36.4
Seldom	288	29.6
No response	6	0.6
	972	100
FCT or Middle Belt or Central		
Regular/Often	210	33.3
None at all	180	28.6
Seldom	234	37.1
	630	100

Table 48

Demographics: Social Group Membership of Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Educational Status

	Social Groups		
Education		Frequency	Percentage
Non Graduate	Professional group	330	27.6
	Cultural group	510	42.7
	Others	258	21.7
	Multiple responses	96	8
	Total	1194	100
Graduate	Professional group	1086	44.3
	Cultural group	444	18.1
	Others	504	20.5
	Multiple responses	300	17.1
	Total	2454	100
Post graduate	Professional group	768	54.2
	Cultural group	90	6.4
	Others	324	22.9
	Multiple responses	186	3.4
	Total	1416	100

Table 49

Extent of Social Group Influence on Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Educational Status

Education	**Extent of social group influence**	Frequency	Percent
Non Graduate	1 - Regular/Often	504	42,2
	2 - None at all	366	30.7
	3 - Seldom	294	24.6
	No response	30	2.5
		1194	100
Graduate	1 - Regular/Often	786	32
	2 - None at all	834	34
	3 - Seldom	798	32.5
	No response	36	1.5
		2454	100
Postgraduate	1 - Regular/Often	456	32.2
	2 - None at all	390	27.5
	3 - Seldom	546	38.6
	No response	24	1.7
	Total	1416	100

Table 50

Demographics: Social Group Membership of Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Regional Native Zone

	Social Groups		
Region		Frequency	Percent
North West	Professional group	174	34.9
	Religious group	**192**	**38.6**
	Cultural group	72	14.5
	Multiple responses	60	12
	Total	498	100
South West	**Professional group**	**570**	**47.8**
	Cultural group	108	9
	Religious group	288	24.1
	Multiple responses	228	19.1
	Total	1194	100
South South	**Professional group**	**294**	**43.4**
	Religious group	96	14.2
	Cultural group	168	24.8
	Multiple responses	120	17.7
	Total	678	100
North Central	Professional group	192	27.8
	Cultural group	192	27.8
	Religious	**216**	**31.3**
	Multiple responses	90	13
		690	100
South East	Professional group	792	**51.2**
	Cultural group	330	21.3
	Religious	240	15.5
	Multiple responses	186	12
	Total	1548	100
North East	Professional group	162	35.5
	Religious group	126	27.6
	Cultural group	102	22.4
	Multiple responses	66	14.5
	Total	456	100

Table 51

Extent of Social Group Influence on Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Marital Status

Extent of social group influence			
Marital Status		Frequency	Percent
Married	Regular/Often	1116	35.5
	None at all	906	28.8
	Seldom	1068	34
	No response	54	1.7
	Total	3144	100
Not married	Regular/Often	582	34.4
	None at all	594	35.1
	Seldom	486	28.7
	No response	30	1.8
	Total	1692	100
Prefer not to say	Regular/Often	18	16.7
	None at all	48	44.4
	Seldom	42	38.9
	Total	108	100
Separated/divorce	Regular/Often	30	25
	None at all	42	35
	Seldom	42	35
	No response	6	10
	Total	120	100

Table 52

Extent of Social Group Influence on Nigerian Consumers of Processed and Packed

Foods/Drinks Based on Regional Native Zone

Region	**Extent of social group influence**	Frequency	Percent
North West	1 Regular/Often	270	54.2
	2- None at all	126	25.3
	3- Seldom	96	19.3
	No response	6	1.2
	Total	498	100
South West	1 Regular/Often	342	28.6
	2- None at all	372	31.2
	3- Seldom	456	38.2
	No response	24	2
	Total	1194	100
South - South	1 Regular/Often	210	31
	2- None at all	216	31.9
	3- Seldom	246	36.3
	No response	6	0.9
	Total	678	100
North Central	1 Regular/Often	234	33.9
	2- None at all	222	32.2
	3- Seldom	222	32.2
	No response	12	1.7
	Total	690	100
South East	1 Regular/Often	510	32.9
	2- None at all	546	35.3
	3- Seldom	480	31
	No response	12	0.8
	Total	1548	100
North East	1 Regular/Often	180	39.5
	2- None at all	108	23.7
	3- Seldom	138	30.3
	No response	30	6.6
	Total	456	100

Table 53 presented who decides what is purchased and consumed in the family based on regional home location. Over 60% of respondents of all regional home locations except Northern home location, indicated that they decide what is purchased and consumed in the family. About fifty-five percent (55%) of respondents from Northern Nigeria regional home location decide what is purchased and consumed in the family. Spouses of about 23% of respondents whose regional home location is Eastern, decide what are purchased and consumed in the family.

Table 54 presented 'who decides what is purchased and consumed in the family' based on marital status. Among all categories, the category of the 'unmarried' had the largest percentage of respondents who decide what is purchased and consumed, compared to other categories. Though unmarried, some have partners/fiancées who decide what they purchase and consume. Among all categories, the category of the 'separated/divorced' had the largest percentage of respondents whose children decide what is purchased and consumed in the family.

Table 55 presented 'who decides what is purchased and consumed in the family', based on regional native location. Over 60% of respondents of all regional home locations except Northern home location, indicated that they decide what is purchased and consumed in the family. About fifty-five percent (55%) of respondents from Northern Nigeria regional home location decide what is purchased and consumed in the family. Spouses of about 23% of respondents whose regional home location is Eastern, decide what are purchased and consumed in the family.

Table 53

Who Decides What Is Purchased and Consumed In the Family Based on Regional Home

Location

Who decides			
Home location		Frequency	Percent
Northern Nigeria	**I decide**	408	**55.3**
	Parents decides	126	17.1
	Spouse decides	90	12.2
	Children decide	48	6.5
	Other members of my family or colleagues or friends	60	8.1
	My cook decides	6	0.8
	Total	738	100
Western Nigeria	**I decide**	1074	**61.5**
	Parents decides	318	18.2
	Spouse decides	168	9.6
	Children decide	150	8.6
	Other members of my family or colleagues or friends	12	0.7
	My cook decides	6	0.3
	No response	18	1
	Total	1746	100
Eastern Nigeria	**I decide**	630	**64.4**
	Parents decides	60	6.1
	Spouse decides	222	22.7
	Children decide	24	2.5
	Other members of my family or colleagues or friends	12	1.2
	My cook decides	30	3.1
	Total	978	100
Southern Nigeria	**I decide**	594	**61.1**
	Parents decides	126	13
	Spouse decides	114	11.7
	Children decide	120	12.3
	Other members of my family or colleagues or friends	18	1.9
	Total	972	100
FCT or Middle Belt or Central	**1- I decide**	390	**61.9**
	Parents decides	102	16.2
	Spouse decides	90	14.3
	Children decide	36	5.7
	Other members of my family or colleagues or friends	6	1
	My cook decides	6	1
	Total	630	100

Table 54

Who Decides What Is Purchased and Consumed In the Family Based on Marital Status

Who decides			
Marital Status		Frequency	Percent
Married	I decide	1692	**53.8**
	Parents decides	528	16.8
	Spouse decides	534	17
	Children decide	306	9.7
	Other members of my family or colleagues or friends	36	1.1
	My cook decides	36	1.1
	No response	12	0.4
	Total	3144	100
Not married	I decide	1254	**74.1**
	Parents decides	192	11.3
	Spouse decides	138	8.2
	Children decide	36	2.1
	Other members of my family or colleagues or friends	54	3.2
	My cook decides	12	0,7
	No response	6	0.4
	Total	1692	100
Prefer not to say	I decide	78	**72.2**
	Parents decides	12	11.1
	Children decide	6	5.6
	Other members of my family or colleagues or friends	12	11.1
	Total	108	100
Separated/divorce	I decide	72	**60**
	Spouse decides	12	10
	Children decide	30	25
	Other members of my family or colleagues or friends	6	5
	Total	120	100

Table 55

Who Decides What Is Purchased and Consumed In the Family Based on Regional Native

Group

Regional Native location	Who decides	Frequency	Percentage
North West	I decide	348	69.9
	Parents decides	36	7.2
	Spouse decides	72	14.5
	Children decide	30	6
	Other members of my family or colleagues or friends	12	2.4
	Total	498	100
South West	I decide	618	51.8
	Parents decides	300	25.1
	Spouse decides	108	9
	Children decide	144	12.1
	Other members of my family or colleagues or friends	12	1
	No response	12	1
	Total	1194	100
South-South	I decide	378	55.8
	Parents decides	120	17.7
	Spouse decides	72	10.6
	Children decide	84	12.4
	Other members of my family or colleagues or friends	12	1.8
	My cook decides	6	0.9
	No response	6	0.9
	Total	678	100
North Central	I decide	438	63.5
	Parents decides	90	13
	Spouse decides	96	13.9
	Children decide	48	7
	Other members of my family or colleagues or friends	12	1.7
	My cook decides	6	0.9
	Total	690	100
South East	I decide	1062	68.6
	Parents decides	114	7.4
	Spouse decides	270	17.4
	Children decide	54	3.5
	Other members of my family or colleagues or friends	18	1.2
	My cook decides	30	1.9
	Total	1548	100
North East	I decide	252	55.3

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Parents decic	72
Spouse decic	66
Children dec	18
Other membe	42
My cook dec	6
Total	456

Who Decides What Processed (Flavored) and Packed Foods/Drinks are Purchased and Consumed in The Family is Related With Gender and Educational Status. **Table 56** shows there is likelihood of relationship among gender, educational status and who decides processed and packed foods/drinks that are purchased and consumed in the family, only in respondents whose regional native locations are South West, South-South, North Central and South East regional native zones.

Extent of Social Group Influence in Purchasing Processed (Flavored) and Packed Foods/Drinks is Related With Educational Status and Gender. **Table 57** shows that there is the likelihood of relationship among gender, educational status and extent of social group influence on respondents only in those whose regional native zones are North Central regional native zone.

Social Group Membership of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks is Related With Educational Status and Gender. **Table 58 shows** that there is likelihood of relationship among gender, educational status and social group membership of respondents only in those whose regional native locations are South-South, North Central, South East and North East.

Social Group Membership of Nigerian Consumers of Processed (Flavored) and Packed Foods is Not Related With Gender and Marital Status. **Table 59** shows that there is the likelihood of a relationship among gender, marital status and social group membership of consumers of processed and packed foods/drinks in only those whose regional native locations are North West and South-South**.**

Extent of Social Group Influence on Nigerian Consumers of Processed (Flavored) and Packed Foods is Related With Gender and Marital Status. **Table 60 presents that** there is no likelihood of relationship among the variables- gender, marital status and social group membership of consumers of processed and packed foods/drinks from any of the regional native locations.

Who Decides What Processed (Flavored) and Packed Foods/Drinks are Purchased and Consumed in the Family is Related With Gender and Marital Status.

Table 61 shows that there is likelihood of relationship among gender, marital status and who decides which processed and packed foods/drink are purchased and consumed in the family only those whose regional native zones are North-West, South-West, South-South, and South-East.

Who Decides What Processed (Flavored) and Packed Foods/Drinks are Purchased and Consumed in The Family is Related With Gender and Age Group.

Table 62 shows that there is likelihood of relationship among gender, age group and who decides what are purchased and consumed in the family of respondents only whose regional native locations are South-East and North-Central.

Extent of Social Group Influence on Nigerian Consumers of Processed (Flavored) and Packed Foods is Related With Gender and Age Group. **Table 63** shows that there is no likelihood of relationship among gender, age groups and extent of social group influence on respondents from any regional native locations.

Who Decides What Processed (Flavored) and Packed Foods/Drinks are Purchased and Consumed in The Family is Related With Gender and Monthly Earning.

Table 64 shows that there is no likelihood of relationship among gender, who decides what is purchased and consumed in the family and monthly earning of respondents from any of regional native locations.

Extent of Social Group Influence on Nigerian Consumers of Processed (flavored) and Packed Foods is Related With Gender and Monthly Earning. Table 65 shows that there is likelihood of relationship among gender, extent of social group influence, and monthly earning of respondents only whose regional native location is South-West.

Social Group Membership of Nigerian Consumers of Processed (Flavored) and Packed Foods is Related With Gender and Monthly Earning. **Table 66** shows that there is

likelihood of relationship among gender, social group membership, and monthly earning of respondents only whose regional native locations are South-East and North-East.

Social Group Membership of Nigerian Consumers of Processed (Flavored) and Packed Foods is Related With Gender and Age Group. **Table 67 shows that there is likelihood of relationship among gender, age group and social group membership of respondents only whose regional native location is South-East.**

Table 56

Relationship Among Gender, Educational Status and Who Decides What is Purchased and

Consumed in The Family

		Chi-Square Tests		
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	20.305[a]	16	.207
	Likelihood Ratio	21.772	16	.151
	Linear-by-Linear Association	1.983	1	.159
	N of Valid Cases	498		
South West	**Pearson Chi-Square**	**38.038[b]**	**25**	**.046**
	Likelihood Ratio	31.870	25	.162
	Linear-by-Linear Association	2.123	1	.145
	N of Valid Cases	1194		
South-South	**Pearson Chi-Square**	**39.074[c]**	**25**	**.036**
	Likelihood Ratio	38.923	25	.037
	Linear-by-Linear Association	.084	1	.772
	N of Valid Cases	678		
North Central	**Pearson Chi-Square**	**30.791[d]**	**12**	**.002**
	Likelihood Ratio	34.711	12	.001
	Linear-by-Linear Association	.171	1	.680
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**90.923[e]**	**25**	**.000**
	Likelihood Ratio	102.550	25	.000
	Linear-by-Linear Association	.182	1	.670
	N of Valid Cases	1548		
North East	Pearson Chi-Square	17.149[f]	15	.310
	Likelihood Ratio	19.004	15	.214
	Linear-by-Linear Association	2.166	1	.141
	N of Valid Cases	456		

Significant difference at P<0.05

Table 57

Relationship Among Gender, Educational Status and Extent of Social Group Influence on

Respondents

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	9.539[a]	12	0.656
	Likelihood Ratio	9.556	12	0.655
	N of Valid Cases	498		
South West	Pearson Chi-Square	10.566[b]	20	0.957
	Likelihood Ratio	10.937	20	0.948
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	18.421[c]	20	0.56
	Likelihood Ratio	18.795	20	0.535
	N of Valid Cases	678		
North Central	**Pearson Chi-Square**	**1.190E2[d]**	**12**	**0**
	Likelihood Ratio	15.616	12	0.209
	N of Valid Cases	690		
South East	Pearson Chi-Square	22.018[e]	20	0.34
	Likelihood Ratio	21.229	20	0.384
	N of Valid Cases	1548		
North East	Pearson Chi-Square	10.128[f]	10	0.429
	Likelihood Ratio	9.875	10	0.451
	N of Valid Cases	456		

Significant difference at P<0.05

Table 58

Relationship Among Gender, Educational Status and Social Group Membership of

Respondents

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	24.411[a]	20	0.225
	Likelihood Ratio	26.315	20	0.156
	N of Valid Cases	498		
South West	Pearson Chi-Square	36.398[b]	30	0.195
	Likelihood Ratio	42.164	30	0.069
	N of Valid Cases	1194		
South-South	**Pearson Chi-Square**	**48.303[c]**	**30**	**0.018**
	Likelihood Ratio	49.719	30	0.013
	N of Valid Cases	678		
North Central	**Pearson Chi-Square**	**35.177[d]**	**24**	**0.066**
	Likelihood Ratio	35.662	24	0.059
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**65.567[e]**	**35**	**0.001**
	Likelihood Ratio	59.551	35	0.006
	N of Valid Cases	1548		
North East	**Pearson Chi-Square**	**50.660[f]**	**20**	**0**
	Likelihood Ratio	52.491	20	0
	N of Valid Cases	456		

Significant difference at P<0.05

Table 59

Relationship Among Gender, Marital Status and Social Group Membership of Respondents

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	40.074 [a]	15	0
	Likelihood Ratio	22.5	15	0.095
	N of Valid Cases	498		
South West	Pearson Chi-Square	18.775 [b]	42	0.999
	Likelihood Ratio	21.475	42	0.996
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	61.992 [c]	36	0.005
	Likelihood Ratio	39.097	36	0.332
	N of Valid Cases	678		
North Central	Pearson Chi-Square	55.962 [d]	42	0.073
	Likelihood Ratio	52.07	42	0.137
	N of Valid Cases	690		
South East	Pearson Chi-Square	49.369 [e]	49	0.458
	Likelihood Ratio	46.038	49	0.594
	N of Valid Cases	1548		
North East	Pearson Chi-Square	23.453 [f]	16	0.102
	Likelihood Ratio	26.555	16	0.047
	N of Valid Cases	456		

Significant difference at P<0.05

Table 60

Relationship Among Gender, Marital Status and Extent of Social Group Influence on

Respondents

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	6.205[a]	9	0.719
	Likelihood Ratio	6.791	9	0.659
	N of Valid Cases	498		
South West	Pearson Chi-Square	24.246[b]	28	0.668
	Likelihood Ratio	28.856	28	0.42
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	26.157[c]	24	0.345
	Likelihood Ratio	26.951	24	0.307
	N of Valid Cases	678		
North Central	Pearson Chi-Square	18.655[d]	21	0.607
	Likelihood Ratio	21.165	21	0.449
	N of Valid Cases	690		
South East	Pearson Chi-Square	15.776[e]	28	0.969
	Likelihood Ratio	17.156	28	0.945
	N of Valid Cases	1548		
North East	Pearson Chi-Square	6.380[f]	8	0.605
	Likelihood Ratio	6.522	8	0.589
	N of Valid Cases	456		

Significant difference at P<0.05

Table 61

Relationship Among Gender, Marital Status and Who Decides What Are Purchased and

Consumed in The Family

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	33.254[a]	12	0.001
	Likelihood Ratio Linear-by-Linear	32	12	0.001
	Association	8.282	1	0.004
	N of Valid Cases	498		
South West	Pearson Chi-Square	74.056[b]	28	0
	Likelihood Ratio Linear-by-Linear	74.57	28	0
	Association	6.456	1	0.011
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	46.335[c]	30	0.029
	Likelihood Ratio Linear-by-Linear	53.199	30	0.006
	Association	1.011	1	0.315
	N of Valid Cases	678		
North Central	Pearson Chi-Square	46.820[d]	35	0.087
	Likelihood Ratio Linear-by-Linear	36.603	35	0.394
	Association	1.093	1	0.296
	N of Valid Cases	690		
South East	Pearson Chi-Square	86.168[e]	35	0
	Likelihood Ratio Linear-by-Linear	58.142	35	0.008
	Association	0.177	1	0.674
	N of Valid Cases	1548		
North East	Pearson Chi-Square	27.021[f]	20	0.135
	Likelihood Ratio Linear-by-Linear	23.797	20	0.251
	Association	0.902	1	0.342
	N of Valid Cases	456		

Significant difference at P<0.05

Table 62

Relationship Among Gender, Age Group and Who Decides What Are Purchased and

Consumed in The Family

	Chi-Square Tests			
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	22.591[a]	20	0.309
	Likelihood Ratio Linear-by-Linear	24.514	20	0.221
	Association	1.978	1	0.16
	N of Valid Cases	498		
South West	Pearson Chi-Square	33.516[b]	25	0.119
	Likelihood Ratio Linear-by-Linear	31.198	25	0.183
	Association	2.142	1	0.143
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	31.836[c]	25	0.163
	Likelihood Ratio Linear-by-Linear	30.979	25	0.19
	Association	0.008	1	0.93
	N of Valid Cases	678		
North Central	Pearson Chi-Square	33.407[d]	12	0.001
	Likelihood Ratio Linear-by-Linear	38.661	12	0
	Association	0.189	1	0.664
	N of Valid Cases	690		
South East	Pearson Chi-Square	89.302[e]	25	0
	Likelihood Ratio Linear-by-Linear	89.951	25	0
	Association	0.317	1	0.574
	N of Valid Cases	1548		
North East	Pearson Chi-Square	14.918[f]	15	0.457
	Likelihood Ratio Linear-by-Linear	16.102	15	0.375
	Association	2.09	1	0.148
	N of Valid Cases	456		

Significant difference at $P<0.05$

Table 63

Relationship Among Gender, Age Group and Extent of Social Group Influence on

Respondents

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	6.537[a]	15	0.969
	Likelihood Ratio	8.298	15	0.911
	N of Valid Cases	498		
South West	Pearson Chi-Square	30.598[b]	20	0.061
	Likelihood Ratio	27.201	20	0.13
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	24.028[c]	20	0.241
	Likelihood Ratio	25.768	20	0.174
	N of Valid Cases	678		
North Central	Pearson Chi-Square	16.886[d]	12	0.154
	Likelihood Ratio	10.839	12	0.543
	N of Valid Cases	690		
South East	Pearson Chi-Square	18.761[e]	20	0.537
	Likelihood Ratio	17.113	20	0.646
	N of Valid Cases	1548		
North East	Pearson Chi-Square	16.376[f]	10	0.089
	Likelihood Ratio	15.232	10	0.124
	N of Valid Cases	456		

Significant difference at P<0.05

Table 64

Relationship Among Gender, Age Group and Social Group Membership of Respondents

Chi-Square Tests			
Region	Value	df	Asymp. Sig. (2-sided)
North West			
Pearson Chi-Square	19.286[a]	25	0.783
Likelihood Ratio	19.962	25	0.749
N of Valid Cases	498		
South West			
Pearson Chi-Square	24.123[b]	30	0.766
Likelihood Ratio	28.631	30	0.537
N of Valid Cases	1194		
South-South			
Pearson Chi-Square	20.950[c]	30	0.889
Likelihood Ratio	22.968	30	0.817
N of Valid Cases	678		
North Central			
Pearson Chi-Square	23.073[d]	24	0.515
Likelihood Ratio	19.334	24	0.734
N of Valid Cases	690		
South East			
Pearson Chi-Square	58.168[e]	35	0.008
Likelihood Ratio	60.8	35	0.004
N of Valid Cases	1548		
North East			
Pearson Chi-Square	25.382[f]	20	0.187
Likelihood Ratio	27.261	20	0.128
N of Valid Cases	456		

Significant difference at P<0.05

Table 65

Relationship Among Gender, Monthly Earning of Respondent, and Who Decides What Are

Purchased and Consumed in The Family

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	**Pearson Chi-Square**	**54.092[a]**	**36**	**0.027**
	Likelihood Ratio	45.053	36	0.143
	Linear-by-Linear Association	2.424	1	0.12
	N of Valid Cases	498		
South West	Pearson Chi-Square	39.358[b]	40	0.499
	Likelihood Ratio	40.221	40	0.46
	Linear-by-Linear Association	0.98	1	0.322
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	35.007[c]	45	0.858
	Likelihood Ratio	37.126	45	0.792
	Linear-by-Linear Association	0.73	1	0.393
	N of Valid Cases	678		
North Central	Pearson Chi-Square	33.025[d]	27	0.196
	Likelihood Ratio	36.485	27	0.105
	Linear-by-Linear Association	0.707	1	0.4
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**89.438[e]**	**45**	**0**
	Likelihood Ratio	88.842	45	0
	Linear-by-Linear Association	0	1	0.987
	N of Valid Cases	1548		
North East	Pearson Chi-Square	24.283[f]	27	0.615
	Likelihood Ratio	27.288	27	0.448
	Linear-by-Linear Association	1.078	1	0.299
	N of Valid Cases	456		

Significant difference at P<0.05

Table 66

Relationship Among Gender, Monthly Earning of Respondent, and Extent of Social Group

Influence on Respondents

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	24.290[a]	27	0.614
	Likelihood Ratio	28.012	27	0.41
	N of Valid Cases	498		
South West	**Pearson Chi-Square**	**49.178[b]**	**32**	**0.027**
	Likelihood Ratio	37.668	32	0.226
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	35.181[c]	36	0.507
	Likelihood Ratio	35.705	36	0.483
	N of Valid Cases	678		
North Central	Pearson Chi-Square	18.147[d]	27	0.899
	Likelihood Ratio	19.61	27	0.847
	N of Valid Cases	972		
South East	Pearson Chi-Square	26.613[e]	36	0.873
	Likelihood Ratio	24.441	36	0.928
	N of Valid Cases	1548		
North East	Pearson Chi-Square	22.464[f]	18	0.212
	Likelihood Ratio	24.394	18	0.143
	N of Valid Cases	456		

Significant difference at P<0.05

Table 67

Relationship Among Gender, Monthly Earning of Respondent, and Social Group Membership

of Respondents

Chi-Square Tests				
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	54.339[a]	45	.160
	Likelihood Ratio	59.878	45	.068
	N of Valid Cases	498		
South West	Pearson Chi-Square	47.818[b]	48	.480
	Likelihood Ratio	51.131	48	.352
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	65.002[c]	54	.145
	Likelihood Ratio	61.437	54	.227
	N of Valid Cases	678		
North Central	Pearson Chi-Square	51.232[d]	54	.582
	Likelihood Ratio	47.795	54	.711
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**1.014E2[e]**	**63**	**.002**
	Likelihood Ratio	99.808	63	.002
	N of Valid Cases	1548		
North East	**Pearson Chi-Square**	**53.742[f]**	36	**.029**
	Likelihood Ratio	51.775	36	.043
	N of Valid Cases	456		

Significant difference at P<0.05

Hypothesis 4

H$_{04}$: Perceived behavioral control (perceived resources – monetary, knowledge, status) are not positively related with Nigerian consumers' intention to purchase processed (flavoured) and packed foods/drinks

The perceived behavioral control (resources) are education, monthly income, marital status, regional home location, age group, hobbies and health concerns. These are independent variables, while the dependent variables are the purchase intention drivers- frequency of purchase and consumption of processed (flavored) and packed foods/drinks, importance attributed to flavor and taste, level of satisfaction derived from processed (flavored) and packed foods/drinks, buying constraints, most desired attributes in processed (flavored) and packed foods/drinks, most desired factors in processed (flavored) and packed foods/drinks, best drink flavor best food flavor, buying decision process, budget and place of purchase of processed (flavored) and packed foods/drinks.

There is Effect of Each of Family Size, Regional Native Location/Group, Regional Home Location and Religious Group on The Decision of Nigerian Consumers to Purchase Processed (Flavored) and Packed Foods/Drinks. **Table 68 shows the Summary of ANOVA Showing Effect of Perceived Social Pressure on Purchasing Intention of Nigerian Consumers.** The effect of social pressure- family size, regional native location/group, regional home location and religious group on the purchase intention drivers towards processed (flavored) and packed foods/drinks reflects in each of frequency of purchase of processed (flavored) and packed foods/drinks, importance attributed to flavor, level of satisfaction derived, buying constraints, most important constraint, most desired attribute, most desired factors, best drink flavor, best food flavor, purchasing decision process, *who in the family decides*, place of purchase and budget of Nigerian consumers for processed (flavored) and packed foods/drinks.

Table 69 shows the correlation between perceived social pressure and drivers of purchasing intention of Nigerian consumers. There is weak positive correlation of purchase intention driver- place of purchase, with who decides what are purchased and consumed in the family (r=.072) at 0.05 level (2-tailed), while at 0.01 level (2-tailed), importance attributed to food taste/flavor has positive correlation with family size (r=.096) and best food flavor with family size (r=.110).

There is weak correlation at 0.05 level (2-tailed), social group membership with frequency of purchase and consumption (r=.080); buying constraints (r=.079), but weak negative correlation with best drink flavor (r=-.073), while at 0.01 level (2-tailed), social group membership has weak positive correlation with each of best food flavor (r=.115) and place of purchase (r=125). Extent of social influence has negative correlation with (r=-.089) at 0.01 level (2-tailed). Religious group of Nigerian consumers correlates positively with most important constraint (r=.203) and negatively correlate with level of satisfaction derived (r=-.094) at 0.01 level (2-tailed); while at 0.05 level (2-tailed), it correlates positively with each of buying constraints (r=.085), most desired attribute (r=.077) and place of purchase (r=.082). Buying decision process correlates positively with importance attributed to flavour (r=.104), most important constraint (r=.109) at 0.01 level (2-tailed), and at 0.05 level (2-tailed) with place of purchase (r=.083) but negatively with level of satisfaction consumers derive in flavoured (flavoured) and packed foods/drinks (r=-.075). Furthermore, most important constraint has positive correlation each with best drink flavor (r=.079) and best food flavor (r=.086), at 0.05 level (2-tailed).

Table 70 shows the correlation between social group membership and dependent variables. Social group membership of Nigerian consumers have positive correlation with place of purchase (r=.125), best food flavor (r=.155), regional native location (r=.142), health concern (r=.095) at 0.01 level (2-tailed).

At 0.05 level (2-tailed), social group membership have positive correlation with buying constraints (r=.079) and religion (r=.088), while it has negative correlation with each of their hobbies (r=-.073), best drink flavor (r=-.073) and frequency of purchase and consumption of processed (flavored) and packed foods/drinks (r=-.080).

Education is Not Positively Related With Level of Satisfaction Derived By Nigerian Consumers in Purchasing Processed (Flavored) and Packed Foods/Drinks. **Table 71** shows the likelihood of relationship among gender, educational status and level of satisfaction of respondents only whose regional native location is North Central.

Education is Not Positively Related With Best Drink Flavors to Nigerian Consumers in Processed (Flavored) and Packed Foods/Drinks. **Table 72** shows the likelihood of relationship among gender, educational status and best drink flavors only in respondents whose regional native locations are North-West, North-East and North-Central.

Education is Not Positively Related With Best Food Flavors to Nigerian Consumers in Processed (Flavored) and Packed Foods/Drinks. **Table 73** shows that there is no likelihood of relationship among gender, educational status and best food flavors in respondents from any of the regional native location.

Table 68

Summary of ANOVA Showing Effect of Perceived Social Pressure on Purchasing Intention of

Nigerian Consumers

	Independent Variables (Perceived Social Pressure)			
Dependent Variables (purchase intention driver)	**Family size**	**Regional native group**	**Regional home location**	**Religion**
Frequency of purchase	0.1	**0**	**0.015**	**0.026**
Importance attributed to flavor	0.25	**0.024**	**0**	**0.004**
Level of satisfaction derived	**0.011**	0.22	**0.001**	**0.045**
Buying constraints	0.244	**0**	**0.013**	0.712
Most important constraint	0.068	**0**	**0.002**	**0**
Most desired attribute	0.446	0.99	**0.002**	0.411
Most desired factors	0.122	**0**	**0**	0.108
Best drink flavor	0.641	0.145	0.667	0.321
Best food flavor	**0.038**	1	0.104	0.835
Buying decision process	**0.041**	0.069	1	0.545
Who in the family decides	0.868	**0.024**	0.843	0.085
Place of purchase	0.812	**0.018**	**0**	**0.006**
Budget	0.151	**0.019**	0.656	0.4

Significant difference at $P<0.05$

Table 69

Correlation Between Perceived Social Pressure and Drivers of Purchasing Intention of Nigerian Consumers

Dependent Variables (purchase intention driver)	Who decides	Family size	Buying decision process	Most important constraint	Social membership	Social influence	Religion
Frequency of purchase	0.013	0.016	-0.005	0	.080*	0.053	-0.008
Importance attributed to flavor	0.027	.096**	.104**	-0.025	-0.024	-0.016	-0.005
Level of satisfaction derived	-0.015	0.017	-.075*	0.053	-0.049	-0.034	-.094**
Buying constraints	-0.025	0.058	-0.026	.074*	.079*	0.028	.085*
Most important constraint	0.021	0.04	.109**	1	0.051	0.054	.203**
Most desired attribute	0.058	0.029	0.024	0.052	-0.007	-0.007	.077*
Most desired factors	-0.053	0.002	0.031	-0.004	0.047	-0.057	-0.067
Best drink flavor	-0.048	-0.003	0.028	.079*	-.073*	-.089**	-0.057
Best food flavor	-0.002	.110**	0.038	.086*	.115**	-0.058	-0.018
Buying decision process	0.007	-0.032	1	.109**	0.036	0.003	0.043
Budget	0.062	0.046	0.053	-0.01	-0.026	-0.036	-0.047
Place of purchase	.072*	0	.083*	-0.011	0.125**	-0.058	.082*

*Correlation is significant at the 0.05 level (2-tailed)

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

Table 70

Correlation Between Status of Social Group Membership and Dependent Variables

Dependent variables	Correlation matrix
Health concern	.095**
Buying constraints	.079*
Place of purchase	.125**
Best food flavor	.155**
Hobbies	-.073*
Best drink flavor	-.073*
Frequency of purchase and consumption	-.080*
Regional native location	.142**
Religion	.088*

*Correlation is significant at the 0.05 level (2-tailed)

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

Table 71

Relationship Among Gender, Educational Status, and Level of Satisfaction Derived in

Processed (Flavored) and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	18.759[a]	12	.095
	Likelihood Ratio	14.429	12	.274
	Linear-by-Linear Association	3.733	1	.053
	N of Valid Cases	498		
South West	Pearson Chi-Square	16.413[b]	15	.355
	Likelihood Ratio	19.903	15	.176
	Linear-by-Linear Association	.013	1	.909
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	12.875[c]	15	.612
	Likelihood Ratio	14.053	15	.522
	Linear-by-Linear Association	2.384	1	.123
	N of Valid Cases	678		
North Central	**Pearson Chi-Square**	**21.140[d]**	**12**	**.048***
	Likelihood Ratio	18.603	12	.099
	Linear-by-Linear Association	.309	1	.578
	N of Valid Cases	690		
South East	Pearson Chi-Square	20.779[e]	15	.144
	Likelihood Ratio	21.501	15	.122
	Linear-by-Linear Association	.009	1	.924
	N of Valid Cases	1548		
North East	Pearson Chi-Square	13.930[f]	15	.531

L	lihood Ratio	15.943	15	.386
i	Linear-by-Linear Association	1.277	1	.258
k				
e	N of Valid Cases	456		

Table 72

Relationship Among Gender, Educational Status, and Best Flavors in Processed (Flavored)

and Packed Drinks

Region		Value	df	Asymp. Sig. (2-sided)
	Chi-Square Tests			
	Pearson Chi-Square	**22.683**[a]	**12**	**.031**
North West	Likelihood Ratio	23.373	12	.025
	Linear-by-Linear Association	.934	1	.334
	N of Valid Cases	498		
	Pearson Chi-Square	10.680[b]	15	.775
South West	Likelihood Ratio	11.110	15	.745
	Linear-by-Linear Association	.991	1	.319
	N of Valid Cases	1194		
	Pearson Chi-Square	24.096[c]	15	.063
South-South	Likelihood Ratio	30.540	15	.010
	Linear-by-Linear Association	4.289	1	.038
	N of Valid Cases	678		
	Pearson Chi-Square	**26.387**[d]	**12**	**.009**
North Central	Likelihood Ratio	25.802	12	.011
	Linear-by-Linear Association	.194	1	.660
	N of Valid Cases	690		
	Pearson Chi-Square	14.197[e]	15	.511
South East	Likelihood Ratio	15.842	15	.393
	Linear-by-Linear Association	.139	1	.709
	N of Valid Cases	1548		
	Pearson Chi-Square	14.934[f]	15	.456
North East	Likelihood Ratio	14.721	15	.472
	Linear-by-Linear Association	1.118	1	.290
	N of Valid Cases	456		

Table 73

Relationship Among Gender, Educational Status, and Best Flavors in Processed (Flavored)

and Packed Foods

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	14.220[a]	16	.582
	Likelihood Ratio	14.824	16	.538
	Linear-by-Linear Association	.094	1	.759
	N of Valid Cases	498		
South West	Pearson Chi-Square	14.334[b]	20	.813
	Likelihood Ratio	16.323	20	.696
	Linear-by-Linear Association	.244	1	.621
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	25.671[c]	20	.177
	Likelihood Ratio	16.723	20	.671
	Linear-by-Linear Association	1.046	1	.306
	N of Valid Cases	678		
North Central	Pearson Chi-Square	10.650[d]	12	.559
	Likelihood Ratio	10.242	12	.595
	Linear-by-Linear Association	.164	1	.685
	N of Valid Cases	690		
South East	Pearson Chi-Square	22.485[e]	20	.315
	Likelihood Ratio	25.241	20	.192
	Linear-by-Linear Association	1.772	1	.183
	N of Valid Cases	1548		
North East	Pearson Chi-Square	25.111[f]	20	.197
	Likelihood Ratio	27.053	20	.134
	Linear-by-Linear Association	.063	1	.802
	N of Valid Cases	456		

Education is Not Positively Related With Extent of Importance Ascribed to Flavors in Processed (Flavored) and Packed Foods/Drinks by Nigerian Consumers. **Table 74** shows that there is no likelihood of relationship among the variables- gender, educational status and importance of flavor in respondents from any of the regional native.

Education is Not Positively Related With Budget of Nigerian Consumers for Processed (Flavored) and Packed Foods/Drinks. **Table 75** shows that there is likelihood of relationship among gender, educational status and budget in only respondents whose regional native location is South East.

Education is Not Positively Related With Buying Decision Process of Nigerian Consumers Towards Processed (Flavored) and Packed Foods/Drinks. **Table 76** that there is no likelihood of relationship among gender, educational status and buying decision process of respondents from the different regional native locations.

Education is Not Positively Related With Place of Purchase of Processed (Flavored) and Packed Foods/Drinks By Nigerian Consumers. **Table 77 shows that there is relationship among gender, educational status and place of purchase of processed and packed foods/drinks by only respondents whose regional native location is South- East.**

Education is Not Positively Related With Most Desired Attributes in Processed (Flavored) and Packed Foods/Drinks By Nigerian Consumers. **Table 78** shows that there is no likelihood of relationship among gender, educational status and most desired attribute in processed and packed foods/drinks by respondents from any of the regional native locations.

Education is Not Positively Related With Most Important Buying Constraint Towards Processed (Flavored) and Packed Foods/Drinks. **Table 79** shows that there is no likelihood that is relationship among gender, educational status and most important constraint to buying processed and packed foods/drinks by respondents from any of the regional native zones.

Education is Not Positively Related With Buying Constraints Towards Processed (Flavored) and Packed Foods/Drinks. **Table 80** shows that there is likelihood that is relationship among gender, educational status and buying constraints to processed and packed foods/drinks by only respondents whose regional native locations are South West, North Central and South East regional native locations.

Education is Not Positively Related With Desired Factors Towards Processed (Flavored) and Packed Foods/Drinks. **Table 81 shows that there is likelihood that there is relationship among gender, educational status and desired factors in processed and packed foods/drinks in only respondents whose regional native locations are South West and South-South.**

Education is Not Positively Related With Frequency of Purchase and Consumption of Processed (Flavored) and Packed Foods/Drinks. **Table 82 shows that there is likelihood that is likelihood of relationship among the variables- gender, educational status and frequency of consumption of processed and packed foods/drinks by only respondents whose regional native location is South East regional native location.**

Education is Not Positively Related With Hobbies of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks. **Table 83** shows that there is likelihood that is relationship among the variables- gender, educational status and of hobbies of only respondents whose regional native zones are North West, South West, and South East.

Education is Not Positively Related With Health Concerns of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks. **Table 84** shows that there is no likelihood there is relationship among the variables- gender, educational status and health concerns of consumers of processed and packed foods/drinks from any of the regional native locations.

Table 74

Relationship Among Gender, Educational Status, and Importance of Flavors in Processed

(Flavored) and Packed Foods/Drinks

Chi-Square Tests				
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	10.560[a]	12	.567
	Likelihood Ratio	10.855	12	.541
	Linear-by-Linear Association	.117	1	.732
	N of Valid Cases	498		
South West	Pearson Chi-Square	14.364[b]	15	.498
	Likelihood Ratio	17.212	15	.306
	Linear-by-Linear Association	1.569	1	.210
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	12.360[c]	15	.652
	Likelihood Ratio	13.044	15	.599
	Linear-by-Linear Association	2.042	1	.153
	N of Valid Cases	678		
North Central	Pearson Chi-Square	12.241[d]	16	.727
	Likelihood Ratio	17.208	16	.372
	Linear-by-Linear Association	1.989	1	.158
	N of Valid Cases	690		
South East	Pearson Chi-Square	27.195[e]	20	.130
	Likelihood Ratio	28.078	20	.108
	Linear-by-Linear Association	2.401	1	.121
	N of Valid Cases	1548		
North East	Pearson Chi-Square	15.038[f]	20	.774
	Likelihood Ratio	16.059	20	.713
	Linear-by-Linear Association	.070	1	.792
	N of Valid Cases	456		

Table 75

Relationship Among Gender, Educational Status, and Budget for Processed (Flavored) and

Packed Foods/Drinks

Region		Value	df	Asymp. Sig. (2-sided)
	Chi-Square Tests			
North West	Pearson Chi-Square	8.014[a]	8	.432
	Likelihood Ratio	8.477	8	.388
	Linear-by-Linear Association	.164	1	.685
	N of Valid Cases	498		
South West	Pearson Chi-Square	16.920[b]	10	.076
	Likelihood Ratio	17.242	10	.069
	Linear-by-Linear Association	1.459	1	.227
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	8.688[c]	10	.562
	Likelihood Ratio	10.614	10	.388
	Linear-by-Linear Association	.049	1	.824
	N of Valid Cases	678		
North Central	Pearson Chi-Square	7.925[d]	8	.441
	Likelihood Ratio	8.044	8	.429
	Linear-by-Linear Association	1.451	1	.228
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**19.279[e]**	**10**	**.037**
	Likelihood Ratio	20.166	10	.028
	Linear-by-Linear Association	4.486	1	.034
	N of Valid Cases	1548		
North East	Pearson Chi-Square	15.145[f]	10	.127
	Likelihood Ratio	19.130	10	.039
	Linear-by-Linear Association	5.655	1	.017
	N of Valid Cases	456		

Table 76

Relationship Among Gender, Educational Status, and Buying Decision Process Towards

Processed (Flavored) and Packed Foods/Drinks

Region	Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	19.563[a]	12	.076
	Likelihood Ratio	12.258	12	.425
	Linear-by-Linear Association	.317	1	.573
	N of Valid Cases	498		
South West	Pearson Chi-Square	6.810[b]	15	.963
	Likelihood Ratio	6.824	15	.962
	Linear-by-Linear Association	3.164	1	.075
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	16.744[c]	15	.334
	Likelihood Ratio	17.687	15	.279
	Linear-by-Linear Association	3.040	1	.081
	N of Valid Cases	678		
North Central	Pearson Chi-Square	10.288[d]	12	.591
	Likelihood Ratio	10.090	12	.608
	Linear-by-Linear Association	.304	1	.582
	N of Valid Cases	690		
South East	Pearson Chi-Square	13.187[e]	15	.588
	Likelihood Ratio	14.772	15	.468
	Linear-by-Linear Association	.484	1	.487
	N of Valid Cases	1548		
North East	Pearson Chi-Square	13.396[f]	15	.572
	Likelihood Ratio	15.295	15	.430
	Linear-by-Linear Association	.121	1	.728
	N of Valid Cases	456		

Table 77

Relationship Among Gender, Educational Status, and Place of Purchase of Processed

(Flavored) and Packed Foods/Drinks

Region		Value	df	Asymp. Sig. (2-sided)
Chi-Square Tests				
North West	Pearson Chi-Square	8.921[a]	12	.710
	Likelihood Ratio	9.690	12	.643
	Linear-by-Linear Association	1.165	1	.281
	N of Valid Cases	498		
South West	Pearson Chi-Square	6.750[b]	15	.964
	Likelihood Ratio	7.476	15	.943
	Linear-by-Linear Association	.294	1	.587
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	5.493[c]	10	.856
	Likelihood Ratio	7.155	10	.711
	Linear-by-Linear Association	.113	1	.736
	N of Valid Cases	678		
North Central	Pearson Chi-Square	6.448[d]	12	.892
	Likelihood Ratio	6.699	12	.877
	Linear-by-Linear Association	.510	1	.475
	N of Valid Cases	690		
South East	Pearson Chi-Square	**26.944[e]**	**15**	**.029**
	Likelihood Ratio	26.753	15	.031
	Linear-by-Linear Association	2.999	1	.083
	N of Valid Cases	1548		
North East	Pearson Chi-Square	6.695[f]	10	.754
	Likelihood Ratio	8.245	10	.605
	Linear-by-Linear Association	.206	1	.650
	N of Valid Cases	456		

Table 78

Relationship Among Gender, Educational Status, and Most Desired Attribute in Processed

(Flavored) and Packed Foods/Drinks

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	21.149[a]	16	.173
	Likelihood Ratio	19.509	16	.243
	Linear-by-Linear Association	3.054	1	.081
	N of Valid Cases	498		
South West	Pearson Chi-Square	17.759[b]	20	.603
	Likelihood Ratio	19.348	20	.499
	Linear-by-Linear Association	1.573	1	.210
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	23.531[c]	20	.263
	Likelihood Ratio	25.171	20	.195
	Linear-by-Linear Association	.449	1	.503
	N of Valid Cases	678		
North Central	Pearson Chi-Square	5.468[d]	16	.993
	Likelihood Ratio	5.868	16	.989
	Linear-by-Linear Association	.204	1	.652
	N of Valid Cases	690		
South East	Pearson Chi-Square	15.686[e]	20	.736
	Likelihood Ratio	19.129	20	.513
	Linear-by-Linear Association	.697	1	.404
	N of Valid Cases	1548		
North East	Pearson Chi-Square	18.503[f]	20	.554
	Likelihood Ratio	21.282	20	.381
	Linear-by-Linear Association	.023	1	.880
	N of Valid Cases	456		

Table 79

Relationship Among Gender, Educational Status, and Most Important Constraints Towards

Processed (Flavored) and Packed Foods/Drinks

Region		Value	df	Asymp. Sig. (2-sided)
	Chi-Square Tests			
North West	Pearson Chi-Square	20.390[a]	16	.203
	Likelihood Ratio	15.750	16	.471
	Linear-by-Linear Association	.085	1	.770
	N of Valid Cases	498		
South West	Pearson Chi-Square	16.039[b]	15	.379
	Likelihood Ratio	18.065	15	.259
	Linear-by-Linear Association	.844	1	.358
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	19.860[c]	15	.177
	Likelihood Ratio	11.153	15	.742
	Linear-by-Linear Association	1.234	1	.267
	N of Valid Cases	678		
North Central	Pearson Chi-Square	17.138[d]	16	.377
	Likelihood Ratio	18.148	16	.315
	Linear-by-Linear Association	1.335	1	.248
	N of Valid Cases	690		
South East	Pearson Chi-Square	18.730[e]	20	.539
	Likelihood Ratio	20.404	20	.433
	Linear-by-Linear Association	.828	1	.363
	N of Valid Cases	1548		
North East	Pearson Chi-Square	15.068[f]	15	.447
	Likelihood Ratio	17.110	15	.312
	Linear-by-Linear Association	.496	1	.481
	N of Valid Cases	456		

Table 80

Relationship Among Gender, Educational Status, and Constraints Towards Buying Processed

(Flavored) and Packed Foods/Drinks

Region	**Chi-Square Tests**	Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	24.346[a]	28	.663
	Likelihood Ratio	26.737	28	.533
	N of Valid Cases	498		
South West	**Pearson Chi-Square**	**57.469**[b]	**40**	**.036**
	Likelihood Ratio	54.320	40	.065
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	51.309[c]	65	.892
	Likelihood Ratio	56.008	65	.779
	N of Valid Cases	678		
North Central	**Pearson Chi-Square**	**52.071**[d]	**36**	**.041**
	Likelihood Ratio	39.628	36	.311
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**1.603E2**[e]	**95**	**.000**
	Likelihood Ratio	117.410	95	.059
	N of Valid Cases	1548		
North	Pearson Chi-Square	45.669[f]	45	.444
	Likelihood Ratio	49.672	45	.292
	N of Valid Cases	456		

Marital Status is Not Positively Related With Health Concerns of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks. **Table 85 shows the likelihood of a relationship among gender, marital status and health concerns of only consumers of processed and packed foods/drinks whose regional native locations are North-West and South-South.**

Marital Status is Not Positively Related With Hobbies of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks. **Table 86 shows that there is likelihood of a relationship among gender, marital status and hobbies of only consumers of processed and packed foods/drinks whose regional native locations are North-West, South-South, North-Central and South-East regional native locations.**

Marital Status is Not Positively Related With Frequency of Purchase and Consumption of Processed (Flavored) and Packed Foods/Drinks By Nigerian Consumers. **Table 87 shows that there is no likelihood there is a relationship among gender, marital status and frequency of purchase of processed and packed foods/drinks in any of the regional native zones.**

Marital Status is Not Positively Related With Desired Factors in Processed (Flavored) and Packed Foods/Drinks By Nigerian Consumers. **Table 88** shows that there is likelihood that there is relationship among the variables- gender, marital status and desired factors in purchasing processed and packed foods/drinks by only consumers whose regional native zones are South-South.

Table 81

Relationship Among Gender, Educational Status, and Desired Factors in Processed

(Flavored) and Packed Foods/Drinks

Region	Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	26.312[a]	20	.156
	Likelihood Ratio	27.425	20	.124
	N of Valid Cases	498		
South	**Pearson Chi-Square**	**36.627**[b]	**20**	**.013**
West	Likelihood Ratio	39.873	20	.005
	N of Valid Cases	1194		
South -	**Pearson Chi-Square**	**99.431**[c]	**50**	**.000**
South	Likelihood Ratio	65.498	50	.070
	N of Valid Cases	678		
North Central	Pearson Chi-Square	55.872[d]	52	.332
	Likelihood Ratio	51.802	52	.482
	N of Valid Cases	690		
South East	Pearson Chi-Square	82.645[e]	70	.143
	Likelihood Ratio	82.332	70	.149
	N of Valid Cases	1548		
North East	Pearson Chi-Square	25.082[f]	25	.458
	Likelihood Ratio	26.560	25	.378
	N of Valid Cases	456		

Table 82

Relationship Among Gender, Educational Status, and Frequency of Purchase and

Consumption of Processed (Flavored) and Packed Foods/Drinks

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	7.294[a]	12	.838
	Likelihood Ratio	8.486	12	.746
	N of Valid Cases	498		
South West	Pearson Chi-Square	22.885[b]	20	.294
	Likelihood Ratio	23.899	20	.247
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	26.228[c]	25	.396
	Likelihood Ratio	30.861	25	.194
	N of Valid Cases	678		
North Central	Pearson Chi-Square	17.036[d]	24	.847
	Likelihood Ratio	17.222	24	.839
	N of Valid Cases	690		
South **East**	**Pearson Chi-Square**	**42.261**[e]	**25**	**.017**
	Likelihood Ratio	38.777	25	.039
	N of Valid Cases	1548		
North East	Pearson Chi-Square	17.735[f]	15	.277
	Likelihood Ratio	21.080	15	.134
	N of Valid Cases	456		

Table 83

Relationship Among Gender, Educational Status, and Hobbies of Respondents

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North	**Pearson Chi-Square**	**66.042**[a]	**36**	**.002**
West	Likelihood Ratio	69.635	36	.001
	N of Valid Cases	498		
South	**Pearson Chi-Square**	**65.856**[b]	**35**	**.001**
West	Likelihood Ratio	77.391	35	.000
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	70.297[c]	70	.468
	Likelihood Ratio	72.731	70	.388
	N of Valid Cases	678		
North Central	Pearson Chi-Square	68.312[d]	88	.941
	Likelihood Ratio	68.831	88	.935
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**1.814E2**[e]	**140**	**.011**
	Likelihood Ratio	176.181	140	.021
	N of Valid Cases	1548		
North	Pearson Chi-Square	88.410[f]	80	.243
East	Likelihood Ratio	86.841	80	.281
	N of Valid Cases	456		

Table 84

Relationship Among Gender, Educational Status, and Health Concerns of Respondents

Region		Value	df	Asymp. Sig. (2-sided)
	Chi-Square Tests			
North West	Pearson Chi-Square	39.782[a]	32	.162
	Likelihood Ratio	41.372	32	.124
	N of Valid Cases	498		
South West	Pearson Chi-Square	84.086[b]	70	.120
	Likelihood Ratio	77.053	70	.263
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	35.567[c]	45	.842
	Likelihood Ratio	34.847	45	.862
	N of Valid Cases	678		
North Central	Pearson Chi-Square	34.745[d]	44	.840
	Likelihood Ratio	36.033	44	.798
	N of Valid Cases	690		
South East	Pearson Chi-Square	91.159[e]	85	.304
	Likelihood Ratio	91.289	85	.301
	N of Valid Cases	1548		
North East	Pearson Chi-Square	47.119[f]	45	.386
	Likelihood Ratio	52.273	45	.212
	N of Valid Cases	456		

Table 85

Relationship Among Gender, Marital Status, and Health Concerns of Respondents

	Chi-Square Tests			
Region		Value	df	Asymp. Sig. (2-sided)
North	**Pearson Chi-Square**	**50.932**[a]	**24**	**0.001**
West	**Likelihood Ratio**	**29.766**	**24**	**0.193**
	N of Valid Cases	498		
	Pearson Chi-Square	72.009[b]	98	0.977
South West	Likelihood Ratio	57.965	98	1
	N of Valid Cases	1194		
South	**Pearson Chi-Square**	**86.660**[c]	**54**	**0.003**
South	**Likelihood Ratio**	**46.207**	**54**	**0.766**
	N of Valid Cases	678		
North	Pearson Chi-Square	82.400[d]	77	0.316
Central	Likelihood Ratio	65.127	77	0.831
	N of Valid Cases	690		
	Pearson Chi-Square	1.200E2[e]	119	0.458
South East	Likelihood Ratio	87.093	119	0.988
	N of Valid Cases	1548		
	Pearson Chi-Square	36.179[f]	36	0.46
North East	Likelihood Ratio	41.609	36	0.24
	N of Valid Cases	456		

Table 86

Relationship Among Gender, Marital Status, and Hobbies of Respondents

Region		Value	df	Asymp. Sig. (2-sided)
Chi-Square Tests				
North	Pearson Chi-Square	68.124[a]	27	0
West	Likelihood Ratio	36.323	27	0.108
	N of Valid Cases	498		
South	Pearson Chi-Square	30.935[b]	49	0.98
West	Likelihood Ratio	30.982	49	0.979
	N of Valid Cases	1194		
South-	Pearson Chi-Square	1.136E2[c]	84	0.017
South	Likelihood Ratio	63.721	84	0.951
	N of Valid Cases	678		
North	Pearson Chi-Square	1.913E2[d]	154	0.022
Central	Likelihood Ratio	138.328	154	0.812
	N of Valid Cases	690		
South	Pearson Chi-Square	2.554E2[e]	196	0.003
East	Likelihood Ratio	149.868	196	0.994
	N of Valid Cases	1548		
North	Pearson Chi-Square	48.307[f]	64	0.928
East	Likelihood Ratio	51.621	64	0.867
	N of Valid Cases	456		

Marital Status is Not Positively Related With Buying Constraints Towards Processed (Flavored) and Packed Foods/Drinks. **Table 89** shows that there is likelihood of a relationship among gender, marital status and constraints to buying processed and packed foods/drink by only respondents whose regional native location is South-South.

Marital Status is Not Positively Related With Most Important Constraints Towards Processed (Flavored) and Packed Foods/Drinks. **Table 90** shows that there is likelihood of a relationship gender, marital status and constraints to buying processed and packed foods/drink by only respondents whose regional native location is North East.

Marital Status is Not Positively Related With Most Desired Attributes in Processed (Flavored) and Packed Foods/Drinks. **Table 91** shows that there is likelihood that there is relationship among gender, marital status and most desired attributes of processed and packed foods/drink by only respondents whose regional native location is South West.

Marital Status is Not Positively Related With Place of Purchase of Processed (Flavored) and Packed Foods/Drinks. **Table 92** shows that there is no likelihood of relationship among gender, marital status and place of purchase of processed and packed foods/drink by only respondents from any of the regional native locations.

Marital Status is Not Positively Related With Buying Decision Process Towards Processed (Flavored) and Packed Foods/Drinks. **Table 93** shows that there is no likelihood of relationship among gender, marital status and buying decision process of processed and packed foods/drink by only respondents any of the regional native locations.

Marital Status is Not Positively Related With Budget for Processed (Flavored) and Packed Foods/Drinks. **Table 94 shows that there is likelihood that there is relationship among gender, marital status and budget of only consumers of processed and packed foods/drink whose regional native zone is North Central.**

Marital Status is Not Positively Related With Importance Attributed to Processed (Flavored) and Packed Foods/Drinks. **Table 95 shows that there is likelihood of**

relationship among gender, marital status and importance of flavor in foods and drinks to only respondents regional native zone is North West.

Marital Status is Not Positively Related With Best Flavors in Processed (Flavored) and Packed Foods. **Table 96 shows that there is likelihood of relationship among gender, marital status and best food flavors to only respondents whose regional native zone is North Central.**

Marital Status is Not Positively Related With Best Flavors in Processed (Flavored) and Packed Drinks. **Table 97** shows that there is the likelihood of relationship among the variables- gender, marital status and best drink flavors to only respondents whose regional native locations are South-South and South-East.

Marital Status is Not Positively Related With Level of Satisfaction Nigerian Consumers Derive in Processed (Flavored) and Packed Foods. **Table 98** shows that there is the likelihood of relationship among gender, marital status and level of satisfaction in processed and packed foods/drinks to only respondents whose regional native zone is North-West.

Age Group is Not Positively Related With Level of Satisfaction Nigerian Consumers Derive in Processed (Flavored) and Packed Foods. **Table 99 shows that there is likelihood of relationship among gender, age group and level of satisfaction in processed and packed foods/drinks to respondents whose regional native locations are North-West and North-Central.**

Table 87

Relationship Among Gender, Marital Status, and Frequency of Purchase and Consumption of

Processed and Packed Foods/Drinks

	Chi-Square Tests			
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	10.059[a]	9	0.346
	Likelihood Ratio	11.534	9	0.241
	N of Valid Cases	498		
South West	Pearson Chi-Square	25.450[b]	21	0.228
	Likelihood Ratio	25.714	21	0.218
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	24.990[c]	30	0.726
	Likelihood Ratio	25.743	30	0.688
	N of Valid Cases	678		
North Central	Pearson Chi-Square	30.465[d]	42	0.907
	Likelihood Ratio	32.786	42	0.845
	N of Valid Cases	690		
South East	Pearson Chi-Square	35.267[e]	35	0.456
	Likelihood Ratio	36.483	35	0.4
	N of Valid Cases	1548		
North East	Pearson Chi-Square	17.082[f]	16	0.38
	Likelihood Ratio	15.187	16	0.511
	N of Valid Cases	456		

Table 88

Relationship Among Gender, Marital Status, and Desired Factors in Processed and Packed

Foods/Drinks

	Chi-Square Tests			
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	14.759[a]	15	0.469
	Likelihood Ratio	13.411	15	0.571
	N of Valid Cases	498		
South West	Pearson Chi-Square	32.653[b]	28	0.249
	Likelihood Ratio	34.903	28	0.173
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	1.570E2[c]	60	0
	Likelihood Ratio	55.034	60	0.657
	N of Valid Cases	678		
North Central	Pearson Chi-Square	66.416[d]	91	0.975
	Likelihood Ratio	66.085	91	0.977
	N of Valid Cases	690		
South East	Pearson Chi-Square	87.203[e]	98	0.774
	Likelihood Ratio	78.002	98	0.932
	N of Valid Cases	1548		
North East	Pearson Chi-Square	9.602[f]	20	0.975
	Likelihood Ratio	12.158	20	0.911
	N of Valid Cases	456		

Table 89

Relationship Among Gender, Marital Status, and Constraints Towards Buying Processed and

Packed Foods/Drinks

Chi-Square Tests			
Region	Value	df	Asymp. Sig. (2-sided)
North West			
Pearson Chi-Square	22.048^{a}	21	0.397
Likelihood Ratio	22.618	21	0.365
N of Valid Cases	498		
South West			
Pearson Chi-Square	59.879^{b}	56	0.337
Likelihood Ratio	44.794	56	0.859
N of Valid Cases	1194		
South-South			
Pearson Chi-Square	$1.601E2^{c}$	78	0
Likelihood Ratio	63.16	78	0.889
N of Valid Cases	678		
North Central			
Pearson Chi-Square	63.716^{d}	63	0.451
Likelihood Ratio	60.692	63	0.559
N of Valid Cases	690		
South East			
Pearson Chi-Square	78.533^{e}	133	1
Likelihood Ratio	82.158	133	1
N of Valid Cases	1548		
North East			
Pearson Chi-Square	34.739^{f}	36	0.528
Likelihood Ratio	41.185	36	0.254
N of Valid Cases	456		

Table 90

Relationship Among Gender, Marital Status, and Most Important Constraints Towards

Processed and Packed Foods/Drinks

Region	Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	5.857[a]	12	0.923
	Likelihood Ratio	7.02	12	0.856
	Linear-by-Linear Association	0.237	1	0.626
	N of Valid Cases	498		
South West	Pearson Chi-Square	15.976[b]	21	0.771
	Likelihood Ratio	15.852	21	0.778
	Linear-by-Linear Association	0.117	1	0.732
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	21.554[c]	18	0.252
	Likelihood Ratio	21.17	18	0.271
	Linear-by-Linear Association	0.358	1	0.549
	N of Valid Cases	678		
North Central	Pearson Chi-Square	26.039[d]	28	0.571
	Likelihood Ratio	29.938	28	0.366
	Linear-by-Linear Association	0.123	1	0.726
	N of Valid Cases	690		
South East	Pearson Chi-Square	20.038[e]	28	0.863
	Likelihood Ratio	22.548	28	0.755
	Linear-by-Linear Association	0.102	1	0.749
	N of Valid Cases	1548		
North East	Pearson Chi-Square	23.961[f]	12	0.021
	Likelihood Ratio	21.725	12	0.041
	Linear-by-Linear Association	0.105	1	0.746
	N of Valid Cases	456		

Table 91

Relationship Among Gender, Marital Status, and Most Desired Attributes in Processed and

Packed Foods/Drinks

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	17.945[a]	12	0.117
	Likelihood Ratio Linear-by-Linear	18.428	12	0.103
	Association	8.042	1	0.005
	N of Valid Cases	498		
South West	Pearson Chi-Square	48.056[b]	28	0.011
	Likelihood Ratio Linear-by-Linear	29.558	28	0.385
	Association	0.009	1	0.925
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	19.817[c]	24	0.707
	Likelihood Ratio Linear-by-Linear	18.06	24	0.8
	Association	0.004	1	0.949
	N of Valid Cases	678		
North Central	Pearson Chi-Square	34.135[d]	28	0.196
	Likelihood Ratio Linear-by-Linear	38.158	28	0.095
	Association	4.876	1	0.027
	N of Valid Cases	690		
South East	Pearson Chi-Square	23.710[e]	28	0.697
	Likelihood Ratio Linear-by-Linear	25.659	28	0.592
	Association	0	1	0.997
	N of Valid Cases	1548		
North East	Pearson Chi-Square	20.240[f]	16	0.21
	Likelihood Ratio	24.904	16	0.072
	Linear-by-Linear Association	0	1	0.998
	N of Valid Cases	456		

Table 92

Relationship Among Gender, Marital Status, and Place of Purchase of Processed and Packed

Foods/Drinks

Region	Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	4.138[a]	9	0.902
	Likelihood Ratio	4.998	9	0.835
	Linear-by-Linear Association	0.001	1	0.974
	N of Valid Cases	498		
South West	Pearson Chi-Square	17.287[b]	21	0.694
	Likelihood Ratio	18.609	21	0.61
	Linear-by-Linear Association	0.029	1	0.865
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	19.938[c]	12	0.068
	Likelihood Ratio	20.377	12	0.06
	Linear-by-Linear Association	5.403	1	0.02
	N of Valid Cases	113		
North Central	Pearson Chi-Square	28.468[d]	21	0.127
	Likelihood Ratio	29.296	21	0.107
	Linear-by-Linear Association	2.031	1	0.154
	N of Valid Cases	690		
South East	Pearson Chi-Square	19.047[e]	21	0.582
	Likelihood Ratio	19.492	21	0.554
	Linear-by-Linear Association	0.162	1	0.687
	N of Valid Cases	1548		
North East	Pearson Chi-Square	15.196[f]	8	0.055
	Likelihood Ratio	17.282	8	0.027
	Linear-by-Linear Association	0.302	1	0.582
	N of Valid Cases	456		

Table 93

Relationship Among Gender, Marital Status, and Buying Decision Process Towards

Processed and Packed Foods/Drinks

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	13.771[a]	9	0.131
	Likelihood Ratio Linear-by-Linear	14.706	9	0.099
	Association	0.027	1	0.869
	N of Valid Cases	498		
South West	Pearson Chi-Square	17.521[b]	21	0.679
	Likelihood Ratio Linear-by-Linear	19.265	21	0.568
	Association	3.464	1	0.063
	N of Valid Cases	1194		
South - South	Pearson Chi-Square	14.419[c]	18	0.701
	Likelihood Ratio Linear-by-Linear	15.291	18	0.642
	Association	1.068	1	0.301
	N of Valid Cases	678		
North Central	Pearson Chi-Square	17.322[d]	21	0.691
	Likelihood Ratio Linear-by-Linear	20.657	21	0.48
	Association	0.233	1	0.629
	N of Valid Cases	690		
South East	Pearson Chi-Square	10.082[e]	21	0.978
	Likelihood Ratio	13.338	21	0.896
	Linear-by-Linear Association	0	1	0.99
	N of Valid Cases	1548		
North East	Pearson Chi-Square	6.764[f]	12	0.873
	Likelihood Ratio	7.34	12	0.834
	Linear-by-Linear Association	0.001	1	0.981
	N of Valid Cases	456		

Table 94

Relationship Among Gender, Marital Status, and Budget of Nigerian Consumers for

Processed and Packed Foods/Drinks

Chi-Square Tests				
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	12.409[a]	6	0.053
	Likelihood Ratio Linear-by-Linear	11.657	6	0.07
	Association	3.876	1	0.049
	N of Valid Cases	498		
South West	Pearson Chi-Square	19.802[b]	14	0.137
	Likelihood Ratio Linear-by-Linear	17.957	14	0.209
	Association	0.095	1	0.758
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	11.649[c]	12	0.474
	Likelihood Ratio Linear-by-Linear	10.205	12	0.598
	Association	0.06	1	0.807
	N of Valid Cases	678		
North Central	Pearson Chi-Square	30.487[d]	14	0.007
	Likelihood Ratio Linear-by-Linear	31.47	14	0.005
	Association	1.947	1	0.163
	N of Valid Cases	690		
South East	Pearson Chi-Square	19.160[e]	14	0.159
	Likelihood Ratio Linear-by-Linear	19.258	14	0.155
	Association	1.117	1	0.291
	N of Valid Cases	1548		
North East	Pearson Chi-Square	4.601[f]	8	0.799
	Likelihood Ratio	4.895	8	0.769
	Linear-by-Linear Association	0.125	1	0.724
	N of Valid Cases	456		

Table 95

Relationship Among Gender, Marital Status, and Importance Ascribed to Flavors in

Processed and Packed Foods/Drinks

Region	sided)	Value	df	Asymp. Sig. (2-
	Chi-Square Tests			
North West	Pearson Chi-Square	19.242[a]	9	0.023
	Likelihood Ratio Linear-by-Linear	15.5	9	0.078
	Association	10.809	1	0.001
	N of Valid Cases	498		
South West	Pearson Chi-Square	30.240[b]	21	0.087
	Likelihood Ratio Linear-by-Linear	35.33	21	0.026
	Association	9.782	1	0.002
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	26.768[c]	18	0.083
	Likelihood Ratio Linear-by-Linear	30.644	18	0.032
	Association	0.127	1	0.721
	N of Valid Cases	678		
North Central	Pearson Chi-Square	15.218[d]	28	0.976
	Likelihood Ratio Linear-by-Linear	17.286	28	0.943
	Association	0.571	1	0.45
	N of Valid Cases	690		
South East	Pearson Chi-Square	33.441[e]	28	0.22
	Likelihood Ratio Linear-by-Linear	26.062	28	0.57
	Association	0.215	1	0.643
	N of Valid Cases	1548		
North East	Pearson Chi-Square	9.529[f]	16	0.89
	Likelihood Ratio	10.444	16	0.842
	Linear-by-Linear Association	0.292	1	0.589
	N of Valid Cases	456		

Table 96

Relationship Among Gender, Marital Status, and Best Flavors of Processed and Packed

Foods

Chi-Square Tests				
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	20.471[a]	12	0.059
	Likelihood Ratio Linear-by-Linear	17.698	12	0.125
	Association	0.095	1	0.758
	N of Valid Cases	498		
South West	Pearson Chi-Square	18.056[b]	28	0.925
	Likelihood Ratio Linear-by-Linear	19.397	28	0.885
	Association	0.361	1	0.548
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	26.877[c]	24	0.31
	Likelihood Ratio Linear-by-Linear	17.147	24	0.842
	Association	0.115	1	0.735
	N of Valid Cases	678		
North Central	Pearson Chi-Square	34.290[d]	21	0.034
	Likelihood Ratio Linear-by-Linear	30.888	21	0.076
	Association	0.12	1	0.729
	N of Valid Cases	690		
South East	Pearson Chi-Square	20.244[e]	28	0.855
	Likelihood Ratio Linear-by-Linear	21.834	28	0.789
	Association	2.101	1	0.147
	N of Valid Cases	1548		
North East	Pearson Chi-Square	10.244[f]	16	0.854
	Likelihood Ratio	12.923	16	0.678
	Linear-by-Linear Association	0.113	1	0.737
	N of Valid Cases	456		

Table 97

Relationship Among Gender, Marital Status, and Best Flavors of Processed and Packed

Drinks

Chi-Square Tests				
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	16.302[a]	9	0.061
	Likelihood Ratio	16.124	9	0.064
	Linear-by-Linear Association	2.42	1	0.12
	N of Valid Cases	498		
South West	Pearson Chi-Square	23.145[b]	21	0.336
	Likelihood Ratio	17.072	21	0.707
	Linear-by-Linear Association	0.402	1	0.526
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	29.179[c]	18	0.046
	Likelihood Ratio	27.413	18	0.072
	Linear-by-Linear Association	1.135	1	0.287
	N of Valid Cases	678		
North Central	Pearson Chi-Square	29.837[d]	21	0.095
	Likelihood Ratio	34.16	21	0.035
	Linear-by-Linear Association	1.401	1	0.237
	N of Valid Cases	690		
South East	Pearson Chi-Square	33.459[e]	21	0.041
	Likelihood Ratio	29.419	21	0.104
	Linear-by-Linear Association	0.074	1	0.785
	N of Valid Cases	1548		
North East	Pearson Chi-Square	3.990[f]	12	0.984
	Likelihood Ratio	4.405	12	0.975
	Linear-by-Linear Association	0	1	0.984
	N of Valid Cases	456		

Table 98

Relationship Among Gender, Marital Status, and Level of Satisfaction Derived from

Processed and Packed Foods/Drinks

Chi-Square Tests				
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	27.186[a]	9	0.001
	Likelihood Ratio	25.982	9	0.002
	Linear-by-Linear Association	17.101	1	0
	N of Valid Cases	498		
South West	Pearson Chi-Square	10.857[b]	21	0.965
	Likelihood Ratio	12.457	21	0.926
	Linear-by-Linear Association	0.141	1	0.707
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	11.904[c]	18	0.852
	Likelihood Ratio	13.856	18	0.738
	Linear-by-Linear Association	1.757	1	0.185
	N of Valid Cases	678		
North Central	Pearson Chi-Square	32.432[d]	21	0.053
	Likelihood Ratio	40.537	21	0.006
	Linear-by-Linear Association	1.149	1	0.284
	N of Valid Cases	690		
South East	Pearson Chi-Square	28.832[e]	21	0.118
	Likelihood Ratio	29.243	21	0.108
	Linear-by-Linear Association	3.303	1	0.069
	N of Valid Cases	1548		
North East	Pearson Chi-Square	9.625[f]	12	0.649
	Likelihood Ratio	13.086	12	0.363
	Linear-by-Linear Association	4.439	1	0.035
	N of Valid Cases	456		

Table 99

Relationship Among Gender, Age Group, and Level of Satisfaction Derived from Processed and Packed Foods/Drinks

Chi-Square Tests			
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	25.006[a]	15	0.05
	Likelihood Ratio	27.138	15	0.028
	Linear-by-Linear Association	4.19	1	0.041
	N of Valid Cases	498		
South West	Pearson Chi-Square	20.643[b]	15	0.149
	Likelihood Ratio	20.311	15	0.16
	Linear-by-Linear Association	0	1	0.987
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	11.888[c]	15	0.687
	Likelihood Ratio	14.596	15	0.481
	Linear-by-Linear Association	2.784	1	0.095
	N of Valid Cases	678		
North Central	Pearson Chi-Square	25.805[d]	12	0.011
	Likelihood Ratio	21.066	12	0.049
	Linear-by-Linear Association	0.309	1	0.578
	N of Valid Cases	690		
South East	Pearson Chi-Square	18.815[e]	15	0.222
	Likelihood Ratio	19.97	15	0.173
	Linear-by-Linear Association	0	1	0.994
	N of Valid Cases	1548		
North East	Pearson Chi-Square	10.124[f]	15	0.812
	Likelihood Ratio	12.841	15	0.615
	Linear-by-Linear Association	0.931	1	0.335
	N of Valid Cases	456		

Age Group is Not Positively Related With Best Flavors of Processed (Flavored) and Packed Drinks. **Table 100** shows the likelihood of relationship among gender, age group and best drink flavors to only respondents whose regional native locations are North-West, South-South and North-Central.

Age Group is Not Positively Related With Best Flavors of Processed (Flavored) and Packed Foods. Table 101 shows the likelihood of relationship among gender, age group and best food flavors to respondents whose regional native location is South-East.

Age Group is Not Positively Related With Importance Attributed to Flavor and Taste of Processed (Flavored) and Packed Foods/Drinks. Table 102 shows the likelihood of relationship among gender, age group and importance of flavor and taste to only respondents whose regional native location is South-East.

Age Group is Not Positively Related With Budget of Nigerian Consumers for Processed (Flavored) and Packed Foods/Drinks. Table 103 shows the likelihood of relationship gender, age group and budget of only respondents whose regional native locations are South-East and North-East.

Age Group is Not Positively Related With Buying Decision Process of Nigerian Consumers Towards Processed (Flavored) and Packed Foods/Drinks. Table 104 shows no likelihood of relationship among gender, age group and buying decision process.

Age Group is Not Positively Related With Place of Purchase of Processed (Flavored) and Packed Foods/Drinks. **Table 105 shows the likelihood of relationship among gender, age group and place of purchase for respondents whose regional native location is South-East.**

Age Group is Not Positively Related With Most Desired Attributes in Processed (Flavored) and Packed Foods/Drinks. **Table 106 shows no likelihood of relationship among gender, age group and most desired attributes of foods/drinks by respondents from any of the regional native locations.**

Table 100

Relationship Among Gender, Age Group, and Best Flavors in Processed and Packed

Foods/Drinks

Chi-Square Tests				
Region	sided)	Value	df	Asymp. Sig. (2-
North West	**Pearson Chi-Square**	**27.233**[a]	**15**	**0.027**
	Likelihood Ratio	**28.094**	**15**	**0.021**
	Linear-by-Linear Association	**0.419**	**1**	**0.517**
	N of Valid Cases	498		
South West	Pearson Chi-Square	9.670[b]	15	0.84
	Likelihood Ratio	9.702	15	0.838
	Linear-by-Linear Association	1.6	1	0.206
	N of Valid Cases	1194		
South-South	**Pearson Chi-Square**	**31.436**[c]	**15**	**0.008**
	Likelihood Ratio	**34.695**	**15**	**0.003**
	Linear-by-Linear Association	**5.802**	**1**	**0.016**
	N of Valid Cases	678		
North Central	**Pearson Chi-Square**	**22.575**[d]	**12**	**0.032**
	Likelihood Ratio	**21.824**	**12**	**0.04**
	Linear-by-Linear Association	**0.1**	**1**	**0.751**
	N of Valid Cases	690		
South East	Pearson Chi-Square	9.648[e]	15	0.841
	Likelihood Ratio	12.499	15	0.641
	Linear-by-Linear Association	0.58	1	0.446
	N of Valid Cases	1548		
North East	Pearson Chi-Square	10.889[f]	15	0.76
	Likelihood Ratio	12.841	15	0.615
	Linear-by-Linear Association	1.131	1	0.288
	N of Valid Cases	456		

Table 101

Relationship Among Gender, Age Group, and Best Flavors in Processed and Packed

Foods/Drinks

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	23.103[a]	20	0.284
	Likelihood Ratio Linear-by-Linear	29.204	20	0.084
	Association	0.43	1	0.512
	N of Valid Cases	498		
South West	Pearson Chi-Square	10.933[b]	20	0.948
	Likelihood Ratio Linear-by-Linear	13.485	20	0.856
	Association	0.265	1	0.607
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	20.916[c]	20	0.402
	Likelihood Ratio Linear-by-Linear	18.575	20	0.55
	Association	1.249	1	0.264
	N of Valid Cases	678		
North Central	Pearson Chi-Square	8.790[d]	12	0.721
	Likelihood Ratio Linear-by-Linear	9.203	12	0.685
	Association	0.307	1	0.58
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**36.208[e]**	**20**	**0.015**
	Likelihood Ratio Linear-by-Linear	**35.73**	**20**	**0.017**
	Association	**0.924**	**1**	**0.336**
	N of Valid Cases	1548		
North East	Pearson Chi-Square	8.564[f]	20	0.987
	Likelihood Ratio	12.081	20	0.913
	Linear-by-Linear Association	0.047	1	0.828
	N of Valid Cases	456		

Table 102

Relationship Among Gender, Age Group, and Importance Ascribed to Flavor and Taste of

Processed and Packed Foods/Drinks

Region		Value	df	Asymp. Sig. (2-sided)
	Chi-Square Tests			
North West	Pearson Chi-Square	11.603[a]	15	0.709
	Likelihood Ratio	12.54	15	0.638
	Linear-by-Linear Association	0.006	1	0.938
	N of Valid Cases	498		
South West	Pearson Chi-Square	9.052[b]	15	0.875
	Likelihood Ratio	10.626	15	0.779
	Linear-by-Linear Association	1.592	1	0.207
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	12.591[c]	15	0.634
	Likelihood Ratio	14.209	15	0.51
	Linear-by-Linear Association	1.985	1	0.159
	N of Valid Cases	678		
North Central	Pearson Chi-Square	16.933[d]	16	0.39
	Likelihood Ratio	18.306	16	0.306
	Linear-by-Linear Association	2.202	1	0.138
	N of Valid Cases	690		
South East	Pearson Chi-Square	33.528[e]	20	0.029
	Likelihood Ratio	31.821	20	0.045
	Linear-by-Linear Association	4.405	1	0.036
	N of Valid Cases	1548		
North East	Pearson Chi-Square	29.023[f]	20	0.087
	Likelihood Ratio	24.676	20	0.214
	Linear-by-Linear Association	0.087	1	0.768
	N of Valid Cases	456		

Table 103

Relationship Among Gender, Age Group, and Budget of Nigerian Consumers for Processed and Packed Foods/Drinks

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	8.067[a]	10	0.622
	Likelihood Ratio Linear-by-Linear	8.719	10	0.559
	Association	0.711	1	0.399
	N of Valid Cases	498		
South West	Pearson Chi-Square	5.424[b]	10	0.861
	Likelihood Ratio Linear-by-Linear	5.435	10	0.86
	Association	1.692	1	0.193
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	5.573[c]	10	0.85
	Likelihood Ratio Linear-by-Linear	5.248	10	0.874
	Association	0.056	1	0.813
	N of Valid Cases	678		
North Central	Pearson Chi-Square	5.862[d]	8	0.663
	Likelihood Ratio Linear-by-Linear	6.655	8	0.574
	Association	1.571	1	0.21
	N of Valid Cases	690		
South East	Pearson Chi-Square	26.822[e]	10	0.003
	Likelihood Ratio Linear-by-Linear	23.469	10	0.009
	Association	4.416	1	0.036
	N of Valid Cases	1548		
North East	Pearson Chi-Square	21.162[f]	10	0.02
	Likelihood Ratio	24.097	10	0.007
	Linear-by-Linear Association	3.986	1	0.046
	N of Valid Cases	456		

Table 104

Relationship Among Gender, Age Group, and Buying Decision Process Towards Processed

and Packed Foods/Drinks

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	16.514[a]	15	0.349
	Likelihood Ratio Linear-by-Linear	18.636	15	0.231
	Association	0.397	1	0.528
	N of Valid Cases	498		
South West	Pearson Chi-Square	16.799[b]	15	0.331
	Likelihood Ratio Linear-by-Linear	19.975	15	0.173
	Association	3.139	1	0.076
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	15.192[c]	15	0.438
	Likelihood Ratio Linear-by-Linear	16.778	15	0.332
	Association	3.459	1	0.063
	N of Valid Cases	678		
North Central	Pearson Chi-Square	5.776[d]	12	0.927
	Likelihood Ratio Linear-by-Linear	6.237	12	0.904
	Association	0.474	1	0.491
	N of Valid Cases	690		
South East	Pearson Chi-Square	21.002[e]	15	0.137
	Likelihood Ratio Linear-by-Linear	26.287	15	0.035
	Association	0.427	1	0.513
	N of Valid Cases	1548		
North East	Pearson Chi-Square	18.952[f]	15	0.216
	Likelihood Ratio	19.462	15	0.194
	Linear-by-Linear Association	0.018	1	0.893
	N of Valid Cases	456		

Age Group is Not Positively Related With Most Important Constraints Towards Processed (Flavored) and Packed Foods/Drinks. **Table 105** shows no likelihood of relationship among gender, age group and most important constraints respondents have towards buying and consuming of foods/drinks, among all respondents from any of the regional native locations.

Age Group is Not Positively Related With Buying Constraints Towards Processed (Flavored) and Packed Foods/Drinks. **Table 106** shows the likelihood of relationship among gender, age group and buying constraints of only respondents whose regional native locations are South-East and North-West.

Age Group is Not Positively Related With Desired Factors in Processed (Flavored) and Packed Foods/Drinks. **Table 107** shows the likelihood of relationship among gender, age group and desired factors in foods/drinks by only respondents whose regional native location is North-West.

Age Group is Not Positively Related With Frequency of Purchase and Consumption of Processed (Flavored) and Packed Foods/Drinks By Nigerian Consumers. **Table 108** shows that there is likelihood of relationship among gender, age group and frequency of purchase and consumption of processed (flavored) and packed foods/drinks by respondents whose regional native location is South-East.

Age Group is Not Positively Related With Hobbies of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks. **Table 109** shows the likelihood of relationship among gender, age group and hobbies of respondents whose regional native locations North-East, South-West and North-West.

Age Group is Not Positively Related With Health Concerns of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks. **Table 110** shows that the likelihood of relationship among gender, age group and health concerns of only respondents whose regional native location is South-East.

Monthly Earning is Not Positively Related With Budget of Nigerian Consumers for Processed (Flavored) and Packed Foods/Drinks. **Table 111** shows that there is likelihood of relationship among the variables- gender, budget and monthly earning of only respondents whose regional native location is South-East.

Monthly Earning is Not Positively Related With Level of Satisfaction Nigerian Consumers Derive from Processed (Flavored) and Packed Foods/Drinks. **Table 112** shows no likelihood of relationship among gender, monthly earning and level of satisfaction in processed and packed foods/drinks to respondents from any of regional native locations.

Monthly Earning is Not Positively Related With Best Flavors in Processed (Flavored) and Packed Foods. **Table 113** shows no likelihood of relationship among gender, age groups and extent of social group influence on respondents from any regional native locations.

Monthly Earning is Not Positively Related With Best Flavors in Processed (Flavored) and Packed Drinks. **Table 116** shows likelihood of relationship among gender, best drink flavors and monthly earnings of only respondents whose regional native location is South-South.

Monthly Earning is Not Positively Related With Importance Ascribed to Flavor and Taste of Processed (Flavored) and Packed Foods/Drinks. **Table 117** shows likelihood of relationship among gender, importance of food/drink flavor and monthly earnings of only respondents whose regional native location is South-East.

Monthly Earning is Not Positively Related With Budget of Nigerian Consumers for Processed (Flavored) and Packed Foods/Drinks. **Table 118** shows no likelihood of relationship among gender, budget for processed and packed foods/drinks, and monthly earning of respondents from any regional native locations.

Table 105

Relationship Among Gender, Age Group, and Place of Purchase of Processed and Packed

Foods/Drinks

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	18.297[a]	15	0.247
	Likelihood Ratio Linear-by-Linear	22.038	15	0.107
	Association	1.004	1	0.316
	N of Valid Cases	498		
South West	Pearson Chi-Square	24.391[b]	15	0.059
	Likelihood Ratio Linear-by-Linear	23.092	15	0.082
	Association	0.051	1	0.821
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	8.048[c]	10	0.624
	Likelihood Ratio Linear-by-Linear	10.327	10	0.412
	Association	0.174	1	0.676
	N of Valid Cases	678		
North Central	Pearson Chi-Square	5.035[d]	12	0.957
	Likelihood Ratio Linear-by-Linear	5.65	12	0.933
	Association	0.655	1	0.418
	N of Valid Cases	690		
South East	Pearson Chi-Square	34.152[e]	15	0.003
	Likelihood Ratio Linear-by-Linear	31.035	15	0.009
	Association	0.958	1	0.328
	N of Valid Cases	1548		
North East	Pearson Chi-Square	8.268[f]	10	0.603
	Likelihood Ratio	8.981	10	0.534
	Linear-by-Linear Association	0.024		
		456	1	0.876

Table 106

Relationship Among Gender, Age Group, and Most Desired Attributes of Processed and

Packed Foods/Drinks

Chi-Square Tests				
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	18.183[a]	20	0.575
	Likelihood Ratio Linear-by-Linear	22.073	20	0.337
	Association	2.065	1	0.151
	N of Valid Cases	498		
South West	Pearson Chi-Square	13.885[b]	20	0.836
	Likelihood Ratio Linear-by-Linear	17.985	20	0.588
	Association	2.288	1	0.13
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	15.868[c]	20	0.725
	Likelihood Ratio Linear-by-Linear	17.815	20	0.6
	Association	0.593	1	0.441
	N of Valid Cases	678		
North Central	Pearson Chi-Square	8.397[d]	16	0.936
	Likelihood Ratio Linear-by-Linear	10.198	16	0.856
	Association	0.2	1	0.655
	N of Valid Cases	690		
South East	Pearson Chi-Square	23.967[e]	20	0.244
	Likelihood Ratio Linear-by-Linear	26.061	20	0.164
	Association	1.025	1	0.311
	N of Valid Cases	1548		
North East	Pearson Chi-Square	14.699[f]	20	0.793
	Likelihood Ratio Linear-by-Linear	17.531	20	0.618
	Association	0.027	1	0.87
	N of Valid Cases	456		

Table 107

Relationship Among Gender, Age Group, and Most Important Constraints Towards

Processed and Packed Foods/Drinks

	Chi-Square Tests			
Region	sided)	Value	df	Asymp. Sig. (2-
North West	Pearson Chi-Square	19.164[a]	20	0.511
	Likelihood Ratio Linear-by-Linear	18.63	20	0.546
	Association N of Valid Cases	0.039 498	1	0.843
South West	Pearson Chi-Square	10.102[b]	15	0.813
	Likelihood Ratio Linear-by-Linear	10.502	15	0.787
	Association N of Valid Cases	0.434 1194	1	0.51
South-South	Pearson Chi-Square	6.218[c]	15	0.976
	Likelihood Ratio Linear-by-Linear	7.592	15	0.939
	Association N of Valid Cases	0.722 678	1	0.395
North Central	Pearson Chi-Square	13.460[d]	16	0.639
	Likelihood Ratio Linear-by-Linear	10.421	16	0.844
	Association N of Valid Cases	1.52 690	1	0.218
South East	Pearson Chi-Square	15.731[e]	20	0.733
	Likelihood Ratio Linear-by-Linear	19.204	20	0.509
	Association N of Valid Cases	1.123 1548	1	0.289
North East	Pearson Chi-Square	13.401[f]	15	0.571
	Likelihood Ratio Linear-by-Linear	14.307	15	0.502
	Association N of Valid Cases	0.182 456	1	0.67

Table 108

Relationship Among Gender, Age Group, and Constraints Towards Purchasing of Processed and Packed Foods/Drinks

Chi-Square Tests			
Region	Value	df	Asymp. Sig. (2-sided)
North West			
Pearson Chi-Square	55.172[a]	35	0.016
Likelihood Ratio	42.055	35	0.192
N of Valid Cases	498		
South West			
Pearson Chi-Square	32.149[b]	40	0.807
Likelihood Ratio	36.35	40	0.635
N of Valid Cases	1194		
South-South			
Pearson Chi-Square	63.832[c]	65	0.518
Likelihood Ratio	50.676	65	0.904
N of Valid Cases	678		
North Central			
Pearson Chi-Square	38.493[d]	36	0.357
Likelihood Ratio	40.93	36	0.263
N of Valid Cases	690		
South East			
Pearson Chi-Square	1.247E2[e]	95	0.022
Likelihood Ratio	106.423	95	0.199
N of Valid Cases	1548		
North East			
Pearson Chi-Square	42.602[f]	45	0.574
Likelihood Ratio	40.809	45	0.65
N of Valid Cases	456		

Table 109

Relationship Among Gender, Age Group, and Desired Factors in Processed and Packed

Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	**Pearson Chi-Square**	**61.946[a]**	**25**	**0**
	Likelihood Ratio	**55.425**	**25**	**0**
	N of Valid Cases	498		
South West	Pearson Chi-Square	28.604[b]	20	0.096
	Likelihood Ratio	31.761	20	0.046
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	48.475[c]	50	0.535
	Likelihood Ratio	39.775	50	0.849
	N of Valid Cases	678		
North Central	Pearson Chi-Square	59.031[d]	52	0.234
	Likelihood Ratio	51.966	52	0.475
	N of Valid Cases	690		
South East	Pearson Chi-Square	84.507[e]	70	0.114
	Likelihood Ratio	84.322	70	0.117
	N of Valid Cases	1548		
North East	Pearson Chi-Square	25.917[f]	25	0.412
	Likelihood Ratio	24.714	25	0.478
	N of Valid Cases	456		

Table 110

Relationship Among Gender, Age Group, and Frequency of Purchase and Consumption of

Processed and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	12.461[a]	15	0.644
	Likelihood Ratio	14.179	15	0.512
	N of Valid Cases	498		
South West	Pearson Chi-Square	25.502[b]	20	0.183
	Likelihood Ratio	27.085	20	0.133
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	16.030[c]	25	0.914
	Likelihood Ratio	15.986	25	0.915
	N of Valid Cases	678		
North Central	Pearson Chi-Square	26.654[d]	24	0.321
	Likelihood Ratio	19.595	24	0.72
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**74.622[e]**	**25**	**0**
	Likelihood Ratio	**71.18**	**25**	**0**
	N of Valid Cases	1548		
North East	Pearson Chi-Square	16.814[f]	15	0.33
	Likelihood Ratio	17.695	15	0.279
	N of Valid Cases	456		

Table 111

Relationship Among Gender, Age Group, and Hobbies of Nigerian Consumers of Processed and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North **West**	**Pearson Chi-Square**	**79.004[a]**	**45**	**0.001**
	Likelihood Ratio	**74.56**	**45**	**0.004**
	N of Valid Cases	498		
South **West**	**Pearson Chi-Square**	**73.293[b]**	**35**	**0**
	Likelihood Ratio	**77.821**	**35**	**0**
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	49.813[c]	70	0.968
	Likelihood Ratio	54.666	70	0.911
	N of Valid Cases	678		
North Central	Pearson Chi-Square	69.134[d]	88	0.932
	Likelihood Ratio	74.827	88	0.84
	N of Valid Cases	690		
South East	Pearson Chi-Square	1.606E2[e]	140	0.112
	Likelihood Ratio	161.796	140	0.1
	N of Valid Cases	1548		
North East	**Pearson Chi-Square**	**136.844[f]**	**80**	**0**
	Likelihood Ratio	**97.29**	**80**	**0.092**
	N of Valid Cases	456		

Table 112

Relationship Among Gender, Age Group, and Health Concerns of Nigerian Consumers of

Processed and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	55.695[a]	40	0.051
	Likelihood Ratio	49.462	40	0.145
	N of Valid Cases	498		
South West	Pearson Chi-Square	1.035E2[b]	70	0.006
	Likelihood Ratio	104.867	70	0.004
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	39.283[c]	45	0.712
	Likelihood Ratio	36.611	45	0.809
	N of Valid Cases	678		
North Central	Pearson Chi-Square	29.929[d]	44	0.948
	Likelihood Ratio	34.037	44	0.86
	N of Valid Cases	690		
South East	Pearson Chi-Square	1.368E2[e]	85	0
	Likelihood Ratio	118.024	85	0.01
	N of Valid Cases	1548		
North East	Pearson Chi-Square	40.499[f]	45	0.663
	Likelihood Ratio	43.368	45	0.541
	N of Valid Cases	456		

Table 113

Relationship Among Gender, Monthly Earning, and Budget of Nigerian Consumers for

Processed and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	17.954[a]	18	0.459
	Likelihood Ratio	21.086	18	0.275
	Linear-by-Linear Association	0.135	1	0.713
	N of Valid Cases	498		
South West	Pearson Chi-Square	14.995[b]	16	0.525
	Likelihood Ratio	15.228	16	0.508
	Linear-by-Linear Association	1.63	1	0.202
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	11.309[c]	18	0.881
	Likelihood Ratio	11.975	18	0.849
	Linear-by-Linear Association	0.26	1	0.61
	N of Valid Cases	678		
North Central	Pearson Chi-Square	15.103[d]	18	0.655
	Likelihood Ratio	19.129	18	0.384
	Linear-by-Linear Association	1.324	1	0.25
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**39.475[e]**	**18**	**0.002**
	Likelihood Ratio	**43.77**	**18**	**0.001**
	Linear-by-Linear Association	**3.215**	**1**	**0.073**
	N of Valid Cases	1548		
North East	Pearson Chi-Square	19.723[f]	18	0.349
	Likelihood Ratio	26.973	18	0.08
	Linear-by-Linear Association	3.103	1	0.078
	N of Valid Cases	456		

Table 114

Relationship Among Gender, Monthly Earning, and Level of Satisfaction Derived By

Nigerian Consumers from Processed and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	35.097[a]	27	0.136
	Likelihood Ratio	40.725	27	0.044
	Linear-by-Linear Association	4.209	1	0.04
	N of Valid Cases	498		
South West	Pearson Chi-Square	28.052[b]	24	0.258
	Likelihood Ratio	34.247	24	0.08
	Linear-by-Linear Association	0.331	1	0.565
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	32.555[c]	27	0.212
	Likelihood Ratio	35.709	27	0.122
	Linear-by-Linear Association	1.634	1	0.201
	N of Valid Cases	678		
North Central	Pearson Chi-Square	24.007[d]	27	0.63
	Likelihood Ratio	25.693	27	0.536
	Linear-by-Linear Association	0.155	1	0.694
	N of Valid Cases	690		
South East	Pearson Chi-Square	31.086[e]	27	0.268
	Likelihood Ratio	33.61	27	0.178
	Linear-by-Linear Association	0.162	1	0.687
	N of Valid Cases	1548		
North East	Pearson Chi-Square	26.007[f]	27	0.518
	Likelihood Ratio	31.519	27	0.25
	Linear-by-Linear Association	0.844	1	0.358
	N of Valid Cases	456		

Table 115

Relationship Among Gender, Monthly Earning, and Best Flavor To Nigerian Consumers for

Processed and Packed Foods

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	25.798[a]	36	.896
	Likelihood Ratio	25.500	36	.904
	Linear-by-Linear Association	.381	1	.537
	N of Valid Cases	498		
South West	Pearson Chi-Square	40.129[b]	32	.153
	Likelihood Ratio	44.304	32	.073
	Linear-by-Linear Association	.089	1	.765
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	26.808[c]	36	.867
	Likelihood Ratio	28.999	36	.790
	Linear-by-Linear Association	.557	1	.455
	N of Valid Cases	678		
North Central	Pearson Chi-Square	26.287[d]	27	.503
	Likelihood Ratio	31.136	27	.266
	Linear-by-Linear Association	.239	1	.625
	N of Valid Cases	690		
South East	Pearson Chi-Square	34.115[e]	36	.558
	Likelihood Ratio	38.232	36	.368
	Linear-by-Linear Association	.121	1	.728
	N of Valid Cases	1548		
North East	Pearson Chi-Square	28.513[f]	36	.808
	Likelihood Ratio	28.677	36	.802
	Linear-by-Linear Association	.030	1	.863
	N of Valid Cases	456		

Monthly Earning is Not Positively Related With Level of Satisfaction Nigerian Consumers Derive from Processed (Flavored) and Packed Foods/Drinks. **Table 119** shows no likelihood of relationship among gender, monthly earning and level of satisfaction in processed and packed foods/drinks to respondents from any of regional native locations.

Monthly Earning is Not Positively Related With Place of Purchase of Processed (Flavored) and Packed Foods/Drinks. **Table 120 shows likelihood of relationship among gender, place of purchase of processed and packed foods/drinks, and monthly earning of only respondents whose regional native location is South-East.**

Monthly Earning of Nigerian Consumers is Not Positively Related With Most Desired Attributes in Processed (Flavored) and Packed Foods/Drinks. **Table 121** shows likelihood of relationship among gender, most desired attribute of processed foods/drinks and monthly earnings of only respondents whose regional native location is South-South**.** locations.

Monthly Earning of Nigerian Consumers is Not Positively Related With Frequency of Purchase and Consumption of Processed (Flavored) and Packed Foods/Drinks. **Table 122** shows likelihood of relationship among the variables- gender, monthly earnings and frequency of purchase of processed and packed foods/drinks by only respondents whose regional native location is South-South.

Monthly Earning of Nigerian Consumers is Not Positively Related With Most Important Constraints Towards Processed (Flavored) and Packed Foods/Drinks. **Table 123** shows no likelihood of relationship among gender, monthly earning and most important constraint to purchasing processed and packed foods/drinks by respondents from any regional native locations.

Table 116

Relationship Among Gender, Monthly Earning, and Best Flavors for Processed and Packed

Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-
North West	sided) Pearson Chi-Square .822	20.208[a]	27	
	Likelihood Ratio	25.318	27	.557
	Linear-by-Linear Association	1.133	1	.287
	N of Valid Cases	498		
South West	Pearson Chi-Square	22.230[b]	24	.566
	Likelihood Ratio	26.489	24	.329
	Linear-by-Linear Association	.388	1	.533
	N of Valid Cases	1194		
South-South	**Pearson Chi-Square**	**40.603[c]**	**27**	**.045**
	Likelihood Ratio	41.564	27	.036
	Linear-by-Linear Association	3.380	1	.066
	N of Valid Cases	678		
North Central	Pearson Chi-Square	30.499[d]	27	.292
	Likelihood Ratio	37.847	27	.080
	Linear-by-Linear Association	.712	1	.399
	N of Valid Cases	690		
South East	Pearson Chi-Square	17.248[e]	27	.925
	Likelihood Ratio	21.561	27	.759
	Linear-by-Linear Association	.267	1	.605
	N of Valid Cases	1548		
North East	Pearson Chi-Square	24.635[f]	27	.595
	Likelihood Ratio	30.350	27	.299
	Linear-by-Linear Association	1.995	1	.158
	N of Valid Cases	456		

Table 117

Relationship Among Gender, Monthly Earning, and Importance Ascribed to Flavor and Taste

of Processed and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	18.797[a]	27	.877
	Likelihood Ratio	20.109	27	.826
	Linear-by-Linear Association	.067	1	.796
	N of Valid Cases	498		
South West	Pearson Chi-Square	10.703[b]	24	.991
	Likelihood Ratio	14.521	24	.934
	Linear-by-Linear Association	1.968	1	.161
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	30.150[c]	27	.307
	Likelihood Ratio	31.153	27	.265
	Linear-by-Linear Association	2.460	1	.117
	N of Valid Cases	678		
North Central	Pearson Chi-Square	34.830[d]	36	.524
	Likelihood Ratio	37.482	36	.401
	Linear-by-Linear Association	1.685	1	.194
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**52.871[e]**	**36**	**.035**
	Likelihood Ratio	52.109	36	.040
	Linear-by-Linear Association	6.316	1	.012
	N of Valid Cases	1548		
North East	Pearson Chi-Square	34.347[f]	36	.547
	Likelihood Ratio	35.817	36	.477
	Linear-by-Linear Association	.015	1	.904
	N of Valid Cases	456		

Table 118

Relationship Among Gender, Monthly Earning, and Budget for Processed and Packed

Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-
North West	sided) Pearson Chi-Square .268	31.071[a]	27	
	Likelihood Ratio	34.401	27	.155
	Linear-by-Linear Association	.397	1	.529
	N of Valid Cases	498		
South West	Pearson Chi-Square	17.873[b]	24	.809
	Likelihood Ratio	21.366	24	.617
	Linear-by-Linear Association	2.870	1	.090
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	28.829[c]	27	.369
	Likelihood Ratio	30.669	27	.285
	Linear-by-Linear Association	2.969	1	.085
	N of Valid Cases	678		
North Central	Pearson Chi-Square	16.598[d]	27	.941
	Likelihood Ratio	17.770	27	.910
	Linear-by-Linear Association	.079	1	.779
	N of Valid Cases	690		
South East	Pearson Chi-Square	29.802[e]	27	.323
	Likelihood Ratio	35.158	27	.135
	Linear-by-Linear Association	.193	1	.660
	N of Valid Cases	1548		
North East	Pearson Chi-Square	21.064[f]	27	.783
	Likelihood Ratio	26.278	27	.503
	Linear-by-Linear Association	.009	1	.923
	N of Valid Cases	456		

Table 119

Relationship Among Gender, Monthly Earning, and Buying Decision Process Towards

Processed and Packed Foods/Drinks

Region		Value	df	Asymp. Sig. (2-sided)
	Chi-Square Tests			
North West	Pearson Chi-Square	31.071[a]	27	0.268
	Likelihood Ratio	34.401	27	0.155
	Linear-by-Linear Association	0.397	1	0.529
	N of Valid Cases	498		
South West	Pearson Chi-Square	17.873[b]	24	0.809
	Likelihood Ratio	21.366	24	0.617
	Linear-by-Linear Association	2.87	1	0.09
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	28.829[c]	27	0.369
	Likelihood Ratio	30.669	27	0.285
	Linear-by-Linear Association	2.969	1	0.085
	N of Valid Cases	678		
North Central	Pearson Chi-Square	16.598[d]	27	0.941
	Likelihood Ratio	17.77	27	0.91
	Linear-by-Linear Association	0.079	1	0.779
	N of Valid Cases	690		
South East	Pearson Chi-Square	29.802[e]	27	0.323
	Likelihood Ratio	35.158	27	0.135
	Linear-by-Linear Association	0.193	1	0.66
	N of Valid Cases	1548		
North East	Pearson Chi-Square	21.064[f]	27	0.783
	Likelihood Ratio	26.278	27	0.503
	Linear-by-Linear Association	0.009	1	0.923
	N of Valid Cases	456		

Table 120

Relationship Among Gender, Monthly Earning, and Place of Purchase of Processed and

Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	25.696[a]	27	.536
	Likelihood Ratio	31.483	27	.252
	Linear-by-Linear Association	1.681	1	.195
	N of Valid Cases	498		
South West	Pearson Chi-Square	25.270[b]	24	.391
	Likelihood Ratio	22.722	24	.536
	Linear-by-Linear Association	.139	1	.709
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	9.879[c]	18	.936
	Likelihood Ratio	11.538	18	.870
	Linear-by-Linear Association	.327	1	.567
	N of Valid Cases	678		
North Central	Pearson Chi-Square	28.773[d]	27	.372
	Likelihood Ratio	31.429	27	.254
	Linear-by-Linear Association	.195	1	.659
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**41.830[e]**	**27**	**.034**
	Likelihood Ratio	44.489	27	.018
	Linear-by-Linear Association	.113	1	.737
	N of Valid Cases	1548		
North East	Pearson Chi-Square	26.938[f]	18	.080
	Likelihood Ratio	29.387	18	.044
	Linear-by-Linear Association	.662	1	.416
	N of Valid Cases	456		

Monthly Earning of Nigerian Consumers is Not Positively Related With Constraints Towards Buying Processed (Flavored) and Packed Foods/Drinks. **Table 124** shows that there is likelihood of relationship among gender, buying constraint for processed and packed foods/drinks, and monthly earning of only respondents whose regional native locations are South-South and North-East.

Monthly Earning of Nigerian Consumers is Not Positively Related With Desired Factors in Processed (Flavored) and Packed Foods/Drinks. **Table 125** shows no likelihood of relationship among gender, desired factors and monthly earning of respondents from any of regional native locations.

Monthly Earning of Nigerian Consumers is Not Positively Related With Hobbies of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks. **Table 126** shows likelihood of relationship among gender, hobbies and monthly earning of only respondents whose regional native locations are North-West, South-West, South-South and South-East.

Monthly Earning of Nigerian Consumers is Not Positively Related With Health Concerns of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks. **Table 127** shows that there is likelihood of relationship among gender, health concern and monthly earning of only respondents whose regional native location is South-East.

Most Desired Factors in Processed (Flavored) and Packed Foods/Drinks Based on Gender. **Table 128 and figure 38 show the desired factors in processed and packed foods/drinks based on gender**. The most desired single factor by both male (25.97%) and female (35.38%) respondents is convenience. 11.86% of male and 14.15% of female respondents desired delicacy and palatability due to taste and flavor most. While higher percentage of male respondents desires availability (15.25%) of processed and packed foods/drinks more than delicacy and palatability due to taste and flavor (11.86%), it is opposite with female respondents as 12% of them indicated availability as the most desired factor. As

the single most desired factor, about 7% of male and 8% of female respondents indicate price; and these are the least proportion of respondents among others.

Most Desired Single Attributes of Processed (Flavoured) and Packed Foods/Drinks. **Table 129 and figure 34 show the most desired attributes of processed and packed foods/drinks**. 44.8% of female respondents and 47.1% of male respondents had health benefits and /or safety as the most desired single attributes in processed and packed foods/drinks. 26.7% of male respondents and 28.3% of female respondents had taste/flavor as the most desired single attribute of processed and packed foods/drinks. As the most desired attribute, only about 6% each of male and female respondents indicate price; about 12% each of male and female respondents indicate 'ease-to-use'; and 7.2% of male respondents, and 8.8% of female respondents indicate appearance as the most desired attribute. Price is the least most desired single attribute among respondents.

Table 121

Relationship Among Gender, Monthly Earning, and Most Desired Attribute of Processed and

Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	44.277[a]	36	.162
	Likelihood Ratio	48.682	36	.077
	Linear-by-Linear Association	2.275	1	.132
	N of Valid Cases	498		
South West	Pearson Chi-Square	19.379[b]	32	.961
	Likelihood Ratio	20.000	32	.951
	Linear-by-Linear Association	1.726	1	.189
	N of Valid Cases	1194		
South-South	**Pearson Chi-Square**	**52.248[c]**	**36**	**.039**
	Likelihood Ratio	48.887	36	.074
	Linear-by-Linear Association	.000	1	.995
	N of Valid Cases	678		
North Central	Pearson Chi-Square	41.371[d]	36	.248
	Likelihood Ratio	41.750	36	.235
	Linear-by-Linear Association	.080	1	.778
	N of Valid Cases	690		
South East	Pearson Chi-Square	40.212[e]	36	.289
	Likelihood Ratio	46.350	36	.116
	Linear-by-Linear Association	2.627	1	.105
	N of Valid Cases	1548		
North East	Pearson Chi-Square	42.743[f]	36	.204
	Likelihood Ratio	47.262	36	.099
	Linear-by-Linear Association	.258	1	.612
	N of Valid Cases	456		

Table 122

Relationship Among Gender, Monthly Earning, and Frequency of Purchase and

Consumption of Processed and Packed Foods/Drinks

Chi-Square Tests			
Region	Value	df	Asymp. Sig. (2-sided)
North West			
Pearson Chi-Square	20.731[a]	27	0.799
Likelihood Ratio	22.073	27	0.734
N of Valid Cases	498		
South West			
Pearson Chi-Square	23.571[b]	32	0.86
Likelihood Ratio	25.695	32	0.777
N of Valid Cases	1194		
South-South			
Pearson Chi-Square	1.043E2[c]	45	0
Likelihood Ratio	62.156	45	0.046
N of Valid Cases	678		
North Central			
Pearson Chi-Square	48.084[d]	54	0.701
Likelihood Ratio	47.088	54	0.736
N of Valid Cases	690		
South East			
Pearson Chi-Square	56.299[e]	45	0.12
Likelihood Ratio	58.495	45	0.085
N of Valid Cases	1548		
North East			
Pearson Chi-Square	18.066[f]	27	0.901
Likelihood Ratio	19.961	27	0.832
N of Valid Cases	456		

Table 123

Relationship Among Gender, Monthly Earning, and Most Important Constraints Towards

Processed and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	35.475[a]	36	.493
	Likelihood Ratio	29.110	36	.785
	Linear-by-Linear Association	.039	1	.844
	N of Valid Cases	498		
South West	Pearson Chi-Square	22.257[b]	24	.564
	Likelihood Ratio	27.896	24	.264
	Linear-by-Linear Association	.778	1	.378
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	23.679[c]	27	.648
	Likelihood Ratio	21.225	27	.776
	Linear-by-Linear Association	.573	1	.449
	N of Valid Cases	678		
North Central	Pearson Chi-Square	29.508[d]	36	.769
	Likelihood Ratio	32.425	36	.639
	Linear-by-Linear Association	.055	1	.814
	N of Valid Cases	690		
South East	Pearson Chi-Square	25.780[e]	36	.896
	Likelihood Ratio	26.469	36	.877
	Linear-by-Linear Association	1.884	1	.170
	N of Valid Cases	1548		
North East	Pearson Chi-Square	25.054[f]	27	.571
	Likelihood Ratio	24.358	27	.610
	Linear-by-Linear Association	.065	1	.798
	N of Valid Cases	456		

Table 124

Relationship Among Gender, Monthly Earning, and Constraints Towards Buying of

Processed and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	72.351[a]	63	.197
	Likelihood Ratio	55.614	63	.734
	N of Valid Cases	498		
South West	Pearson Chi-Square	69.034[b]	64	.311
	Likelihood Ratio	63.192	64	.505
	N of Valid Cases	1194		
South South	**Pearson Chi-Square**	**1.562E2[c]**	**117**	**.009**
	Likelihood Ratio	112.509	117	.600
	N of Valid Cases	678		
North Central	Pearson Chi-Square	67.883[d]	81	.851
	Likelihood Ratio	71.488	81	.766
	N of Valid Cases	690		
South East	Pearson Chi-Square	1.863E2[e]	171	.200
	Likelihood Ratio	163.614	171	.644
	N of Valid Cases	1548		
North East	**Pearson Chi-Square**	**145.496[f]**	**81**	**.000**
	Likelihood Ratio	71.072	81	.777
	N of Valid Cases	456		

Table 125

Relationship Among Gender, Monthly Earning, and Desired Factors in Processed and

Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	51.556[a]	45	.233
	Likelihood Ratio	50.860	45	.254
	N of Valid Cases	498		
South West	Pearson Chi-Square	38.964[b]	32	.185
	Likelihood Ratio	41.354	32	.124
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	1.051E2[c]	90	.131
	Likelihood Ratio	69.803	90	.943
	N of Valid Cases	678		
North Central	Pearson Chi-Square	1.245E2[d]	117	.300
	Likelihood Ratio	110.079	117	.662
	N of Valid Cases	690		
South East	Pearson Chi-Square	1.454E2[e]	126	.114
	Likelihood Ratio	136.970	126	.238
	N of Valid Cases	1548		
North East	Pearson Chi-Square	46.511[f]	45	.410
	Likelihood Ratio	43.130	45	.551
	N of Valid Cases	456		

Table 126

Relationship Among Gender, Monthly Earning, and Hobbies of Nigerian Consumers of

Processed and Packed Foods/Drinks

Region		Value	df	Asymp. Sig. (2-sided)
		Chi-Square Tests		
North West	**Pearson Chi-Square**	**1.148E2[a]**	**81**	**.008**
	Likelihood Ratio	106.288	81	.031
	N of Valid Cases	498		
South West	**Pearson Chi-Square**	**91.263[b]**	**56**	**.002**
	Likelihood Ratio	85.834	56	.006
	N of Valid Cases	1194		
South-South	**Pearson Chi-Square**	**1.669E2[c]**	**126**	**.009**
	Likelihood Ratio	104.256	126	.921
	N of Valid Cases	678		
North Central	Pearson Chi-Square	1.722E2[d]	198	.907
	Likelihood Ratio	141.986	198	.999
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**2.945E2[e]**	**252**	**.034**
	Likelihood Ratio	268.726	252	.224
	N of Valid Cases	1548		
North East	Pearson Chi-Square	155.330[f]	144	.245
	Likelihood Ratio	119.870	144	.929
	N of Valid Cases	456		

Significant difference at P<0.05

Table 127

Relationship Among Gender, Monthly Earning, and Health Concerns of Nigerian Consumers

of Processed and Packed Foods/Drinks

Chi-Square Tests				
Region		Value	df	Asymp. Sig. (2-sided)
North West	Pearson Chi-Square	86.085[a]	72	.123
	Likelihood Ratio	73.701	72	.422
	N of Valid Cases	498		
South West	Pearson Chi-Square	1.112E2[b]	112	.503
	Likelihood Ratio	100.695	112	.770
	N of Valid Cases	1194		
South-South	Pearson Chi-Square	67.560[c]	81	.857
	Likelihood Ratio	61.616	81	.946
	N of Valid Cases	678		
North Central	Pearson Chi-Square	1.022E2[d]	99	.394
	Likelihood Ratio	75.132	99	.965
	N of Valid Cases	690		
South East	**Pearson Chi-Square**	**1.846E2[e]**	**153**	**.042**
	Likelihood Ratio	171.766	153	.142
	N of Valid Cases	1548		
North East	Pearson Chi-Square	95.852[f]	81	.124
	Likelihood Ratio	86.380	81	.321
	N of Valid Cases	456		

*Correlation is significant at the 0.05 level (2-tailed)

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

Table 128

Desired Factors in Processed and Packed Foods/Drinks Based on Gender

	Single Desired Factors		
Gender		Frequency	Percent	Cumulative Percent

Gender		Frequency	Percent	Cumulative Percent
Male	**1- Convenience**	642	**25.91**	25.91
	2- Price (affordability)	174	**7.02**	32.93
	3- Delicacy and Palatability due to taste and flavor	294	**11.86**	44.79
	4- Availability	378	**15.25**	60.04
	5- All of the above	990	39.96	100
	Total	2814	100	
Female	**1- Convenience**	690	**35.38**	35.38
	2- Price (affordability)	156	**8**	43.38
	3- Delicacy and Palatability due to taste and flavor	276	**14.15**	57.53
	4- Availability	234	**12**	69.53
	5- All of the above	594	30.47	100
	Total	2250	100	

Figure 33

Desired Factors in Processed and Packed Foods/Drinks Based on Gender
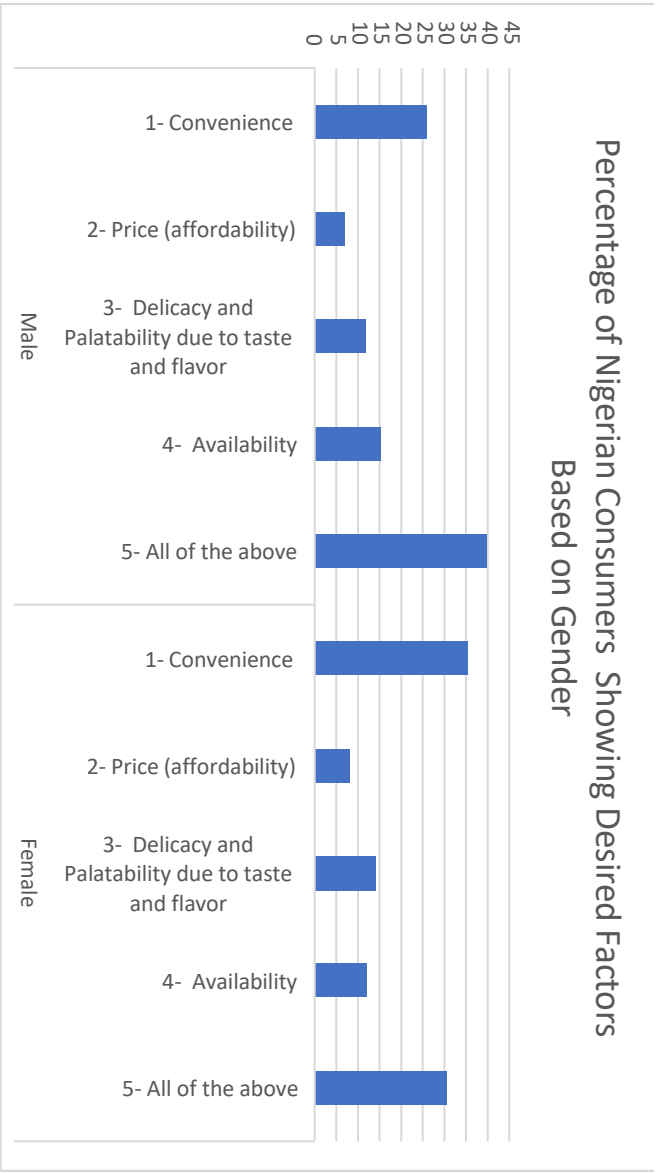
Table 129

Most Desired Attributes in Processed and Packed Foods/Drinks Based on Gender

Gender	Most desired attribute	Frequency	Percent	Cumulative Percent
Male	1- Appearance	204	7.2	7.2
	2-Taste/Flavor	750	**26.7**	33.9
	3-Price	186	6.6	40.5
	4-Health benefits and /or safety	1326	**47.1**	87.6
	5- Ease to use	348	12.4	100
	Total	2814	100	
Female	1- Appearance	198	8.8	8.8
	2-Taste/Flavor	636	**28.3**	37.1
	3-Price	138	6.1	43.2
	4-Health benefits and /or safety	1008	**44.8**	88
	5- Ease to use	270	12	100
	Total	2250	100	

Figure 34

Most Desired Attributes in Processed and Packed Foods/Drinks Based on Gender

Table 130 and figure 35 show the desired factors in processed and packed foods/drinks based on age group. Percentage respondents with desired single factor of convenience by young adults are 24.58%; middle age adult (30.56%) and old adult (43.30%) respondents. Across different age groups, convenience was indicated as the single most desired factor with highest percentage of respondents, while at different percentages, next is availability, delicacy and palatability and affordability.
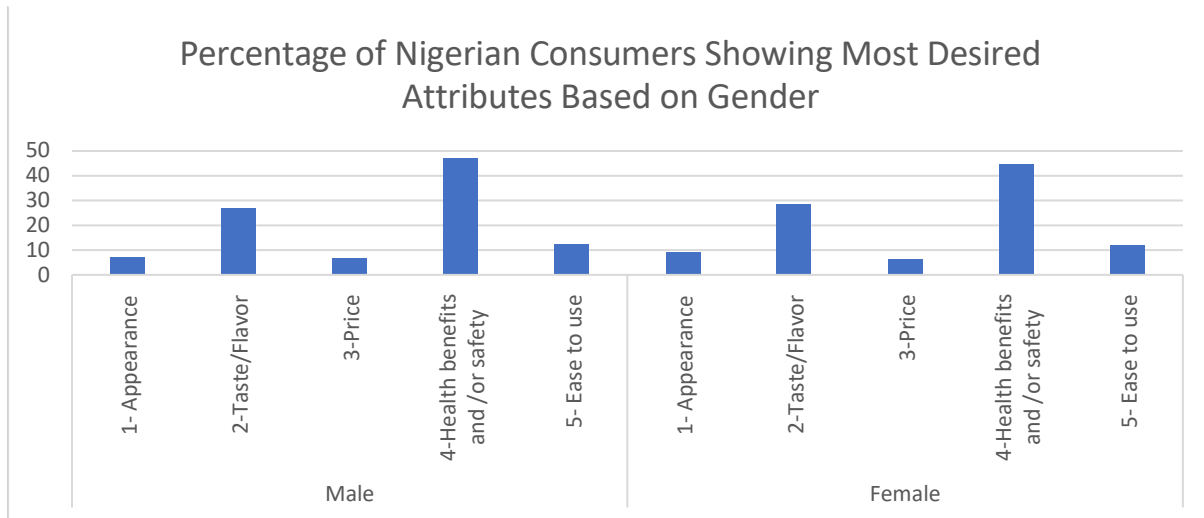
Table 131 and figure 36 show the most desired attribute in processed and packed foods/drinks based on age group. Across different age groups, highest percentages of young adult, middle age respondents, and old adult respondents have health benefits and/or safety as the most desired single attributes in processed and packed foods/drinks. Across all age groups, health benefits and/or safety was the most desired attribute in processed (flavored) and packed foods/drinks, being indicated as the highest percentage of respondents, while at different percentages, next is taste/flavor, and affordability.

Table 132 and figure 38 show the desired factors in processed and packed foods/drinks based on different regional home locations. Across different regional home locations, convenience is the single most desired factor, while at different percentages, next desired factors vary with regional home location - availability, delicacy and palatability and affordability. To some, delicacy and palatability due to taste/flavour that is next to convenience- reflecting extent of importance attributed to taste/flavour-/delicacy by them, while to some price – reflecting price-sensitivity of those.

Table 133 and figure 39 show the most desired attribute in processed and packed foods/drinks based on regional home locations. Health benefits and /or safety is extraordinarily high as the single most desired attributes across all regional home locations, while next to it is taste/flavour with respondents from Eastern Nigeria having the highest and Northern Nigeria as next.

Table 130

Desired Factors in Processed and Packed Foods/Drinks Based on Age Group

Desired Factors			
Age group		Frequency	Percent
Young adults (19-39 years)	1- Convenience	612	24.58
	2- Price (affordability)	204	8.19
	3- Delicacy and Palatability due to taste and flavor	276	11.08
	4- Availability	450	18.07
	5- All of the above	948	38.08
	Total	2490	100
Middle age adults (40-59 years)	1- Convenience	330	30.56
	2- Price (affordability)	66	6.11
	3- Delicacy and Palatability due to taste and flavor	144	13.33
	4- Availability	90	8.33
	5- All of the above	450	41.67
	Total	1080	100
Old adults (60-69 years)	1- Convenience	390	43.3
	2- Price (affordability)	60	6.7
	3- Delicacy and Palatability due to taste and flavor	150	16.7
	4- Availability	72	8
	5- All of the above	186	20.7
	Total	900	100

Figure 35

Desired Factors in Processed and Packed Foods/Drinks Based on Age Group
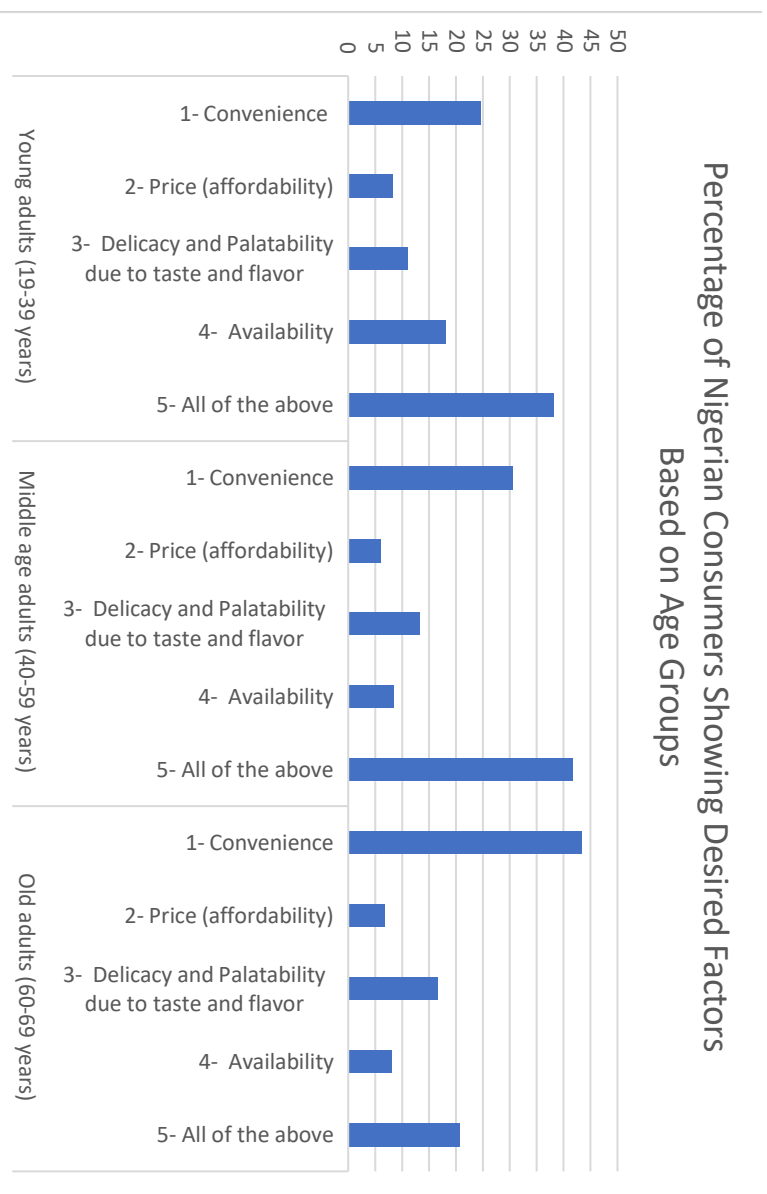
Table 131

Most Desired Attributes in Processed and Packed Foods/Drinks Based on Age Group

Age_group	Most desired attribute	Frequency	Percent
	1- Appearance	228	8
Young adults (19-39 years)	2-Taste/Flavor	780	27.4
	3-Price (affordability)	186	6.5
	4-Health benefits and /or safety	1344	47.3
	5- Ease to use	306	10.7
	Total	2844	100
	1- Appearance	78	5.9
Middle age adults (40-59 years)	2-Taste/Flavor	324	24.5
	3-Price(affordability)	60	4.5
	4-Health benefits and /or safety	642	48.6
	5- Ease to use	216	16.4
	Total	1320	100
	1- Appearance	96	10.7
Old adults (60-69 years)	2-Taste/Flavor	282	31.3
	3-Price(affordability)	78	8.7
	4-Health benefits and /or safety	348	38.7
	5- Ease to use	96	10.7
	Total	900	100

Figure 36

Most Desired Attributes in Processed and Packed Foods/Drinks Based on Age Group
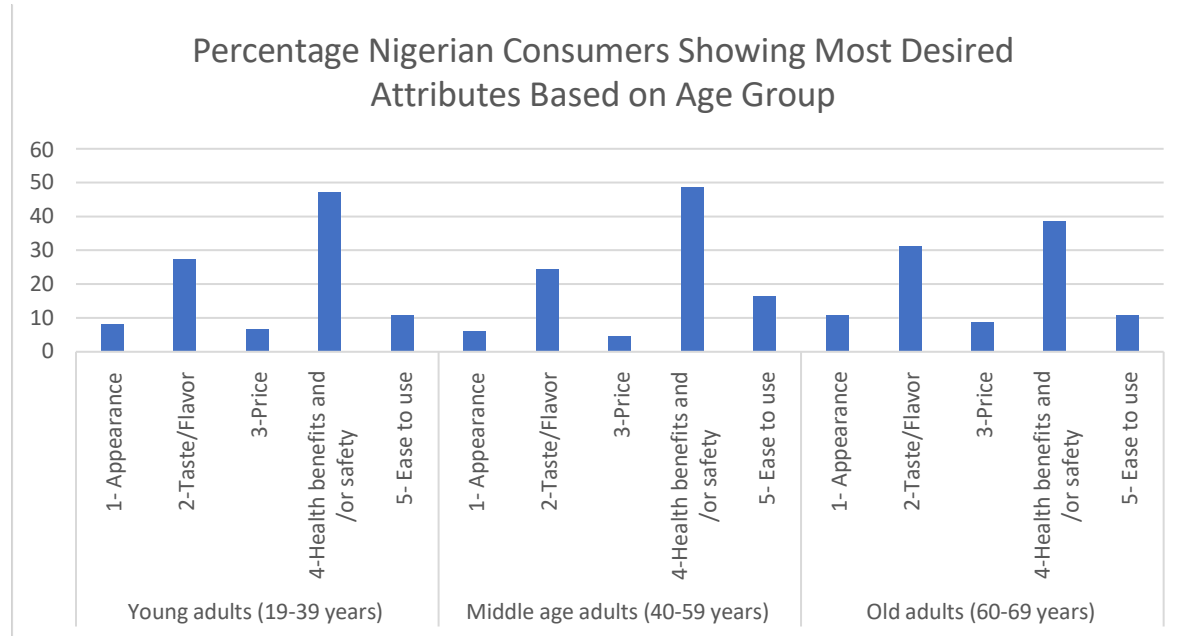
Table 132

Desired Factors in Processed and Packed Foods/Drinks Based on Regional Home Location

Home location		Frequency	Percent	Cumulative Percent
Northern Nigeria	1- Convenience	168	25.45	25.45
	2- Price (affordability)	72	10.91	36.36
	3- Delicacy and Palatability due to taste and flavor	96	14.55	50.91
	4- Availability	72	10.91	61.82
	5- All of the above	252	38.18	100
	Total	660	100	
Western Nigeria	1- Convenience	294	20.76	16.8
	2- Price (affordability)	108	7.63	23.7
	3- Delicacy and Palatability due to taste and flavor	168	11.86	33.3
	4- Availability	216	15.25	45.7
	5- All of the above	630	44.49	81.8
	Total	1416	100	
Eastern Nigeria	1- Convenience	384	41.56	41.56
	2- Price (affordability)	30	3.25	44.81
	3- Delicacy and Palatability due to taste and flavor	126	13.64	58.45
	4- Availability	168	18.18	76.63
	5- All of the above	216	23.38	100
	Total	978	100	
Southern Nigeria	1- Convenience	246	29.29	29.29
	2- Price (affordability)	42	5	34.29
	3- Delicacy and Palatability due to taste and flavor	126	15	49.29
	4- Availability	60	7.14	56.43
	5- All of the above	366	43.57	100
	Total	840	100	
FCT or Middle Belt or Central	1- Convenience	240	40.82	40.82
	2- Price (affordability)	78	13.26	54.08
	3- Delicacy and Palatability due to taste and flavor	54	9,18	63.26
	4- Availability	96	16.33	79.59
	5- All of the above	120	20.41	100
	Total	588	100	

Figure 37

Desired Factors in Processed and Packed Foods/Drinks Based on Regional Home Location
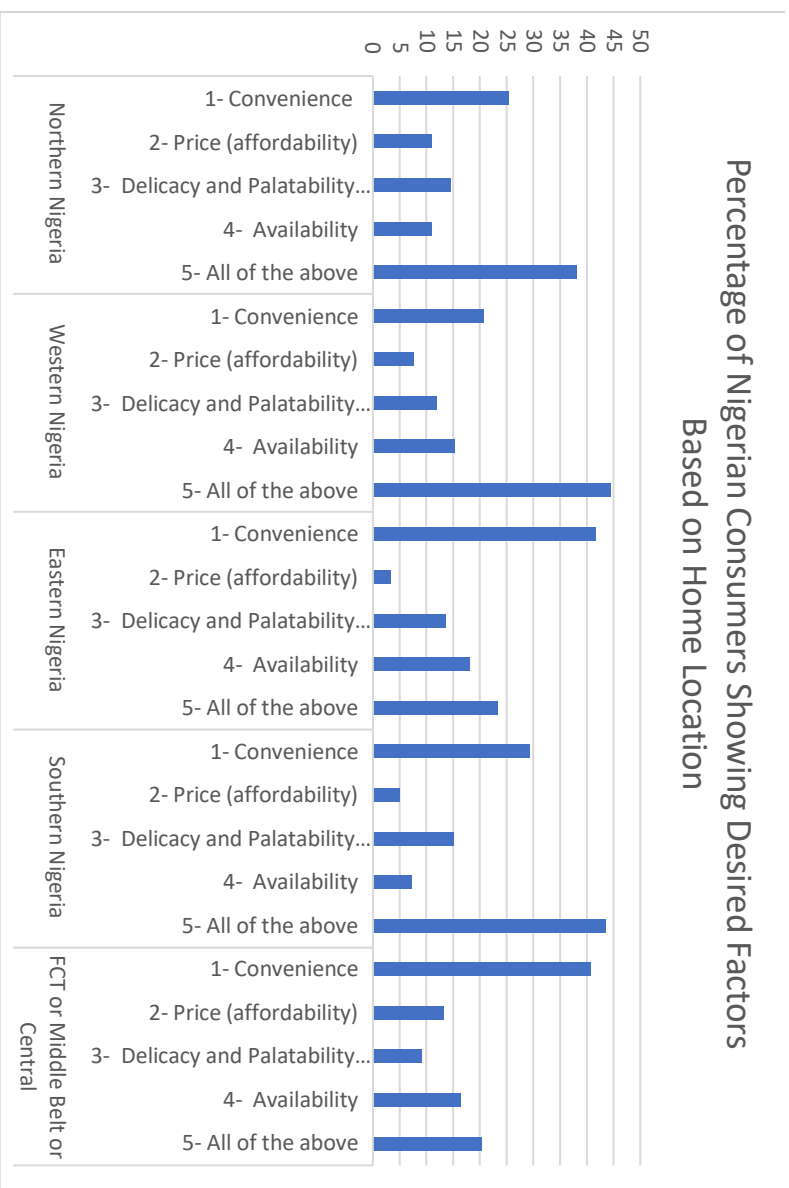
Table 133

Most Desired Attributes in Processed and Packed Foods/Drinks Based on Regional Home

Location

Most desired attribute			
Home location	Frequency	Percent	Cumulative Percent
Northern Nigeria			
1- Appearance	42	5.7	5.7
2-Taste/Flavor	222	30.1	35.8
3-Price	42	5.7	41.5
4-Health benefits and /or safety	306	41.5	82.9
5- Ease to use	126	17.1	100
Total	738	100	
Western Nigeria			
1- Appearance	108	6.2	6.2
2-Taste/Flavor	510	29.2	35.4
3-Price	102	5.8	41.2
4-Health benefits and /or safety	858	49.1	90.4
5- Ease to use	168	9.6	100
Total	1746	100	
Eastern Nigeria			
1- Appearance	120	12.3	12.3
2-Taste/Flavor	300	30.7	42.9
3-Price	36	3.7	46.6
4-Health benefits and /or safety	414	42.3	89
5- Ease to use	102	10.4	99.4
Total	972	100	
Southern Nigeria			
1- Appearance	30	3.1	3.1
2-Taste/Flavor	234	24.1	27.2
3-Price	84	8.6	35.8
4-Health benefits and /or safety	444	45.7	81.5
5- Ease to use	180	18.5	100
Total	972	100	
FCT or Middle Belt or Central			
1- Appearance	102	16.2	16.2
2-Taste/Flavor	120	19	35.2
3-Price	60	9.5	44.8
4-Health benefits and /or safety	312	49.5	94.3
5- Ease to use	36	5.7	100
Total	630	100	

Figure 38

Most Desired Attributes in Processed and Packed Foods/Drinks Based on Regional Home Location

Percentage Nigerian Consumers Showing Most Desired Attributes Based on Home Location
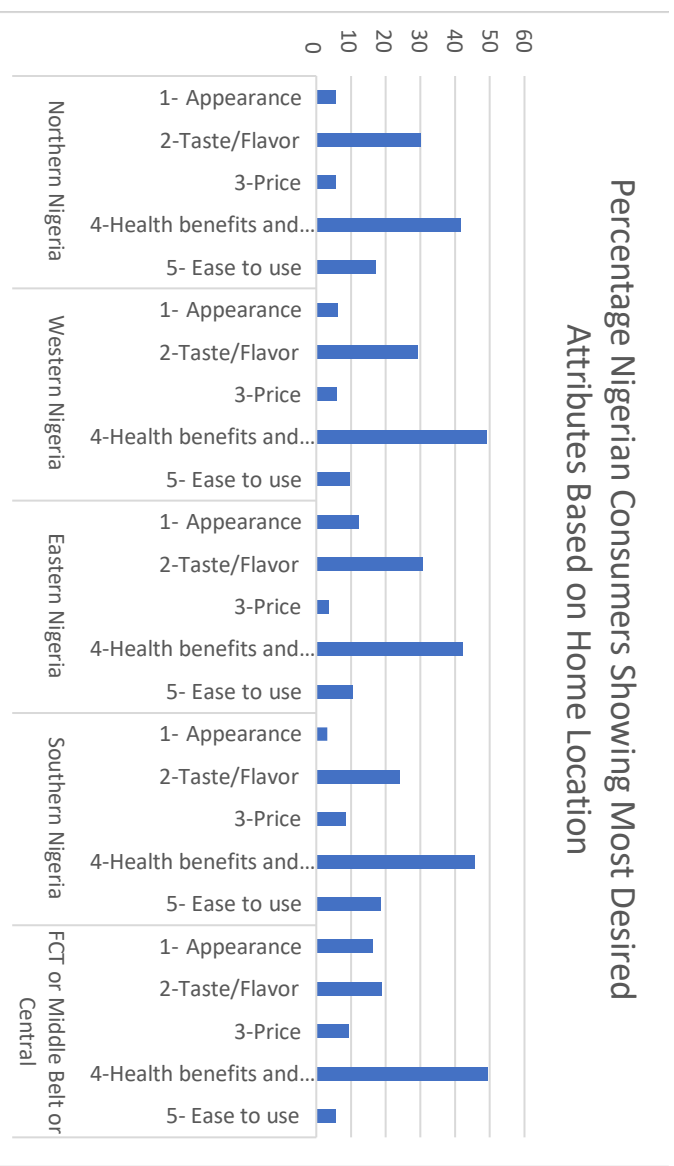
Table 134 and figure 39 show the most desired factors across different educational status. Across all educational status, convenience is the single most desired factor with postgraduate respondents having the highest percentage. Availability is next but undergraduate respondents has the highest percentage, and also in price (affordability).

Table 135 and figure 40 show the most desired attributes across different educational status. Across all educational status, health benefits and/or safety is the most desired attribute with graduate (51.3%) and postgraduate (48.3%) respondents having the highest percentage. Taste/flavour is next for all regardless of educational status.

Table 136 presents effects of characteristics of flavored processed and packed food and drink on purchasing behaviors of Nigerian consumers. It shows that health benefits and/or safety is the most desired attribute of processed and packed foods and drinks, regardless of consumers' demographics. The next most desired attribute indicated by high number of participants was taste/flavour.

Largest number of respondents had convenience as a single desired factor. Overall, the largest number of respondents were only just satisfied with products that existed in Nigerian market, while the next large number of respondents neither liked nor disliked processed and packed foods and drinks.

Table 134

Desired Factors in Processed and Packed Foods/Drinks Based on Educational Status

	Desired Factors			
Education		Frequency	Percent	Cumulative Percent
Non Graduate	1- Convenience	282	25	25
	2- Price (affordability)	96	8.51	33.51
	3- Delicacy and Palatability due to taste and flavor	150	13.3	46.81
	4- Availability	246	21.81	68.62
	5- All of the above	354	31.38	100
	Total	1128	100	
Graduate	1- Convenience	606	28.13	28.13
	2- Price (affordability)	168	7.8	35.93
	3- Delicacy and Palatability due to taste and flavor	246	11.42	47.35
	4- Availability	300	13.93	61.28
	5- All of the above	834	38.72	100
	Total	2154	100	
Post graduate	1- Convenience	444	38.74	38.74
	2- Price (affordability)	66	5.76	44.5
	3- Delicacy and Palatability due to taste and flavor	174	15.18	59.68
	4- Availability	66	5.76	65.44
	5- All of the above	396	34.56	100
	Total	1146	100	

Figure 39

Desired Factors in Processed and Packed Foods/Drinks Based on Educational Status

Percentage of Nigerian Consumers Showing Desired Factors Based on Educational Status
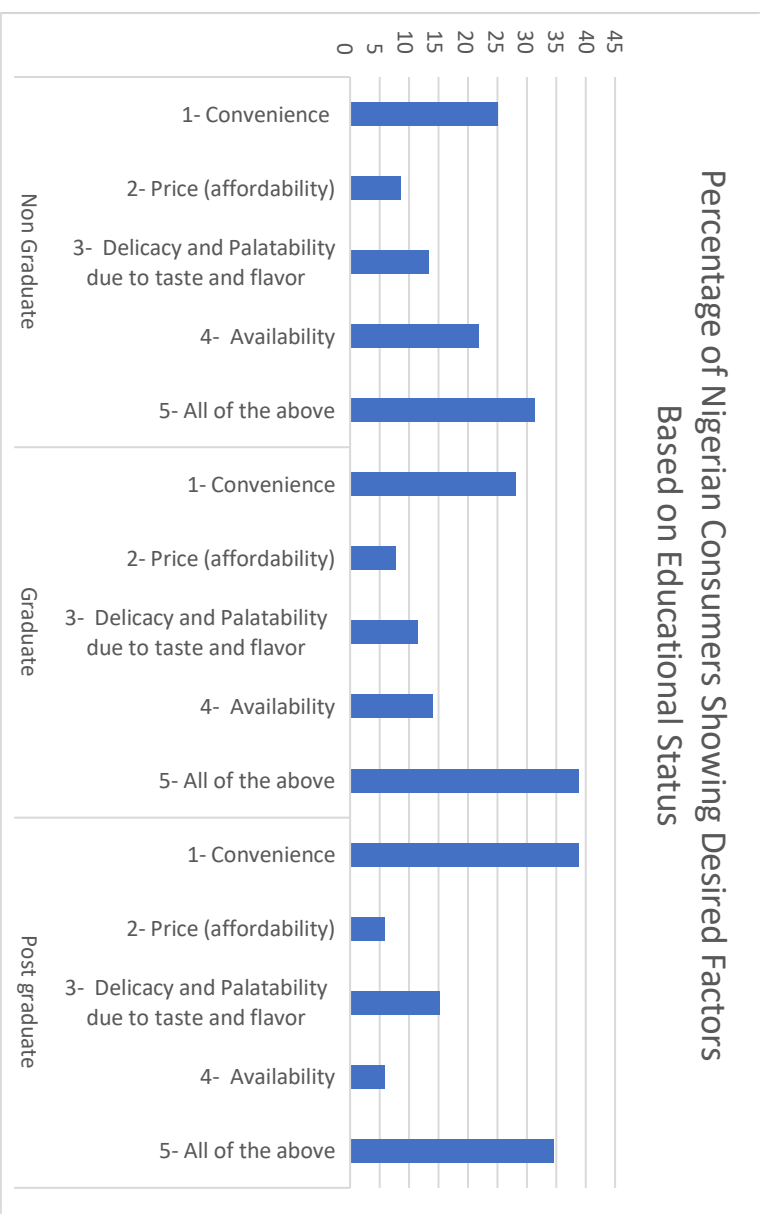
Table 135

Most Desired Attributes in Processed and Packed Foods/Drinks Based on Educational Status

	Most desired attribute			
Education		Frequency	Percent	Cumulative Percent
Non Graduate	1- Appearance	144	12.1	12.1
	2-Taste/Flavor	**444**	**37.2**	**49.2**
	3-Price	138	11.6	60.8
	4-Health benefits and /or safety	**390**	**32.7**	**93.5**
	5-Ease to use	78	6.5	100
	Total	1194	100	
Graduate	1- Appearance	150	6.1	6.1
	2-Taste/Flavor	654	26.7	32.8
	3-Price	102	4.2	36.9
	4-Health benefits and /or safety	**1260**	**51.3**	**88.3**
	5-Ease to use	288	13.5	100
	Total	2454	100	
Post graduate	1- Appearance	108	7.6	7.6
	2-Taste/Flavor	288	20.3	28
	3-Price	84	5.9	33.9
	4-Health benefits and /or safety	**684**	**48.3**	**82.2**
	5-Ease to use	252	17.8	100
	Total	1416	100	

Figure 40

Most Desired Attributes in Processed and Packed Foods/Drinks Based on Educational Status
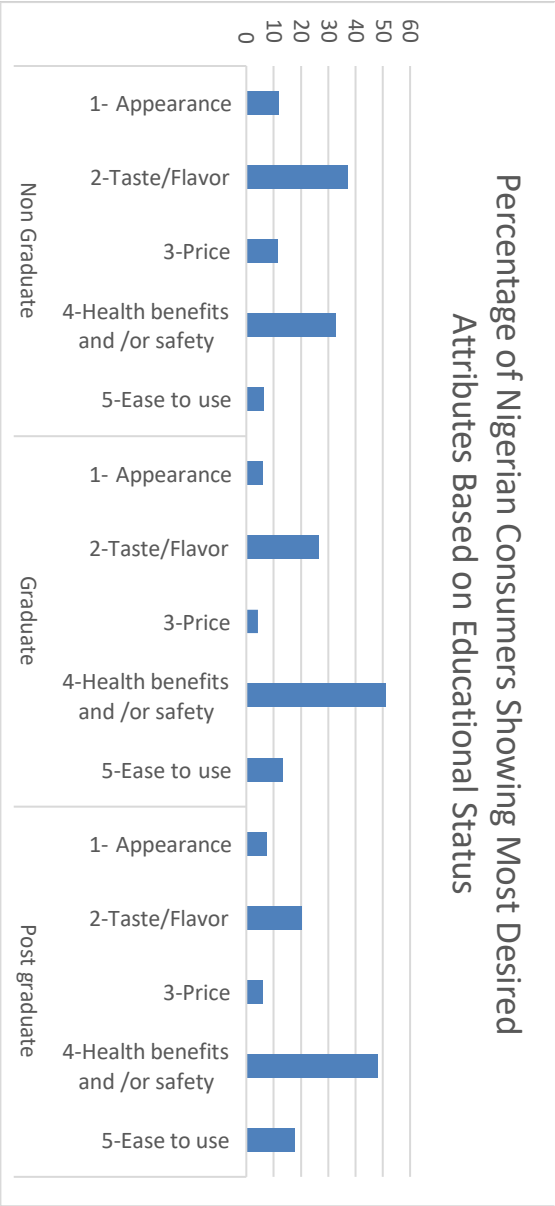
Table 136

Effect of Characteristics of Flavored Processed and Packed Food and Drink on Purchasing

Behaviors of Nigerian consumers

	Frequency N	Percent %
Most desired attribute		
Appearance	402	7.9
Taste/Flavor	1386	27.4
Price	324	6.4
Health benefits and /or safety	2334	46.1
Ease to use	612	12.1
Desired Factors		
Convenience	1332	30.08
Price (affordability)	330	7.45
Delicacy and Palatability due to taste and flavor	570	12.87
Availability	612	13.82
All of the above	1584	35.78
Level of Satisfaction		
Very dissatisfied	486	9.6
Not satisfied	774	15.3
Neither satisfied not dissatisfied	1242	24.5
Satisfied	2136	42.2
Very satisfied	414	8.2

Table 137 shows the correlation among variables- perceived behavioral control.
This sheds light on the relationship of perceived behavioral control with purchase intention drivers. The relationship between purchase intention drivers and perceived behavioral control-educational status, marital status, monthly earning, regional home location, health concern, hobbies, age group. Educational status had positive correlation with most important constraint (r=.071) and most desired attribute (r=.184) at 0.05 level (2-tailed) and 0.01level (2-tailed), respectively. Marital status had positive correlation with best drink flavor (r=.069) at 0.01 level (2-tailed), while monthly earning had negative correlation with most desired factor (r=-.081), and buying constraints (r=-.075) but positive correlation with place of purchase (r=.088) at 0.05 level (2-tailed). Regional home location had negative correlation with each of importance attributed to food flavor/taste (r=-.070), best food flavor (r=-.071) and place of purchase (r=-.082), at 0.05 level (2-tailed). Health concerns had positive correlation with place of purchase (r=.132) at 0.01 level (2-tailed). Age group had negative correlation with each of importance attributed to flavor/taste of food/drink (r=-.082) and best drink flavor (r=-.167) at 0.05 level (2-tailed) and 0.01 level (2-tailed), respectively.

Table 137

Correlation Among Independent and Dependent Variables- Perceived Behavioral Control

	Independent variables (Perceived Behavioral Control)						
Dependent Variables (purchase intention drivers)	**Educational status**	**Marital Status**	**Monthly Earning**	**Regional home location**	**Health concerns**	**Hobbies**	**Age group**
Frequency of purchase and consumption	-0.06	0.01	-0.03	0.041	-0.1	0.027	-0.041
Importance attributed to flavor and taste	0.056	-0.06	0.05	**-.070***	0.06	0.019	**-.082***
Level of satisfaction derived	0.031	0.02	0.01	0.056	-0	-0.03	0.046
Buying constraints	0.034	0.04	**-.075***	0.016	-0	-0.01	-0.002
Most important constraint	**.071***	0.04	0.03	0.019	-0	-0.05	-0.05
Most desired attribute	**.184****	-0.03	0.01	-0.01	-0	-0.02	-0.026
Most desired factors	-0.065	0.02	**-.81***	0.043	-0	-0.01	-0.005
Best drink flavor	0	**.069***	0.01	-0.06	-0	0.008	**-.167****
Best food flavor	-0.042	0.06	0.04	**-.071***	0.03	-0.02	0.009
Buying decision process	-0.063	-0.02	0.01	0.004	0.02	-0.01	-0.025
Budget	0.011	-0.03	0.06	0.036	-0	-0.04	0.004
Place of purchase	-0.05	0.01	**.088***	**-.082***	**.132****	0.003	**.074***

*Correlation is significant at the 0.05 level (2-tailed)

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

Through principal component analysis purchase intention drivers are further streamlined to better unveil the variables which influence purchasing behavior of Nigerian consumers. **Table 138 shows the independent variables which influenced consumers' behavior the most**, in this study. Among the fifteen (15) factors or components used in this research, only 1 to 7 had eigen values higher than one, and are therefore, taken as most appropriate in checking understanding the motivations and influences behind consumers' purchasing behavior towards processed (flavored) and packed foods/drinks. These variables are monthly earning, health concerns, hobbies, desired factors, who decides and buying constraints towards processed (flavored) and packed foods/drinks. Furthermore, frequency of purchase and consumption of processed (flavored) and packed foods/drinks reflect consumers' behavior. According to the rotated cumulative percentage variance, these seven factors explain about 54% of the entire variance.

Figure 41 shows the scree plot which indicates focus independent variables which influenced consumers' behavior the most, in this study. The scree plot shows a visual decline at a point, just as the eigenvalues drop. The "elbow" where the scree plot made a significant decline and then picks, is regarded as the point that indicates the number of factors to be interpreted. Therefore, focus are on monthly earning, health concerns, hobbies, frequency of purchase and consumption, desired factors, who in the family decides what are purchased and consumed, desired factors and buying constraints, as the most influencing dependent variables in this study. Furthermore, reference is made to Appendix XLVII and Appendix XLVIII, which **shows Kaiser-Meyer-Olkin.**

Measure of Sampling Adequacy value is 0.506 and the Bartlett's Test of Sphericity is 205.874 with a degree of freedom of 105. KMO and Bartlett's Test explains that correlation matrix of the variables under consideration is significant ($p < 0.01$) in this analysis.

Table 139 shows the component matrix. Factors were reduced from 15 to 7 factors, and these are those having component values 0.5 or more, and are highlighted in bold figures. The 7 most important variables that affect consumers behavior starting from the highest are level of satisfaction (0.**715**), frequency of purchase and consumption (0.**682**), best to drink flavor (0.**596**), most desired attribute (-**0.563**), buying constraints (0.**543**), place of purchase (0.**510**) and lastly, most important constraints (0.**507**).

Furthermore, with level of satisfaction, there is weak positive correlation with each of monthly earning (0.468), health concerns(0.417), best food flavor (0.418), best drink flavor (0.313), but weak negative correlation with buying constraint. However, there is positive correlation with place of purchase (0.51).

With frequency of purchase and consumption of processed (flavored) and packed foods/drink, there is low positive correlation with best food flavor (0.496), but moderate positive correlation with each of most important constraint (0.507) and best drink flavor (0.596). With best drink flavor, there is low positive correlation with who decides what are purchased and consumed in the family (0.489)most important constraint (0.374), buying decision process (0.384), budget (0.360).

With most desired attribute, there is moderate positive correlation with buying constraint (0.543), while there is low positive correlation with health concerns (0.404) and hobbies(0.476). With buying constraint, there is low positive correlation with desired factors (0.480), place of purchase (0.321), and low but negative low correlation with who decides what are purchased and consumed in the family (0.348), and moderate negative correlation (0.563) with most desired attribute.

With place of purchase, there is positive weak correlation with monthly earning (0.337, most desired attribute (0.327) and negative weak correlation with buying decision process

(0.315). With most important constraints there is strong positive correlation with frequency of purchase and consumption (0.682) and weak positive correlation with hobbies (0.452).

Table 140 shows the rotated component matrix with factors already reduced from 15 to 12 factors, which are factors having component values 0.5 or more, and are highlighted in bold figures. These are the most important variables that affects consumers behavior. As guided by Liu *et al*. (2003)[413], classification is done according to loading values such that values >0.75 are classified as *strong*, as in *level of satisfaction* (0.88); while values *0.75 to 0.50* are classified as *moderate* for each of *best drink flavor* (0.74), *most desired attribute* (0.73), *frequency of purchase and consumption* (0.72), *best food flavor* (0.68), *health concern* (0.68), *budget* (0.66), *buying constraints* (0.61), *desired factors* (0.60), *hobbies* (0.59), *place of purchase* (0.58), and *most important constraint* (0.52).

Figure 42 shows *the score plot for dependent variables.* From the loading plot, **on component 2, *best drink flavor***, variables with the highest positive influence are best food flavor (2.3) and most important constraint (1.4), while variables with the highest negative influence are extent of social group (-1.4) and health concern (-1.0). **On component 1, which is *level of satisfaction*,** variables with the highest positive influence are place of purchase (2.3), health concern (1.8) and importance attributed to food flavor and taste (1.7), while variables with the highest negative influence are frequency of purchase and consumption (-1.2).

Figure 43 shows component plot in a rotated space, that indicate the associated variables of the three factors; component 1, component 2 and component 3.

Factor (F1) is named *consumer personal attitude and needs*, a personal factor which constitutes 25.54% of the total variance and it is associated with *hobbies, health concern and monthly earning.* They are moderate positive with this factor. Hobbies are personal lifestyle choices based on individual which are deliberately decided for health and well being. Health concern is based on health status and interest of individual consumers, while monthly earning

reflect individual consumer's financial status. There is constraint or motivation to meet the personal needs, while the frequency to purchase and consume processed (flavored) and packed foods/drinks is influenced by this. Consequently, purchasing decisions are influenced by individual consumer's attitude and personality.

Factor (F2) is named *perceived behavioral control*, a motivating/constraining factor which constitutes 21.47% of the total variance which is associated to *buying constraints, desired factors, frequency of purchase and consumption of processed (flavored) and packed foods/drinks*. These are motivations and constraints towards purchasing processed (flavored) and packed foods and drinks by Nigerian consumers. Constraints towards purchasing and consuming processed (flavored) foods/drinks based on demographics include financial reasons (high prices), health restriction, cultural beliefs, religious constraints, and nutritional reasons. On the other hand, motivations are the desired factors which are convenience, affordability, delicacy and palatability due to taste and flavor, and availability. Frequency of purchase and consumption of processed (flavored) and packed foods/drinks varies with motivation/constraint. Ultimately, it reflects the purchase behavior of consumers.

Factor (F3) is named *social influence*, a social factor which constitutes 6.89% of the total variance which is associated with *who decides what are purchased and consumed in the family*. Family ties and social bonds influence the decision made in the family, and decisions are made by self, parent, spouse, children, other members of the family, colleagues, or friends, or cook. Furthermore, under the influence of family members and others, purchasing decision is made. Who decides what are purchased and consumed in the family is moderate positive with this factor. In addition, this reflect consumers' social needs to keep their relationship with others. There is constraint or motivation to meet the needs of others, while the frequency to purchase and consume processed (flavored) and packed foods/drinks is influenced by this.

Table 138

Most-Influencing Dependent Variables on Consumers' Purchasing Behavior Towards Processed (Flavored) and Packed Foods/Drinks

Components	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Monthly Earning	1.37	9.11	9.11	1.366	9.11	9.11	1.30	8.67	8.67
Health concerns	1.30	8.67	17.78	1.3	8.67	17.78	1.25	8.35	17.02
Hobbies	1.16	7.76	25.54	1.164	7.76	25.54	1.15	7.68	24.70
Frequency of purchase & consumption	1.12	7.49	33.03	1.123	7.49	33.03	1.14	7.63	32.32
Desired Factors	1.08	7.17	40.20	1.076	7.17	40.20	1.11	7.39	39.71
Who decides	1.03	6.89	47.09	1.034	6.89	47.09	1.08	7.16	46.88
Buying constraints	1.02	6.81	53.90	1.022	6.81	53.90	1.05	7.03	53.90
Most important constraint	0.98	6.54	60.45						
Most desired attribute	0.97	6.46	66.91						
Place of Purchase	0.97	6.44	73.35						
Buying decision process	0.88	5.88	79.23						
Budget	0.84	5.62	84.84						
Best food flavor	0.80	5.32	90.17						
Best drink flavor	0.77	5.14	95.30						
Level of satisfaction	0.71	4.70	100						

Figure 41

Scree Plot

Scree Plot
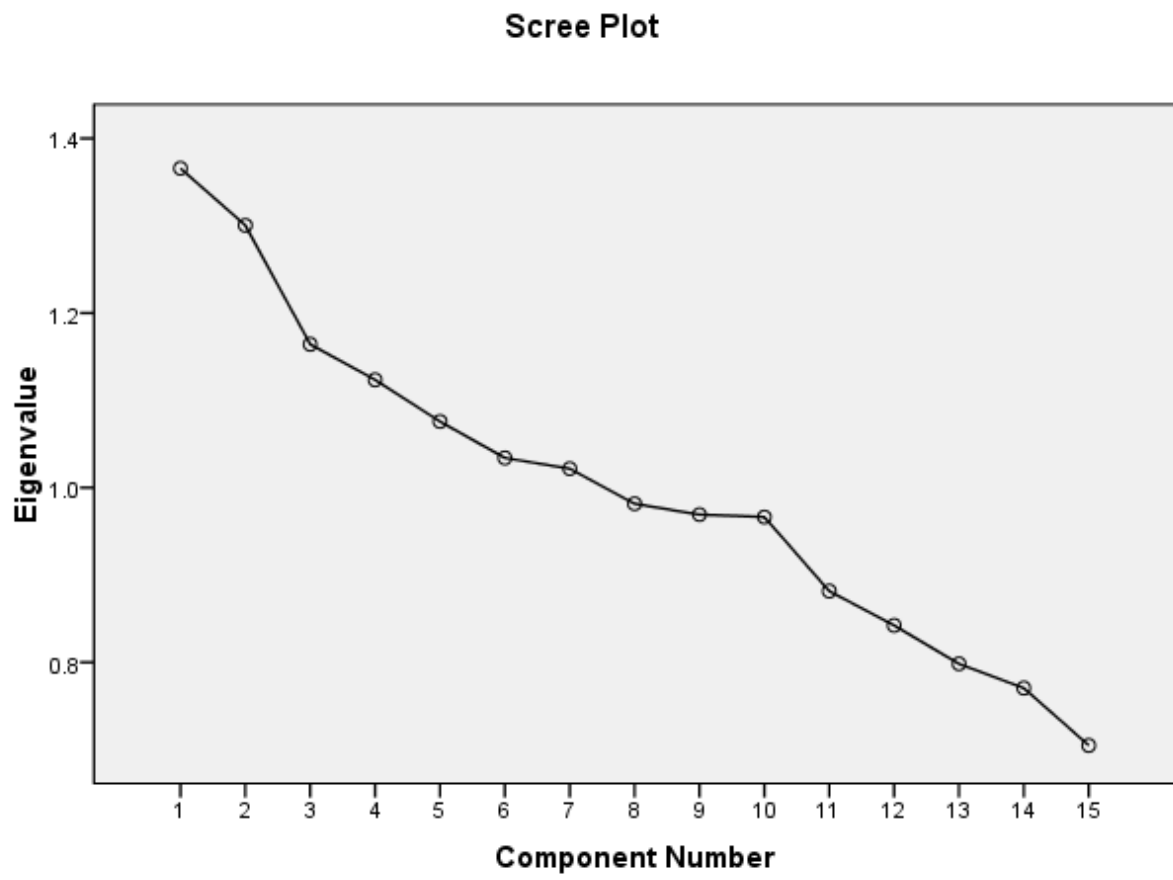
Table 139

Component Matrix^a

	Component						
	Level of satisfaction	**Frequency of purchase consumption**	**Best drink flavor**	**Most desired attribute**	**Buying constraint**	**Place of purchase**	**Most important constraints**
Monthly Earning	0.468	-0.25	-0.103	-0.05	-0.072	0.337	0.093
Health concerns	0.417	-0.32	-0.087	0.404	0.097	0.161	0.009
Hobbies	-0.021	-0.18	-0.264	0.476	-0.254	0.131	0.452
Frequency of purchase and consumption	-0.223	0.166	-0.112	-0.21	-0.076	0.168	**0.682**
Desired Factors	-0.205	0.276	0.098	0.205	0.48	-0.064	0.298
Who decides	0.113	-0.11	0.489	-0.3	-0.348	0.067	0.053
Buying constraint	-0.338	0.029	0.279	**0.543**	0.107	-0.009	-0.017
Most important constraint	0.078	**0.507**	0.374	0.186	-0.071	0.221	-0.194
Most desired attribute	-0.086	0.141	0.271	0.19	**-0.563**	0.327	0.006
Place of Purchase	**0.51**	-0.22	0.256	0.066	0.321	0.161	0.068
Buying decision process	0.33	0.232	0.384	0.202	-0.008	-0.315	0.235
Budget	0.205	-0.07	0.365	-0.29	0.134	-0.206	0.366
Best food flavor	0.418	0.496	-0.206	0.07	0.102	0.024	-0.1
Best drink flavor	0.313	**0.596**	-0.343	-0.11	-0.109	0.08	0.093
Level of satisfaction	-0.236	0.044	0.132	-0.2	0.404	**0.715**	-0.023

Extraction Method: Principal Component Analysis.

a. 7 components extracted.

Table 140

Rotated Component Matrix[a]

	Component						
	Level of satisfaction	**Frequency of purchase consumption**	**Best drink flavor**	**Most desired attribute**	**Buying constraint**	**Place of purchase**	**Most important constraints**
Monthly earning	0.09	0.51	-0.35	0.05	0.04	0.1	0.11
Health concerns	-0.02	**0.68**	0.04	-0.11	-0.04	-0.1	-0
Hobbies	-0.1	0.33	0.13	-0.25	0.11	-0.3	**0.59**
Frequency of purchase and consumption	0.07	-0.21	0	0.19	-0.01	0.18	**0.72**
Desired factors	0.11	-0.08	**0.6**	0.14	-0.2	0.17	0.15
Who decides	-0.2	-0.05	-0.3	0.43	0.41	0.02	-0.1
Buying constraints	-0.24	0.02	**0.61**	-0.14	0.22	-(	-0
Most important constraint	0.33	-0.05	0.27	0.06	**0.52**	0.14	-0.2
Most desired attribute	-0.04	-0.02	-0.04	-0.09	**0.73**	-(	0.14
Place of purchase	0.03	**0.58**	0.03	0.35	-0.07	0.15	-0.2
Buying decision process	0.2	0.11	0.29	0.48	0.15	-0.3	-0
Budget	-0.07	0.02	-0.03	**0.66**	-0.11	-(	0.08
Best food flavor	**0.68**	0.11	0.04	-0.03	-0.02	-(	-0.1
Best drink flavor	**0.74**	-0.08	-0.14	-0.04	0.03	-(	0.17
Level of satisfaction	-0.04	0.05	0.09	-0.06	0.06	**0.88**	0.04

Extraction Method: Principal Component Analysis.

 Rotation Method: Varimax with Kaiser Normalization.
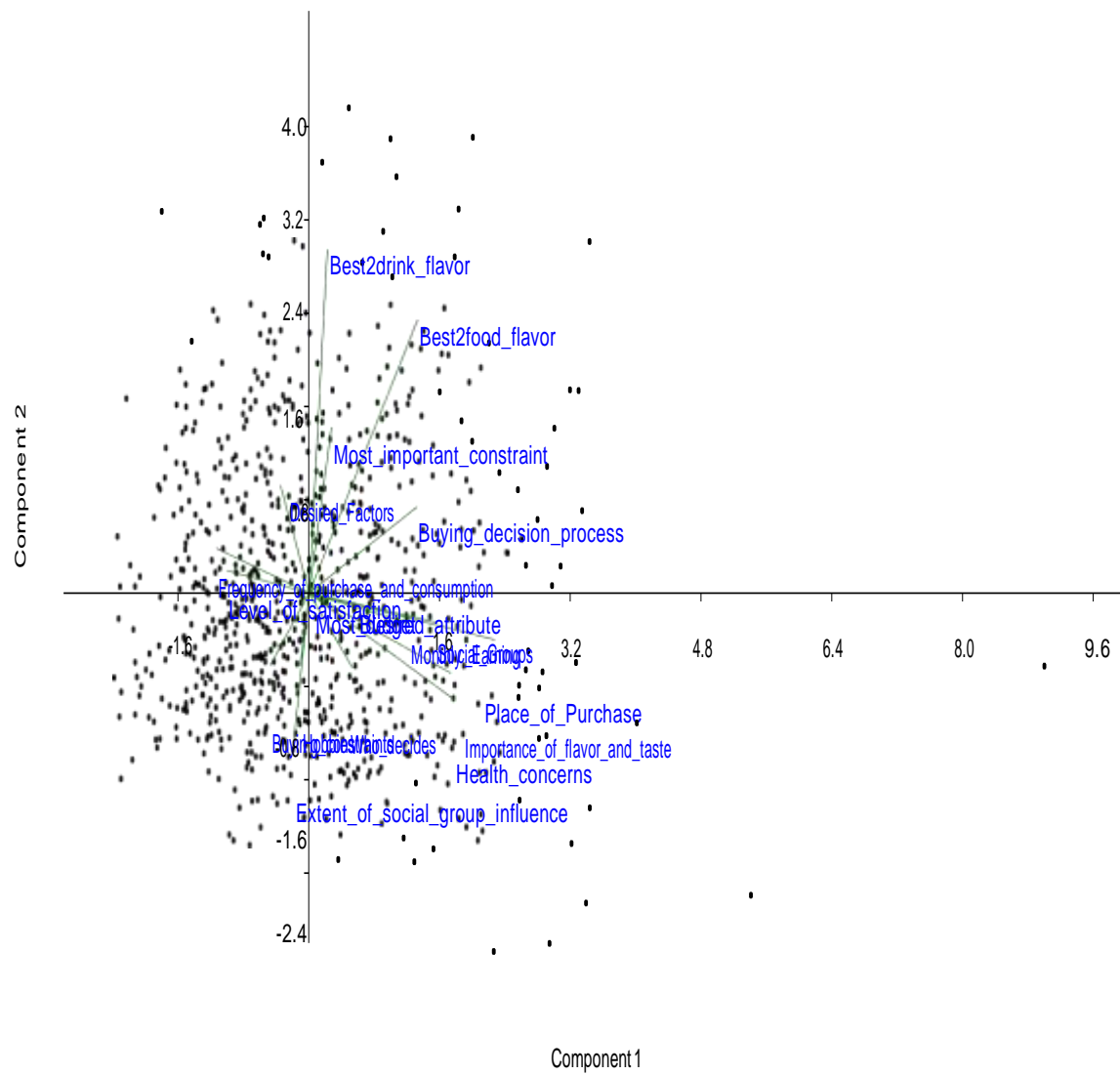
a. Rotation converged in 11 iterations.

Figure 42
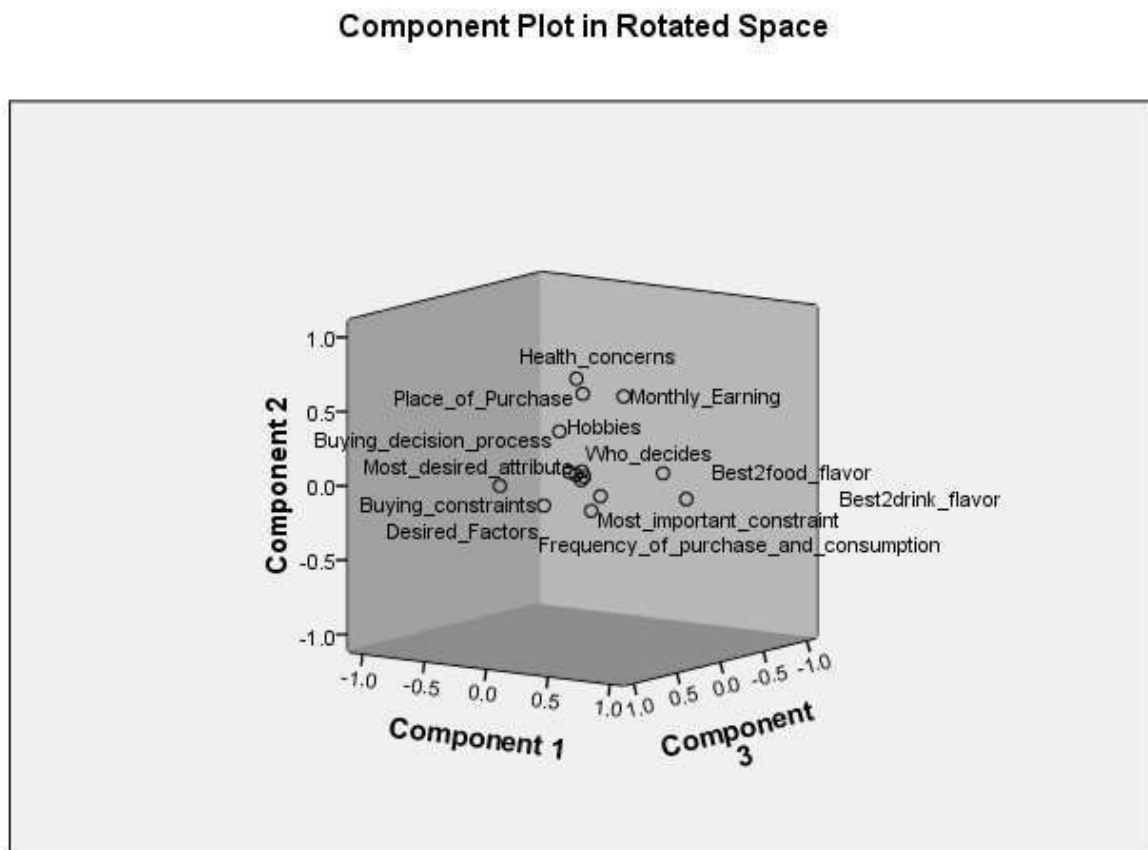
The Score Plot – Dependent Variables

Figure 43

Component Plot in Rotated Space
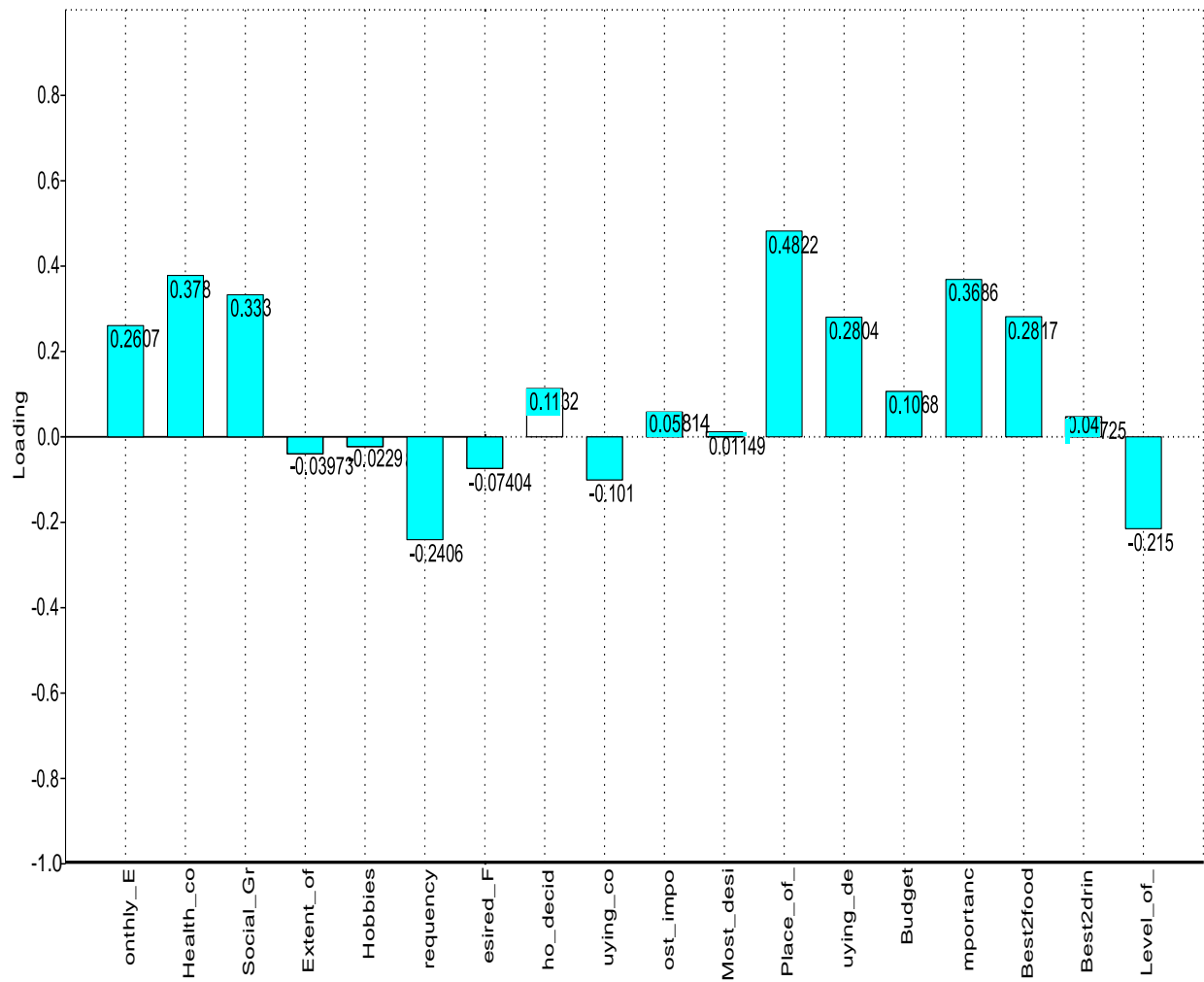

Component Plot in Rotated Space

Figure 44

Loading Plot

Table 141 shows the factor score coefficient matrix identifying the relative weight of each of the variables in the factor analysis. The higher the value of coefficient, the more crucial the corresponding variable in estimating the component.

The following 7 factors are identified- *level of satisfaction* **(0.819);** *frequency of purchase and consumption* **(0.689);** *most desired attribute* **(0.664);** *budget* **(0.589);** *best drink flavor* **(0.576);** *hobbies* **(0.557); and** *health concerns* **(0.546). These are indicators of Nigerian consumers' behavior towards processed (flavored) and packed foods/drinks.**

Level of satisfaction derived from processed (flavored) and packed foods/drinks and flavor is most strongly influenced by hobbies of Nigerian consumers. This serves as a guide to understand what strongly motivates Nigerian consumers towards processed (flavored) and packed foods/drinks.

Frequency of purchase and consumption of processed (flavored) and packed foods is moderately being influenced by each of health concerns and hobbies of Nigerian consumers. Most desired attributes moderately influence desired factors of Nigerian consumers in processed (flavored) and packed foods/drinks. Desired factors are convenience, price (affordability), delicacy and palatability due to taste and flavor and availability. Desired attributes moderately influences consumers' buying constraints towards processed (flavored) and packed foods/drinks.. Desired attributes are appearance, taste/flavor, price (affordability), health benefits and/or safety and ease to use. The needs of Nigerian consumers are basic for survival, and having met this needs, safety/health and wellness follows, needs for social and family relationship, self esteem and self fulfilment. Nigerian consumers' taste and flavor preference influence the best drinks which they consider as being delicious and palatable. On the other hands, due to familiarity with what is available, they tend to give preference to the available flavors as their best in drink, and some take as ' what is available is acceptable'.

Table 141

Component Score Coefficient Matrix

	Component						
	Level of satisfaction	Frequency of purchase consumption	Most desired attribute	Budget	Best drink flavor	Hobbies	Health concerns
Monthly Earning	0.065	0.403	-0.283	0.018	0.058	0.129	0.121
Health concerns	-0.019	**0.546**	0.071	-0.119	-0.017	-0.07	-0.005
Hobbies	-0.069	0.289	0.124	-0.201	0.118	-0.23	**0.557**
Frequency of purchase and consumption	0.062	-0.145	-0.01	0.202	-0.009	0.16	**0.689**
Desired Factors	0.088	-0.034	**0.53**	0.149	-0.206	0.141	0.148
Who decides	-0.169	-0.061	-0.266	0.365	0.368	0.021	-0.03
Buying constraints	-0.189	0.051	**0.524**	-0.112	0.182	-0.05	-0.051
Most important constraint	0.244	-0.018	0.212	0.03	0.448	0.136	-0.217
Most desired attribute	-0.037	0.005	-0.06	-0.092	**0.664**	-0.02	0.132
Place of Purchase	0.008	0.457	0.066	0.278	-0.062	0.167	-0.121
Buying decision process	0.129	0.07	0.268	0.418	0.114	-0.31	-0.011
Budget	-0.071	-0.014	-0.006	**0.589**	-0.113	-0.01	0.102
Best2food_flavor	**0.52**	0.081	0.037	-0.052	-0.033	-0.02	-0.104
Best2drink_flavor	**0.576**	-0.072	-0.127	-0.048	0.023	-0.01	0.164
Level of satisfaction	-0.018	0.096	0.066	-0.054	0.061	**0.819**	0.031

Extraction Method: Principal Component Analysis.

 Rotation Method: Varimax with Kaiser Normalization.

Table 142 shows the most-influencing dependent and independent variables on consumers' purchasing behavior towards processed (flavored) and packed foods/drinks in this study. Among the twenty-eight (28) factors or components used in this research, only 1 to 15 had eigen values higher than one, and are therefore, taken as most appropriate in understanding the motivations and influences behind consumers' purchasing behavior towards processed (flavored) and packed foods/drinks. These independent variables are respondents' demographic factors which are their gender, age group, regional home location, educational status, marital status, tribe, regional native location, regional birth location, family size, religion, monthly earning and health concerns.

Furthermore, **figure 44 shows loading plot**. Having examined the loading pattern to identify the factor which mostly influence each variable, loadings near -1 or 1 show strong influence on variable by the factor, which those near 0 show weakness of influence. Strongest positive influence by factor are on place of purchase (0.482), health concerns (0.378), social group membership (0.333), importance attributed to taste and flavor of food/drink (0.282), monthly earning (0.261). Strongest negative influence by factor are on frequency of purchase and consumption (-0.241) and level of satisfaction derived in processed (flavored) and packed foods/drinks (-0.215).

Figure 45 shows the scree plot – dependent and independent variables indicates focus independent and dependent variables which influenced consumers' behavior the most, in this study. The scree plot shows a visual decline at a point, just as the eigenvalues drop. The "elbow" where the scree plot made a significant decline and then picks, is regarded as the point that indicates the number of factors to be interpreted.

Table 143 shows Kaiser-Meyer-Olkin. The measure of sampling adequacy value is 0.574, hence indicates appropriateness of factor analysis. KMO and Bartlett's Test explains if

the correlation matrix of the variables under consideration is significant. In this analysis, the result is highly significant (p<0.01).

Table 144 shows the component matrix of the dependent and independent variables. These indicate the most important variables which are the factors that influence consumers' behavior towards purchasing and consuming processed (flavored) and packed foods/drinks. The results of the principal component shows that consumers' preferences is affected by the following factors which reduced from 28 to 12 factors, and these are those having component values 0.5 or more, and are highlighted in bold figures. The 12 most important variables that affect consumers behavior from the most important and strongest to the least and weakest: regional birth location (0.72), age group (0.70), regional home location (0.66), tribe (0.60), religion (0.59), buying constraints (0.55), region native location (0.54), level of satisfaction (-0.54), extent of social group influence (-0.53), best drink flavor (-0.53), education (0.52) and family size (0.52). The covariance matrix shows the positive and negative relationship between two collinear variables. Extent of social influence decreased with increasing family size, while level of satisfaction differs with regional birth location, and best drink flavor differs with regional home location of respondents.

Figure 46 shows *the score plot for independent variables.* From the score plot, **on component 1,** *regional birth location*, variables with the highest positive influence are level of satisfaction (0.8), extent of social group influence (0.8), and buying constraint (0.5). **On component 2, which is** *age group,* variables with the highest positive influence are most desired attribute (1.0), importance attached to flavor/taste (1.2), and best drink flavor (0.5), while variables with the highest negative influence are desired factors (1.2), hobbies (0.5), best drink flavor (0.5), budget (0.4), frequency of purchase and consumption (-0.3).

Table 142

Most-Influencing Dependent and Independent Variables on Consumers' Purchasing Behavior

Towards Processed (Flavored) and Packed Foods/Drinks

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Gender	2.221	7.933	7.933	2.221	7.933	7.933
Age group	1.83	6.535	14.467	1.83	6.535	14.467
Home location	1.562	5.577	20.044	1.562	5.577	20.044
Education	1.486	5.309	25.353	1.486	5.309	25.353
Marital Status	1.291	4.612	29.965	1.291	4.612	29.965
Tribe	1.242	4.435	34.399	1.242	4.435	34.399
Regional native location	1.179	4.21	38.609	1.179	4.21	38.609
Birth Place	1.129	4.031	42.64	1.129	4.031	42.64
Family Size	1.099	3.926	46.567	1.099	3.926	46.567
Religion	1.08	3.857	50.424	1.08	3.857	50.424
Monthly Earning	1.053	3.761	54.185	1.053	3.761	54.185
Health concerns	1.014	3.621	57.806	1.014	3.621	57.806
Social Groups	0.98	3.501	61.308			
Extent of social group influence	0.964	3.441	64.749			
Hobbies	0.938	3.35	68.099			
Frequency of purchase and consumption	0.914	3.265	71.364			
Desired Factors	0.863	3.081	74.445			
Who decides	0.843	3.01	77.455			
Buying constraints	0.776	2.772	80.227			
Most important constraint	0.77	2.748	82.975			
Most desired attribute	0.758	2.707	85.682			
Place of Purchase	0.722	2.578	88.26			
Buying decision process	0.699	2.498	90.758			
Budget	0.653	2.332	93.09			
Importance of flavor and taste	0.603	2.153	95.243			
Best to food flavor	0.533	1.902	97.145			
Best to drink flavor	0.426	1.522	98.667			
Level of satisfaction	0.373	1.333	100			

Extraction Method: Principal Component Analysis

Figure 45
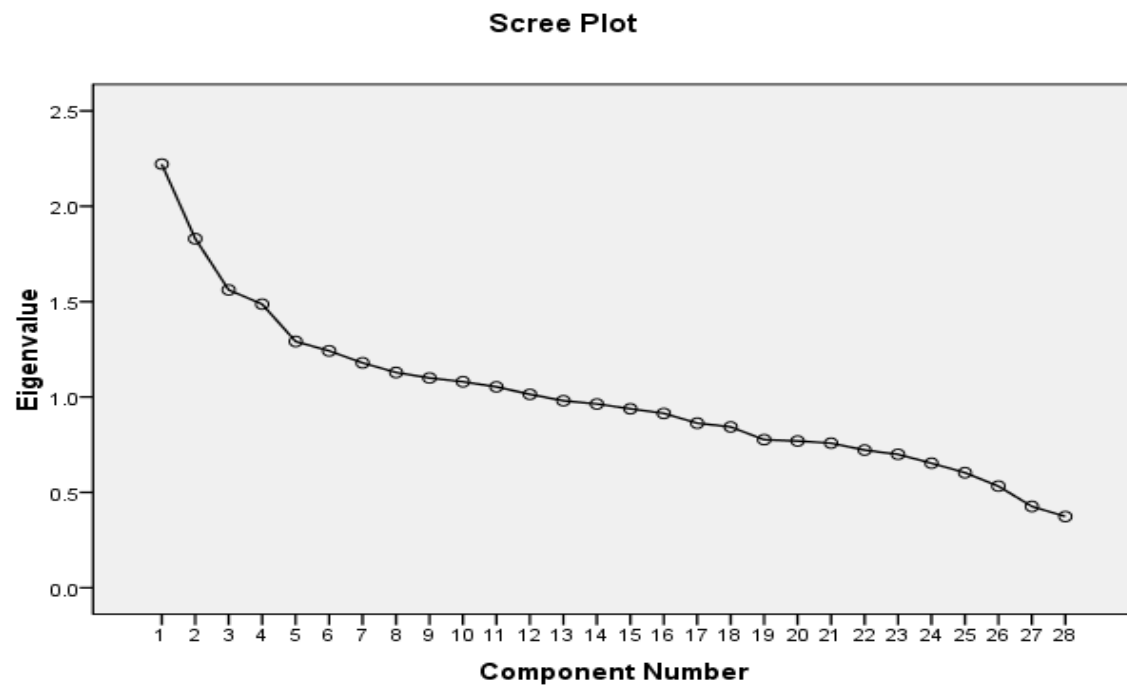
Scree Plot- Dependent and Independent Variables

Scree Plot

Table 143

Kaiser-Meyer-Olkin

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.574
Bartlett's Test of Sphericity	Approx. Chi-Square	1.803E3
	df	378
	Sig.	.000

Table 144

Dependent an Extraction Method: Principal Component Analysis

	RBL	AGE G	RHL	Tribe	BC	Religion	RNL	EDU	FS	BDF	ESGI	LS
						Components						
Gender	0.2	0.11	-0.1	0.21	-0.17	-0.46	-0.09	0.27	0.3	-0.1	-0.1	0.08
Age group	0.2	0	**0.7**	0.04	0.02	-0.1	0.17	-0.2	-0.2	0.08	-0.1	0.02
Regional home location	**0.66**	-0.4	0.18	0.02	-0.05	-0.1	0.19	0.09	-0	0.06	0.1	0.16
Education	0	0.35	0.24	-0.3	**0.52**	-0.2	0.05	0	0.1	-0.1	-0.1	0.07
Marital Status	0.3	-0.1	-0.4	0.18	-0.08	0.02	-0.18	0.01	0.2	0.08	0.3	0.36
Tribe	0	**0.6**	-0.2	-0.2	-0.29	0.09	0.09	-0.2	0	0.17	-0.1	0.02
Regional native location	**0.5**	**0.54**	-0.1	0.2	-0.15	0	-0.12	-0.1	-0.1	0.08	0	-0.2
Regional birth location	**0.72**	-0.3	0.11	0.03	0.06	-0.1	0.11	0	0	0.05	0	0.19
Family Size	-0.1	0.3	0.09	-0.2	-0.23	0.31	0.2	0.08	0.1	-0	0.1	**0.52**
Religion	**0.59**	0.41	0	0	0.23	-0.1	-0.07	-0.1	0	0.11	0.1	-0.1
Monthly Earning	-0.4	0	0.13	0.1	0.11	-0.3	0.05	-0.2	-0.1	-0.1	0.4	0.22
Health concerns	-0.2	0.1	0.29	0.33	0.18	-0.1	-0.33	-0.1	0.1	0.12	0.2	0.07
Social Groups	0	0.05	0.2	0.47	-0.07	0.44	-0.14	-0.1	0	-0.2	-0.2	0.17
Extent of social influence	0.2	0.2	0.16	-0	-0.09	0.03	-0.19	0.07	**-0.5**	-0.2	0.1	0.25
Hobbies	-0.2	-0.1	0.04	-0.2	0.29	0.07	-0.29	0.24	0	0.31	0.3	0.03
Frequency of purchase and consumption	0	0	-0.2	-0.2	-0.13	0.13	0.16	0.05	-0.5	0.25	0.3	0
Desired Factors	0	-0.3	0	0.06	0.06	0.43	0.2	0.21	0.3	0.12	-0.2	-0.1
Who decides	-0.1	0.3	0.03	-0	-0.14	-0.1	0.24	0.11	0	-0.4	0	0
Buying constraints	0.2	0.07	0.1	-0.1	0.17	**0.55**	-0.31	0.11	0.1	-0.2	0.2	-0.1
Best drink flavor	-0.1	-0.1	**-0.5**	0.14	0.29	-0.1	0.25	-0.1	-0.1	0.06	-0.1	0.25
Level of satisfaction	0.2	0.01	0.02	-0.2	0.01	0.14	0.25	**-0.5**	0.3	0.2	0.2	-0.2

d Independent Variables- Component Matrix

Figure 46

The Score Plot
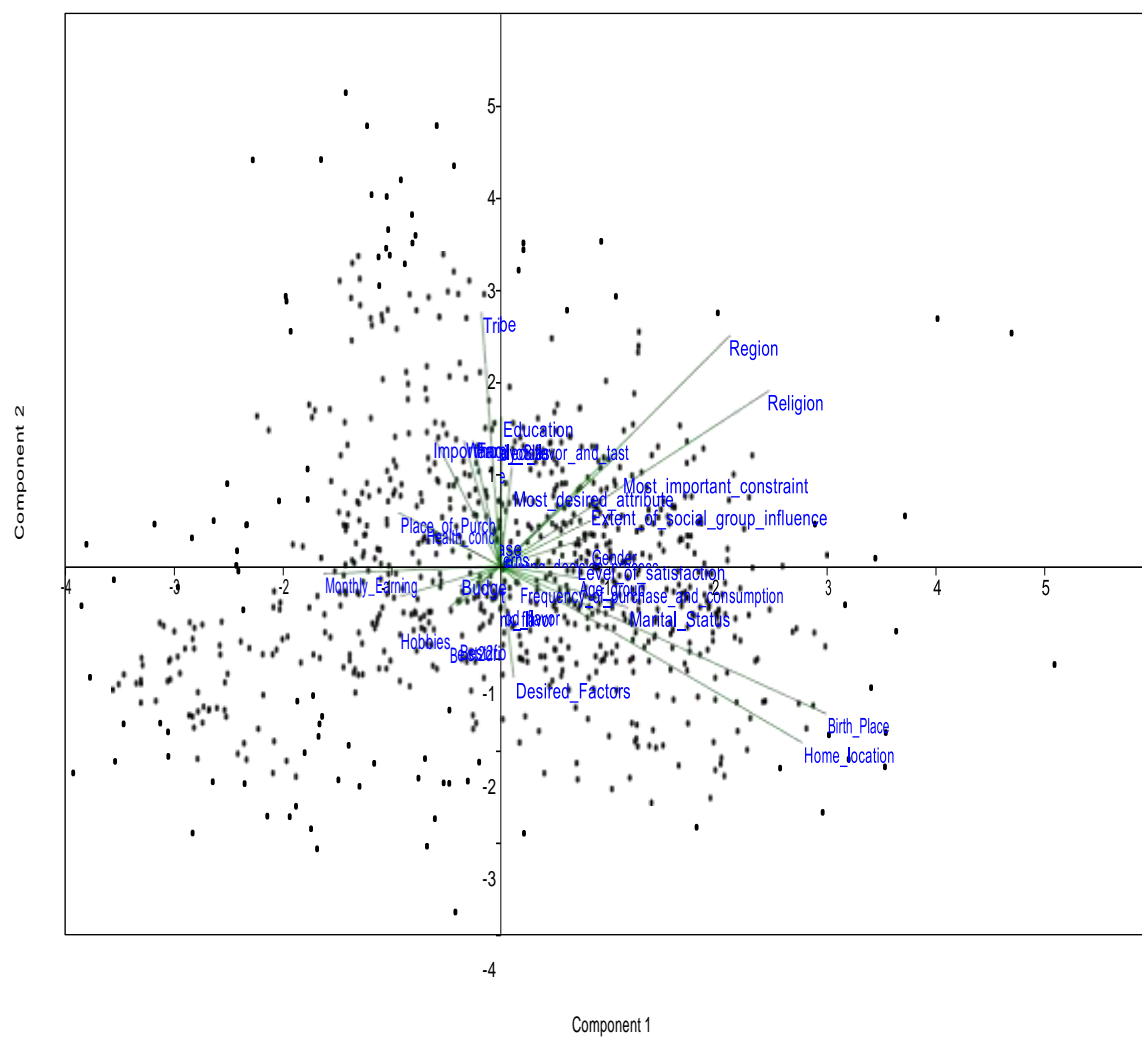
Research Question 3

Q3: What is the essence of diversities of Nigerian consumers in developing marketing strategies from food flavor industry?

Taste predilection across demographics of Nigerian consumers of processed (flavoured) and packed foods/drinks differs. Hence, the below guides on the direction of product marketing strategy for them.

Q3:1 Essence of diversity/demographic needs -taste predilection of Nigerian consumers in developing marketing strategies from food flavor industry.

Flavor preferences indicated by Nigerian consumers based on their demographics*:*

Best Food Flavors

Spice & vegetable flavors as best flavours for food mostly preferred by

- All respondents

- Most male respondents than female respondents

- Most respondents of old age group (60-70 years)

- Most separated/divorced respondents

- Most respondents whose religion were traditional

- Most respondents whose regional home locations were Northern Nigeria

- Most respondents whose family size was 6 and above

Animal meat protein (beef, chicken, seafood-fish, crayfish, prawn, crab) as best flavours for food mostly preferred by

- Almost all respondents

- Most male respondents than female respondents

- Most respondents of young age group (19-39 years) and middle age group (40-59 years) than respondents who were of old age group (60-70 years)

- Most single (unmarried) and separated/divorced respondents than married

- Most respondents whose family sizes were 3,4,5

- Most respondents from FCT/Middle Belt/Central Nigeria, Western, Eastern Nigeria

- Most non-graduate respondents

- Most respondents whose religion were Christian

Chocolate and malt flavors for food mostly preferred

- Most single (unmarried) and separated/divorced respondents than married

- Most respondents from FCT/Middle Belt/Central Nigeria regional native location

- More respondents of young age than respondents of old age group

- More respondents who were non-graduate than respondents who were graduate and postgraduate

- Most respondents of family size of 3

- With advancement in age, preference for chocolate and malt flavours in foods dropped while preference for spice & vegetable flavours increased. The younger preferred chocolate and malt flavour, just as the older prefer spice & vegetable flavour

- Most respondents whose religion were Christian

Nut flavours for food mostly preferred

- Most respondents regardless of their marital status were neutral towards nut flavors

- Most respondents from FCT/Middle Belt/Central Nigeria had nut flavors as their best flavour

- More respondents of young age had preference for nut flavours than respondents of old age group

- Most respondents regardless of their educational status were neutral towards nut flavors as their best food flavor

- Most respondents of family size of 3 had preference for nut flavor, while most respondents from family size above 3 showed least preference

- With advancement in age, preference for nut flavors in foods dropped while preference for spice & vegetable flavors increased. More younger respondents liked nut flavors, just as the older preferred spice & vegetable flavor

- More respondents whose religion were Christian showed preference for nut flavors

Best drink (beverage) flavors

Spice & vegetable flavours as best flavors for drinks (beverages) mostly preferred by

- Most respondents of old age group (60-70 years)

- Most separated/divorced respondents

- Most respondents whose religion were traditional

- Most respondents whose family size is 6 and above

Dairy-related flavours as best flavours for drink (beverages)

- Liked equally or disliked equally by male and female

- Most respondents of young age group (19-39 years) like dairy-related flavors most in drinks.

- With advancement in age, preference for dairy-related flavours in drink drop while preference for spice & vegetable flavors increase. The younger prefer dairy-flavors, just as the older prefer spice & vegetable flavor

- Most respondents whose family sizes were 4 and 5

Chocolate and malt flavors for drink (beverages) mostly preferred

- Most respondents of young old age

- Most respondents whose regional home locations were FCT/Middle Belt/Central Nigeria, Western Nigeria, Southern Nigeria and Northern Nigeria

- Most respondents who were single (unmarried)

- Most graduate respondents

- Most respondents who practice Islam, and those who practice Christianity

- Most respondents whose family sizes were 3,4 and 5 (below 6)

- With advancement in age, preference for chocolate and malt flavors in drink drop while preference for spice & vegetable flavors increase. The younger prefer chocolate and malt flavor, just as the older prefer spice & vegetable flavor

Fruit flavors for drink (beverages) mostly preferred

- Most respondents of young old age

- Most respondents whose regional home locations were Western Nigeria, Southern Nigeria and Northern Nigeria

- Most respondents who were single (unmarried)

- Most graduate respondents

- Most respondents who practice Islam, those who practice Christianity

- Most respondents whose family sizes were 4 and 5

- With advancement in age, preference for fruit flavors in drink dropped while preference for spice & vegetable flavors increased. The younger prefer fruit flavors, just as the older prefer spice & vegetable flavor

Q3: 2. Essence of diversity needs in order of priority of most desired factors and attributes in developing marketing strategies for international food flavor manufacturers

Figures 47, 48, 49, 50, 51, 52, 53 and 54 below reflect the needs of Nigerian consumers of processed (flavored) and packed foods/drinks in the order of priority based on their demographics.

Findings in this qualitative research show that processed (flavored) and packed foods/drinks are purchased and consumed by Nigerian consumers for convenience/ ease to use in order to meet their needs for survival, after which was health/safety/wellness (to meet health/safety/wellness needs). Having met health/safety/wellness needs, Nigerian consumers

were motivated to meet the needs of sense of social belonging such as religious group, family, cultural group, professional group. Next to meeting this need was need for self-esteem, which was met through affordability (provision at affordable price- price strategy) and also availability of products (making desired products which boost consumers' confidence available- this is linked to strategy of placement). Place of purchase differed and Nigerian consumers liked to associate with buying from Supermarkets, to boost their self-esteem. Having met self-esteem needs, the next Nigerian consumers need was self-actualization which they got through satiety in processed (flavored) and packed foods/drinks.

On contrary, due to diversity the sequence of the ideal hierarchy of needs was not same across all regional locations in Nigeria. For some demographics, their need for sense of belonging to religious group and/or cultural groups were basic, hence, they were considered very paramount and exchanged with their needs for their survival.

Needs of Nigerian consumers were important, and these influenced their desired factors in processed and packed foods/drinks, and their food choices, as it influenced consumers' buying decision and behavior.

Having identified the desired factors of consumers in processed and packed foods/drinks and their significance in increasing frequency of purchase and consumption of end product, food flavor manufacturers needed to put them into consideration in innovating solutions that supported processed and packed food manufacturers to achieve them.

Food flavor manufacturers needed to put them into consideration in innovating health-enhancing solutions that supported processed and packed food manufacturers to achieve it. Nigerian consumers from different regional native zones/groups had peculiar or unique taste; and local taste as the theme of what were the most appealing (attractive) attributes to them in processed and packed foods/drinks. Furthermore, products that reflected and suggested natural taste were strongly desired by most of the respondents. From food flavor taste perspective,

peculiar or unique taste that gave the desired level of satisfaction/satiety was strongly desired, regardless of the regional native zones/groups, gender, age group educational status and marital status. Spice and fruit flavors had, therefore been identified to be the most appealing flavors, while intense sweet and savory taste in drinks and foods, respectively, were strong desires for respondents from Northern regional location of Nigeria.

Nutrition (vehicle for fortification) was the next theme. Processed and packed foods/drinks were perceived to be enriched. Very large percentage of respondents first inspected the pack for information such as nutrition facts, ingredients and check for safety and health (production date/best before date). Satisfaction was a crucial factor most appealing attributes to all respondents, however, it was a function of two or more other attributes. Regardless of age group, appearance was a very crucial attribute to respondents whose home location/regional native location were FCT/Middle Belt/Central, as they were strongly attracted to color of product or packaging.

North-Western, North-Eastern, and South-Southern respondents were more cost-conscious and identified theme among these respondents across different age groups was affordable products.

Needs of Nigerian consumers of processed (flavored) and packed foods/drink varied with regional native locations, age, gender, religion, regional home locations, educational and marital status. Strategies that would be developed would be such that conforming products were made available (product and place strategies) at affordable prices- price strategy, supported by awareness (product label) – promotion strategy.

Figure 47

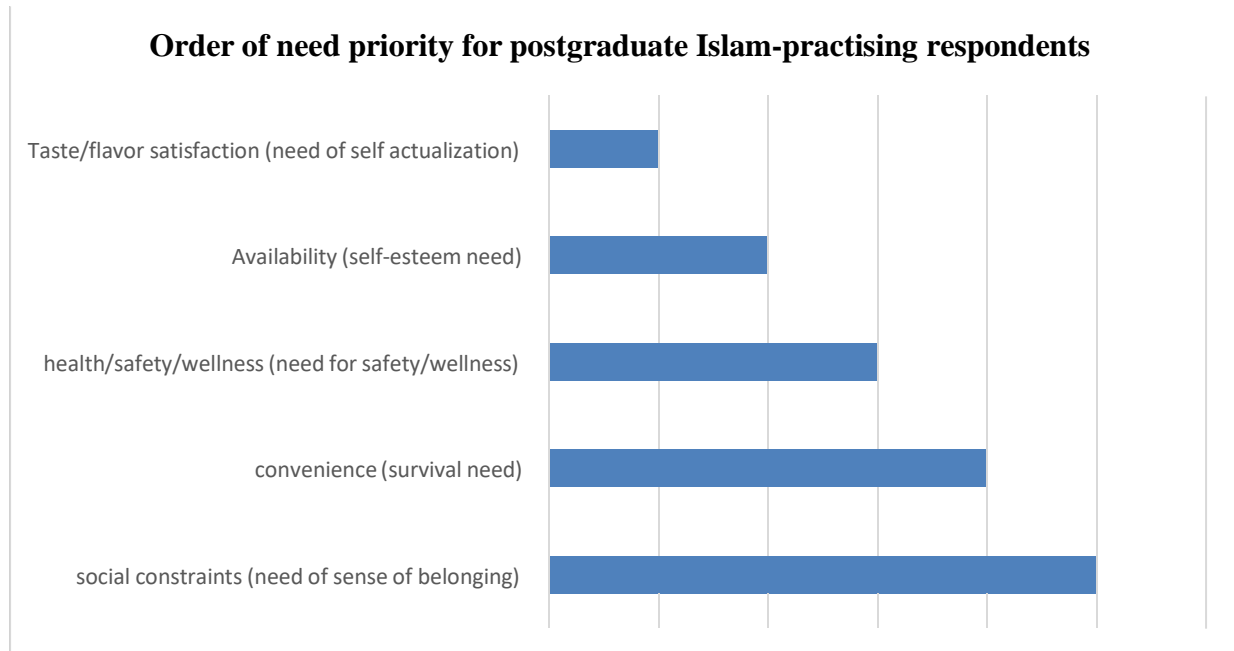*Order of Need Priority For Postgraduate Islam-Practising Respondents*

Order of need priority for postgraduate Islam-practising respondents

Figure 48

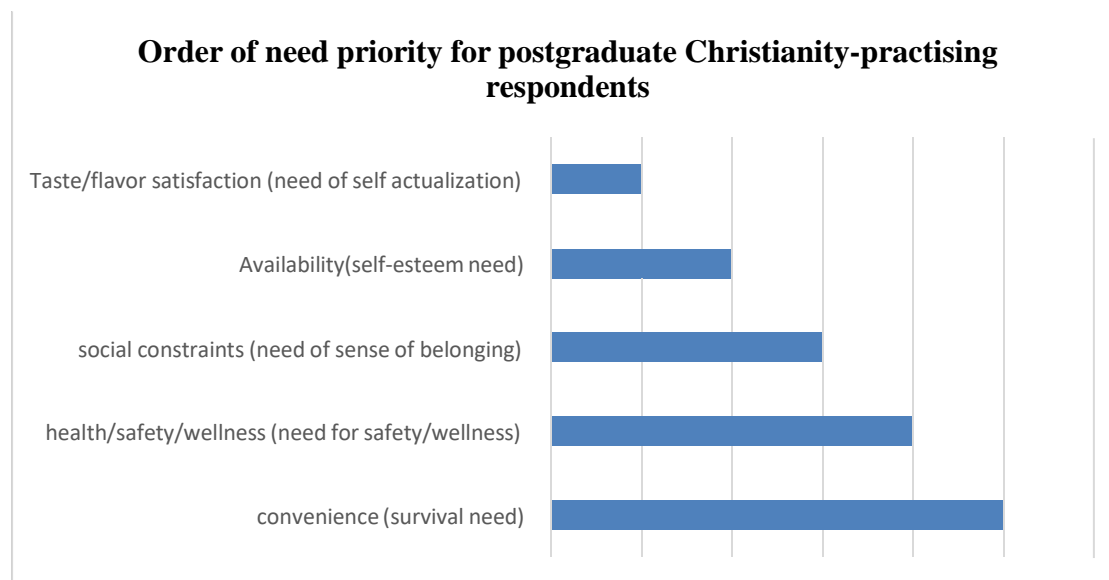*Order of Need Priority For Postgraduate Christianity-Practising Respondents*

Order of need priority for postgraduate Christianity-practising respondents

Need	
Taste/flavor satisfaction (need of self actualization)	
Availability(self-esteem need)	
social constraints (need of sense of belonging)	
health/safety/wellness (need for safety/wellness)	
convenience (survival need)	

Figure 49

Order of Need Priority For Young Age Group Islam-Practising Respondents

Order of need priority of young age group Muslim respondents

Figure 50

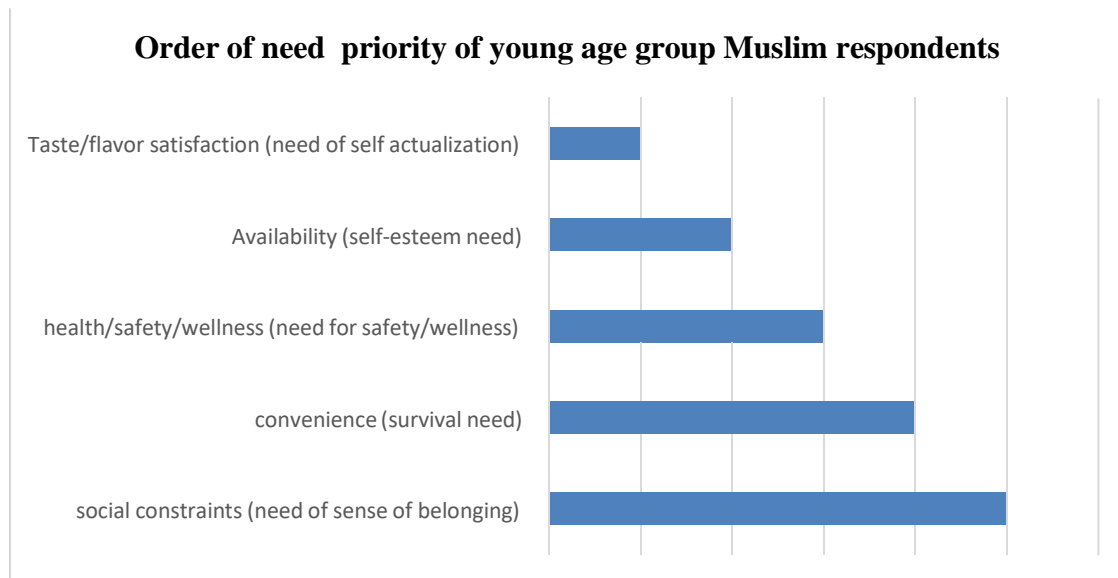*Order of Need Priority For Young Age Group Christian Respondents*

Order of need priority for young age group Christian respondents
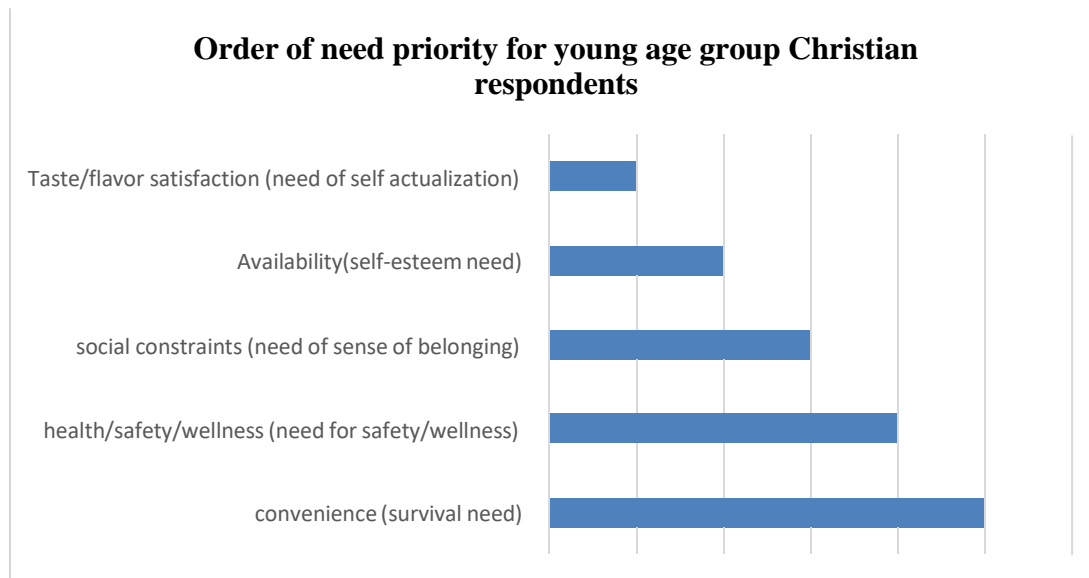
Figure 51

Order of Need Priority For Respondents of South-Eastern and South-Western Regional
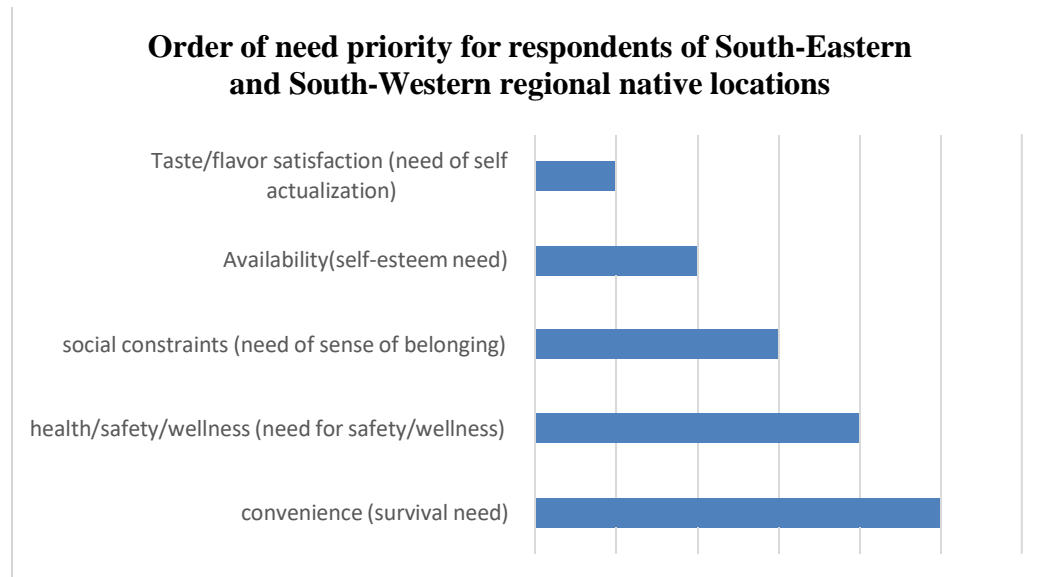
Native Locations

Figure 52

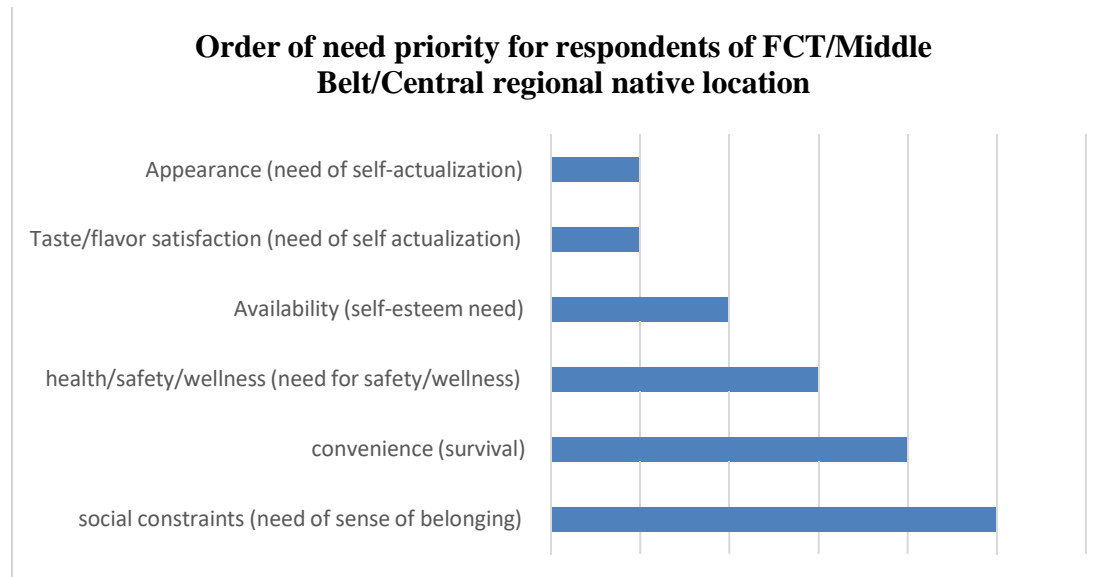*Order of Need Priority For Respondents of FCT/Middle Belt/Central Regional Native*

Location

Figure 53

Order of Need Priority For Respondents of North-Eastern and North-Western Regional
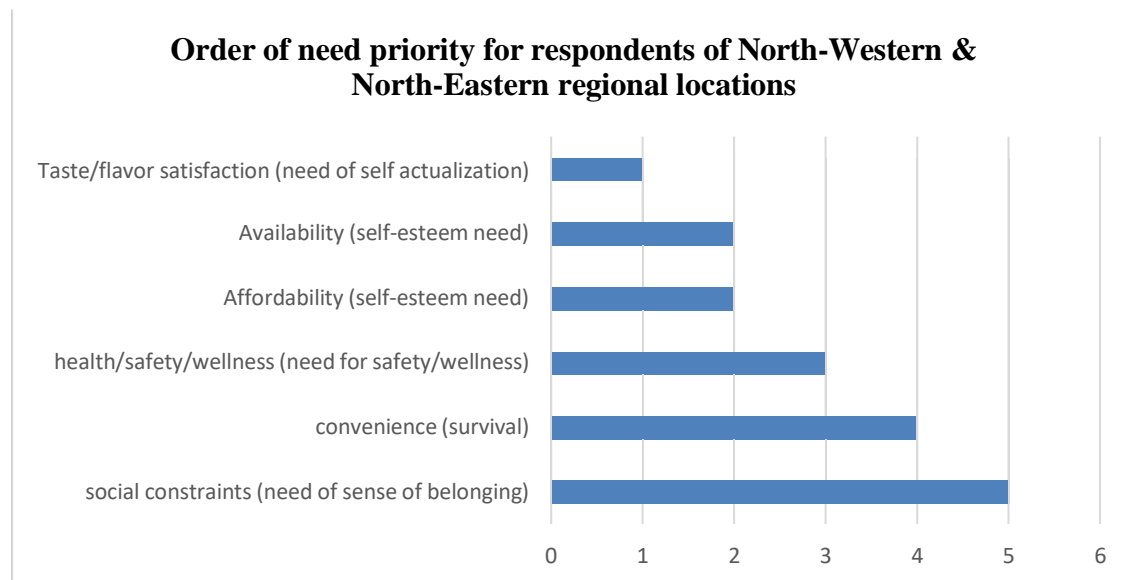
Native Locations

Order of need priority for respondents of North-Western & North-Eastern regional locations

Figure 54

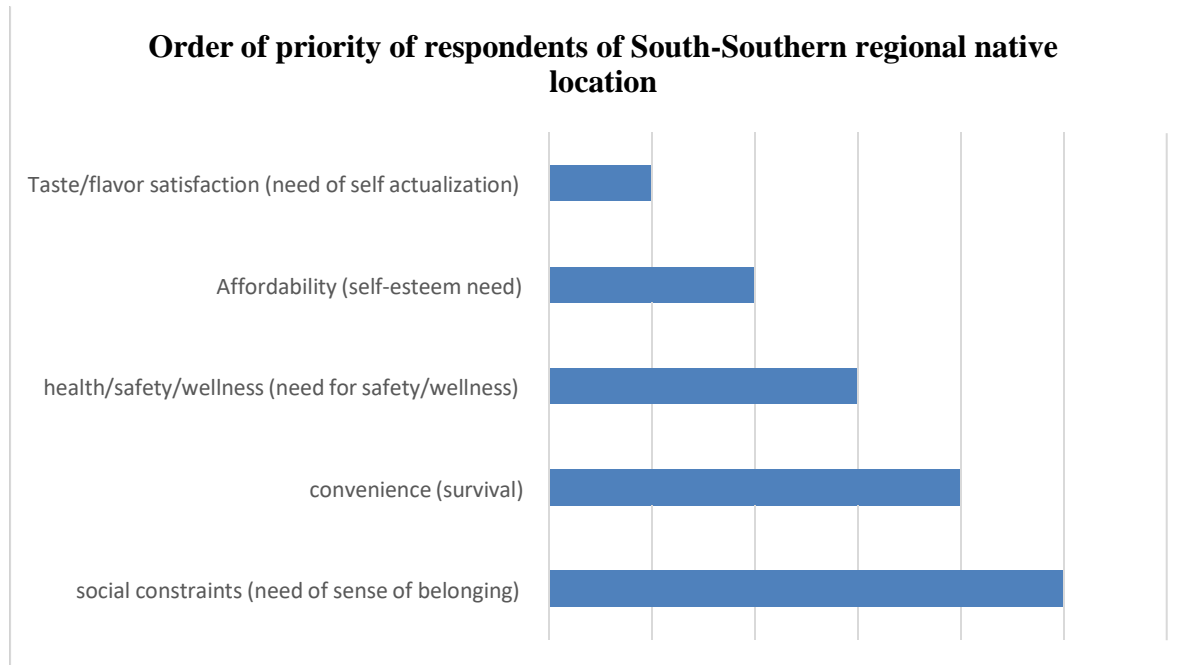*Order of Need Priority For Respondents of South-Southern Regional Native Location*

Order of priority of respondents of South-Southern regional native location

Research Question 4

Q4: What is the essence of purchasing behavior of Nigerian consumers in developing marketing strategies for food flavor and processed (flavored) and packed foods/drink industries?

Across all demographics except religion, ease/convenience is the most desired factor, followed by health and safety. When conformity with social constraints is taken care of in Islam-practicing and in cultural beliefs of others, ease/convenience is most desired, and next is health and safety.

Q4:1 Essence of purchasing decision process of Nigerian consumers in developing marketing strategies for food flavor industry

Buying decision process sheds more light on how long it took for a Nigerian consumer to decide to purchase processed (flavoured) and packed foods/drink. Mostly, regardless of demographics, respondent indicated that they have predetermined choice before making purchase decision but they make purchase decision much more **after checking the pack of the processed (flavored) foods/drinks** for information such as ingredients (flavor inclusive), best before date and/or expiry date, and check for the general presentation of the packaging to ascertain the state of the product. All focus group participants make purchase decision after they are satisfied with checking the pack. This practice was more easily done in some places of purchase than others.

No respondents disclosed he or she **consult friends/family/others first before making purchase decision**, while some respondents from South Eastern Nigeria (old age group), South southern Nigeria (young age group, middle age group, and all age groups – North Eastern Nigeria, indicated that they make purchase decision after price of the product to be purchased is compared with others.

Most respondents of all age groups whose regional native location is North-Central Nigeria, and few of North-West regional native location indicated they **purchase processed (flavoured) and packed foods/drinks spontaneously**. Further discussion revealed their special interest for what they referred to as 'good appearance' of pack which according to them was a desired factor that reflected hygiene and safety. This was identified as a desired factor (which was linked to their need for safety), and on the other hand, they indicated their preference for certain colours (both pack and content in see-through packs), and for certain flavours which gave them some sense of satiety. Among Nigerian consumers, color preferences in processed (flavoured) and packed foods/drinks seemed to influence their decision also in making spontaneously decision.

Q4:2 Essence of Nigerian consumers' needs (most desired attributes and factors) in developing marketing strategies for food flavor industry

Among all respondents, regardless of demographics, most desired attribute in processed (flavoured) and packed foods/drinks was health benefits/safety. Across different educational status, respondents who were graduate showed greatest interest in obtaining – consuming and purchasing processed (flavoured) and packed foods/drinks which support and enhance their health and wellness.

Social conformance and acceptance (religion)- need for sense of belonging was more paramount and basic to the Islam-practising Nigerian consumers than provision for survival. Similarly, there was cultural restriction for respondents whose regional native locations were North-East, North-West and FCT/Middle Belt/Central and had certain restrictions to certain flavours linked to some animal meat protein. However, for other Nigerian consumers who did not have strong social restrictions, after meeting the basic need of survival/provision, there comes health benefits/safety/wellness; then flavour/taste satisfaction, next was ease to use for post graduate respondents, but appearance was crucial to non-graduate respondents, then ease

to use. Post graduate respondent seemed not to have so much time, hence as much as possible needed convenience more.

From in-depth interview conducted, the below findings were made:

For Product Strategy:

- An average Nigerian consumer of processed (flavored) and packed foods/drinks was satisfied but not very satisfied.

- Consumers attribute high importance to food taste and flavour, but not as a standalone, as food flavour/taste must enhance attraction or be appealing as well or must be nourishing

- Food flavor and taste were rated to be very important among all regional native groups. Consumers whose regional native group were North-East, North-Western and FCT/Middle Belt/Central Nigeria attached much importance to sweet taste and strong umami taste, strong fruity flavour, and strong herbal notes.

- Local taste/flavor were well embraced, as they were considered to be authentic to Nigerian consumers

- 'One size cannot fit all' for Nigerian consumers, products need to be finetuned to their local taste preference

- Products that delivered based on health concerns of different age groups and educational status, as these were the demographics with most influence. These were weight control for young adults, and high blood pressure control for old adults, and most desired attributes were mostly influenced by respondents' educational status. Respondents from all demographics were motivated by products which gave health benefits- nutrition, and metabolic regulation. Best drink flavor was influenced by age group and marital status, and importance ascribed to food flavor and taste was mostly influenced by age group.

For Price Strategy:

- Cost of production of processed (flavored) and packed foods/drinks was hugely affected by political, economic, social, technological, legal and environmental factors

- Price of processed (flavored) and packed foods/drinks was affected directly by cost of production, and indirectly by PESTLE factors

- Price of food/drink flavors had impact on cost of production of processed (flavored) and packed foods/drinks

- All Nigerian consumers were price-sensitive but would not compromise with quality

- Price to be market-competitive and individual customer-based

- Purchase within price range of existing products applied to all demographic, however, depending on educational status few respondents were willing to pay at a little higher if there were extra benefits

For Promotion Strategy:

- **Below the line advertisement were required for international manufacturers of food/drink flavors. The business was business-to-business with manufacturers of processed (flavored) and packed foods/drinks.**

- Marketing tool used as a strategy of communication were clear as respondents checked packs label first for information. Across all demographics, it showed that information was key, and those on the label, hence, this needs to be imbibed as it is suitable for Nigerian flavor industry

For Place Strategy:

- Age group of respondents had most influence on place of purchase.

- Availability and accessibility of Nigerian consumers of processed (flavored) and packed foods/drinks were paramount

- Buying decision process indicated Nigerian consumers needed place of purchase that would encourage checking of product packs for information. Place strategy needs to encourage display of product to promote product visibility.

Information on the pack regarding the ingredient also guides them towards their desired flavor.

Price competitiveness in the market where products are sold, is a current marketing strategy employed by international manufacturers of flavor in its industry in Nigeria. International manufacturers of food flavours are therefore, to be mindful of negative cost effect of their flavors in end products- processed and packed foods/drinks, as they are also mindful of price competitiveness with existing brands in Nigerian food flavor industry.

Flavor, as an essential additive/ingredient in processed and packed foods/drinks can impact significantly negatively on the cost of production (raw material), and invariably affects selling price of the finished products- processed (flavored) and packed foods/drinks.

Some features are added to food/drink flavors to improve attraction. This include colored flavors which impact attractive colours as well as flavors, when added to processed and packed foods/drinks during manufacture. **This is a product strategy used to encourage impulsive buying of consumers.**

Consumers checked products pack for health/safety and nutritional purposes. Some features are added to food/drink flavors to guarantee improved health/safety and nutrition such that health concerns of consumers are taken care of. **Value proposition is made to boost marketing claims that meet the very needs of consumers**. Food flavors as additives are sometimes used as vehicle for food fortification, and some provide addition features to 'mimic' and therefore, replace or reduce fat in food/drink product formulation, making them healthier for consumers. This enhances weight control in consumers. **This is a product strategy and a packaging strategy to furnish manufacturers of processed and packed foods/drinks as**

marketing tools (such as no cholesterol claim), especially to captivate customers who look out for information and health benefits on product packs before buying.

In-depth interview revealed that political, economic, social, technological, legal and environmental impact on price of processed and packed foods/drinks is high, especially from the perspective of cost of production. Furthermore, there is taste and flavour predilection among Nigerian consumers of processed and packed foods. It becomes important not to standardize product and price for this market that has its peculiarity. Furthermore, cost of productions needs to be under control due to low disposable income of Nigerian consumers, which invariably is responsible for their sensitivity to cost/price.

Evaluation of Findings

The findings in this research are evaluated in the light of motivational and cognitive theories. Respondents had taste predilection and factors that must be met before they could have reasonable level of satisfaction. Convenience and health benefits/safety was identified to be crucial motivating factors to meeting their desired level of satisfaction in processed and packed foods/drinks. These come first, after them were other desired attributes and factors. This was in agreement with Maslow's proposition that needs are basic, linked, and are in the order of importance, and they determine what motivate a consumer. According to him, once these essential needs are met, any other important need follows. Next in the order of relevance come up or appear.

Hanus (2018)[88] and Kaya (2016)[89] reported that impulsive intrigue is affected by persuading features, which include quality -appearance/colour, flavor type/profile and strength, and peculiarity), convenience, satisfaction/ satiety, health-benefits, and safety ; and competitive price, regarding high degree of motivation of the specific individual evaluating the food. Food consumers differ in what motivate them most, and this explains why the inspirations are not same, as they might just be appropriate for some, they could be off for others. Across different

demographics (age groups, gender, level of education, regional birth location, regional home location and regional native zone/group), health concerns/ benefits and safety, and convenience were the highest desired factors in processed and packed foods/drinks. Food flavor and taste was discovered to be very important to Nigerian food consumers, regardless of their demographics, however, in addition to good taste/flavor delivery, health-benefits and safety, and convenience are paramount, and these are the drivers. These were more obvious in consumers' most preferred or best food flavor and drink flavor. Furthermore, weight control is the highest health concern across all demographics, and food products that promote this is well-embraced by most Nigerian consumers.

Price competitiveness was key as most respondents, regardless of demographics are not willing to buy beyond the price of other existing brands in the market.

In addition, according to Hanus (2018)[88], Kaya (2016)[89] and Lévy *et al*. (2006)[90], the level of stimulation that was just adequate for some respondents, might change with time due to frequency of consumption to the factor that gave the stimulation, or change in situation, therefore, peculiarity might evolve with time. This was unlike most respondents who were health-conscious and still attached much important to their taste predilection towards natural and authentic taste from spices and some indigenous herbs.

Across different demographics, about 20-25% of sample of respondents did impulse buying, while far greater number of them bought based on plan, as they checked the packs of processed and packed foods before purchase, and some compared prices before they made buying decision. Gorton and Barjolle (2014)[81] suggested that the greatest directing postulation used specifically to understand food choice are the economic theories by Bonke (1992)[91]. This entails the food choice process theory and that of reasoned action or planned behavior. These are hence, employed to shed more light to respondents' food choice and relevant marketing strategies to be employed in this emerging market.

In addition to Bonke (1992)[91] and Becker (1965)[92] economic ménage theories on more consumption of processed foods by busy households, it was observed that Nigerian consumers whose regional home locations were in some specific locations where commercial activities were very high, had highest frequency of purchase and consumption of processed and packed foods/drinks.

Regardless of demographics, mother, or wife (spouse) decided majorly what the entire family consumed. However, they put into consideration the specific needs of the other family members. As there was increasing number of working-class mothers, convenience had become a key factor many homes looked out for in processed and packed foods. These further explained where convenience was a driver in the Nigerian market. Monthly earning did not influence the frequency of consumption of processed and packed foods/drinks, even though most of Nigerian consumers were not willing to pay higher than the price of the existing brands in the market.

As postulated by Gorton and Barjolle (2014)[81] on unplanned utility theory, in general, about 37% of Nigerian food consumers were willing to purchase processed and packed foods/drinks if their prices were above existing brands, inasmuch there were other benefits. It was unveiled that Nigerian consumers were inclined to buy food products which had other specific desired attributes (health-benefits and convenience), only if the prices were not too far from the existing brands. This was in line with Gorton and Barjolle (2014)[81] theory in comprehending natural and safe food additives, such as food flavours.

Furst *et al.* (1996)[95] and Sobal *et al.* (2006)[96] suggested that there were consumers' way of life regarding process of choosing food/ taste predilection, and that there were social influences to the food choices made. To a large extent, respondents' taste predilection and buying decisions towards foods/drink were influenced by social bonds, family ties and acculturation. There were various constraints to purchase and consumption of processed and packed foods/drinks, and such included religious constraint (Halal) and cultural constraints

which were highest in Northern regional locations in Nigeria, while the greatest was health (and nutritional) constraints.

Buying decisions in most homes were made by women, as guided by other members of the family. Most women 'acted' based on what their children wanted, and/or putting into consideration the general or specific constraints for one or more members of the family. The regional birth location and regional home location really influenced the food choices and lifestyle of many Nigerian consumers, as they tend to make guided decisions towards some food choices which were similar to the culture of the region where they were born and lived in. Additionally, in comprehending food choice as a series of action framework (Furst *et al.*, 1996)[95], consumer's ways of life, which involved personal experiential food eating and food choice model; social and household influenced on way of food choice, and specific personal necessity (Sobal *et al.,* 2006)[96].

On the other hand, under cognitive theory, this study was evaluated in the light of theory of perceived behavior of Ajzen (1991)[107] which explained that the buying behavior of a respondent was guided by his/her motive or intention, the regulating and guided intentions.

Among all demographics, at least about 30% of sample of respondents' have planned intentions to buy, which was displayed by checking packs to look out for the buying stimuli which motivated their decision to buy. Nigerian consumers whose regional home location was FCT or Middle Belt or Central regional location had highest percentage of those who did impulse buying. What guided their decision most were attraction to appearance of processed and packed foods/drinks. They looked out for appealing appearance, which they believed would give the expected satisfaction, and this was their buying intention. This theory was based on the presumption that action which turned out to be behavior over a period of time was clearly as a result of intention, which consequently were affected by consumers' viewpoints and credence in the values and in the choice of people whose viewpoints were important to them.

Some of the choices of respondents might be hinged on their past experiences rather than credence of values, just like the reports of Honkanen *et al*. (2005)[102], and Verbeke and Vackier (2005)[103]. This unveiled exposure of consumers to some incidents.

Theory of planned behavior was reported in buying health-enhancing food products in young adult consumption perception (Bakti *et al.*, 2019)[111]; organic products (Wekeza and Sibanda, 2019)[114], and functional food products (Bakti *et al*., 2020), while social bond-influenced action was reported in the form of purchase of Islamic religion-conforming food products (Alam and Sayuti, 2011)[112].

Furthermore, Otuedon (2016)[104] reported that consumers' demographics explain best the factors that influence their food choices. It was suggested that consumers' knowledge values and mindset are also crucial. External and environmental factors, social or cultural, economic, political, technological, environmental, and legal constraints are said to have effects. These external constraints could be linked to unavailability of some processed foods and drinks in remote areas of the country, and this could explain the statement of some respondents that 'what is available is acceptable'.

There is peculiarity or uniqueness of food choice to consumers (Steenkamp, 1993)[41], and this is evident in a variegated population of Nigeria. Study on food choice of Romanians was conducted based on theory of reasoned action (Petrovici *et al*., 2004)[105], while Popovic *et al*. (2019)[106] conducted a study based on attitudinal theory on individual consumer's experience and its stronger effects on purchasing decision than social group influence. However, this finding was different from this study which had revealed stronger influence on consumers; food choices and purchasing behavior, even though respondents 'feel' they were the ones taking the decision without being conscious that their actions were being guided by social bonds and family ties.

Suki (2013)[120] reported the findings that consumers that had health concerns had

interest in natural products. This is similar to the findings in this study as respondents across all demographics had health concerns as the major desired factor, and also had the most desired attributes of peculiar or unique natural taste, while best flavors in foods and drinks were natural flavors – spices and fruits. This indicated respondents' strong interest in flavors which would support their health, and these were natural food flavors. The highest constraints to purchasing and consumption of processed and packed foods were health, and then nutrition. The attitudinal evolution among respondents, regardless of educational status, might be linked to increasing awareness to diseases which result from food or drink intake. Curiosity in ensuring safety and healthy living was evident among respondents as most of them first inspected food packs for information before buying decision was made.

Findings are in line with self-concept theory of consumers psychology needs by Grubb *et al.* (1967)[40] which is based on knowledge. There was awareness of healthy living by all respondents- non-graduate, graduate, and postgraduate, and regardless of the educational status, an average Nigerian consumer was health conscious and was inclined towards healthy living. In general, about 45% of sample of Nigerian consumers used in this study first inspected the pack of processed and packed foods/drinks before they made buying decision. About 35% of non-graduate, as compared to about 46% of graduate and 53% of postgraduate, inspected pack for information first before buying and consuming packed foods/drinks. The buying decisions of non-graduates were guided by the level of enlightenment though not so well formally educated. The information they had were could have come from social groups they belonged to.

The theory of reasoned action, which is now the theory of planned behavior by Ajzen and Fishbein (1980)[97] has therefore, explained what guide or regulate the decision of most Nigerian consumers even though it is unknown to them in most cases that social bonds, family ties and acculturation greatly influence their buying decision. In the questionnaire, most

respondents reported they were responsible for decisions them make to buy and consume processed foods/drinks, however, results obtained in the study (and in qualitative aspect of the study through focus group discussion and elite interview) revealed that female spouses and mothers decided what were purchased and consumed by other family members. In actual sense, the decision of female spouses and mothers to buy for everyone in the family was guided by the needs of other members of the family.

Social groups include professional groups, cultural group, religious group, and others, and these had great influence on all regardless of level of education and other demographics of Nigerian consumers.

Figure 55 shows the hierarchy of needs theory for Nigerian consumers of processed (flavored) and packed foods/drinks.

Respondents' motivating needs varied with demographic. Basically, their needs were in hierarchy with convenience and survival as the basic on which safety, nutrition and health were built. Respondents did not indicate that social influence affected their decision making for purchase, but it actually did as the thought of family members and sense of belonging really influenced their purchasing decision in their unconscious/subconscious mind. Affordability gave self-esteem to respondents while achieving the spontaneous sense of self-fulfillment through taste, flavoring and appearance.

Furthermore, based on personal attitude of respondents, and purchasing intention influence convenience was the most desired factor for survival need; while health benefits and nutrition were the most desired attribute for safety (and well-being) need. On the other hand, based on perceived social influence on respondents, socially accepted and non-restrictive product quality, such as local taste/flavor delivery, and halal-conformance, which promoted **social bonding and family ties**. **Social group membership** had relationship with respondents'

constraints, **religion** and **regional native location. There was complexity of satisfying individual family member's needs in large families- family tie. Regional home location showed high relevance in regression analysis – acculturation.**

Figure 55

Hierarchy of Needs Theory for Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks- Maslow (1943)[82]
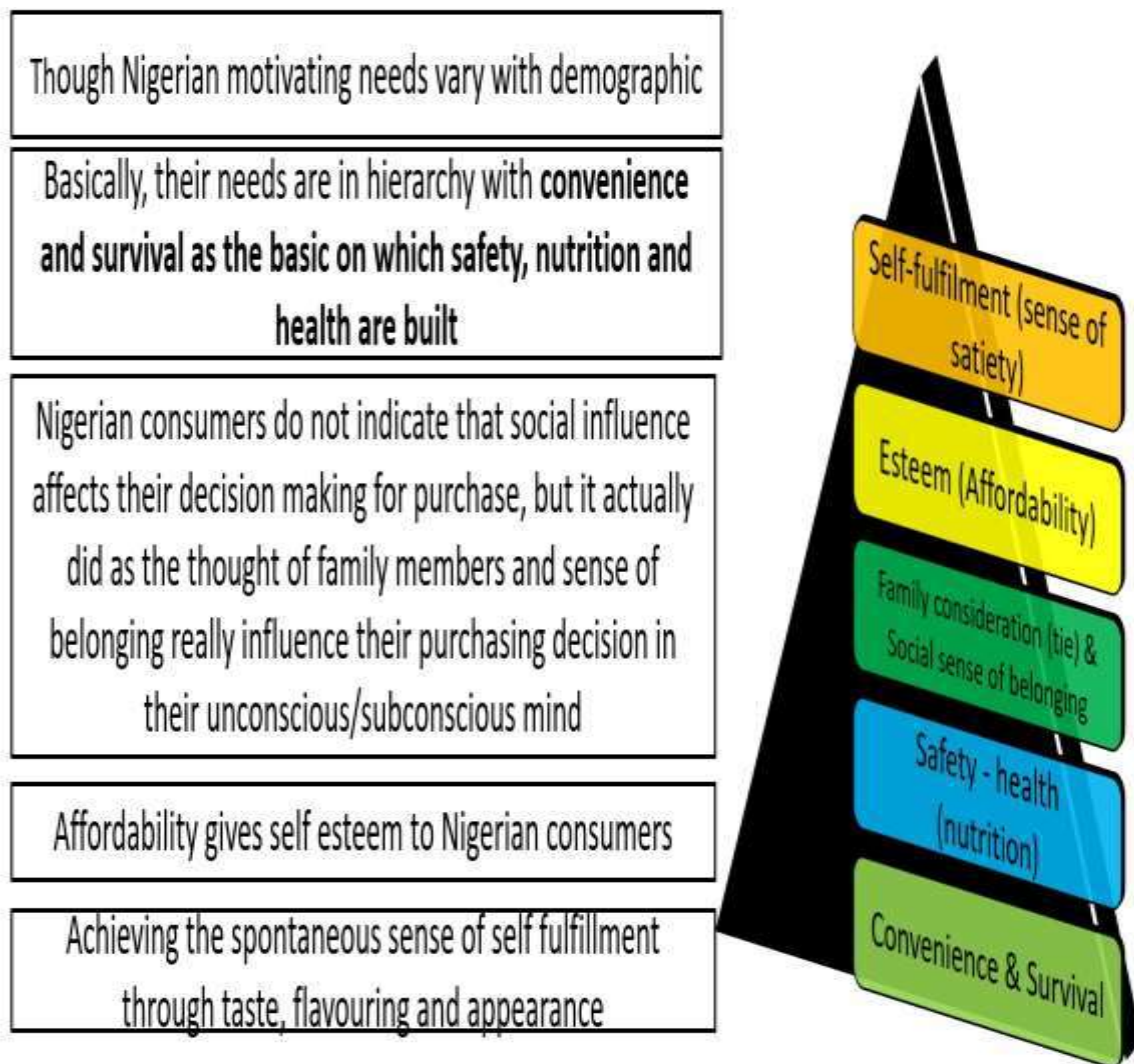
(Source: Uysal *et al*., 2017[83])

Summary

Respondents tend to want more than taste and flavor enhancement and impartation; hence, international food flavor manufacturers require to understand each consumer sub-markets and effects of diversities on what constitutes satisfaction. Understanding the influence of demographics of Nigerians on their taste predilection and purchasing behavior towards processed and packed foods and/or drinks would be useful to international organizations to facilitate applying same marketing strategies or modifying marketing strategies. Ultimately, as it is required in modern businesses, international flavor manufacturing organizations inclusive, global marketing is promoted.

This study on Nigerian consumers' demographics have unveiled variegation in culture (regional native zone, regional home location, regional birth location), social group membership (ethnic, religion, profession), marital status, family size, health concerns, monthly earnings (dispensable income), level of education, gender, and age, and their effects on their taste predilection and purchasing behavior towards processed foods and drinks. Each of these factors served as the basis of classifying Nigerian consumers in this study.

The association between demographics of Nigerian consumers of flavoured foods on their buying behaviors were studied. Constraints to the purchasing behavior of Nigerian consumers towards processed and packed foods and drinks based on their demographics, are revealed. These constraints are religious, health, cultural, nutritional, and financial. Religious sects in Nigeria are mainly Islam, Christianity, and Traditional, while Islam has the highest constraints and hold on Nigerian consumers of processed and packed foods which has to do with Halal restrictions, but very little or no restrictions exist in Christianity. There are constraints due to cultural backgrounds of Nigerian consumers, hence, regional native zone, ethnical bonds and family ties have influence on the purchasing decision and consumption of some consumers. These unveil effect of social bond on consumers' purchasing behavior based

on the social group consumers belong and family members' influence, while the person (s) who decides (decide) what the whole family consumes is discovered. It reveals who influences Nigerian consumers of processed and packed foods and drinks the most in their buying decision.

Health concerns of Nigerian consumers of processed and packed foods and drinks influence their choice and purchasing behavior, and these include weight control, high interest in high nutrition (supplementation) and food safety, high blood pressure control and high blood sugar control. The influence of demographics on these health concerns were revealed and that weight control was the concern most consumers, regardless of their age, gender, regional native zone, home location, birth location, educational and marital status.

The purchasing process of Nigerian processed, and packed foods is revealed, indicating the length of time it takes to make a purchasing decision by respondents towards processed and packed foods and drinks- whether it is spontaneous (impulsive buying without prior intention); after enquiry from friends/family members; after inspection on the product has been made; or after considering or comparing prices of similar products or their substitute. Based on each class of respondents, the importance of flavor and taste of processed and packed foods and drinks has been unveiled to understand to what extent food flavors influence their decision to buy and consume them. In addition, the best flavor categories in food and drinks are unveiled, to understand the taste predilection of respondents who consume processed and packed foods and drinks, based on demographics.

The extent of effect of socio-economic class respondents belong on their choice of processed and packed foods and drinks were measured. In addition, the typical budget for the purchase of packed foods/drinks were determined, if it was within the price range of most common brands in the product categories; or could accommodate a little above the price range, or could accommodate much more above the price range, if they had other benefits. Therefore,

the most desirable attributes of processed and packed foods and drinks were determined to understand what other attributes can add value to processed and packed foods, which could be product quality (improved appearance, enhanced or preferred taste/flavor, health benefitting properties and/or safety); price (affordability); placement (availability); packaging; or convenience (ease to use).

The place of purchase processed, and packed foods and drinks were determined based on regional zones and among different classes of consumers. Place of purchase could be supermarket, retail outlets (on the street), on-the-go from hawkers in traffic, and open market, while the level of satisfaction of consumers are determined.

This cross-cultural sub-population has an incredible diversity, uniqueness and twist in food taste preference and restrictions, which had affected the purchasing decision of respondents towards processed and packed foods and drinks. It is, therefore, important not to downplay the influences of diversities that exist in Nigeria, as an emerging market, as they are pivotal in the formulation or adoption of marketing strategies by international manufacturers of food flavors, to sustain their business. The characteristics of food flavors which influence the purchasing behaviors of respondents who consume flavoured foods were revealed.

Therefore, taste predilection of Nigerian food consumers has been understood as being specific to consumers which may not be generalized (Steenkamp, 1993)[41], and purchasing behavior of Nigerian consumers of processed and packed foods and drinks has been understood as a process (Rabontu and Boncea, 2007[52]; Loudon and Della Bitta, 1979[44]). In addition, in the light of self-concept theory (Grubb and Grathwohl, 1967)[40] the factors which influence consumers food choices are being understood based on the satisfaction they derive from taste and price (Schiffman and Kanuk, 2000)[53]. The makeup of Nigerian consumers and that of what food/drink they make choice of are being understood.

The study has revealed cause-effect relationship between predictor variables (demographics) and purchasing intention drivers for respondents who consume processed (flavored) and packed foods/drinks. It has shown demographics- increase in age group, education, family size, and variation in gender, religion, regional location were associated with changes in the purchase intention drivers.

The study has unveiled cause-effect relationship between predictor variables (demographics) and purchasing intention drivers for Nigerian consumers of processed (flavored) and packed foods/drinks. Consumers' demographics were associated with purchase intention drivers which included consumer level of satisfaction, importance ascribed to food/drink flavor; consumers' budget for purchasing processed (flavored) and packed foods/drinks; and social group influence. Through the study, prediction of satisfaction of Nigerian consumers based on gender and religion; prediction of extent of importance that is ascribed to food/drink taste and flavor in processed (flavored) and packed foods/drinks by Nigerian consumers based on their age group, family size and regional home location; and prediction of extent of social group influence on Nigerian consumers based on their regional home location.

These understandings shed light on the required marketing strategies to be formulated and/or employed for the success of global organizations which have local presence or play in an emerging yet multicultural market like Nigeria. This research gives marketing insight based on the theory of marketing mix elements- price, product, place, packaging, and promotion. From the questionnaires administered and in-depth interviews with professionals in food and flavor industry in Nigeria, current marketing strategies used by international manufacturers of flavor industry in Nigeria were unfolded. In addition, the connection between demographics of respondents who consume flavored foods on marketing strategies of manufacturers of food flavors were unveiled.

In addition, very large number of participants purchased processed and packed foods and drinks by checking they were within the price range of most brands or similar products in the market. Very few participants were willing to accommodate higher prices. Price competitiveness in the market where products are sold, is a current marketing strategy employed by international manufacturers of flavor in its industry in Nigeria. Flavor, as an essential additive/ingredient in processed and packed foods/drinks can impact significantly negatively on the cost of production (raw material), and invariably affects selling price to Nigerian consumers.

Some features are added to food/drink flavors to improve attraction. This include coloured flavors which impacts attractive colours as well as flavors, when added to processed and packed foods/drinks during manufacture. This is a product strategy to encourage impulsive buying of consumers.

Age group of respondents, regardless of other demographics, did not significantly ($P<0.05$) influence the importance attributed to food/drink taste and flavor. There was significant ($P<0.05$) difference among Nigerian consumers across different regional native zone/group and regional home locations in the attributing importance to food taste and flavor. Respondents whose regional home location was Eastern and Northern Nigeria were significantly different among others. Respondents from the regional groups (home locations and native zone/group) which attributed high importance to taste and flavor also indicated that after reading, cooking was their next most cherished hobby, and those respondents from North-Western, South-Western and South-Eastern Nigerians mostly liked intense food/drink taste.

Importance in food/drink flavor and taste was not significantly ($P<0.05$) different among respondents with different marital status, however, there was relationship among the variables- gender, marital status and importance of flavor in foods and drinks to Nigerian consumers of processed and packed foods/drink, whose regional native zone is North West.

North-Eastern respondents attributed least importance to food flavor and taste, among all regional native zones/groups.

Benefits derived from processed and packed foods was strongly linked to importance attributed to food taste and flavor of flavor and taste. There was significant ($P<0.05$) difference among respondents of different educational status, regardless of their regional native zone/group and regional home locations in attributing importance to food taste and flavor. Postgraduate respondents attributed slightly less importance to food taste/flavor than non-graduates and graduates.

There was significant ($P<0.05$) difference among respondents of different regional birthplace in attributing importance to food taste and flavor. Northern and Eastern respondents attributed highest importance to food taste and flavor, and then consumers whose birth location was FCT or Middle Belt or Central. Intense sweet taste and flavor is highly cherished by respondents whose birth locations are Northern and FCT or Middle Belt or Central region. Among different religious groups, respondents whose religion are Christianity, Islam and others are significantly ($P<0.05$) different from those whose religion is traditional as this group attributed less importance to food taste and flavor.

Importance of food flavor and taste tend towards decision made by self; and positively correlated with buying decision process which tends towards spontaneous (impulsive buying) and firstly inspecting the pack (intentional buying); and desired factors -which tend towards desire for delicacy and palatability of food/drink due to taste and flavor. In addition, importance of food flavor and taste tends towards the best drink flavors – and were mostly attributed to flavors that are spices; while the level of satisfaction was linked the combination of desired factors and attributes.

Respondents' motivating needs varied with demographic. Basically, their needs were in hierarchy with convenience and survival as the basic on which safety, nutrition and health

are built. Respondents did not indicate that social influence affected their decision making for purchase, but it actually did as the thought of family members and sense of belonging really influenced their purchasing decision in their unconscious/subconscious mind. Affordability gave self-esteem to respondents, while achieving the spontaneous sense of self-fulfillment through taste, flavoring and appearance.

Furthermore, based on personal attitude of respondents, and purchasing intention influence convenience was the most desired factor for survival need; while health benefits and nutrition were the most desired attribute for safety (and well-being) need. On the other hand, based on perceived social influence on respondents, was socially accepted and non-restrictive product quality, such as local taste/flavor delivery, Halal-conformance, which would promote social bonding and family ties. Social group membership had relationship with respondents' constraints, religion and regional native location, and in complexity of satisfying individual family member's needs in large families- family tie. Regional home location showed high relevance in regression analysis, and this suggested acculturation of respondents as they adapted to the regional home location regardless of regional birth and regional native locations.

Through regression analysis cause-effect relationship between predictor variables (demographics) and purchasing intention drivers for respondents- the consumers of processed (flavored) and packed foods/drinks were determined. Consumers' demographics were the independent variables and the purchase intention drivers for Nigerian consumers of processed (flavored) and packed foods/drinks were dependent variables. Regression analysis have shown how variation in demographics- increase in age group, education, family size, and variation in gender, religion, regional location were associated with changes in the purchase intention drivers. The purchase intention drivers which were significantly associated were consumer level of satisfaction in processed (flavored) and packed foods/drinks; importance ascribed to

food/drink flavor; consumers' budget for purchasing processed (flavored) and packed foods/drinks; social group influence. It was found out that female respondents had higher level of dissatisfaction derived from processed (flavored) and packed foods/drinks than male respondents, and vice versa. This helps to predict nature of satisfaction of respondents in processed (flavored) and packed foods/drinks based on gender. On the other hand, regarding the effect of religion, Islam-practicing respondents had higher level of dissatisfaction from processed (flavored) and packed foods/drinks was derived than Christian and traditional respondents, and vice versa. This helps to predict nature of satisfaction of respondents in processed (flavored) and packed foods/drinks based on their religious beliefs.

Furthermore, as age group of respondents increases, there was decline in level of importance that was ascribed to flavor in processed (flavored) and packed foods/drinks. Consequently, as age group rises to the next level, there was drop to the next lower level of importance to food/drink flavor in processed (flavored) and packed foods/drinks. This helps to predict extent of importance that was ascribed to food/drink taste and flavor in processed (flavored) and packed foods/drinks by respondents based on their age group. In addition, as the family size of respondents increases, there was decline in importance that was ascribed to flavor and taste of processed (flavored) and packed foods/drinks. Consequently, as family size rises to the next level, there was drop to the next lower level of satisfaction in processed (flavored) and packed foods/drinks. This helps to predict nature of extent of importance that was ascribed to food/drink flavor and taste in processed (flavored) and packed foods/drinks by respondents based on their family size.

Regarding the effect of regional home location in Northern, Western and Eastern regional home location of Nigeria, respondents ascribed high importance flavor/taste of processed (flavored) and packed foods/drinks, while respondents whose regional home locations are FCT/Middle Belt/Central home location region and Southern Nigeria ascribed

very low importance to flavor and taste of processed (flavored) and packed foods/drinks. With respondents whose regional home locations were Northern Nigerian ascribing the highest importance to taste and flavor of processed (flavored) and packed foods, those who had FCT/Middle Belt/Central as their regional home location ascribed the least importance to food/drink flavor. This helps to predict level of importance that Nigerian consumers ascribe to flavor and taste of processed (flavored) and packed foods/drinks based on their regional home location.

In addition, regarding the effect of regional home location on budget of Nigerian consumers of processed (flavored) and packed foods/drinks, in the Northern, Western and Eastern regional home location of Nigeria, Nigerian consumers had strict budget for processed (flavored) and packed foods/drinks, while respondents whose regional home locations were FCT/Middle Belt/Central home location region and Southern Nigeria had more flexible budget for processed (flavored) and packed foods/drinks. With respondents whose regional home locations were Northern Nigerian having the toughest budget for processed (flavored) and packed foods, such that they were not willing to spend beyond their budget even if there were little more benefits while those who had FCT/Middle Belt/Central as their regional home location were most willing to pay higher than the budget for more benefits from processed (flavored) and packed foods/drinks. This helps to predict the budget of Nigerian consumers for processed (flavored) and packed foods/drinks based on their regional home location.

Regarding the effect of regional home location on extent of social group influence on respondents – those who consume processed (flavored) and packed foods/drinks, in Northern, Western and Eastern regional home location of Nigeria, influence of one form of social group influence or the other was more regular on them than those whose regional home locations were FCT/Middle Belt/Central home location region and Southern Nigeria. Northern Nigeria was a region with highest percentage of Islam-practicing Nigerians, and the influence was high

just as there were constraints to consuming some items, while Western Nigeria had high percentage of Islamic Nigerian, but less than in Northern region. This helps to predict the extent of social group influence on Nigerian consumers for processed (flavored) and packed foods/drinks based on their regional home location.

Marketing Strategies Adopted in Nigerian Market

Price Strategy

Regardless of educational status large number of participants purchase processed and packed foods and drinks by checking they are within the price range of most brands or similar products in the market. Very few participants are willing to accommodate higher prices. They, therefore, make a purchasing decision after being satisfied with information in the pack, they move to comparing prices of the processed and packed foods/drinks with existing brands in the market. The non-graduate respondents are more price-sensitive than graduates and postgraduates, while the postgraduate respondents are the least price-conscious. Price competitiveness in the market where products are sold, is a current marketing strategy employed by international manufacturers of flavor in its industry in Nigeria. Flavor, as an essential additive/ingredient in processed and packed foods/drinks can impact significantly negatively on the cost of production (raw material), and invariably affects selling price to Nigerian consumers.

Very few respondents enquire from friends/colleagues/others before they can make purchasing decisions on processed and packed. This indicates social influence on purchasing decision of Nigeria consumers.

Price competitiveness in the market where products are sold, is a current marketing strategy employed by international manufacturers of flavor in its industry in Nigeria. International manufacturers of food flavours are therefore, to be mindful of negative

cost effect of their flavors in end products- processed and packed foods/drinks, as they are also mindful of price competitiveness with existing brands in Nigerian food flavor industry.

Product Characteristics (Product Strategy)

Flavor predilection of Nigerian processed and packed foods and drinks, and the level of importance attached to food and drink flavor and taste indicate the characteristics of food flavors that influence their purchasing behaviors.

Consumers' attribute high to moderate importance to food taste and flavour, and the level of importance varies based on demographics. In general, flavorful and tasteful processed (flavoured) and packed foods/drinks are the taste predilection of Nigerian consumers, though they differ based on demographics. Some features are added to food/drink flavors to improve attraction. This include coloured flavors which impacts attractive colours as well as flavors, when added to processed and packed foods/drinks during manufacture. **This is a product strategy to encourage impulsive buying by consumers.**

Study reveals effect of demographics on taste and flavor predilection of Nigerian consumers. Best food flavor differs with marital status and gender among the Nigerian consumers across different regional native locations.

This is a product strategy using target consumers' preferred flavors in processed and packed foods/drinks to encourage intentional buying by consumers.

Promotion Strategy

Presentation and packaging give lots of information to Nigerian consumers as the lookout for information to make informed decision on buying. Highest percentage (53%) of postgraduate, 45.7% of graduates, and 35.2% of non-graduate buy after they obtain satisfactory information as they first inspect the packs of processed and packed foods/drinks. Across all educational status- non-graduate, graduate and postgraduate, 23.3% - 27.1% of spontaneously

buy processed and packed foods, based on need. These Nigerian consumers take buying decisions at the spur of the moment, without prior intention to buy.

For North-Westerners, availability is key to them, as about 34% of them chose availability as the single desired factor, mostly by male (married and single) hence, the importance of placement marketing strategy to ensure effective distribution channel due to distance. Convenience entails ease to use to meet their 'pressing' need- eat-on-the-go, fast food, speed. Convenience were chosen most by the married- considering their time obligation in the family.

Furthermore, based on age group, the highest desired single factor across all age groups was convenience; followed by availability for young adults; delicacy and palatability due to taste and flavor for middle age adult and old age adult; and affordability across the age groups. On the basis of effect of educational status on most desired factors, convenience was the most desired factor regardless of educational status, followed by availability for non-graduate and graduate; but delicacy and /palatability due to taste and flavor for postgraduate. The implication is that desired factors of respondents vary with educational status, which serve as a good indicator of the approach for marketing strategy on product for the consumers whose educational status vary across each region. Convenience and delicacy and /palatability due to taste and flavour can be combined as a single solution for all.

In addition, regarding most desired attributes, about 49% of South Western respondents had health benefits and/or safety as the most desired attribute in food/drinks; while about 27% had taste/flavor as the most desired attribute; about 15% chose ease to use/convenience as the most desired attribute; 5.5% chose price; and 4% chose appearance. Among those who chose health benefits and/or safety, 49.50% were male married, and 22.70% were female married. 37% of those who chose taste/flavor were male married, 24.10% were female married; 22.20% were female single, and 6.70% were male single. 51.70% of those who chose ease to use/

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convenience were male married, 31% were female married, and 10.30% were female single. It implies among South Western, most desired attributes in food vary with gender and marital status. In general, the implication is that most desired attributes of food by respondents varied with regional native location and relationship between gender and marital status only had impact on South Westerners, and not others.

Among all regional native locations, health and/or safety was chosen by about 50% and taste/flavour was chosen by about 25% of entire respondents per regional native location, only North Western native respondents had taste/flavour as highest desired attribute in food (about 33%), about 27% of respondents chose health and/or safety, about 15% chose appearance. **In general Northern respondents really attach importance to appearance and taste/flavour. This is a good indicator of the approach for marketing strategy on product for the consumers in this region. North-Westerners female (married and single) and male single really have strong flair for taste with higher impacts on most desired attributes by gender and marital status of South Western respondents.**

Health and/or safety and delicacy and /palatability due to taste and flavour can be combined as a single solution for all.

Place of Purchase Strategy

Buying Decision Process was Influenced by Place of Purchase. Supermarket as a place of purchase gives good presentation and display of products. Nigerian consumers, being health/safety conscious are more attracted by appearance of surrounding and of the products to be purchased. Supermarket facilitate spontaneous (impulsive) buying (Pradhan, 2018[408]; Husnain *et al.,* 2018)[401] and the findings in this research have revealed same. Extra carefulness is taken when processed and packed foods/drinks are purchased from retail outlets, as most respondents tend to inspect packs more for information like best before date or expiry dates, state of handling/packaging, hygiene and others. Open markets are meant to be a good ground

for negotiation for all, such that prices are relatively cheaper, however, quality is less controlled.

Good number of Nigerian consumers are into impulsive buying, this indicates a strategy used by food and drink manufacturers in the industry. International food flavor manufacturers need to tap into this to boost sales, as there is a great likelihood that Nigerian consumers end up making a purchasing decision after entering the supermarket, as this buying decision is mostly being triggered by emotions and feelings

Having understood that place of purchase of processed and packed foods/drinks influences buying decision process, food flavor manufacturers need to put them into consideration in innovative solutions that support processed and packed food manufacturers to achieve attractive and captivating products which would enhance product display in places of purchase that are most relevant to their target groups and target products. In addition to this food flavors that support safety regarding shelf stability and extension of final food/drink in open market, supermarket display and/or retail market.

Level of Importance Attributed To Food Flavors By Consumers Was Linked With Place of Purchase. The importance attached to flavour and taste of food/drink would motivate consumers to buy their desired products where they can purchase them in good condition.

Supermarket serves as a place of purchase where food products are presented and displayed appropriately, and kept fresh under the required storage conditions. The more important food flavour and taste are to respondents, the more they visit supermarkets to get them fresh with good flavour and taste retention. On the other hand, the less important food/drink flavour and taste are, the less concerned are consumers to get premium and/or tasteful and fresh products, as more of volume products which are at cheaper prices exist in the

open market, while more of premium and good quality products are more common in supermarkets

These findings imply there is indeed diversity among respondents based on gender, marital status, desired factors, and regional native locations. These consequently influence the buying behavior of respondents. Therefore, there is the need to employ relevant marketing strategies that meet the peculiar needs of each of the regional native locations. Price competitiveness, product tailored to the taste predilection of target consumers, enhanced with desired appearance (colour) and health-benefitting solutions; placement to improve shelf visibility and availability, by ensuring proper distribution channel; and packaging to captivate all, especially to make more sales through impulsive buyers.

External (PESTLE) factors and cultural diversities influence marketing strategies employed by international manufacturers of food flavors in Nigeria.

The information received were from professionals in the food flavor and processed (flavored) and packed foods/drinks manufacturing industries, through in-depth interview and elite interview. The level of satisfaction of most respondents whose home locations are remote was not high because according to them, 'what is available is acceptable'. This implied that products which respondents would have liked were not available on shelf for them to buy. One of the reasons could be linked to uncirculated distribution of products from poor road networks (technology- infrastructure), insecurity issues (political and social), embargo on importation of some particular foreign products (legal restrictions on contraband), religious constraints (social), and price constraints (custom duties and high importation charges), and environmental constraints. To some international organizations, they have local distributors which are close to processed and packed foods manufacturers across the country.

Price is one of the most flexible marketing mix elements, which influences precisely within a short period of time the profitability and efficacy of an organization. As most organizations put in place pricing policies to ensure corporate profitability regulation of raw material cost has become very essential (De Toni *et al*., 2017)[369]. Food flavours are raw materials/ingredients/additive used in manufacturing processed and packed food to enhance taste and flavour, therefore, manufacturing organization are ensuring their prices don't impact negatively on the profit margin of their products, and priced based on the peculiarity of a country (Doole and Lowe, 2004)[368]. As pricing policies apply to food flavors buyers and users, do the strategy apply to food flavour manufacturers.

According to De Toni *et al*. (2017)[369], to ensure performance of the business of an organization, such organization would put into consideration customer value-based prices, competition-based prices, and cost-based prices, and establish price strategies on these bases. Furthermore, the pricing strategies employed by manufacturing organization revolve round new product development and importation. If new product development would impact negatively on the business' profit margin, then organization needs to leverage economies of scale and concentrate on production and supply of existing collection products. On the other hand, if large volume importation of materials would affect business profitability, organization would consider to avoid to importation or reduce volume of materials that would be imported. There are regulations in Nigeria which do not encourage importation of some products, as tariffs and customer duties are high for such products. Freight charges nowadays are high from remote countries to Nigeria. As a result of these, pricing strategies employed by some international manufacturers included local production in a local affiliate, hence, individual country pricing (Doole and Lowe, 2004)[368] would be made based on its peculiarity of political, environmental, social, technology, and legal constraints.

For competition-built pricing strategy, price comparison in the market with competitors and suppliers of substitutes is crucial to understand what range to work with and hence, determine how competitive an organization is in price. The cost-built price strategy entails the concept of cost-in-use in product formulation, with which price is adjusted and/or established.

The customer-built pricing strategy entails segmenting customer to assign price to them based on potential volume and nature of product to be sold to them. Some food flavor manufacturers differentiate their products by offering premium quality products with higher prices to international processed and packed foods manufacturers whose products are equally premium, and can afford such prices.

According to Onkvisit and Shaw (2004)[246], product strategy would be established based on consumers' taste/flavor predilection which is quite peculiar to Nigerian consumers, their local taste (as spices) (to be adapted), and those taste/flavors which could be standardized across the globe and extended to Nigerian market. Product-based strategies are put in place for country conformance of quality and components (Engwa *et al*., 2015)[370] as regulated by NAFDAC (National Agency for Food and Drug Administration and Control) and categorized and assigned with the relevant HS Code (Harmonized System Code for International Trade). Furthermore, strategy on product entails ensuring relevant consumers' predilections meet their social, and environmental needs; and technological challenges (Taiwo *et al*., 2002)[371].

An international organization would adapt or standardize their marketing element mix. However, as suggested by Gioko (2015)[372], the importance of worldwide marketing is to determine the equilibrium between standardization and adaptation/localization that is relevant to the emerging country- Nigeria, and its regional diversities. Therefore, the extent to which this equilibrium is made would be an informed decision based on the findings of this study on

place of purchase, packaging, product and price, and distribution channel (Onkvisit and Shaw, 2004)[246].

CHAPTER 5: IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSION

Introduction to The Section

Impact of diversities of consumers on purchasing behavior is a challenge to worldwide marketing, in spite of the fact that the practice of global marketing element mix in current day business makes it easy for international manufacturing organizations to employ same marketing strategy by promoting a standardized way of doing things across the world. Global food/drink flavor industry is expanding tremendously with growth in demand for food flavors, as a result of globalization and innovation.

Nigeria has been identified as an emerging market in Africa, which takes important part in global economy. Many international organizations are eager to invest in emerging markets like Nigeria for long-term revenue generation, and some of which are international food/drink flavor manufacturers, hence, global food/drink flavor marketing as a current trend requires attention in this market. As reported by National Population Commission (2018)[36] that the huge

population of Nigeria consists of large geographical locations, variegated demographics, predilections and complexities, hence, the findings in this research has shown the essence of not downplaying impacts of the differences within the population on the purchasing pattern of consumers of processed and packed foods/drinks. These findings were expected and found to align with the reports of Market Research.com (2018)[7] and Steenkamp (1993)[41] on the role location plays on taste predilections of consumers and the existence of difference in food predilections within multicultural societies (Wright *et al*., 2001)[65].

Furthermore, results obtained in this study revealed that lifestyle of Nigerian consumers of processed and packed foods/drinks evolve with their lifestyles, and these invariably influence the custom of food of people in the location. The evolvement of Nigerian consumers' preferences, expectations and tastes has been a limitation for manufacturers as the factors that drive or motivate their satisfaction through research were not understood (Market Research.com, 2018)[373]. The findings in this research has revealed the motivations of Nigerian consumers, and these are indicators of what guides their food/food flavor choices, hence, their purchasing decision.

Similar to the report of Nair and Maram (2014)[42], Nigerian consumer behavior is understood through this study to improve satisfaction, and as revealed by Otuedon (2016)[104], the findings obtained on location/situation of Nigerian market have unveiled relevant marketing strategies that would be useful to multinational flavor manufacturing organizations in this peculiar market to avoid uncertainties from external environment which could impact negatively on profitability and their business performance. As some international food flavor organizations who currently play in Nigerian market already have some marketing strategies in place, which are similar to the reports of Pires, *et al*.(2015)[45] and Akgün *et al*., (2014)[46] in other countries. Information obtained from this study would further help guide such organizations to check if their decisions align with the market needs, and also be useful to new

entrants to make informed decisions on most suitable and relevant strategies -adaptation or standardization, to be employed to be successful in Nigeria food flavor market/industry. The end result would help in the growth of globalization in food flavor industry.

The findings of this research is however, easier to apprehend unlike the complexities which were reported by Nowicki and Sikora (2012)[374]; Rabontu and Boncea (2007)[52]; and Loudon and Della Bitta (1979)[44]. Expected results were found to be easily apprehended and similar to those of Gorton and Barjolle (2014)[81], and Randall and Sanjur (1981)[375] on factors which influence food choices and that they are dependent on the Nigerian consumers themselves, on the features of processed and packed foods/drinks, and their external environments. Through the qualitative research part of this study, in-depth understanding of factors that could explain reasons for buying patterns of Nigerian consumers of processed (flavored) and packed foods/drinks were obtained on PESTLE (political, environmental, social, technological, legal and environmental) factors that influence the findings within food flavor industry.

Implications

Research Questions and Hypotheses

RQ1: What is the relationship between the characteristics of food flavor and the purchasing behavior of Nigerian consumers?

RQ2: What is the relationship between demographics of Nigerian consumers, their needs and buying pattern and preference?

RQ3: What is the essence of diversities of Nigerian consumers in developing marketing strategies for food flavour industry?

RQ4:. What is the essence of purchasing behavior of Nigerian consumers of processed (flavored) and packed foods/drinks in developing strategies for food flavor industry in Nigeria?

H1: There is no significant relationship among the needs of Nigerian consumers of processed (flavored) and packed foods/drinks.

H2: There is no significant relationship between personal attitude of Nigerian consumers and their willing intention to purchase processed (flavored) and packed foods/drinks.

H3: There is significant relationship between subjective norms and the decision of Nigerian consumers to purchase processed (flavored) and packed foods/drinks.

H4: Perceived behavioral control are not positively related with Nigerian consumers' intention to purchase processed (flavored) and packed foods/drinks.

In this study, monthly earnings of male was higher than those of female. This is similar to the reports of Blau and Kahn (2017)[376], Turner *et al*. (2017)[377] in Irish employees, Briel *et al*. (2021)[420] and eArraes *et al*. (2014)[378] on Brazilian employees' gender wage difference. Level of social bonding influence on female respondents is regular/often with family members, friends, colleagues and neighbors, and it is different from the reports of McDaniell *et al*. (2015)[379] and Benenson *et al.* (2011)[380] and David-Barret *et al.* (2015)[381] that females put more heavily into few cordial bonding with friends or colleagues, while males do not give so much into the groups they belong but they have stronger group bonding.

There is significant difference (p<0.05) in extent of social group influence between male and female. This implies that social group influence is stronger on female than male. Level of social bonding influence on female respondents is regular/often with family members, friends, colleagues and neighbors, and it is different from the reports of McDaniell *et al*. (2015)[379] and Benenson *et al.* (2011)[380] that females put more heavily into few cordial bonding with friends or colleagues, while males do not give so much into the groups they belong but they have stronger group bonding.

There was no significant difference (P<0.05) in the monthly earnings of Nigerian consumers of processed and packed foods/drinks across different age groups (19-70 years).

This was not expected as it is contrary to earlier reports that financial satisfaction increased with age from middle age adult to old adult (Hsieh, 2003)[382]. There was no significant difference (P<0.05) in the monthly earnings of Nigerian consumers of processed and packed foods/drinks across different level of education. **This was not expected as it is contrary to the report that higher education brings in the higher earning (Rani and Elliot, 2013)[216].**

There was no significant difference (p<0.05) among the monthly earnings of consumers whose regional home locations are Western, Southern and FCT or Middle Belt or Central, but there were significant differences between each of them and those from Northern, and Eastern Nigeria. However, there was no significant difference (P<0.05) between monthly earnings of FCT or Middle Belt or Central and Eastern Nigeria. Furthermore, there were significant differences (p<0.05) among the monthly earnings of consumers from different regional native zones. Consumers from North-Central and South-Eastern earn highest monthly, while those from North-Eastern Nigeria earn least monthly. **The implications of these findings are that some regional locations vary in economic strength within Nigeria, while some are similar.** These findings are similar to those of eArraes *et al*. (2014)[378] whose findings were that earnings of Brazilian employees varied with regions; and Eliasson *et al.* (2021)[383] who reported intra- and inter-regional differences in earnings of Finish and Swedish.

There were significant difference (p<0.05) among the monthly earnings of consumers who are separated and those who are married and single. The separated/divorced earn much less monthly. The findings of Schoeni (1995)[384] and Blackburn and Korenman (1994)[385] revealed that marital status of influenced earnings the earnings of male married were more than male single, separated/widowed and separated. Watson and McLanahan (2011)[386] reported that married partners earn higher than those who are single, while Balcazar (2019)[387] suggested that married male/female had the highest earning among all others. **The findings in this study**

regarding married male earning more than married female was expected according to various existing reports.

Life Styles As Influenced By Demographics

Demographics of Nigerian consumers which relate to their lifestyle and health concerns have some relationships with their purchasing behavior towards processed (flavoured) and packed foods and drinks. Health concerns, hobbies, frequency of purchase and consumption of processed and packed foods and drinks, and constraints to purchase and consumption of processed and packed foods and drinks are linked to demographics of participants. There is significant difference (p<0.05) in social groups, extent of social group influence, hobbies, frequency of purchase and consumption, desired factors, who decides, buying constraints, and best drink flavor among different age groups.

There were significant differences (p<0.05) among the health concerns of consumers from different birth location. Weight control was the highest health concern in Northern (33.9%), Western (37.8%), Eastern (34.3%), Southern (39.7%) and FCT/Middle Belt/Central Nigeria (36.5%). Across all birth locations in Nigeria, weight control was highest, and next was high nutrition, but other health concerns varied across the different birth locations. Other health concerns – high blood sugar control and high blood pressure vary among different regional birth locations. **The findings of connection of health concerns with location is similar to and/or align with the report of Dummer (2008)[388], which was that geography and health are inherently connected, hence, birth location, home location and work location directly affect health due to different types of exposure from air, foods/drinks consumed, and social environments.**

Weight control is the root cause of many ailments and such (high blood pressure, high blood sugar) can be prevented and controlled through it (Harsha and Bray, 2008)[389]. **The**

findings on weight control as the major health concern across most demographics was not a surprise, though an eye opener to the reality among Nigerians.

There were significant differences (p<0.05) among the health concerns of consumers of different age groups. Though weight control was highest health concern in young adult (41.14%) and middle age adults (33.2%), while both weight control (26%) and high blood pressure (26%) were highest concern in old adults, other health concerns varied among age groups. Blood sugar control was the lowest across all age groups, ranging from 4.01 – 9.3%. Franssen *et al.* (2020)[390] reported that there were differences in social and health-related concerns due to difference in age groups across 19–65 years of Irish.

According to Bakhtiar *et al.* (2021)[391], fitness is very essential to young adults as they are the most active age group. There were significant differences (p<0.05) among the health concerns of consumers of different educational status. It implies that health concerns of respondents varied with their educational status. This is similar to the report of Raghupathi and Raghupathi (2020)[392] that adult who have higher educational attainment enjoy their health better, and have different health concerns from those with lesser level of education. In terms of weight control, it was the highest health concern across all education status/level- non-graduate, graduate and post graduate Nigerian consumers of processed and packed foods and drinks. Weight control was a concern for 35.2% of non-graduate, 37.4% of graduate; and 36.4% of postgraduate. Other health concerns varied with educational status. High nutrition was essential to all, but varies with educational status. Good nutrition awareness and knowledge determines or guides the choices of respondents on their choices (Bakhtiar *et al.*, 2021)[391].

Desired factors in processed and packed foods/drinks influence the frequency of purchase and consumption by Nigerian consumers. This implies frequency of purchase and consumption of processed and packed foods/drinks increases with presence or extent of presence of the desired factors in the products, which were convenience, health, nutrition,

affordability, and availability. Slabá (2019)[214] reported that age of consumers affected their purchasing behavior, especially price sensitivity. **Having identified the desired factors of consumers in processed and packed foods/drinks and their significance in increasing frequency of purchase and consumption of end product, food flavor manufacturers need to put them into consideration in innovating solutions that support processed and packed food manufacturers to achieve them.**

Health concerns of Nigerian consumers of processed and packed foods/drinks influence their hobbies. This implies that Nigerian consumers of processed (flavored) and packed foods/drinks make the choice of hobbies for reasons of concern of health. This is in line with the report of Bakhtiar *et al.* (2021)[391] that nutrition is an essential determinant of performance in sport/game.

Consumers whose health concerns are weight control have cooking, and wining and dining as their hobbies. This could explain one of the main reasons they have issues with weight. Consumers whose health concerns are high nutrition, high blood sugar and high blood pressure mostly have reading as their hobby, while whose concerns are high nutrition mostly have games/sport as their hobby. **Respondents' lifestyle has effects on their health, hence, their health challenges. These are expected as they align with existing reports.**

Having understood that health concerns of Nigerian consumers of processed and packed foods/drinks is paramount as the determining factor to what they buy and consume, and as it also influences their hobbies, food flavor manufacturers need to put them into consideration in innovating health-enhancing solutions that support processed and packed food manufacturers to achieve it.

There were significant differences (p<0.05) among the hobbies of consumers of different educational status. In Nigerian consumers of processed and packed foods/drinks across all educational status, reading was highest in non-graduates (23.1%), followed by

postgraduates (22%), and graduates (17.4%); while cooking was the highest (27.6%) among non-graduates, and travelling (14.4%) among postgraduates. Droomers *et al.* (2001)[393] reported that educational level varied with physical activities (hobbies) of respondents. Reading enlightens and serves as an instrument for learning, a means for education, acquiring new knowledge, and obtaining information (Chettri and Rout, 2013)[394].

Non graduate tend to be most curious to know. This was not expected, as graduates were assumed to have stronger flair for reading. Non-graduate Nigerian consumers have strong flair for cooking. **Having understood that educational status of Nigerian consumers of processed and packed foods/drinks influences their hobbies, food flavor manufacturers need to put them into consideration in innovative solutions that support processed and packed food manufacturers to meet the needs of different target groups of consumers based on their educational status and their 'special interest'.**

Social group which Nigerian consumers belong to influences their hobbies. Nigerian consumers who had cooking, wining and dining, and reading as their hobbies are mostly those who belong to one professional group membership or the other. These consumers as well may also belong to ethnic (cultural) groups and other social groups- religious groups and others. Those whose hobbies are games/sport and travelling belong mostly to other social bonding groups (sport/games groups) which support travelling, tours and others.

As most respondents belong to one professional group or the other, these are working class people who desire convenience, ease-to-use, and on-the-go type of solutions that are fast to use and consume. These products are affordable and they are those that are palatable and acceptable level of delicacy from taste and flavor. For other social groups members (health groups, religious groups), their requirements seem to be very specific, hence, affordability is key, while delicacy and palatability are essential in the processed (flavored) and packed foods/drinks they buy and consume, and very importantly, is availability of the identified

products. **Having understood that social group of Nigerian consumers of processed and packed foods/drinks influences their hobbies, food flavor manufacturers need to put them into consideration in innovative solutions that support processed and packed food manufacturers to meet the needs of different target groups of consumers based on their social groups and their 'special interest'.**

Place of purchase of processed and packed foods/drinks influence the frequency of purchase and consumption of processed foods/drinks by Nigerian consumers. This implies that Nigerian consumers buy more frequently from open market than supermarket. This aligns with the report of Food and Beverage West Africa (2021)[395] that 75% of Nigerian food consumers buy from open markets. **Having understood that place of purchase of processed and packed foods/drinks influences the frequency of purchase and consumption of Nigerian consumers, food flavor manufacturers need to put them into consideration in innovative solutions that support processed and packed food manufacturers to achieve attractive and captivating products which would enhance product display in places of purchase that are most relevant to their target groups and target products. In addition to this food flavors that support shelf stability and extension of final food/drink in open market, supermarket display and/or retail market.**

Health concerns of Nigerian consumers influence their desired factors in processed and packed foods/drinks. Nigerian consumers whose health concerns are weight control mostly had convenience as their desired factors. This could explain one of the main reasons they have issues with weight. **These confirm earlier reports on negative health effects of processed foods. This boils down to lifestyle pattern regarding feeding habit as reported by Gherasim *et al*. (2020)[396] and Fayez *et al*. (2017)[396]. Having understood that the most desired factor of Nigerian consumers of processed and packed foods/drinks is linked to their health concerns towards what they buy and consume, food flavor**

manufacturers need to put them into consideration in innovating health-enhancing solutions that support processed and packed food manufacturers to achieve it.

Hobbies of Nigerian consumers influence their frequency of purchase and consumption of processed and packed foods/drinks. Nigerian consumers whose hobbies are cooking, wining and dining most frequently purchase and consume processed (flavored) and packed foods/drinks than others. The frequency of purchase and consumption of these products are two or more times per day, and at least once per day. Consumers whose hobby is reading purchase and consume processed (flavored) and packed foods/drinks about once per day or at least three times per week. They consume processed and packed foods/drinks less frequently than those whose hobbies are food and drink-related. Consumers whose hobbies are travelling actually consume lots of processed (packed) foods mostly when they are travelling, and much more than those whose hobby is games/sport. **Having understood that the hobbies of Nigerian consumers influence their frequency of purchase and consumption of processed and packed foods/drinks, food flavor manufacturers need to put into consideration innovative solutions that support processed and packed food manufacturers to achieve captivating products for target consumer groups/market which would enhance their desired attributes based on their hobbies.**

Hobbies of Nigerian consumers influence their desired factors in processed and packed foods/drinks. Consumers whose hobby is cooking, and wining and dining, have convenience as the most desired factor in processed (flavoured) and packed foods/drinks. **Having understood that the hobbies of Nigerian consumers are linked to their desired factors in processed and packed foods/drinks, food flavor manufacturers need to put them into consideration to innovate solutions that support processed and packed food manufacturers to achieve captivating products for target consumer groups/market which would enhance the desired factor based on their hobbies. Such include flavors that deliver**

their desired direction or level of delicacy and palatability, affordability, availability, health-benefits/safety or convenience.

Hobbies and buying constraints of Nigerian consumers are towards processed and packed foods/drinks are linked to each other. Religious constraints of consumers were linked to cooking, and wining and dining, as there are restrictions to processed (flavored) foods/drinks which are Halal-non conformant. Nutritional constraint as a buying constraint was linked to consumers whose hobbies require high nutrition. Reading brings enlightenment, and consumers who have it as hobby tend towards having buying constraints that are linked to health, nutritional, cultural and others depending on what gives them conviction. **Having understood that the hobbies of Nigerian consumers are linked to their buying constraints towards processed and packed foods/drinks, food flavor manufacturers need to put them into consideration to innovate solutions that support processed and packed food manufacturers to achieve captivating products for target consumer groups/market which would meet their 'special' needs based on their constraints as guided by their hobbies. Such include innovative flavors that support their health concerns for weight control (fat-replacement solution, Yashini *et al.*, 2021)[397], high blood sugar regulation (sugar-reduction solution; Mahato *et al*., 2020)[398], high blood pressure regulation (salt-reduction solution; Ponzo *et al.,* 2021[399], Liem *et al*., 2011[400]), and high nutrition (fortification) (Lo *et al., 2009*)[421].**

Hobbies and most important buying constraints of Nigerian consumers are towards processed and packed foods/drinks are linked to each other. Religious constraints as a most important constraints to consumers who practice Islam were linked to hobbies which are cooking, and wining and dining, as there are restrictions to buying and consuming processed (flavored) foods/drinks which are Halal-non conformant. Nutritional constraint is an important buying constraint that has been linked to consumers whose hobbies require high

nutrition. Consumers whose hobby is reading are more enlightened, hence, are more prone to constraints which they identify as important based on what they consider so, such as health, nutritional, cultural and others. Financial constraints apply to all consumers, regardless of their hobbies, though the extent differs. **Having understood that the hobbies of Nigerian consumers influence the most important buying constraints to buying and consuming processed and packed foods/drinks, food flavor manufacturers need to put into consideration innovative solutions that support processed and packed food manufacturers to achieve captivating products for target consumer groups/market which would make up for the constraints which consumers consider most important.**

Hobbies and extent of influence of social group on Nigerian consumers of processed and packed foods/drinks are linked to each other. Social groups, such as religious groups (Islam) most frequent/regular influence on respondents whose hobbies are cooking, and wining and dining, because of Halal restriction. Respondents whose hobby is reading are seldom influenced by social groups because they are more enlightened, and have inculcated the knowledge into themselves such that it appears it originated from them. Respondents whose hobbies are travelling and game have social group influence but not as frequent and strong as those whose hobbies are cooking, and wining and dining.

Extent of influence of social group on Nigerian consumers is linked to who decides which processed (flavored) and packed foods/drinks are purchased and consumed in the family. Consumers decide what they buy and consume, however, under the influence of social bonds and family ties. They are regularly influenced by social bonding and family ties, when they decide what they buy because they put into consideration the interest and consumption constraints of other family members. When children decide, they are not that thoughtful to consider others but only themselves. From focus group discussions, female spouses (for the married male) or mother for some of the single male, and female single decide which processed

(flavored) and packed foods/drinks are bought and consumed in the family. They take decisions based on their children's preferences. Decisions made are in the interest of other family members though they are the ones who carry out the buying. **These findings were similar to those of Husnain *et al.* (2018)[401] on effect of family influence on shopping pattern**. **These findings are partly expected based on existing reports, however, when Nigerian food consumers say they decide, they are not 100% in control of their decision.**

Extent of influence of social group on Nigerian consumers is linked to their most important constraints to buying and consuming processed and packed foods/drinks.
Religious constraints exist very well most consumers whose religion is Islam, and they are numerous among Northern Nigerians, while few Southern and Western Nigerians practice the religion. The influence of the religious group and their beliefs have a very strong hold on the members of the religious sect. On the other hand, nutritional and health constraints are the most regularly influenced in respondents by social groups (professional, cultural and others) they belong as members. Cultural beliefs and the constraints exist but have little or no influence of most consumers. Social group influence has little or no influence on financial constraint of respondents to buying and consuming what they would have loved to, rather, it is mostly availability of disposable income and budget.

Buying Decision Process

The findings in this research aligns with the reports of Rabontu and Boncea (2007)[52] and Loudon and Della Bitta (1979)[44] that the purchasing behaviors of food consumers require to be comprehended as a process. In this study, about half of the Nigerian consumers of processed and packed foods/drinks buy by first inspecting the pack, while about one-fourth of the participants buying spontaneously. Few compare prices, but they are more than those who make enquiry from friends/colleagues and others first before they purchase.

Buying constraints and budget of consumers of processed and packed foods/drinks are linked. Generally, the highest buying constraints were health and nutrition, while religious constraint is the most important for those whose religion prohibits some foods/drinks. These buying constraints take priority over budget, rather, respondents could sacrifice their budget for these constraints, hence, the stronger the constraints the less adherence to budget. Respondents could buy either slightly beyond or much more than budget, depending on how pressing the need is. **This finding was not expected, as previous reports (Food and Beverage West Africa, 2021)[395] were that price is the most essential factor that influence the buying decisions of Nigerian consumers.**

Level of importance attributed to food/drink flavour by Nigerian consumers influences the buying decision process for processed and packed foods/drinks. Nigerian consumers that consider food flavor and taste very important and get attracted to them based on this tend to be more spontaneous (impulsive) in buying, while those who are more careful in checking packs for information, consider food flavor and taste moderately important. Those that buy based on price tend consider food flavor and taste less important compared to others. **Buying constraints towards food/drink flavor by Nigerian consumers influences the buying decision process for processed and packed foods/drinks.** Most Nigerian consumers do not buy spontaneously, they rather buy by carefully checking the packs for information, which would guide them based on safety/health, and alignment with their buying constraints.

Relationship Among Demographical Factors

Relationship Among Monthly Earning, Gender and Place of Purchase. Higher percentage of male consumers who earn least (less than 250k and below) buy more from supermarket than their female counterpart. Higher percentage of female who earn most (250 k and above) buy from supermarket more than their male counterpart. Largest percentage of consumers who buy from open market were female (23.70%) and male (25.40%) who earn

between 50k and less than 100k (17.80%) while their male who earn less than 250k to 100k are responsible for 20.30% of total number of consumers who buy processed (flavoured) and packed foods/drinks from open market.

Largest percentage of consumers who buy from retail outlets were female who earn above 500k (18.80%) while their male counterpart were 17.40%. However, female who earn 100k -250k monthly are responsible for 15.90% of the consumers and their male counterpart make up 14.50% of the consumers who buy from retail outlet (on the street).

Having understood that the relationship among monthly earning, gender and place of purchase of Nigerian consumers, food flavor manufacturers who wants to be competitive need to put into consideration cost competitive innovative solutions that would not impair negatively on their cost of production, hence, their profit margin, thereby supporting processed and packed food manufacturers to achieve good but affordable products for target consumer groups/market.

Relationship Among Monthly Earning, Gender and Desired Attributes of Processed (Flavoured) And Packed Foods/Drinks. From respondents whose regional native locations are South-South, 75% of female respondents whose most desired attribute was appearance earn between 250k and above. However, the rest 25% are male whose monthly earning was the least (less than 50k). **It implies that appearance is very crucial to female South Southerners who earn much more than average.**

Among consumers who had price as the most desired attribute to 28.60% each of them are male who earn less than 250k and between 100K; male who earn less than 100k and 50K; and female who earn less than 500k and 250k. **Female consumers who earn highest seemed to be very price-conscious much more than female who earn less and least. There is price sensitivity across different earning scales and between male and female consumers.**

Among consumers who had health benefits and /or safety as the most desired attribute, 28.60% of them are female who earn less than 100k and between 50K; and 23.20% of them are male who earn less than 500k and 250k. **It implies that even at low earning, female consumers are more health/safety conscious, while male consumers who earn much more are the most health/safety-conscious ones among other male.**

Among consumers who had ease to use / convenience as the most desired attribute, 27.80% of them are female who earn less than 100k and between 50K; and 22.20% of them are male who earn less than 500k and 250K. **It implies that even with low earning, female are more conscious of convenience, while male who earn much more are the most conscious of convenience/ease to use among other male. This might be attributed to demands of jobs and need to balance work with life.**

Relationship among the most desired attribute and monthly earning only among consumers whose regional native zones are North Central. From consumers whose regional native locations is North Central zone 33% of them whose most desired attribute was appearance are male who earn between 100k and below 250k; 20% of respondents earn above 500k; and 20% of them earn between less than 100k and 50k. Only 6.70% of total respondents for each female who earn 100k and less 250k; 50k and less 100k; and less than 50k, had appearance as the most desired attribute. **It implies appearance of processed (flavoured) and packed foods/drinks is more important to male than female respondents.**

Relationship Among Gender, Monthly Earning, Most Desired Attribute of Consumers and Regional Native Location, and Implication on Marketing Strategies of Manufacturers of Food Flavors. 24% of consumers whose most desired attribute was taste were male who earn above 500k and 24% are male who earn 100k and less 250k; while 16% are female earn above 500k and 16% are female who earn 100k and less 250k. Obviously, for consumers who earn 100k and above, larger percentage of male respondents have taste/flavour

as their most desired attributes than female who earn same. **It also implies than the more consumers from this native regional location earn, the more they appreciate or desire taste/flavours in processed (flavoured) and packed foods/drinks, hence, the more the** indulgence. **Having understood that the relationship among monthly earning, gender and most desired attributes of processed and packed foods/drinks, food flavor manufacturers who wants to be competitive need to put into consideration cost competitive innovative solutions that would not impact negatively on their cost of production, hence, their profit margin, thereby supporting processed and packed food manufacturers to achieve good but affordable products for target consumer groups/market. This entails international food flavor manufacturers bearing in mind the relationship of diversity of consumers based on gender with monthly earning and regional location.**

Among consumers who had price as the most desired attribute, 36.40% of them are male who earn less than 250k and between 100K; and 27.30% are male who earn above 500K; and 27.30% are female who earn above 500K. **It implies consumers who earn more seem to be more price-sensitive than others who earn less.**

Among consumers who had health benefits and /or safety as the most desired attribute, 27.30% of them are male who earn above 500k and these were the highest, followed by 21.80% of male who earn 100k and less 250k. Obviously, male consumed from North Central location are more health/safety conscious than female consumers.

Among consumers who had ease to use / convenience as the most desired attribute, 22.20% of them are female who earn above less 500k and between 250k; and 22.20% of them are male who earn above 500k.

Cause-And-Effect Relationship Between Demographics and Purchasing Behavior

General regression analysis findings establish the cause and effect relationship between demographics/diversity of Nigerian consumers and their purchasing behavior.

***Level of Satisfaction of Nigerian Consumers Was Determined By Gender.* This reflects differences in personal attitude which are psychological and physiological needs, safety/health/well-being, need for sense of belonging, meet the need for self-esteem and need for self-actualization** (specific food flavors that bring satiety and promote their creativity and hobbies). Having their preferred flavor preference influences their sense of satiety, as well as lifestyle-based needs such as – hobby of cooking for female, health concerns/constraints vary with gender, and in extent of social group influence. Most male respondents mostly prefer spice & vegetable flavors much more than female respondents. Most male respondents like animal meat protein (brothy, savory taste/flavor) much more than female respondents.

***Level of Satisfaction of Nigerian Consumers Was Determined By Religion.* This reflects sense of belonging/social needs of Nigerian consumer, and effect of social pressure. Importance attributed to food/drink flavor and taste determined by age group: personal attitude- physiological and psychological needs due to age.** The younger prefer chocolate and malt flavor, just as the older prefer spice & vegetable flavor, while more respondents of young age have preference for nut flavors than respondents of old age group. With advancement in age, preference for each of nut flavors, dairy-related flavors, and chocolate and/or malt flavors in foods/drinks drop while preference for spice & vegetable flavors increase.

***Importance Attributed to Food/Drink Flavor And Taste Was Determined By Regional Home Location.* This was linked to sense of belonging/social needs of Nigerian consumer, and effect of social pressure.** Regardless of regional birth location and regional native group/location, findings have revealed that regional home location supersedes all other regional location as regards their influence on their purchasing behavior towards processed (flavored) and packed foods/drinks.

Importance Attributed to Food/Drink Flavor And Taste Was Caused By Family Size. **This was linked to sense of belonging/social needs (family ties) of Nigerian consumers and effect of pressure from social group.** Family size influenced a Nigerian consumer's decision towards purchasing and consumption of processed (flavored) and packed foods, as less importance was attributed to food flavors. Most respondents of family size of 3 have preference for chocolate and malt flavor. Most respondents of family size of 3 have preference for nut flavor, while most respondents from family size above 3 show least preference. Most respondents whose family size is 6 and above prefer spice & vegetable flavors. Most respondents whose family sizes are 4 and 5 prefer dairy-related flavors as best flavors for drink (beverages).

Budget For Processed (Flavoured) And Packed Foods/Drink Was Determined By Regional Home Location of Nigerian Consumers. **This reflects need for self-esteem and also perceived behavioral control.** Based on market knowledge of the immediate place they live and from where they purchase processed (flavoured) and packed foods/drinks, consumers' budget varies per regional home locations. In some regions, most consumers strictly buy within the price of existing similar products, while in some locations, most consumers are more flexible to pay little more, and others are willing to pay much more provided there are added benefits. Across all regional home locations, 56.2 – 67.3% of respondents buy processed (flavored) and packed foods within the price range of most brands. Highest percentage of FCT/middle Belt or Central are willing to pay a little above price range of most brands, while Southern has the least that are willing to pay much more, and Western has the least percentage respondents who are willing to accommodate a little above the price range of most brands if there are other benefits.

Extent of Social Group Influence Was Determined By Regional Home Location of Nigerian Consumers of Processed (Flavoured) and Packed Foods/Drinks. **This**

reflected sense of belonging needs and pressure from social group. 72.4% of Northern, 72% of Western, and 71.2% of FCT or Middle Belt or Central, 62.3% of Eastern, 63.4% of Southern indicated that there is social group influence in their purchasing decision towards processed (flavoured) and packed foods and drinks.

Characteristics of Food/Drink Flavour That Influenced Purchasing Behavior

Information were obtained from data gathered from questionnaires; themes obtained from factors that influence the purchase decision of and what make special taste to different focus group discussion participants; and themes obtained from in-depth interview with professionals in the food flavor industry.

Importance of food flavor and taste tend towards decision made by self; and strongly influences buying decision process which tends towards spontaneous (impulsive buying) and firstly inspecting the pack (intentional buying); and desired factors -which tend towards desire for delicacy and palatability of food/drink due to taste and flavor. In addition, importance of food flavor and taste tends towards the best drink flavors - was attributed mostly attributed to flavors that are spices; while the level of satisfaction derived from processed and packed foods was strongly linked to importance attributed to food taste and flavor of flavor and taste.

From the findings of this study, respondents attribute high to moderate importance to food taste and flavor, and the level of importance varies based on demographics. In general, flavorful and tasteful processed (flavored) and packed foods/drinks are the taste predilection of Nigerian consumers, though they differ based on demographics and cultural background, as reported by Kacen and Lee (2002)[403] on consumer impulsive buying behavior.

Best Food Flavours for Nigerian Respondents Differ With Regional Native Location, Gender and Marital Status. Though the best food flavors for North Western

respondents differ with gender and marital status, spice flavors were the best, as over 50% of respondents who liked it most were married male, about 20% were single male, and close to 25% were married female. Category of flavor from Beef, chicken, seafood (fish, crayfish, prawn, crab) were next to spices, followed by dairy: milk, cream, butter flavor; chocolate and malt flavors; and lastly nut flavors (coconut, groundnuts, walnut) which were least most liked, but no preference was shown to this category by female (married and single) and male single. Intensely sweet, indulging taste from chocolate/malt and fruit flavors; and very rich, creamy taste from dairy flavors and authentic natural flavor from spice flavors were respondents' interests in their choice flavors. The outstanding preference for spice flavors by married male suggested health consciousness and authentic natural taste.

Though the best food flavors for South Western respondents differ with gender and marital status, spice flavors were the best, as over 50% of respondents who liked it most were married male, and over 20% were married female. Category of flavor from Beef, chicken, seafood (fish, crayfish, prawn, crab) were next to spices, followed by dairy: milk, cream, butter flavor; chocolate and malt flavors, and nut flavors (coconut, groundnuts, walnut) which were well-accepted by South Western. Mildly sweet, indulging taste; very rich, creamy taste; well-rounded 'brothy' taste from protein flavors; authentic natural taste from spice flavors were respondents' interests in their choice flavors. The outstanding preference for spice flavors by married male and female suggested health consciousness and authentic natural taste.

Despite the best food flavors for South Southern respondents differ with gender and marital status, spice flavors were the best, as over 50% of consumers who liked it most were married male, and over 20% were married female. Category of flavor from Beef, chicken, seafood (fish, crayfish, prawn, crab) were next to spices, followed by dairy (milk, cream, butter) flavor; chocolate and malt flavors, and nut flavors (coconut, groundnuts, walnut) which were slightly acceptable by South Southern. South-South single male have stronger dairy (milk,

cream, butter) flavor, single female preferred chocolate, malt. However, female married liked it most. Moderately sweet, indulging taste; very rich, creamy taste; well-rounded 'brothy' taste from protein flavors; authentic natural taste from spice flavors were consumers' interests in their choice flavors. Proteins (beef, chicken, seafood) were mostly liked by male married, and it suggests flair for nutrition. The outstanding preference for spice flavors by married male and moderately preference by female married suggested health consciousness and authentic natural taste.

In spite of the best food flavors for North Central respondents differ with gender and marital status, spice flavors were the best, as over 50% of respondents who liked it most were married male, and over 20% were married female. Category of flavor from Beef, chicken, seafood (fish, crayfish, prawn, crab) were next to spices, followed by dairy (milk, cream, butter) flavor; chocolate and malt flavors, and nut flavors (coconut, groundnuts, walnut) which were not preferred by respondents whose regional native locations is North Central. Male single which had the highest preference for dairy (milk, cream, butter) flavor, and it suggests taste predilection for richness, nutrition and fat-enhancing solution. Married female preferred chocolate, malt, most, which suggests strong flair for indulgence. These imply best food flavor differs with marital status and gender among the North Central natives, though nut flavor is not their taste predilection. Intensely sweet, indulging taste; very rich, creamy taste; intense 'brothy' taste from protein flavors; authentic natural taste from spice flavors were respondents' interests in their choice flavors. The outstanding preference for spice flavors by married male and moderately preference by female married suggested health consciousness and authentic natural taste.

Despite the best food flavors for South Easterner respondents differ with gender and marital status, spice flavors were the best, over 50% of respondents who liked it most were married male, and over 20% were married female. Category of flavor from Beef, chicken,

seafood (fish, crayfish, prawn, crab) were next to spices, followed by dairy: milk, cream, butter flavor; chocolate and malt flavors, and nut flavors (coconut, groundnuts, walnut) which were not preferred by respondents whose regional native locations is North Central. Those whose best food flavors are dairy (milk, cream, butter) flavor, were dominated by female married (29.20%).

Despite the best food flavors for North Easterner respondents differ with gender and marital status, spice flavors were the best, as over 40% of respondents who liked it most were married female, and over 20% were married male. Category of flavor from Beef, chicken, seafood (fish, crayfish, prawn, crab) were next to spices, followed by dairy: milk, cream, butter flavor; chocolate and malt flavors, and nut flavors (coconut, groundnuts, walnut) which were not preferred by respondents whose regional native locations is North Central. Those whose best food flavors were chocolate, malt flavors, 41.20% of them were male married, 23.50% each of male single and female married, while female single was very low - 5.90%. Nut flavors (coconut, groundnuts, walnut) were preferred only by married male and married female, as it was 33.30% each for them of the respondents whose flavor preference was nut. North Eastern single male and married male have strongest flair for chocolate, malt, for indulgence, followed by proteins (beef, chicken, seafood) which suggests high level of interest in delicacy and savory taste, and nutrition. Dairy (milk, cream, butter) flavor cuts across all groups with close level of preference, apart from female married which had the highest, and it suggests richness, and nutrition.

Food flavors that are best for consumers are linked with their best drink flavors. Consumers' responses to taste predilection in foods and drinks are similar in terms of flair for intense sweetness, indulgence, creaminess, *mouthfulness*, natural and authentic taste. These are expected and similar to the reports of Engwa *et al*. (2015)[370] and Philip *et

al. (2013)[402], that the high rate or frequency of consumption of carbonated drinks was linked to the characteristic taste, flavor type and refreshment.

Fruit flavors were considered to be the most important regarding flavour and taste. The importance attached to flavour and taste of drinks are for refreshment, indulgence and nutritional reasons as fruit flavours are most popularly accepted for that. These are the most popular flavours in drink such as carbonated drinks or soft drinks (Philip *et al*., 2013)[402], energy drinks and most others. According to Engwa *et al*. (2015)[370], most popular flavors and brands of soft drinks in Nigeria are Fanta (citrus fruits), Mirinda (citrus flavour), Sprite (citrus- lemon flavour); and malt-flavored drinks such as Maltina (Malt and caramel flavour) and Amstel Malta (Malt and caramel flavour). Chocolate-flavored and uncarbonated malt-flavored chocolate drinks which were also considered important in drink include chocolate breakfast drinks (Milo, Bournvita), while milk, cream flavors are moderately/slightly important in milk drinks (yoghurt, ice cream, chocomilk drinks), while spice-flavoured drinks are least popular regarding flavour and taste of spices such as ginger, roots as it bitters, which are taken for health reasons.

Summary of Section

This study implied that health benefits and constraints, and convenience are main elements that affect the buying behaviors of Nigerian consumers. This study, therefore, concluded that the regional birth location, native location and home location really influence the culture of respondents, coupled with diversity in gender, age group, marital status, monthly earning, and level of education. Furthermore, social group influence and family ties, and acculturation, have a strong hold on respondents' buying behavior, which invariably guides on strategies to be employed by international food flavor organizations for this peculiarly diverse emerging market. The findings in these section are partly expected but some are eye-opening to what are the taste predilections of Nigerian

consumers on the basis of demographics and reasons behind their purchasing behaviors- which are mostly linked to their demographics. This invariably implies that demographics of respondents influenced the buying behavior towards processed (flavoured) and packed foods/drinks. Therefore, it becomes very important to apply relevant marketing strategies that to meet the peculiar and specific needs of each of the respondents on the basis of their demographics, and by providing tailor-made flavour solutions for processed foods/drinks manufacturers in Nigeria.

Furthermore, based on the findings of this study, flavour manufacturers would ensure price competitiveness, product tailored to the taste predilection of target consumers, enhanced with desired appearance (colour) and health-benefitting solutions; placement to improve shelf visibility and availability, by ensuring proper distribution channel; and packaging to captivate all, especially to make more sales through impulsive buyers. These are by providing relevant flavour solutions that meet the needs and that are satisfactory to the diverse target groups within Nigerian market processed and packed foods/drinks, based on the findings of this study.

Recommendations For Application

The findings in this research has revealed that demographics of Nigerian consumers of processed (flavoured) and packed foods/drinks influence their taste predilection and purchasing behavior towards processed (flavoured) and packed foods/drinks. Nigerian consumers' needs are basic, connected among each other or one another, and arrayed in the sequence of importance, and these 'dictate' what invigorate a consumer, and once the most essential need is met and satisfied, the next need in the order of essence shows up. **These findings are in line with the motivational theory (Maslow, 1943)[82].**

As reported by Rybnicek et al. (2019)[84]; Krishna and Strack (2017)[85], Durmaz and Diyarbakırlıoğlu (2011)[17]; Peighambari et al. (2016)[86] and Hausman (2000)[87] motivation is

decided by the thinking that respondents- consumers of processed (flavoured) and packed foods/drinks passionately seek for stimulation through inspiration and are inclined to keep the extent of invigoration. Accordingly, Hanus (2018)[88] and Kaya (2016)[89] suggested that the attraction of stimuli is affected by stimulating most desired food attributes and factors such as price (affordability), sensory characteristics such as colour (appearance), delicacy and palatability due to taste/flavour (level of satisfaction), desired flavor intensity, flavour profile and direction, desired flavour type (natural, authentic), convenience (ease to use), health benefits and/or safety, and availability. Similarly, Engwa *et al*. (2015)[370] and Philip *et al*. (2013)[402] reported their findings that the high rate or frequency of purchase and consumption of soft drinks was connected to the taste delivery (sweetness and mild acidic taste in some), flavor type and refreshment which gives satisfaction, especially in harsh tropical weather like Nigeria.

According to Maslow (1943)[82], in this study, convenience and health benefits/safety are the most desired factor and attribute in processed (flavored) and packed foods/drinks, respectively, and for most respondents, regardless of demographics- age group, gender, educational status, marital status, monthly earning, and regional birth, native and home locations, they are the most important motivating factor to attain their desired satisfaction first, afterwards, other attributes/factors follow. Convenience is basic for meeting the survival needs of Nigerian consumers, after which is health benefits/safety/wellness. However, due to strong social bond and compelling pressure to meet the need for sense of belonging of some Nigerian consumers, religious constraints and cultural constraints tend to be the basic needs for their survival.

Nigerian consumers of processed (flavoured) and packed foods show the trend of health-consciousness, while other desired attributes/factors are built on their most desired attribute of sustaining and improvement of health and safety, such as good

nutrition, and weight control which cuts across most demographics as the greatest health concern.

According to the findings of this study, the extent of stimulation and motivation that was very ideal for some specific consumers, have evolved with time due to frequent exposure to the stimuli that brings about the motivation. Consequently, distinctiveness has changed with time (Lévy *et al*., 2006)[90] and this indicated that the peculiarity in food flavour and taste predilections and desired attributes/factors which bring about satisfaction to them has evolved. **This is revealed in the findings of this study on how regardless of socio-economic class of Nigerian consumers, health consciousness has become the trend of most consumers of processed and packed foods/drinks.** In as much as consumers' buying decisions change with time, the findings of this research have revealed the underlying factors that determine the Nigerian consumers' behavior, which are from individual perspective, feelings or sensation or sentiments, intent, and culture (Durmaz and Diyarbakırlıoğlu, 2011[17]; Peighambari *et al*., 2016[86]; Kaya, 2016)[89]. **Findings in this research have revealed the trend of what are utmost for most Nigerian consumers, as what motivate most in buying and consuming processed (flavoured) and packed foods/drinks are convenience and health benefits/safety. This is in line with motivational theory.**

Sense of belonging to social groups- religious, native/cultural group, professional group, family, as a member who meets the expectations of the group they belong is next to the needs of Nigerian consumers of processed (flavoured) and packed foods/drinks. In quantitative study, most respondents admitted that they themselves decide what are purchased and consumed in their families. However, the qualitative study reveals that though consumers perform the action, decision of what are purchased and consumed in the families are mostly taken by other members of the family- mothers, wives and children. In the subconscious mind, their purchasing decisions are made under the

influence of other family members. On the other hand, religious beliefs and cultural beliefs guide the purchasing decision of Nigerian consumers either they are aware of it or not. It is an essential need for sense of belonging. This is in the light of Motivational Theory and Social Cognitive Theory of reasoned/planned action.

Furthermore, Nigerian consumers of processed (flavoured) and packed foods have needs to fulfil their self-esteem through affordability of choice products and purchasing from desired place of purchase, such as Supermarket. This is in the light of Motivational Theory and Theory of planned behavior under perceived behavioral control. In addition, the findings in this research have unveiled that the budget of Nigerian consumers are linked with the postulation of Bonke (1992)[91] on the most compelling and suitable proposition in understanding food choice made by them. Their buying decisions are based on the economic frameworks regarding household/family unplanned value/benefits (Gorton and Barjolle, 2014)[81]. Consequently, as the findings of this study are linked to the postulations, more light has been shed on Nigerian consumers' choices and their budget to buy within the price of existing similar products, pay a little higher or pay much more if there are additional benefits. These serve as basis for establishing strategies to be employed by international manufacturers of food flavours.

Very importantly, after the needs of self-esteem is met, consumers have another need of self-actualization. They check products pack for information first prior to buying to satisfy their needs. Findings in this research have unveiled that the buying decision process of Nigerian consumers help in meeting their needs for self-actualization. Part of the information checked include ingredient list which gives some sense of satiety when the desired flavor is included on the list.

Appearance (colour) is very important, and much more essential to female South Southerners whose monthly earning are more than average (about NGN250,000/month). These

findings are in line with Schiffman and Kanuk (2000)[53] proposition on economic framework of Marshal on unveiling buying patterns of consumers, with emphasis on their purchase based on satisfaction they derive from taste and affordability.

In this study it has been found out that average monthly earning of Nigerian consumer is around NGN 250,000/month, and this compares well with those earlier reported as $6,000 - $7,000 per annum ($500 -583 per month; NGN 206,000 – NGN 240,000 per month) (Robertson *et al*., 2011)[424] and $8,000 per annum ($667 per month; NGN 206,000 – NGN 274,000 per month) (McKinsey, 2014)[153]. Respondents whose monthly earnings were high tend to be more price-conscious than those whose monthly earnings are less. Across different locations, regardless of age, gender, educational status and marital status, the higher consumer earns monthly, the better they appreciate or desire taste/flavours in processed (flavoured) and packed foods/drinks, hence, the more the indulgence. This could be explained with Maslow's theory that when consumers become more financially bouncy, their needs to meet necessities evolve to emotional satisfaction.

Furthermore, female consumers are more sensitive to convenience, even with low monthly earning. Monthly earning of consumers did not affect the rate of consumption of processed and packed foods/drinks, despite most of them do not have budget for higher price than existing brands. This is linked to proposition of Maslow (1943)[82] that the most crucial motivating factor which gives desired satisfaction comes first, and every other thing is secondary. **Similarly, to consumers even with low monthly earning, their defined worth of processed (flavored) and packed foods/drinks are health, nutrition and satisfaction** (Drewnowski and Darmon, 2005[185]; Lo *et al*., 2009[184]). **Based on the findings in this research, strategy recommended for application is innovative products which meets consumers top priority needs and satisfaction, but with the need to have the marketing mix element of price strategy to ensure affordability and competitiveness.**

The busy schedule of respondents who have more earnings but have limited time resources, made them to set aside financial resources to meet their pressing needs (work/life balance), as postulated by Bonke (1992)[91].

In this study, it has been revealed that taste predilections of Nigerian consumers of processed (flavored) and packed foods/drinks differ (Steenkamp, 1993)[41], with region, and other demographical factors- age groups, gender, educational and marital status, monthly earning, among consumers. Nigerian consumers assimilated to the culture of their regional home and birth home locations, even though they are not natives of the region (Lee *et al*., 2015; Schwartz *et al*., 2010[170]). This love for indulgence (Ga-Eun, 2020)[411] and nutrition (energy-giving foods/drinks) (Drewnowski *et al*., 2012)[213], which might be connected to the peculiar hotter climatic conditions in the region (Morgan and Fanzo, 2020)[214].

Furthermore, in consumers' food choices, they prioritize their personal needs and values (quality/safety, taste/flavour satisfaction, constraints, and family ties/household members' needs/concern), but their purchasing decision for processed (flavoured) and packed foods/drinks have the underlying influence of social bonds and family ties (Sobal *et al*., 2006[96]; Devine, 2005[187]; Bove *et al*., 2003; Connors *et al*., 2001[99]; Devine *et al*. (1998)[191]; Furst *et al*., 1996)[95]. This study reveals that extent of social bonding and/or family ties have stronger influence on female Nigerians who decide what is purchased and consumed in the family, than male Nigerians.

In addition, in this study, it has been revealed that frequency of purchase and consumption of processed and packed foods/drinks increase with presence of and/or increase in most desired attributes and factors such as convenience, health, nutrition, affordability, and availability. **The postulations of Gorton and Barjolle (2014)[81] on unplanned utility framework could explain the predilection of respondents towards food/drink products that have multiple attributes to meet various desired needs**.

Consequently, it enhances impulsive buying by respondents. This is an identified product strategy for processed (flavoured) and packed foods/drinks, that are compared to competition brands.

According to the findings of this study, the idea of having convenience in processed and packed food/drinks to Nigerian consumers is having products which have many attributes in them- in terms of colour, taste, ease to use, safety, enriching, natural and authentic flavour, local flavour and simplicity. Recommended applications for international food flavour manufacturing organization are product strategy which entails having single solution products which do not only impart or deliver flavour but improve taste, enhance colour, nutritive, safe, deliver authentic/natural, and local flavour; packaging strategy to improve brand representation and packaging; and placement strategy for good distribution channel to enhance availability of their brand.

The underlying factors which influence buying decision, hence, behavior of consumers despite most of them are not aware that most of the time their decisions are based on them include social bonds, family ties and acculturation. According to Ajzen and Fishbein (1980)[97] - **theory of reasoned action**, is based on feeling and not need. The feeling of acceptance, norm, value, and of past experiences (social cognitive theory). In this study, depending on the marital status of male consumers, female partners and/or mother, purchase for the entire family, but based on the interest of every member of the family. **There is a mind-set on decisions as guided by values, conducts, pressures of other people, which were pre-planned behavior. These are linked to cognitive theory.**

In this study, it is revealed that the factors that determine Nigerian consumers' food buying decision are demographics (age, gender, marital and educational status, regional home, birth and native location, monthly earning), environmental, social, economic, political, legal, stimulation, and external factors – which are in line with the report of Otuedon (2016)[104].

According to the findings of this research, regardless of educational attainment, awareness and informal or experiential knowledge, based on self-concept theory (Grubb and Grathwohl (1967)[40] influence consumers' buying behavior which is reflected on health-consciousness ;- their health concerns, nutrition and preference for spice flavor-suggestion of flair for natural authentic health-benefitting products.

In this study, food /drink flavour predilection of Nigerian consumers are influenced by knowledge, through information on labels of food packs and the advertisement on safety and healthy living, and this is similar to the report of KoÈster and Mojet (2006)[196]. **This study reveals that most consumers have reading as their hobby, and this suggests a strategy could be built around it by international flavor manufacturers**. This suggests product strategy through innovation of flavour solutions which could successfully regulate weight in consumers (Seitz *et al*., 2020)[416]. Nutrition is the second most desired attribute in processed (flavoured) and packed foods/drinks, innovation of flavour solutions is as a strategy, such that flavour solutions would not just impact flavour but also nourish or fortify processed and packed foods/drink to which they are added with nutrients (Chee, 2020)[405]. This entails the innovation of using flavour solutions to deliver taste with nutrition.

Furthermore, sweetness and appearance (colour) are very important to Northern Nigeria consumers. Innovation of sweetness enhancer and colourant as flavour solution which enhances sweetness, as well impart colour and flavour (Mao *et al*., 2015)[414], would be a good product idea.

Consumers' demographics, food/drink attributes and external factors interacted and influenced consumers' attitude towards purchasing processed (flavored) and packed foods/drinks, are checked to understand their buying decision or behavioral intentions through perceived behavioral control (Ajzen, 2015)[100].

In addition, lifestyles of consumers were influenced by their demographics. Demographics of Nigerian consumers are connected to their lifestyle, health concerns, hobbies, constraints to food choice, who decides what is purchased and consumed in the family, most desired attributes and most desired factors in and frequency of purchase and consumption of, best food flavors, best drink flavors, of processed (flavored) and packed foods/drinks. Each of these factors at different extent, influenced purchasing behavior of Nigerian consumers.

Age influences consumers' food choices and predilection of Nigerian consumers. Age of target consumers should be put into consideration in flavoring the food/drink products. Other desired attributes (such as appearance/color, mouthfeel) should be considered bearing in mind the age target consumers. Taste is very essential to all age groups, but some specific tastes/flavors are more preferred to particular ages. As they advance in age, their preference changes (Gorton and Barjolle, 2014)[81].

Appearance of processed (flavoured) and packed foods/drinks influenced the purchasing behavior of consumers. It is very necessary to take into consideration cultural colour preferences (Alcantara-Pilar *et al*., 2015)[223] and attraction (Doole and Lowe, 2008)[229]; specific taste and flavour preferences for each region (Liem and Russell, 2019)[206] of target customers, therefore, adapting strategy to suit market needs.

Buying constraints influenced buying behavior of consumers towards processed (flavored) and packed foods/drinks. Religious constraint was the most important constraints to those whose religion was Islam. Religious constraint was the most important for Muslims, compared to budget, which can be raised based on importance and affordability. Nutritional constraint is an important buying constraint that has been linked to respondents whose hobbies require high nutrition. Financial constraints is applicable to all Nigerian consumers irrespective of the hobbies, the level of constraint due to finance differs.

In this study, it has been revealed that buying decision process for processed (flavored) and packed foods/drinks influenced the purchasing behavior of Nigerian consumers. Impulsive buyers are about 25% of Nigerian consumers of processed and packed foods/drinks, and they did buy them spontaneously. About half of the Nigerian consumers buy processed and packed foods and drinks by first inspecting the pack; few consumers compared prices first, while very few enquired from friends/colleagues and others first prior to buying. Consumers who attach much importance to food flavor and taste are most susceptible to impulsive buying of processed (flavoured) and packed foods/drinks, while consumers who check packaging for information prior to purchase tend to be more health/safety conscious, or nutritional conscious. Consumers who purchase on the basis of price are most price-conscious than others. Impulsive buyer are about 25% of Nigerian consumers, and they buy spontaneously. Consumers who attach much importance to food flavor and taste are most susceptible to impulsive buying of processed (flavoured) and packed foods/drinks.

Furthermore, in this study, monthly earning and gender influence place of purchase of processed and packed foods/drinks. More consumers who are male with monthly earning below NGN 250,000 buy from supermarket more than their female counterpart, while more consumers who are female with monthly earning above N 250,000 buy from supermarket more than their male counterpart.

In this study, generally across the regions, *flavorful* and tasteful processed (flavored) and packed foods/drinks are the taste predilection of Nigerian consumers, though the extent differs with demographics.

In this study, it has been revealed that food flavor preference differs with marital status and gender, and this is more evident among the South Southern Nigerian consumers of processed (flavored) and packed foods/drinks. Single male has very strong preference for dairy flavor; single female has strong preference for chocolate/malt flavor; while married female has

the strongest preference for chocolate/malt flavor for nourishment and partly indulgence. The color of chocolate/malt captivates the female as well. Proteins flavors are most preferred by married male for overall flavor, taste delivery and nutrition.

Food taste/flavor predilection is greatly influenced by marital status and gender of consumers who are natives of North Central. Nut flavor is not their taste predilection at all. Their male (married and single) have strong preference for protein flavors while all categories of consumers really liked dairy flavor, but single male consumers like it most. Married female has strong predilection for chocolate, malt, and this indicates flair for nutritious refreshment and partly indulgence. The strong love of the married male for spice flavor indicates predilection for naturalness, authenticity, local taste and health-sensitivity.

On the basis of age, the highest single most desired factor across all age groups is convenience; next is availability for young adults; delicacy and palatability from taste and flavour by middle age adult and old age adult; but affordability across the different age groups. **Based on these findings of flavour preference for different demographics, product and price strategies would be combined to offer an affordable but acceptable (flavorful and tasty) product. Adaptation strategy would have to be employed, as taste predilections of Nigerians are peculiar, while standardized strategy for distribution might still be maintained if distribution channel the international organization has in place is effective.**

In this study, effect of education reflected on the single most desired factors, across consumers with different educational status. Convenience was the highest single desired factor, next was availability for non-graduate and graduate; but delicacy and /palatability from taste and flavor for postgraduate consumers. **A marketing strategy is the combination of the three features- convenience, tastefulness and *flavorfulness*, and availability, such that product strategy, and placement strategy would be combined to have an offering that meets the needs of all, regardless of the educational status.**

In this study, the effect of difference in regional native locations of Nigerian consumers of processed (flavored) and packed foods/drinks reflects that in each of the different regional natives, health and/or safety is the most desired attributes by about half the proportion of respondents, while about one-quarter of consumers have taste/flavour as their most desired attribute. **The only regional native location which is different is North Western where about one-third of the entire participants have taste/flavour as the highest desired attribute in foods/drinks. According to this study, generally, Northern consumers have very strong preference for and attribute much importance to appearance (colour) and taste/flavour. Product strategy would be partly adapted (tweaked to meet the specific colour and taste requirements). Female (married and single) and male single expressed their strong flair for taste and flavour, while who were natives of natives of South Western location had strong flair for health and/or safety and delicacy and /palatability, hence these attributes could be combined as one in a product.**

According to the findings of this study, placement strategy would be required for remote regions like North-Western consumers whose single mostly desired factor is availability, to achieve effective distribution through channels and availability in place of purchase. These are B2C strategies which consequently are useful to develop and establish strategies to be employed by B2B (international organization manufacturers of food flavors). International food flavor manufacturing organizations would ensure availability of suitable and tailor-made flavor compounds which are enriched, colored, and flavored as single solution to manufacturers of processed (flavored) and packed foods/drinks across Nigeria.

According to the findings of this study, as social, environmental, political, technological, economic, legal and external factors influence the buying decision of Nigerian consumers, hence, they serve as basis for establishing and / or employing marketing strategies for any international organization, the following are necessary to be

put into consideration by international food flavour manufacturing organization to be successful in Nigerian market. These are knowledge of international market and external factors in Nigerian food flavor market, and responsiveness to it (Kotler *et al.*, 2005)[232], responsiveness to social diversities (Keegan and Schlegelmilch, 2001)[233], legal conformance (Doole and Lowe, 2008)[229], product conformance to Nigerian food standards (Kotler *et al.* , 2005[232]; Sobal *et al.*, 2006)[96], and developing pricing strategies that supports profitability and as well competitiveness (Doole and Lowe, 2008)[229]. In addition, leveraging government policies that support cost reduction (Kotler *et al.*, 2005[232]), provision of efficient solutions (time and cost saving) through technological advancement (Hanus, 2018)[88]. As globalization involves international relationship, and the major driving factors are technological development, governmental policy and competition (Onwuka and Eguavoen, 2007)[168], they are recommended for application in Nigerian food flavor industry.

Findings serve as guideline to develop marketing strategies to meet the needs of Nigerian consumers targeting consumer segments based on their demographic through food flavors as ingredients in processed (flavored) and packed foods/drinks. As the needs of Nigerian consumers are met more satisfactorily through food/drink flavoring, processed (flavored) and packed foods production increases, hence. the flavor industry expands in Nigeria.

5.3: Recommendations for future research

Nigeria is a densely populated and diversified emerging market which required to be studied to understand the effects of consumers' diversities on their purchasing behavior towards food flavors in processed and packed food and drink products. Food flavors are additives in processed and packed foods to improve taste and impact flavors. This study reveals Nigerian consumers attach much importance to flavors and taste of processed (flavored) and packed foods/drinks. This study, therefore, sheds light on what Nigerian consumers of

processed (flavored) and packed foods/drinks look out for in the products, and what actually gives them satisfaction in foods/drinks, based on demographics. This research contains some lacking information on the specific taste and flavor preference of Nigerian consumers and motivating and demotivating factors to their food choices, their order of need (priority) on the basis of demographics. Furthermore, this study has revealed the influence of Nigerian consumers' diversity and purchasing behavior on marketing strategies to be employed in the flavor industry in Nigeria. This entails the marketing element mix for adaptation and/or standardization strategy by current players in the flavor industry in Nigeria and intending players. These are international food flavor manufacturers who have seen the prospect in Nigeria and want to build strong business presence and performance.

This study has, therefore, unveiled the insights to relevant marketing mix elements to be adapted and/or standardized. More light is thrown on the form adaptation and/or standardization on the marketing elements; product, price, place of purchase, packaging and promotion, to meet the specific needs of individual target consumers group. In addition, the study has revealed cause-effect relationship between predictor variables (demographics) and purchasing intention drivers for Nigerian consumers of processed (flavored) and packed foods/drinks. It has shown demographics- advancement in age group, education, family size, and variation in gender, religion, regional location are associated with changes in the purchase intention drivers. Very importantly, from the findings on this study, having understood the purchasing intention drivers of Nigerian consumer, their purchasing behavior can be predicted.

For future research, upon innovation of new product to meet the taste predilections for Nigerian food flavour industry, it is crucial to research to know consumers' purchasing behaviors across the different regional locations, while the manner with which the innovative product solutions are distributed, circulated and adopted to remote areas (especially interior

Northern part of the country) are monitored. **Therefore, this would be based on diffusion innovative theory (Roger, 2003)[409].**

Furthermore, children and adolescents make up a substantial proportion of the population of Nigeria. Future research is recommended using children (5-12 years) and adolescent (13-18 years) to determine the effect of diversity on their food choices and flavour preference in processed (flavoured) foods/drinks. According to Fitzgerald *et al*., (2010)[410], parental control reduces as they gradually take charge of their food choices. It would be an avenue to determine the extent of social influence and /or family ties on their food choices. **Young consumers of processed (flavoured) and packed foods have expectations which will be measured through expectation confirmation theory.**

Conclusions

Understanding Nigerian consumers' diversities and demographics as they influence their behavior towards purchasing processed (flavored) and packed foods/drinks, and the effects on marketing strategies for the industries, has provided insight on their needs, motivations and prediction of their purchasing behavior.

Global food flavor market is expanding, and it is essential to pay attention to Nigeria, being an emerging market. It is a multicultural and variegated yet a peculiar market due to the taste predilection of Nigerian food consumers which requires to be understood, for the success of international food flavor manufacturers in Nigeria. Consumers' flavor/taste preferences does not only differ across the globe, it evolves, hence, poses some threats to globalization as the changes are consistent limitations to manufacturers. There are no information on what gives Nigerian consumers satisfaction in foods and drinks, and the effects of demographics on what gives them satisfaction in foods/drinks, and on the purchasing behavior towards them. There are neither research-based publication on their purchasing behavior towards processed

(flavored) and packed foods/drinks nor ideal marketing strategy (adaptation and/or standardization) to be employed for new and even existing players in the Nigerian food flavor industry.

The findings are connected to motivational theory, revealing that consumers' needs are crucial and numerous, they are linked but priority is given to some more than others, and once the top priority is satisfied, the next essential need becomes a priority. The needs include basically affordability, palatability/delicacy from taste/flavour, convenience, availability, health and/or safety, appearance, and nutrition. Except for Nigerian consumers whose religion is Islam, hence, give priority to Halal-conforming solutions, the most important and most desired factor and attribute in processed and packed foods/drinks are convenience (ease to use) and health and/or safety, respectively. Once these are satisfied, nutrition followed and next is delicacy and palatability from taste/flavor. These needs are the motivations that determine the level of satisfaction Nigerian consumers derive from processed and packed foods/drinks), as they have a mind-set and buy based on what they already planned to purchase, as linked to the theory of planned action (Ajzen, 2015)[100].

Convenience is the most desired factor for most Nigerians, as it is partly linked to Bonke (1992)[91] economic ménage utility frameworks to meet the busy lifestyle of most of them, hence, they set aside reasonable amount out of their monthly earning to get convenience from processed and packed foods/drinks. In addition, according to this study, products with multiple attributes are well embraced by Nigerians, hence they give better satisfaction to them. Study showed that most consumers have already planned what they will buy before they get to the place of purchase, while some only need to check the pack for information to conclude the buying decision. Most Nigerian consumers buy only within budget and at prices within the range of existing brands. It is left with international flavor organizations to offer competitive prices or differentiate their products with quality that meet target consumers' needs.

It has been revealed that the level of importance Nigerian consumers attribute to food flavor/taste is moderately high, and the level of satisfaction they derive in processed and packed foods/drinks in the Nigerian market is moderate. However, some consumers from certain regional locations are not satisfied due to unavailability, as some focus group members mentioned, "what is available is acceptable', while some have religious constraints, and many others want more than just enhanced flavor delivery, and convenience. **This is linked to perceived behavioral control of planned action to measure extent of satisfaction as expected.**

Consumers acclimatize to customs, hence imbibe the customs of the regional birth and regional home locations. Regional locations have the strongest influence on consumers' purchasing behavior towards processed and packed foods. Similarly, social bonding and family ties have strong influence on what consumers buy either for the family or for personal consumption. The decisions of most consumers to buy or not to buy have underlying factors which are guided by influence of social group and/or in the interest of family members, though extent of social bonds or family ties differ with demographics. **These are linked to the theory of reasoned action (social cognitive theory).**

In this study, research hypotheses were tested and shown below;

H$_{01}$: There is no significant relationship among the needs of Nigerian consumers of processed (flavored) and packed foods/drinks

Needs are connected and in hierarchy of importance. Across all demographics except religion, ease/convenience was the most desired factor, followed by health and safety. As needs are related and in order of importance, regardless of demographics of Nigerian consumers- age group, gender, monthly earning, regional native group, religion, educational and marital status, regional locations- home, birth and native, health and wellness need is most crucial after survival (physiological) needs. Health benefits/safety and nutrition, are attributes that are

generally highly desired in processed (flavored) and packed foods/drinks. This aligns with Maslow's motivational theory on hierarchy of needs.

The needs of Nigerian consumers motivate them to purchase and consume processed (flavored) and packed foods/drink. These needs are interconnected and are in order of priority, firstly and basically to meet survival needs (physiological) which is indicated in frequency of purchase and consumption, most desired factors and desired attributes. Having satisfied the physiological needs, the next on priority is safety/well-being need, which is expressed consumers' as health concern, and next is need of sense of belonging which is indicated as social group membership, buying constraints and most important constraints.

Need of self-esteem is met through who decides what are purchased and consumed in the family, place of purchase, buying decision process, budget, and importance of flavor and taste. After the need of self-esteem is met, there comes need of self-actualization which is met through hobbies, best food flavor and best drink flavor which give a sense of fulfilment and satiety. These needs have some relationships such that health concerns of Nigerian consumers (health/safety/wellness needs) have a strong positive correlation with each of social group (need for sense of belonging) and place of purchase (need for self-esteem). One need is built on the other, and having met the most critical, there comes the next.

Very importantly, some dependent variables are associated, such that they influence other variables in the purchasing decisions Nigerian consumers make for processed (flavored) and packed foods/drinks. These purchase intention drivers are connected, as explained by the Maslow's theory of motivation.

- **Buying constraints towards processed (flavored) and packed foods/drinks strongly influences the frequency of purchasing and consumption**

Frequency of purchase and consumption is moderately influenced by the most important constraints to purchasing and consumption of processed (flavored) and packed foods/drinks, based on Nigerian consumers level of education and religion.

- **Through ANOVA, difference between the means of the religion of Nigerian consumers was determined. There is significant difference (p<0.05) in extent of social group influence, and frequency of purchase and consumption.**

Regardless of the level of education, gender, age group, and regional home, birth, native location of a Nigerian consumer, the religious group has a strong influence on their choices, and hierarchy of importance of needs. The social need is paramount most especially to the Islam-practicing ones. Instead of having survival need as the basic and most important need, social need (sense of belonging, social bond/love) comes first, and this is followed by survival need, then health/safety/wellness need, self-esteem need (affordability, availability) and need for self actualization (taste/flavor satisfaction). These needs are connected, and they determine their constraints towards processed (flavored) and packed foods/drinks.

The null hypothesis for ANOVA that is, the means of the religion are not equal is accepted, as there are significant differences between the mean values of consumers in the religion for extent of social group influence, and for frequency of purchase and consumption.

Therefore,

H₀: M₁ ≠ M₂ ≠ M₃ is accepted for mean values of religion on frequency of purchase and consumption

H₀: M₁ ≠ M₂ ≠ M₃ ≠ is accepted for mean values of religion on extent of social group influence

Furthermore, according to the results of principal component analysis, *place of*

purchase moderately influences level of satisfaction derived in processed (flavored) and packed foods/drinks. This is linked to the satisfaction that is derived in the product as they are made available in the desired place of purchase, condition of place of purchase as it affects the desired factors and attributes in them. Place of purchase are supermarket, retail outlets (on the street), on-the-go (hawkers), and open market.

There is significant difference ($P<0.05$) in the level of satisfaction in processed (flavored) and packed foods/drinks based on the regional home location and religion of Nigerian consumer. In addition, there is significant ($p<0.05$) in the place of purchase of Nigerian consumers for processed (flavored) and packed foods/drinks based on their regional home location and religion.

H_0: $M_1 \neq M_2 \neq M_3 \neq M_4 \neq M_5$ is accepted for mean values of regional home location on each of place of purchase; and level of satisfaction in processed (flavored) and packed foods/drinks by Nigerian consumers

Certain religious sects have higher percentage of Nigerians with high educational attainment than others. Christians tend to attain higher educational level than Islam-practicing Nigerian consumers.

Through principal component analysis, values of rotated component matrix show the factors (dependent variables) that mostly influence the purchasing behavior of Nigerian consumers of processed (flavored) and packed foods/drinks.

H_{02}: There is no significant relationship between personal attitude of Nigerian consumers and their willing intention to purchase processed (flavored) and packed foods/drinks

This null hypothesis is rejected because personal attitude of individual Nigerian consumer influences their purchasing intention towards processed (flavored) and packed foods/drinks, as;

- **Hobbies of individual Nigerian consumers moderately influence the constraints they have towards buying processed (flavored) and packed foods/drinks.**

- **Monthly earning of individual Nigerian consumers strongly influences their best food flavors**

- **Monthly earning of individual Nigerian consumers moderately influences their best drink flavors**

- **Health concern of individual Nigerian consumer moderately influences their preferred place of purchase of processed (flavored) and packed foods/drinks.**

Furthermore, through ANOVA, there is significant ($P < 0.05$) differences in the means of each of age groups, marital status and regional home locations of Nigerian consumers for best drink flavor. **Difference between the means of the three age groups (young adult age group – 19-39 years; middle adult age group- 40-59 years; and old adult age group- 60-70 years) of Nigerian consumers was determined. There are significant differences ($p < 0.05$)** in means of the best flavor of processed (flavored) and packed drinks, and in frequency of purchase and consumption of processed (flavored) and packed drinks, based on age group.

H_0: $M_1 \neq M_2 \neq M_3$ is accepted for mean values of age groups on each of their best flavor for processed (flavored) and packed drinks; and their frequency of purchase and consumption of processed (flavored) and packed drinks

There are significant differences ($p < 0.05$) in means of the best flavor of processed (flavored) and packed drinks, based on marital status

H_0: $M_1 \neq M_2 \neq M_3$ is accepted for mean values of marital status on their best flavor for processed (flavored) and packed drinks

Best drink flavor and taste vary with regional home locations of Nigerian consumers.

H₀: M₁ ≠ M₂ ≠ M₃ ≠ M₄ ≠ M₅ is accepted for mean values of regional home location on their best flavor for processed (flavored) and packed drinks

H$_{03}$: There is no significant relationship between subjective norms (perceived social pressure) and the decision of Nigerian consumers to purchase processed (flavoured) and packed foods/drinks

This null hypothesis is rejected because perceived social pressure on Nigerian consumer influences their tendency to purchase processed (flavored) and packed foods/drinks, as;

- **Who decides what the family purchases and consumes, very strongly influences the level of satisfaction derived in processed (flavored) and packed foods/drinks .**

- **Family size of Nigerian consumers moderately influences the level of satisfaction derived in processed (flavored) and packed foods/drinks**

The larger the family size, the less the level of satisfaction Nigerian consumers derive from processed (flavored) and packed foods/drinks. Individual Nigerian consumer from larger family has the higher tendency of low level of satisfaction with what are purchased and consumed in the family. It is linked to the broader interest of every family member being put into consideration, due to family ties/bond.

- **Family size of Nigerian consumers moderately influences the best drink flavors**

The larger the family size, the higher the tendency of family having spice (ginger) as the best drink flavor.

Findings reveal that health and nutrition are strong motivations of Nigerian consumers as they are interested in protecting the family. This sheds more light on the tendency of the choice of larger families for spice/herbs-related flavors as best drink.

- **Extent of social group influence moderately affects the frequency of purchase (flavored) and packed foods/drinks**

Social group influence can be strong, moderate, mild or none, while frequency of purchase and consumption of processed (flavored) and packed foods/drinks can be twice daily; once daily; thrice weekly; once weekly.

The stronger the social group influence of an individual Nigerian consumer, the less the frequency of purchase and consumption of processed (flavored) and packed foods/drinks. This shows that regardless of the social group a Nigerian consumer belongs- professional, cultural, religious, inasmuch as the social group influence is strong, frequency of purchase and consumption of processed (flavored) and packed foods/drinks is low.

A Nigerian consumer from a large family size tends towards having stronger extent of social group influence.

H_{04}: Perceived behavioral control (perceived resources – monetary, knowledge, status) are not positively related with Nigerian consumers' intention to purchase processed (flavoured) and packed foods/drinks

This null hypothesis is rejected because perceived behavioral control on Nigerian consumer influences their tendency to purchase processed (flavored) and packed foods/drinks, as;

- **Budget of individual Nigerian consumers for processed (flavored) and packed foods/drinks moderately influences their frequency of purchase and consumption of processed and packed foods/drinks.**

Budget of Nigerian consumers for processed (flavored) and packed foods/drinks can be *within the price range*, *can accommodate a little above price range of similar products*; and *can accommodate much more than price range of similar products*.

Budget Nigerian consumers have for processed (flavored) and packed foods/drinks depend on their affordability, monthly earning, relevance, and some related controls*.*

- **Educational level of Nigerian consumers moderately influences their buying constraints towards processed (flavored) and packed foods/drinks.**

Educational levels of Nigerian consumers can be non-graduate, graduate and postgraduate. As the constraints towards purchasing and consumption of processed (flavored) and packed foods/drinks can be religious, health, cultural beliefs, nutritional, and financial, the higher the educational status of Nigerian consumer, the higher their nutritional constraints towards processed (flavored) and packed foods/drinks. The knowledge, education or level of exposure of Nigerian consumers guides their decision and factors they desire or constrain in processed (flavored) and packed foods/drinks, hence, their buying constraint.

Furthermore, regarding educational level of Nigerian consumers, **through ANOVA, difference between the means of the three educational levels (undergraduate, graduate, postgraduate) of Nigerian consumers was determined. There is significant difference (p<0.05)** in **frequency of purchase and consumption** and **most important constraint. This implies that frequency of purchase and consumption of processed (flavored) and packed foods/drinks vary with the educational level of Nigerian consumers, and these are two or more times per day; once per day; about three times a week; and once a week.** The most important constraint towards purchasing and consuming processed (flavored) and packed foods/drinks vary with educational level of Nigerian consumers, and these constraints are religious constraints, nutritional reasons, health constraints, financial reasons and cultural beliefs (constraints).

The null hypothesis for ANOVA that the means of the educational levels of Nigerian consumers are equal is accepted as there are significant (p<0.05) differences between the mean values of consumers based on their educational status in the frequency of purchase and consumption; and in the most important constraint; in most desired attribute.

Therefore,

H$_0$: M$_1$ ≠ M$_2$ ≠ M$_3$ is accepted for mean values of educational level on their frequency of purchase and consumption of processed (flavored) and packed foods/drinks

H$_0$: M$_1$ ≠ M$_2$ ≠ M$_3$ is accepted for mean values of educational level on the most important constraint towards purchasing and consuming processed (flavored) and packed foods/drinks

- Regional home location of Nigerian consumers moderately influences their choice of best flavor for processed (flavored) and packed drinks

Regional home locations of Nigerian consumers are Northern, Western, Eastern, Southern and F.C.T/Middle Belt/ Central, and this influences their choice for the best flavor for processed (flavored) and packed drinks, which can be spice (herbs) and vegetables, dairy (milk, cream), chocolate/malt, or fruits flavors. Nigerian consumers whose regional home locations are Northern Nigerian have strongest preference for sweet-indulging flavors and tastes -chocolate/malt flavors, and fruit flavors/taste. However, Nigerian consumers whose regional home locations are Western and Eastern Nigeria have strongest preference for dairy (milk, cream) flavors and spice (herb) and vegetable flavors in processed (flavored) and packed drinks.

Regardless of the regional native location of Nigerian consumers, their regional home location strongly influence their purchasing decision as affected by their choice flavors and taste for drinks. Acculturation explains the decision of Nigerian consumers as they learn the values and dietary habits, and adapt to the taste predilection of the indigenes (natives) of their regional home location.

Through principal component analysis, it was revealed that depending on Nigerian consumers' demographics, frequency of purchase and consumption is moderately influenced

by best drink flavor. This is linked to the perceived behavioral control which serves as purchase intention driver as explained by their status; and personal attitude of consumers as influenced by their need for satiety or satisfaction.

H_0: There is no significant relationship between personal attitude of Nigerian consumers and their willing intention to purchase processed (flavored) and packed foods/drinks.

This null hypothesis is rejected, as there is significant influence (P<0.05) of the best drink flavor of Nigerian consumers on their frequency to purchase and consume processed (flavored) and packed drinks.

H_A: There is significant relationship between best drink flavor of Nigerian consumers and the frequency of purchasing and consumption of processed (flavored) and packed drinks.

This alternative hypothesis is accepted, as there is significant influence (P<0.05) of the best drink flavor of Nigerian consumers on their frequency to purchase and consume processed (flavored) and packed drinks.

- **Desired factors in processed (flavored) and packed foods/drinks moderately influence the most important constraint towards buying and consuming processed (flavored) and packed foods/drinks.**

Most important constraint towards buying and consuming processed (flavored) and packed foods/drinks can be religious, nutritional reasons, health, financial and cultural beliefs. Desired factors can be convenience, price (affordability), delicacy and palatability due to taste and flavor, or availability, and these are for products that are acceptable to consumers. Financial constraint to purchasing and consuming processed (flavored) and packed foods/drinks is associated with the consumers' inability to afford the products. Convenience is key but products need to meet consumers' satisfaction such that they do not contradict their

fundamental cultural beliefs and religious beliefs, health concerns and nutritional needs. Upon the satisfaction of the requirements and ruling out of constraints, the related desired factors follow.

In other words, as the influence of the desired factors Nigerian consumers have in processed (flavored) and packed foods/drinks depends on an individual Nigerian consumer's most important constraint, meeting the most important constraint of a Nigerian consumer towards processed (flavored) and packed foods/drinks precedes the most desired factor. As explained by Maslow theory on interrelation of needs, and hierarchy of need in which survival is basic, and on the basic (physiological) needs, other needs are built.

- Desired factors in processed (flavored) and packed foods/drinks moderately influences the level of satisfaction derived in processed (flavored) and packed foods/drinks

Desired factors can be convenience, price (affordability), delicacy and palatability due to taste and flavor, or availability. These influence the level of satisfaction Nigerian consumers derive in processed (flavored) and packed foods/drinks, depending on an individual Nigerian consumer's desired factor. Meeting the desired factor of a Nigerian consumer in processed (flavored) and packed foods/drinks determines the level of satisfaction derived.

- Most desired attributes are strongly influenced by desired factors in processed (flavored) and packed foods/drinks by Nigerian consumers.

Most desired attributes can be appearance, taste/flavor, price, health benefits and/or safety, and ease to use for Nigerian consumers. Both the elements in desired attributes and desired factors in processed (flavored) and packed foods/drinks are connected. These needs serve as motivations to Nigerian consumers, depending on personal attitudes, perceived social pressure, and perceived behavioral control.

As explained by motivational and cognitive theories, this study reveals that motivations for Nigerian consumers are connected and influenced by their personal attitudes, perceived social pressure and perceived behavioral control. This study further reveals that personal attitudes of Nigerian consumers vary based on demographics- gender, age group, educational level, marital status, family size, monthly earning, regional home location, regional birth location and regional native location. Their demographics influence their motivations and their purchasing behavior towards processed (flavored) and packed foods/drinks.

The null hypotheses in this study are rejected.

H_{01}: There is no significant relationship among the needs of Nigerian consumers of processed (flavored) and packed foods/drinks

H_{02}: There is no relationship between the personal attitude of Nigerian consumers and their willing intention to purchase processed (flavored) and packed foods/drinks.

H_{03}: There is no relationship between the perceived social pressure on Nigerian consumers and the willing intention to purchase processed (flavored) and packed foods/drinks.

H_{04}: There is no influence of perceived behavioral control on the purchasing intention of Nigerian consumers of processed (flavored) and packed foods/drinks

The alternative hypotheses in this study are accepted.

H_{A1}: There is significant relationship among the needs of Nigerian consumers of processed (flavored) and packed foods/drinks

H_{A2}: There is relationship between the personal attitude of Nigerian consumers and their willing intention to purchase processed (flavored) and packed foods/drinks.

H_{A3}: There is relationship between the perceived social pressure on Nigerian consumers and the willing intention to purchase processed (flavored) and packed foods/drinks.

H~A4~: There is influence of perceived behavioral control on the purchasing intention of Nigerian consumers of processed (flavored) and packed foods/drinks

Overall, the findings in this study come up with insights into the relationship between each of personal attitude, perceived social pressure; and perceived behavioral control of Nigerian consumers and their purchase behavior.

Therefore, in this study, it has been concluded that needs of Nigerian consumers of processed (flavored) and packed foods/drinks are connected; and that their purchase decisions are influenced by their personal attitude; perceived social pressure on them; and perceived behavioral control.

Q1: What is the Relationship Between The Characteristics of Food Flavor and The Purchasing Behavior of Nigerian Consumers of Processed (Flavored) and Packed Foods/Drinks?

Qualitative findings on taste and flavor predilection of Nigerian consumers indicate what actually are their needs and motivations, and how they relate. Taste and flavor preference of Nigerian consumers are understood based on their basic demographics- gender, age group, marital status and regional native group/location.

Indulging and intensely sweet taste and flavors; dairy flavor in food and drink; fruity flavor; brothy, savory flavor and taste; local spices; chocolate/malty taste and flavor in food and drink are identified as the basic flavor and taste directions, and these vary with Nigerian consumers' demographics. These taste/flavor preferences are their motivations to make purchase decision towards processed (flavored) and packed foods/drinks. Nigerian consumers tend to embrace more of products which contain flavors that they are familiar with, as they come in persistent circumstances, past experience and through parental upbringing, and this is similar to the report of Devine *et al.* (1998)[191] on consumers generally. Similarly, as described

by Jeong and Lee (2021)[15], Nigerian consumers' perception and acceptance are linked to familiarity of sensory attributes to consumers, and these influence their purchasing decision.

Nigerian consumers have peculiar or unique taste preference; as local taste is the theme of what are the most appealing (attractive) flavors giving the desired level of satisfaction to them in processed and packed foods/drinks. Furthermore, products that reflect and suggest natural taste that suggest natural taste are strongly desired by most of the respondents.

Importance of food flavor and taste tend towards decision made by self; and strongly influences buying decision process which tends towards spontaneous (impulsive buying) and firstly inspecting the pack (intentional buying); and desired factors -which tend towards desire for delicacy and palatability of food/drink due to taste and flavor.

Nigerian consumers of processed (flavored) and packed foods/drinks perception of taste and flavors indicate- **intensely sweet, indulging taste from chocolate/malt; and sweet and nourishing fruit flavors; very rich, creamy taste from dairy flavors (milk, cream, butter flavor); authentic natural health-giving flavor from spice and vegetables; rounded, brothy and savory taste and flavors from meat and seafood; and snacking flavors from nut (coconut, groundnuts, walnut).** These flavors influence Nigerian consumers' impulsive buying decision depending on individual's taste/flavor predilection, which is similar to the reports of Kacen and Lee (2002)[403], Awan and Abbas (2015)[418] , Bashar *et al*. (2012)[419] consumer impulsive buying behavior. **From the findings of this study, Nigerian consumers attribute moderate to high importance to food taste and flavor.**

Importance attributed to taste and flavor influences Nigerian consumers' buying decision process, frequency of purchase and consumption of processed (flavored) and packed foods/drinks, budget for processed (flavored) and packed foods/drinks. These are reflections of the level of satisfaction they derive just as the level of importance they attribute to

taste/flavor. Invariably, these are purchase intention drivers which influence their purchase decision towards processed (flavored) and packed foods/drinks.

The research question to understand the relationship of food flavor and the purchasing behavior of Nigerian consumers towards processed (flavored) and packed foods/drinks has been addressed.

This study entails understanding consumer diversities, global marketing mix strategy adaptation or standardization on purchasing behavior in food flavor industry in Nigerian emerging markets. Overall, the findings in this study come up with insights into the relationship between each of personal attitude, perceived social pressure, and perceived behavioral control of Nigerian consumers and their purchase behavior; and their taste/flavor predilection and the essence of their demographics and purchasing behavior in developing suitable strategies for food flavor industry in Nigerian emerging markets. These make it possible to predict purchasing behavior of Nigerian consumers towards processed (flavored) and packed foods/drinks, based on demographics.

Q2: What is The Relationship Between Demographics of Nigerian Consumers, Their Needs, Preferences and Buying Pattern?

Findings in this study reveals that Nigerian consumers' expectations differ based on their demographics, and this also affects their acceptance of, and their purchasing decision towards processed (flavored) and packed foods/drinks. **From the findings of this study, Nigerian consumers have different motivations based on demographics and cultural background (Kacen and Lee, 2002)[403], and these influence their purchasing decisions. They attribute high to moderate importance to food taste and flavor and this affects their** impulsive buying behavior. **Meeting or satisfying their desired attributes and factors influences their buying decision process, frequency of purchase and consumption of processed (flavored) and packed foods/drinks, budget for processed (flavored) and**

packed foods/drinks. The higher the level of satisfaction they derive in processed (flavored) and packed foods/drinks, the stronger are these purchase intention drivers towards purchase decision towards processed (flavored) and packed foods/drinks.

Motivations and needs of Nigerian consumers for processed (flavored) and packed foods/drinks differ based on demographics. As Nigerian consumers' needs or motivations vary, this study findings made it easy to understand these needs on the basis of their demographics. Nigerian consumers from different regional native zones/groups/locations have *convenience* **(ease, simplicity, time-saving, instant, fast, multiple usage, availability on-the-go) as the theme of what they look out for or what inspire them to buy and consume processed and packed foods/drinks**. From food flavor impartation perspective, processed and packed food/drinks such as cooking aids serve as ingredients that simplify cooking by enhancing flavor and taste. Across different regional native groups and age groups, *convenience* is the highest theme of motivation for purchasing and consuming processed (flavored) and packed foods/drinks, while *nutrition* is the theme which is next. Processed and packed foods/drinks are perceived to be enriched and therefore, serve as vehicle for fortification.

Processed and packed foods/drinks are perceived to be safe and hygienic by especially consumers whose regional native groups/locations are Northern Nigeria. **Hygiene and safety motivate many consumers to purchase and consume processed foods/drinks.** Some consumers perceive processed and packed foods/drinks as cost-saving solutions which are affordable to use and/or 'suppress hunger'. Furthermore, in the form of cooking aid, or instant foods/drinks, the most cost-sensitive consumers (North-Western and South-Eastern) middle age adults Nigerian consumers perceive them as cost-saving solutions.

Availability is crucial as respondents from South Eastern Nigeria and FCT/Middle Belt/Central Nigeria do not have a choice than to buy and consume available processed and

packed foods/drinks, hence, they gave the description that 'what is available is acceptable'. The taste predilection of consumers whose regional native location is South Eastern Nigeria tend to be more sophisticated, while due to proximity and accessibility, consumers whose regional native locations are FCT/Middle Belt/Central desire to have more varieties of processed and packed foods/drinks.

Flavors and taste preference in processed (flavored) and packed foods/drinks differ based on demographics. Generally, Nigerian consumers attribute moderate to high importance to food taste/flavor, however, based on regional native zones/groups, they have peculiar or unique taste; and *local taste* preference, which is the theme of what are the most appealing (attractive) attributes to them in processed and packed foods/drinks. Furthermore, products that reflect and suggest natural taste are strongly desired by most Nigerian consumers. From food flavor and taste perspective, peculiar or unique taste that give the desired level of satisfaction/satiety is strongly desired, regardless of the regional native zones/groups, gender, age group educational status and marital status. Spice and fruit flavors have, therefore been identified to be the most appealing flavors, while intense sweet and savory taste in drinks and foods, respectively, are strongly desired by consumers from the Northern regional home and birth location of Nigeria.

Virtual presentation preference in processed (flavored) and packed foods/drinks differ based on demographics, and this influences impulsive buying. Regardless of age group, appearance is a very crucial attribute to Nigerian consumers whose home location/regional native location are FCT/Middle Belt/Central, as they are strongly attracted and are most sensitive to color of packaging and content.

Need for nutrition value (vehicle for fortification) or perceived nutritional value differs with demographics. Mostly Nigerian consumers who are of young age and middle age groups, and whose regional native locations are South-Eastern Nigeria, and whose regional

home locations are Southern Nigeria, have highest preference for nutrition. Processed and packed foods/drinks are perceived to be enriched. Very large percentage of Nigerian consumers first inspect the pack for information such as nutrition facts, ingredients and check for safety and health (production date/best before date). Satisfaction is a crucial factor and most appealing attribute to all respondents, however, it is a function of two or more other attributes.

Price-sensitivity towards processed (flavored) and packed foods/drinks are based on demographics. In general, affordability greatly influences consumers buying decision, it becomes their behavior after series of consistent reason-based/guided decision or action in buying and consuming the products. However, Nigerian consumers whose regional native locations are North-Western, North-Eastern, and South-Southern (across different age groups), are more cost-conscious and price-sensitive. Importance of food taste and flavor need to balance with other desired attributes, though Nigerian consumers attribute high importance to food taste and flavor, it is not as a standalone, as food flavor/taste must enhance attraction or be appealing as well or must be nourishing. Food flavor and taste are rated to be very important among all regional native groups except North-West consumers who rate it moderately and put affordability first.

Who decides what processed (flavored) and packed foods/drinks are consumed in the family differs based on demographics. Though across all demographics, in every home, the woman- wife or mother decide what are purchased and consumed in the family, even though responses from quantitative aspect of the study indicated buying is self-decisive. Results revealed that self-decision based on need and affordability greatly influence consumers buying decision. The proportion of women taking the lead to decide what are purchased or consumed in the family varies with level of education and regional native locations of their spouses. In addition, it has been revealed that only male who live alone, and the single/unmarried or separated/divorced, take purchasing decisions themselves.

The buying decision process towards processed (flavored) and packed foods/drinks differs are based on demographics. Though buying decision, to a large extent across different demographics, is predetermined, as consumers first check pack for expected information that would satisfy their intention or plan to buy the specific product/ or similar ones within same category. Motivations as the most desired attributes, could be convenience, health/safety, authentic taste, nutrition, and price (affordability) within budget. Nigerian consumers whose regional home locations are North-Central Nigeria have very high tendency towards impulsive buying decision based on appearance (attractiveness) of contents and packs. Far less respondents make buying decision spontaneously or do impulse buying (about one-fifth of Nigerian consumers do), while buying decision after price comparison to ascertain price is within same price as similar products, is made by a good number of Nigerian consumers.

Q3: What is the essence of diversities of Nigerian consumers in developing marketing strategies from food flavor industry?

Based on the findings that the needs of Nigerian consumers of processed (flavoured) and packed foods/drinks differs depending on their demographics, it becomes very essential to put these diversities into consideration to develop relevant marketing strategies for food flavor industry in Nigeria, and these would also be useful for processed (flavored) and packed foods/drinks industry in Nigeria.

Understanding the needs of Nigerian consumers on the basis of their diversity and demographic helps to determine their taste predilection and flavor preferences, and develop appropriate marketing strategies for food flavor industry.

Demographics give insight to Nigerian consumers best food and best drink flavors. There are best food flavors to some Nigerian consumers based on demographics. These food flavors are spice (& vegetable) flavors, animal meat protein (beef, chicken, seafood-fish, crayfish, prawn, crab); Chocolate and malt flavors; nut flavors. Drink flavors spice

(and vegetables), fruits, dairy, and chocolate and malts. Nigerian consumers' preferences vary with gender, age group, marital status, religion, regional home location, regional native location and family size. Very importantly, with advancement in age of Nigerian consumers, preference for indulging flavors and taste decline but increases with spice & vegetable flavours, and vice versa. As each of age group, regional native location and regional home location most strongly influence Nigerian consumers' taste/flavor predilection, strategy is to choose and focus on target market based on these dempgraphics.

Essence of diversity needs in order of priority of most desired factors and attributes in developing marketing strategies for international food flavor manufacturers. **Nigerian consumers' needs and motivations (most desired factors) are in order of priority.** The needs of Nigerian consumers of processed (flavored) and packed foods/drinks in the order of priority based on their demographics. Convenience as a motivating factor to Nigerian consumers based on demographics, for developing marketing strategies. Findings in this qualitative research show that processed (flavored) and packed foods/drinks are purchased and consumed by Nigerian consumers for convenience/ ease to use in order to meet their needs for survival, after which was health/safety/wellness (to meet health/safety/wellness needs). Having met health/safety/wellness needs, Nigerian consumers were motivated to meet the needs of sense of social belonging such as religious group, family, cultural group, professional group.

Next to meeting this need was need for self-esteem, which was met through affordability (provision at affordable price- price strategy) and also availability of products (making desired products which boost consumers' confidence available- this is linked to strategy of placement). Place of purchase differed and Nigerian consumers liked to associate with buying from supermarkets, to boost their self-esteem. Having met self-esteem needs, the next Nigerian

consumers need was self-actualization which they got through satiety in processed (flavored) and packed foods/drinks.

On the contrary, due to diversity the sequence of the ideal hierarchy of needs is not same across all regional locations in Nigeria. For some demographics, their need for sense of belonging to religious group and/or cultural groups were basic, hence, they were considered very paramount and exchanged with their needs for their survival.

Needs of Nigerian consumers are important, and these influence their desired factors in processed and packed foods/drinks, and their food choices, as it influences consumers' buying decision and behavior. Food flavor manufacturers need to put into consideration health-enhancing and nutrition- based solutions in processed (flavored) and packed foods/drinks, as these are needs of motivations to Nigerian consumers. Nigerian consumers from different regional native zones/groups had peculiar or unique taste; and local taste as the theme of what were the most appealing (attractive) attributes to them in processed and packed foods/drinks. Furthermore, processed (flavored) and packed foods/drinks which suggest authentic and natural taste are strongly desired by most of Nigerian consumers, across all demographics.

Strategy is to choose and focus on target market by demographics (age group, regional home location, and regional native location), focusing on and prioritizing the motivations and needs of Nigerian consumers. Marketing strategies are to standardize and/or adapt some marketing mix elements- product, price, place of purchase and promotion, so that the peculiar motivations of Nigerian consumers unveiled in this study are integrated.

Q4: What is the essence of purchasing behavior of Nigerian consumers in developing marketing strategies for food flavor and processed (flavored) and packed foods/drink industries?

Essence of purchasing decision process of Nigerian consumers in developing marketing strategies for food flavor industry. Buying decision process shed more light on how long it took for a Nigerian consumer to decide to purchase processed (flavoured) and packed foods/drink. Mostly, regardless of demographics, Nigerian consumers predetermined their choice before making purchase decision but they made purchase decision much more **after checking the pack of the processed (flavored) foods/drinks** for information such as ingredients (flavor inclusive), best before date and/or expiry date, and check for the general presentation of the packaging to ascertain the state of the product. For virtually all focus group participants purchase decision was made after they were satisfied with checking the pack. This practice was more easily done in some places of purchase than others.

No respondents disclosed he or she **consult friends/family/others first before making purchase decision**, while some respondents from South Eastern Nigeria (old age group), South southern Nigeria (young age group, middle age group, and all age groups – North Eastern Nigeria, indicated that they make purchase decision after price of the product to be purchased is compared with others.

Most respondents of all age groups whose regional native location was North-Central Nigeria, and few of North-West regional native location indicated they **purchase processed (flavored) and packed foods/drinks spontaneously**. Further discussion revealed their special interest for what they referred to as 'good appearance' of pack which according to them was a desired factor that reflected hygiene and safety. This was identified as a desired factor (which was linked to their need for safety), and on the other hand, they indicated their preference for certain colours (both pack and content in see-through packs), and for certain flavours which gave them some sense of satiety. Among Nigerian consumers, color preferences in processed (flavoured) and packed foods/drinks seemed to influence their decision also in making spontaneously decision.

Essence of buying constraints of Nigerian consumers towards processed (flavored) and packed foods/drinks, in developing marketing strategies for food flavor industry.

Health/safety, nutritional/wellness and financial constraints towards purchasing and consuming processed (flavored) and packed foods/drinks affect frequency of purchasing and consumption, and budget for processed (flavored) and packed foods/drinks, while religious and /or cultural constraints cause complete restrain or abstinence. In some cases for health concerns/reasons, health and nutritional constraints can lead to permanent abstinence.

Essence of frequency of purchasing and consumption of processed (flavored) and packed foods/drinks, in developing marketing strategies for food flavor industry.

Frequency of purchase and consumption of processed (flavored) and packed foods/drinks reflect level of satisfaction, as Nigerian consumers reduce frequency of purchase when their needs which actually motivate their buying decision are not fully met. Needs which serve as motivation to Nigerian consumers include the desired factors and most desired attributes, such as convenience, affordability, delicacy due to taste and flavor, nutrition, health benefits, and appearance. Frequency of purchase and consumption of processed (flavored) and packed foods/drinks are daily or weekly, depending of demographics. Nigerian consumers' level of education and social group influence (religion) affect the frequency of purchase and consumption of processed (flavored) and packed foods/drinks.

Essence of budget for processed (flavored) and packed foods/drinks, in developing marketing strategies for food flavor industry.

Budget of Nigerian consumers for processed (flavored) and packed foods/drinks vary with monthly earning, affordability, social group influence, importance attributed to the products, level of satisfaction in desired factors and attributes of the products. Budget of Nigerian consumers for processed (flavored) and packed foods/drinks can be *within the price*

range, *can accommodate a little above price range of similar products*; and *can accommodate much more than price range of similar products.*

Very importantly, in this study, based on the theoretical framework, Nigerian consumers' needs are their motivations, though these vary based on their demographics, but fundamentally the most important need comes first for all Nigerian consumers, and on this are the rest needs built in that order of importance. As these needs are connected, they basically reflect in the level of satisfaction, buying constraint, frequency of purchase and consumption and their best flavors. Furthermore, there are personal needs which are based on perception and attitude of individual consumer; as well as there are needs which are influenced by perceived social needs; and perceived behavioral control. The self-perception needs include the best flavors for drink/foods and satisfaction which they want to derive in processed (flavored) and packed foods. These personal needs are mostly influenced by their age group. Their social needs which is important to them reflect in the extent of social group influence. Extent of social group influence and family size of Nigerian consumers greatly influence their purchasing behavior, as they show in their buying constraints, and frequency of purchase and consumption of processed (flavored) and packed foods/drinks. These explain how strong the regional birth location, regional home location and regional native locations of Nigerian consumers, and family size have strong hold on them. Education gives perceived behavioral control, hence, it influences their purchasing behavior.

In addition, from the strongest of the most influencing factors in the purchasing behavior of Nigerian consumers towards processed (flavored) and packed foods/drinks, they are their - regional birth location; age group; regional home location; religion, regional native location; educational level; and family size. On the other hand, there are strongest purchase intention drivers which are also indicators of purchase behavior of

Nigerian consumers, and from the strongest are level of satisfaction derived from processed (flavored) and packed foods/drinks; frequency of purchase and consumption; buying constraints; most desired attributes; budget; best drink flavor; hobbies and health concerns. These vary significantly based on aforementioned demographics of Nigerian consumers, as they reflect purchase behavior of Nigerian consumers. Most importantly, These are the independent variables with buying constraint towards processed (flavored) and packed foods/drinks; best flavor and extent of social group influence greatly influence the purchasing decision of Nigerian consumers. **As these meet the needs of as Nigerian consumers are basically– survival, safety/health/wellness, social, self esteem and self fulfilment needs, priority are given in this order, except for those with strong Islamic belief whose social needs take priority.`**

Therefore, based on these information, strategy is to choose and focus on target market by demographics (age group, regional home location, and regional native location). Having understood their purchasing behavior towards processed (flavored) and packed foods/drinks, their motivations and needs are prioritized for the focus market. Marketing strategies are to standardize and/or adapt the marketing mix elements- product, price, place of purchase and promotion, such that the peculiar motivations of Nigerian consumers unveiled in this study are incorporated.

Understanding the peculiarities of Nigerian consumers For Product Strategy Adaptation

- An average Nigerian consumer of processed (flavored) and packed foods/drinks wants more than is being offered in Nigerian market, as they attribute high importance to food taste and flavour, but not as a standalone, as food flavour/taste must enhance attraction or be appealing as well or must be nourishing.

- Food flavor and taste are rated to be very important among all regional native groups. Consumers whose regional native group were North-East, North-Western and

FCT/Middle Belt/Central Nigeria attached much importance to sweet taste and strong umami taste, strong fruity flavour, and strong herbal notes.

- Local taste/flavor are well embraced, as they are considered to be authentic to Nigerian consumers

- 'One size cannot fit all' for Nigerian consumers, products need to be finetuned to their local taste preference

- Meeting consumers' peculiar needs based on diversities

- Value proposition is made to boost marketing claims that meet the very needs of consumers.

- This is a product strategy used to encourage impulsive buying of consumers.

For Price Strategy: Adaptation

- Cost of production of processed (flavored) and packed foods/drinks is hugely affected by political, economic, social, technological, legal and environmental factors

- Price of processed (flavored) and packed foods/drinks is affected directly by cost of production, and indirectly by PESTLE factors

- Price of food/drink flavors has impact on cost of production of processed (flavored) and packed foods/drinks

- All Nigerian consumers are price-sensitive and will not compromise with quality

- Price of food flavors need to be market-competitive and individual customer-based. It needs to be adapted to the need and peculiarity of Nigerian markets.

- Purchase of processed (flavored) foods/drinks is done mostly within price range of existing products, regardless of demographic, however, depending on educational status few respondents are willing to pay at a little higher if there are extra benefits

For Promotion Strategy: Standardized

- **Below the line advertisement are required for international manufacturers of food/drink flavors. It is business-to-business with manufacturers of processed (flavored) and packed foods/drinks.**

- Marketing tool used as a strategy of communication are clear as respondents checked packs label first for information. Across all demographics, it shows that information is key, and those on the label, hence, this needs to be imbibed as it is suitable for Nigerian flavor industry

For Place Strategy: Adapted

- Age group of respondents has most influence on place of purchase.

- Availability and accessibility of food flavors to manufacturers of processed (flavored) and packed foods/drinks, while in turn, they make these products available to Nigerian consumers of processed (flavored) and packed foods/drinks, thereby, making what is available acceptable to them.

- Buying decision process indicated Nigerian consumers need place of purchase that would encourage checking of product packs for information. Place strategy needs to encourage display of product to promote product visibility.

Adapting price to make it competitiveness in the market where products are sold, is essential to be employed by international manufacturers of flavor in its industry in Nigeria, bearing in mind negative cost effect of their flavors in end products- processed and packed foods/drinks.

Overall, the findings in this study provide insights into and concludes that there is relationship between each of personal attitude, perceived social pressure; and perceived behavioral control of Nigerian consumers and their purchase behavior. Furthermore, it concludes that Nigerian consumers' needs are in hierarchy of importance, convenience first for

survival, after fulfillment of this, on it are other needs built to meet needs related to safety, social love/bond/sense of belonging, self esteem and self actualization. These needs have been concluded to be connected, and are based on demographics which play essential roles in developing marketing strategies (standardization or adaptation) in Nigerian food flavor industry.

Very importantly, from the findings on this study, having understood the purchasing intention drivers of Nigerian consumer, their purchasing behavior can be predicted. Therefore, in this study, it has been concluded that the purchase behavior of Nigerian consumers of processed (flavored) and packed foods/drink can be predicted through their personal attitude; perceived social pressure on them; and perceived behavioral control.

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Appendices

Appendix I

Nigeria: States that constitute the regional native groups

North Central (Middle Belt) Regional Native Group
Benue
Kogi
Kwara
Nassarawa
Niger
Plateau
Federal Capital Territory

North East Regional Native Group
Adamawa
Bauchi
Borno
Gombe
Taraba
Yobe

North West Regional Native Group
Jigawa
Kaduna
Kano
Katsina
Kebbi

Sokoto

Zamfara

South East Regional Native Group

Abia

Anambra

Ebonyi

Enugu

Imo

South East Regional Native Group (Niger Delta)

Akwa Ibom

Bayelsa

Cross River

Rivers

Delta

Edo

South West Regional Native Group

Ekiti

Lagos

Ogun

Ondo

Osun

Oyo

Source: (Modified) Bakare (2015)

Appendix II

Monthly earnings across different age groups

Monthly Earning		
Duncan		
Age group	N	Subset for alpha = 0.05
		1
Young adults (19-39 years)	2832	3.36
Middle age adults (40-59 years)	1308	3.55
Old adults (60-69 years)	900	3.65
Sig.		0.068

Means for groups in homogeneous subsets are displayed.

There was no significant difference (P<0.05) in the monthly earnings of Nigerian consumers

of processed and packed foods/drinks across different age groups.

Appendix III

Monthly earning across different level of education

Monthly Earning		
Duncan		
Education	N	Subset for alpha = 0.05 1
Non Graduate	1194	3.38
Graduate	2412	3.42
Post graduate	1416	3.59
Sig.		0.166

Means for groups in homogeneous subsets are displayed.

There was no significant difference (P<0.05) in the monthly earnings of Nigerian consumers

of processed and packed foods/drinks across different level of education.

Appendix IV

Monthly earnings across different regional home locations

Monthly Earning				
Duncan				
Regional home location	N	Subset for alpha = 0.05		
		1	2	3
Northern Nigeria	732	3.02		
Western Nigeria	1740		3.38	
Southern Nigeria	966		3.43	
FCT or Middle Belt or Central	630		3.66	3.66
Eastern Nigeria	972			3.83
Sig.		1	0.151	0.333

Means for groups in homogeneous subsets are displayed.

There was no significant difference (p<0.05) among the monthly earnings of consumers whose regional home locations are Western, Southern and FCT or Middle Belt or Central, but there were significant differences between each of them and those from Northern, and Eastern Nigeria. However, there was no significant difference (P<0.05) between monthly earnings of FCT or Middle Belt or Central and Eastern Nigeria.

Appendix V

Monthly earnings across different marital status

Monthly Earning			
Duncan			
Marital Status	N	Subset for alpha = 0.05	
		1	2
Prefer not to say	108	3.06	
Married	3132	3.41	
Not married	1680	3.51	
Separated/divorce	120		4.3
Sig.		0.252	1

Means for groups in homogeneous subsets are displayed.

With reference to Appendix V, there were significant difference (p<0.05) among the monthly earnings of consumers who are separated and those who are married and single. The separated/divorced earn much less monthly.

Appendix VI

Monthly earnings across different regional native zones

Monthly Earning				
Duncan				
Region	N	Subset for alpha = 0.05		
		1	2	3
North East	450	2.88[a]		
North West	498	3.12[ab]	3.12[ab]	
South West	1194	3.25[ab]	3.25[ab]	
South-South	678		3.42[b]	3.42[bc]
North Central	690			3.75[c]
South East	1530			3.79[c]
Sig.		0.092	0.176	0.083

Means for groups in homogeneous subsets are displayed.

With reference to Appendix VI, there were significant differences ($p<0.05$) among the monthly earnings of consumers from different regional native zones. Consumers from North-Central and South-Eastern earn highest monthly, while those from North-Eastern Nigeria earn least monthly.

Qualitative analysis of focus group information, using coding/indexing

Appendix VII

Question 1:   **What are the reasons for buying and consuming packed food products and/or drinks?**

Regional Native Groups (Locations)	Themes								Theme (Nourishment)	Theme (Flavor and Taste Impartation)	Theme (Hygiene / Safety)	Theme (Cost-saving)
Codes	Ease	Convenience	Simplicity	Time-saving	Instant	Fast	Multiple usage	Availability, on-the-go	Nourishment	Flavor and Taste Impartation	Hygiene / Safety	Cost-saving
South-South (middle age adult) 60-70 yrs	X	X	X	X	X	X	X	X				
South-East (old age adult) 60-70 yrs	X	X		X	X	X			X			
South-West (old age adult) 60-70 yrs	X	X		X	X					X		
North-Central (middle age adult) 40-59 yrs	X	X		X	X	X		X				
North-West (young age adult) 19-39 yrs	X	X						X			X	
North-West (old age adult) 60-70 yrs	X	X		X				X	X	X	X	
North-West (young age adult) 19-39 yrs	X	X		X	X			X	X	X	X	
North-East (old age adult) 60-70 yrs	X	X						X	X		X	
South-East (middle age adult) 40-59 yrs	X							X	X	X		X
North-East (young age adult) 19-39 yrs	X	X						X	X		X	X
South-South (middle age adult) 40-59 yrs	X	X						X				
South-East (middle age adult) 19-39 yrs	X	X		X				X	X			
South-South (middle age adult) 19-39 yrs	X	X						X				
North-East (middle age adult) 40-59 yrs	X			X				X				
South-West (middle age adult) 40-59 yrs	X	X		X	X					X		
South-West (young age adult) 19-39 yrs	X	X		X	X					X		
North-Central (young age adult) 19-39 yrs	X	X		X	X	X		X			X	
North-Central (old age adult) 60-70 yrs	X	X		X	X	X		X			X	

Appendix VIII

| Question 2: | What attribute is most appealing to you in processed and packed foods and drinks? |

Themes

	Physiological need	Safety need		Need for Social bond/sense of belonging	Esteem need		Self-actualization need		

Codes

Regional Native Groups (Locations)	Convenience	Health	Naturalness	Local taste	Nutrition (Enrichment)	Affordability	Appealing appearance	Satiety	Peculiar or unique taste
South-South (middle age adult) 60-70 yrs	X		X	X	X	X			X
South-East (old age adult) 60-70 yrs	X	X	X	X	X			X	X
South-West (old age adult) 60-70 yrs	X	X	X	X	X	X	X		X
North-Central (middle age adult) 40-59 yrs	X	X		X		X			X
North-West (young age adult) 19-39 yrs	X	X		X		X			X
North-West (old age adult) 60-70 yrs	X	X		X		X	X		X
North-West (young age adult) 19-39 yrs	X	X		X		X	X		X
North-East (old age adult) 60-70 yrs	X	X		X		X			X
South-East (middle age adult) 40-59 yrs	X	X	X	X	X	X	X	X	X
North-East (young age adult) 19-39 yrs	X	X		X		X			X
South-South (middle age adult) 40-59 yrs	X	X	X	X	X	X			X
South-East (middle age adult) 19-39 yrs	X	X	X	X	X	X		X	X
South-South (middle age adult) 19-39 yrs	X	X		X	X	X			X
North-East (middle age adult) 40-59 yrs	X	X		X		X			X
South-West (middle age adult) 40-59 yrs	X	X		X	X	X	X		X
South-West (young age adult) 19-39 yrs	X	X		X	X	X	X		X
North-Central (young age adult) 19-39 yrs	X	X		X		X			X
North-Central (old age adult) 60-70 yrs	X	X		X		X			X

Appendix IX

Question 3:   **What makes special taste to you?**

	Themes					
	Peculiar or unique tastes	Local spices	Natural taste	Safety	Nutrition	Health
South-South (Middle adult 60-70 yrs)	X		X		X	
South-East (Adult) 60-70 yrs	X		X		X	X
South-West (Adult) 60-70 yrs						
North-Central (Adult) 40-59 yrs	X	X	X			
North-West (Young Adult) 19-39 yrs		X				X
North-West (Adult) 60-70 yrs		X				X
North-West (young age) 19-39 yrs		X				X
North-West (middle age) 40-59 yrs		X				X
South-East (middle age) 40-59 yrs	X		X	X		X
North-West (middle age) 40-59 yrs	X	X	X			
South-South (middle age) 40-59 yrs	X		X	X	X	
South-East (middle age) 19-39 yrs			X			X
South-South (middle age) 19-39 yrs	X		X			
South-East (middle age) 40-59 yrs	X		X			
North-East (middle age) 40-59 yrs	X		X		X	X
South-West (Adult) 40-59 yrs	X		X			X

Appendix X

Question 4:   **Factors that influence your purchasing decision**

	Health	Convenience	Nutrition (Enrichment)	Natural taste	Price	Appearance
South-South (Middle adult 60-70 yrs)	X	X			X	
South-East (Adult) 60-70 yrs	X	X	X		X	
South-West (Adult) 60-70 yrs		X			X	X
North-Central (Adult) 40-59 yrs	X	X	X	X	X	X
North-West (Young Adult) 19-39 yrs	X		X			X
North-West (Adult) 60-70 yrs			X	X	X	X
North-West (young age) 19-39 yrs	X		X		X	X
North-West (middle age) 40-59 yrs			X		X	X
South-East (middle age) 40-59 yrs		X				
North-West (middle age) 40-59 yrs	X			X	X	X
South-South (middle age) 40-59 yrs		X				
South-East (middle age) 19-39 yrs		X				
South-South (middle age) 19-39 yrs	X			X		
South-East (middle age) 40-59 yrs			X		X	
North-East (middle age) 40-59 yrs		X			X	X
South-West (Adult) 40-59 yrs	X	X				

Appendix XI

Question 5:	Who decides what they buy and consume in the family?			
	Themes			
	Spouse (Female)	Self	Children	Mother
South-South (Middle adult 60-70 yrs)	X		X	X
South-East (Adult) 60-70 yrs	X			X
South-West (Adult) 60-70 yrs	X		X	X
North-Central (Adult) 40-59 yrs	X		X	X
North-West (Young Adult) 19-39 yrs	X		X	X
North-West (Adult) 60-70 yrs	X		X	X
North-West (young age) 19-39 yrs	X			X
North-West (middle age) 40-59 yrs	X			X
South-East (middle age) 40-59 yrs	X		X	X
North-West (middle age) 40-59 yrs	X			X
South-South (middle age) 40-59 yrs	X	X		X
South-East (middle age) 19-39 yrs	X		X	X
South-South (middle age) 19-39 yrs	X		X	X
South-East (middle age) 40-59 yrs	X	X		X
North-East (middle age) 40-59 yrs	X		X	X
South-West (Adult) 40-59 yrs	X		X	X

Appendix XII

Question 6:	What is the Decision Buying Process?					
	Themes					
	Predetermined	**After checking the pack**	**After consulting friends/others**	**After comparing prices of others**	**Affordability**	**Appearance**
South-South (Middle adult 60-70 yrs)	X					
South-East (Adult) 60-70 yrs	X					
South-West (Adult) 60-70 yrs	X			X		
North-Central (Adult) 40-59 yrs	X				X	X
North-West (Young Adult) 19-39 yrs	X					X
North-West (Adult) 60-70 yrs	X				X	X
North-West (young age) 19-39 yrs	X				X	X
North-West (middle age) 40-59 yrs	X				X	X
South-East (middle age) 40-59 yrs	X				X	
North-West (middle age) 40-59 yrs	X	X			X	X
South-South (middle age) 40-59 yrs	X	X		X	X	
South-East (middle age) 19-39 yrs		X				
South-South (middle age) 19-39 yrs	X	X			X	
South-East (middle age) 40-59 yrs	X				X	
North-East (middle age) 40-59 yrs	X			X		
South-West (Adult) 40-59 yrs	X	X				

Appendix XIII

Question 7:	**Who and What Influence your decision in purchasing processed and packed foods/drinks**			
	Themes			
	Self : based on need	Self; based on nutrition	Self: based on health and safety	Self: based on affordability
South-South (Middle adult 60-70 yrs)	X			X
South-East (Adult) 60-70 yrs	X	X		X
South-West (Adult) 60-70 yrs	X	X		X
North-Central (Adult) 40-59 yrs	X		X	X
North-West (Young Adult) 19-39 yrs	X			X
North-West (Adult) 60-70 yrs	X	X		X
North-West (young age) 19-39 yrs	X			X
North-West (middle age) 40-59 yrs	X			X
South-East (middle age) 40-59 yrs	X		X	X
North-West (middle age) 40-59 yrs	X			X
South-South (middle age) 40-59 yrs	X	X		X
South-East (middle age) 19-39 yrs		x		X
South-South (middle age) 19-39 yrs	X	X	X	X
South-East (middle age) 40-59 yrs	X			X
North-East (middle age) 40-59 yrs			X	X
South-West (Adult) 40-59 yrs	X		X	X

Appendix XIV

Question 8:	What is the Importance of Food Taste and Flavor?		
	Themes		
	Very important, but must appeal	Very important but must be nourishing	Very important but mild
South-South (Middle adult 60-70 yrs)	X	X	X
South-East (Adult) 60-70 yrs	X	X	
South-West (Adult) 60-70 yrs	X		
North-Central (Adult) 40-59 yrs	X		
North-West (Young Adult) 19-39 yrs	X		
North-West (Adult) 60-70 yrs	X		
North-West (young age) 19-39 yrs	X		
North-West (middle age) 40-59 yrs	X		
South-East (middle age) 40-59 yrs		X	
North-West (middle age) 40-59 yrs	X		
South-South (middle age) 40-59 yrs	X		
South-East (middle age) 19-39 yrs		X	
South-South (middle age) 19-39 yrs		X	
South-East (middle age) 40-59 yrs	X		
North-East (middle age) 40-59 yrs		X	
South-West (Adult) 40-59 yrs		X	

Appendix XV

Question 9:

What are your constraints to making decisions to buying foods/drinks?

	Price	Religion	Quality (Safety)	Quantity	In-availability
			Themes		
South-South (Middle adult 60-70 yrs)	X		X		
South-East (Adult) 60-70 yrs			X	X	
South-West (Adult) 60-70 yrs	X		X		
North-Central (Adult) 40-59 yrs	X				X
North-West (Young Adult) 19-39 yrs		X			X
North-West (Adult) 60-70 yrs	X	X			X
North-West (young age) 19-39 yrs	X	X			X
North-West (middle age) 40-59 yrs	X				X
South-East (middle age) 40-59 yrs	X		X	X	
North-West (middle age) 40-59 yrs	X	X	X		X
South-South (middle age) 40-59 yrs			X	X	
South-East (middle age) 19-39 yrs			X		
South-South (middle age) 19-39 yrs			X	X	
South-East (middle age) 40-59 yrs	X		X		
North-East (middle age) 40-59 yrs		X			X
South-West (Adult) 40-59 yrs	X	X		X	

Appendix XVI

Question 10:	To what extent do these packed foods meet your needs?			
	Themes			
	Very well	**Moderately**	**What is available is acceptable**	**What is available is not satisfactory**
South-South (Middle adult 60-70 yrs)	X	X		
South-East (Adult) 60-70 yrs			X	
South-West (Adult) 60-70 yrs		X		
North-Central (Adult) 40-59 yrs	X		X	
North-West (Young Adult) 19-39 yrs				X
North-West (Adult) 60-70 yrs			X	
North-East (young age) 19-39 yrs				X
North-West (middle age) 40-59 yrs			X	
South-East (middle age) 40-59 yrs				X
North-West (middle age) 40-59 yrs			X	
South-South (middle age) 40-59 yrs			X	
South-East (middle age) 19-39 yrs		X		
South-South (middle age) 19-39 yrs		X		
South-East (middle age) 40-59 yrs		X		
North-East (middle age) 40-59 yrs		X		
South-West (Adult) 40-59 yrs	X		X	

Appendix XVII

Flavour / Taste preference

Regional Native Groups (Locations)	Indulging and intensely sweet taste/flav	Brothy, savoury	Local Spices	Dairy flavor in food and drink	Choco/malt	Fruit flavor
South-South (married male middle age adult) 60-70 yrs	3	5	5	5	5	4
South-South (married female middle age adult) 60-70 yrs	3	4	4	5	5	4
South-East (married male old age adult) 60-70 yrs	3	5	5	3	5	4
South-East (married female old age adult) 60-70 yrs	3	5	5	5	5	4
South-West (married male old age adult) 60-70 yrs	3	5	5	3	5	4
South-West (married female old age adult) 60-70 yrs	3	4	4	5	5	4
North-Central (married male middle age adult) 40-59 yrs	5	5	5	3	5	4
North-Central (married female middle age adult) 40-59 yrs	5	4	4	5	5	4
North-West (married male young age adult) 19-39 yrs	5	5	5	3	5	4
North-West (married female young age adult) 19-39 yrs	5	4	4	5	5	4
North-West (single male young age adult) 19-39 yrs	5	5	5	5	3	4
North-West (single female young age adult) 19-39 yrs	5	4	4	5	3	5
North-West (married male old age adult) 60-70 yrs	5	5	5	3	5	4
North-West (married female old age adult) 60-70 yrs	5	4	4	5	5	4
North-West (married male young age adult) 19-39 yrs	5	5	5	3	5	4
North-West (married female young age adult) 19-39 yrs	5	4	4	5	5	4
North-West (single male young age adult) 19-39 yrs	5	5	5	5	3	4
North-West (single female young age adult) 19-39 yrs	5	4	4	5	3	5
North-East (married male old age adult) 60-70 yrs	5	5	5	3	5	4
North-East (married female old age adult) 60-70 yrs	5	4	4	5	5	4
South-East (married male middle age adult) 40-59 yrs	3	5	5	3	5	4

South-East (married female middle age adult) 40-59 yrs	3	5	5	5	5	4
North-East (married male young age adult) 19-39 yrs	5	5	5	3	5	4
North-East (married female young age adult) 19-39 yrs	5	5	5	5	5	4
North-East (single male young age adult) 19-39 yrs	5	5	5	5	3	4
North-East (single female young age adult) 19-39 yrs	5	4	4	5	3	5
South-South (married male middle age adult) 40-59 yrs	3	5	5	3	5	4
South-South (married female middle age adult) 40-59 yrs	3	4	4	5	5	4
South-East (married male middle age adult) 19-39 yrs	3	5	5	3	5	4
South-East (married female middle age adult) 19-39 yrs	3	5	5	5	5	4
South-East (single male middle age adult) 19-39 yrs	3	5	5	5	3	4
South-East (single female middle age adult) 19-39 yrs	3	5	5	5	3	5
South-South (married male middle age adult) 19-39 yrs	3	5	5	3	5	4
South-South (married female middle age adult) 19-39 yrs	3	4	4	5	5	4
South-South (single male middle age adult) 19-39 yrs	3	5	5	5	3	4
South-South (single female middle age adult) 19-39 yrs	3	4	4	5	3	5
North-East (married male middle age adult) 40-59 yrs	5	5	5	3	5	4
North-East (married female middle age adult) 40-59 yrs	5	4	4	5	5	4
South-West (married male middle age adult) 40-59 yrs	3	5	5	3	5	4
South-West (married female middle age adult) 40-59 yrs	3	4	4	5	5	4
South-West (married male young age adult) 19-39 yrs	3	5	5	3	5	4
South-West (married female young age adult) 19-39 yrs	3	4	4	5	5	4
South-West (single male young age adult) 19-39 yrs	3	5	5	5	3	4
South-West (single female young age adult) 19-39 yrs	3	4	4	5	3	5
North-Central (married male young age adult) 19-39 yrs	5	5	5	3	5	4
North-Central (married female young age adult) 19-39 yrs	5	4	4	5	5	4
North-Central (single male young age adult) 19-39 yrs	5	5	5	5	3	4
North-Central (single female young age adult) 19-39 yrs	5	4	4	5	3	5
North-Central (married male old age adult) 60-70 yrs	5	5	5	3	5	4
North-Central (married female old age adult) 60-70 yrs	5	4	4	5	5	4

Appendix XVIII

Flavour / Taste preference

Taste/Flavour Preilection of Nigerian Consumers of Processed (Flavoured) and Packed Foods/Drinks

- South-South (married male middle age adult) 60-70 yrs
- South-South (married female middle age adult) 60-70 yrs
- South-East (married male old age adult) 60-70 yrs
- South-East (married female old age adult) 60-70 yrs
- South-West (married male old age adult) 60-70 yrs
- South-West (married female old age adult) 60-70 yrs
- North-Central (married male middle age adult) 40-59 yrs
- North-Central (married female middle age adult) 40-59 yrs
- North-West (married male young age adult) 19-39 yrs
- North-West (married female young age adult) 19-39 yrs
- North-West (single male young age adult) 19-39 yrs
- North-West (single female young age adult) 19-39 yrs
- North-West (married male old age adult) 60-70 yrs
- North-West (married female old age adult) 60-70 yrs
- North-West (married male young age adult) 19-39 yrs
- North-West (married female young age adult) 19-39 yrs
- North-West (single male young age adult) 19-39 yrs
- North-West (single female young age adult) 19-39 yrs
- North-East (married male old age adult) 60-70 yrs
- North-East (married female old age adult) 60-70 yrs
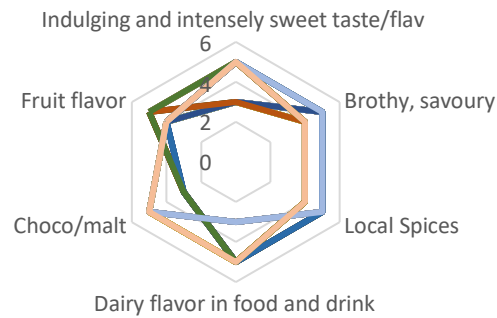
Appendix XIX

Across all demographics	
Frequency of purchase and consumption	Percentage
Two or more times per day	22.86
Once per day	21.54
About three times a week	30.68
Once a week	24.90
	100

N=5,064

Appendix XX

Across all demographics	
Health concerns	**Percentage**
1 - Weight control	48.89
2 - High Nutrition	30.57
3 - High Blood Sugar	7.006
4 - High Blood Pressure	13.54
Total	100

N=5,064

Appendix XXI

Health concerns		
Gender		**Percentage**
	1 - Weight control	46.47
	2 - High Nutrition	32.35
Male	3 - High Blood Sugar	7.35
	4 - High Blood Pressure	13.82
	Total	100
	1 - Weight control	43.82
	2 - High Nutrition	24.12
Female	3 - High Blood Sugar	5.59
	4 - High Blood Pressure	11.18
	Total	100

N=5,064

Appendix XXII

Regional home location	Health concerns	Percentage
Northern Nigeria	1 - Weight control	62.11
	2 - High Nutrition	28.42
	3 - High Blood Sugar	4.21
	4 - High Blood Pressure	5.26
	Total	100
Western Nigeria	1 - Weight control	42.4
	2 - High Nutrition	39.41
	3 - High Blood Sugar	6.40
	4 - High Blood Pressure	11.85
	Total	100
Eastern Nigeria	1 - Weight control	57.41
	2 - High Nutrition	20.21
	3 - High Blood Sugar	10.85
	4 - High Blood Pressure	11.63
	Total	100
Southern Nigeria	1 - Weight control	46.46
	2 - High Nutrition	39.40
	3 - High Blood Sugar	4.04
	4 - High Blood Pressure	10.10
	Total	100
FCT or Middle Belt or Central	1 - Weight control	41.18
	2 - High Nutrition	19.61
	3 - High Blood Sugar	8.82
	4 - High Blood Pressure	30.39
	Total	100

N=5,064

Appendix XXIII

Regional native location	Health concerns	Percentage
North West	1 - Weight control	50
	2 - High Nutrition	32.3
	3 - High Blood Sugar	8.06
	4 - High Blood Pressure	9.68
	Total	100
South West	1 - Weight control	45.3
	2 - High Nutrition	37.4
	3 - High Blood Sugar	6.47
	4 - High Blood Pressure	10.8
	Total	100
South-South	1 - Weight control	44.3
	2 - High Nutrition	38.6
	3 - High Blood Sugar	7.14
	4 - High Blood Pressure	10
	Total	100
North Central	1 - Weight control	40
	2 - High Nutrition	19
	3 - High Blood Sugar	9.52
	4 - High Blood Pressure	31.4
	Total	100
South East	1 - Weight control	53.7
	2 - High Nutrition	50.5
	3 - High Blood Sugar	13.3
	4 - High Blood Pressure	20
	Total	100
North East	1 - Weight control	61.3
	2 - High Nutrition	32.3
	3 - High Blood Sugar	1.61
	4 - High Blood Pressure	4.84
	Total	100

N=5,064

Appendix XXIV

Age group	Health concern	Percentage
Young adults (19-39 years)	1 - Weight control	53.42
	2 - High Nutrition	33.42
	3 - High Blood Sugar	5.205
	4 - High Blood Pressure	7.945
	Total	100
Middle age adults (40-59 years)	1 - Weight control	46.79
	2 - High Nutrition	35.26
	3 - High Blood Sugar	7.051
	4 - High Blood Pressure	10.9
	Total	100
Old adults (60-69 years)	1 - Weight control	36.45
	2 - High Nutrition	14.02
	3 - High Blood Sugar	13.08
	4 - High Blood Pressure	36.45
	Total	100

N=5,064

Appendix XXV

Education	Health concern	Percentage
Non Graduate	1 - Weight control	46.36
	2 - High Nutrition	27.81
	3 - High Blood Sugar	9.934
	4 - High Blood Pressure	15.89
	Total	100
Graduate	1 - Weight control	49.5
	2 - High Nutrition	34.22
	3 - High Blood Sugar	5.648
	4 - High Blood Pressure	10.63
	Total	100
Post graduate	1 - Weight control	50
	2 - High Nutrition	26.7
	3 - High Blood Sugar	6.818
	4 - High Blood Pressure	16.48
	Total	100

N=5,064

Appendix XXVI

Marital Status		Percentage
Married	1 - Weight control	48.92
	2 - High Nutrition	27.3
	3 - High Blood Sugar	7.568
	4 - High Blood Pressure	16.22
	Total	100
Not married	1 - Weight control	51.53
	2 - High Nutrition	35.37
	3 - High Blood Sugar	6.114
	4 - High Blood Pressure	6.987
	Total	100
Prefer not to say	1 - Weight control	28.57
	2 - High Nutrition	28.57
	4 - High Blood Pressure	42.86
	Total	6.114
Separated/divorce	1 - Weight control	26.67
	2 - High Nutrition	40
	3 - High Blood Sugar	13.33
	4 - High Blood Pressure	20
	Total	100

N=5,064

Appendix XXVII

Age group		Percentage
Young adults (19-39 years)	1- Cooking	22.96
	2- Wining and Dining	5.031
	3- Reading	27.67
	4- Travelling	21.07
	5- Games/Sport	23.27
	Total	100
Middle age adults (40-59 years)	1- Cooking	24.62
	2- Wining and Dining	4.615
	3- Reading	27.69
	4- Travelling	20.77
	5- Games/Sport	22.31
	Total	100
Old adults (60-69 years)	1- Cooking	26.47
	2- Wining and Dining	8.824
	3- Reading	33.09
	4- Travelling	16.18
	5- Games/Sport	15.44
	Total	100

N=5,064

Appendix XXVIII

Gender	Hobbies	Percentage
Male	1- Cooking	10.90
	2- Wining and Dining	4.98
	3- Reading	28.04
	4- Travelling	23.99
	5- Games/Sport	32.09
	Total	100
Female	1- Cooking	40.30
	2- Wining and Dining	6.84
	3- Reading	30.04
	4- Travelling	14.83
	5- Games/Sport	7.98
	Total	100

N=5,064

Appendix XXIX

Hobbies		
Regional native location	**Frequency**	**Percentage**
North West		
1- Cooking	72	19.67
2- Wining and Dining	30	8.197
3- Reading	78	21.31
4- Travelling	78	21.31
5- Games/Sport	108	29.51
Total	366	100
South West		
1- Cooking	102	16.35
2- Wining and Dining	48	7.69
3- Reading	162	25.96
4- Travelling	144	23.08
5- Games/Sport	168	26.92
Total	624	100
South South		
1- Cooking	96	24.24
2- Wining and Dining	18	4.545
3- Reading	120	30.3
4- Travelling	84	21.21
5- Games/Sport	78	19.7
Total	396	100
North Central		
1- Cooking	144	24.74
2- Wining and Dining	36	6.186
3- Reading	198	34.02
4- Travelling	114	19.59
5- Games/Sport	90	15.46
Total	582	100
South East		
1- Cooking	354	30.41
2- Wining and Dining	60	5.155
3- Reading	324	27.84
4- Travelling	156	13.4
5- Games/Sport	270	23.2
Total	1164	100
North East		
1- Cooking	78	20.97
2- Wining and Dining	12	3.226
3- Reading	132	35.48
4- Travelling	120	32.26
5- Games/Sport	30	8.065
Total	372	100

Appendix XXX

Hobbies	
Educational status	**Percentage**
Non Graduate	1- Cooking — 30.9
	2- Wining and Dining — 7.303
	3- Reading — 25.84
	4- Travelling — 14.61
	5- Games/Sport — 21.35
	Total — 100
Graduate	1- Cooking — 24.52
	2- Wining and Dining — 4.215
	3- Reading — 27.2
	4- Travelling — 21.46
	5- Games/Sport — 22.61
	Total — 100
Post graduate	1- Cooking — 9.3
	2- Wining and Dining — 4.2
	3- Reading — 22
	4- Travelling — 14.4
	5- Games/Sport — 11.4
	Total — 100

N=5,064

Appendix XXXI

Marital Status	Hobbies	Percentage
Married	1- Cooking	27.93
	2- Wining and Dining	5.307
	3- Reading	29.61
	4- Travelling	19.55
	5- Games/Sport	17.6
	Total	100
Prefer not to say	1- Cooking	25
	3- Reading	25
	4- Travelling	25
	5- Games/Sport	25
	Total	100
Separated/divorce	1- Cooking	29.41
	2- Wining and Dining	17.65
	3- Reading	23.53
	4- Travelling	23.53
	5- Games/Sport	5.882
	Total	100

N=5,064

Appendix XXXII

Frequency of purchase and consumption		
Gender		Percentage
Male	Two or more times per day	22.46
	Once per day	20.95
	About three times a week	31.97
	Once a week	24.62
	Total	100
Female	Two or more times per day	23.37
	Once per day	22.28
	About three times a week	29.08
	Once a week	25.27
	Total	100

N=5,064

**Appendix
XXXIII**

Frequency_of_purchase_and_consumption		
Age group		Percentage
Young adults (19-39 years)	Two or more times per day	17.6
	Once per day	23.18
	About three times a week	32.83
	Once a week	26.39
	Total	100
Middle age adults (40-59 years)	Two or more times per day	18.98
	Once per day	20.37
	About three times a week	33.8
	Once a week	26.85
	Total	100
Old adults (60-69 years)	Two or more times per day	44.97
	Once per day	18.12
	About three times a week	19.46
	Once a week	17.45
	Total	100

N=5,064

Appendix
XXXIV

Frequency_of_purchase_and_consumption		
Home_location		Percentage
Northern Nigeria	Two or more times per day	16.1
	Once per day	19.49
	About three times a week	29.66
	Once a week	34.75
	Total	100
Western Nigeria	Two or more times per day	21.75
	Once per day	22.11
	About three times a week	29.47
	Once a week	26.67
	Total	100
Eastern Nigeria	Two or more times per day	18.4
	Once per day	22.09
	About three times a week	36.2
	Once a week	23.31
	Total	100
Southern Nigeria	Two or more times per day	14.38
	Once per day	23.13
	About three times a week	36.88
	Once a week	25.63
	Total	100
FCT or Middle Belt or Central	Two or more times per day	53.33
	Once per day	19.05
	About three times a week	17.14
	Once a week	10.48
	Total	100

Appendix XXXV

Frequency_of_purchase_and_consumption		
Education		Percentage
Non Graduate	Two or more times per day	35.7
	Once per day	20.1
	About three times a week	28.1
	Once a week	16.1
	Total	100
Graduate	Two or more times per day	17.2
	Once per day	21.4
	About three times a week	31.9
	Once a week	28.5
	Total	100
Post graduate	Two or more times per day	20.9
	Once per day	22.1
	About three times a week	29.4
	Once a week	25.1
	Total	100

N=5,064

Appendix XXXVI

Frequency_of_purchase_and_consumption		
Marital_Status		Percentage
Married	Two or more times per day	25.24
	Once per day	20.19
	About three times a week	28.93
	Once a week	25.63
	Total	100
Not married	Two or more times per day	15.47
	Once per day	25.54
	About three times a week	33.81
	Once a week	25.18
	Total	100
Prefer not to say	Two or more times per day	44.44
	Once per day	11.11
	About three times a week	22.22
	Once a week	22.22
	Total	100
Separated/divorce	Two or more times per day	45
	Once per day	10
	About three times a week	40
	Once a week	5
	Total	100

N=5,064

Appendix XXXVII

Frequency_of_purchase_and_consumption		
Region		Percentage
North West	Two or more times per day	32.93
	Once per day	29.27
	About three times a week	24.39
	Once a week	13.41
	Total	100
South West	Two or more times per day	18.56
	Once per day	19.59
	About three times a week	30.41
	Once a week	31.44
	Total	100
South-South	Two or more times per day	21.62
	Once per day	21.62
	About three times a week	35.14
	Once a week	21.62
	Total	100
North Central	Two or more times per day	50
	Once per day	21.93
	About three times a week	15.79
	Once a week	12.28
	Total	100
South East	Two or more times per day	14.34
	Once per day	22.09
	About three times a week	37.21
	Once a week	26.36
	Total	100
North East	Two or more times per day	12.5
	Once per day	15.28
	About three times a week	31.94
	Once a week	40.28
	Total	100

N=5,064

Appendix XXXVIII

Gender	Buying Constraints	Percentage
Male	Constraints-Religious	12.8
	Nutritional reasons + health	68.5
	Cultural beliefs (constraints)	3.44
	Financial reasons (high prices)	15.3
	Total	
Female	Constraints-Religious	7.69
	Nutritional reasons + health	75.4
	Cultural beliefs (constraints)	2.93
	Financial reasons (high prices)]	13.9
	Total	100

N=5,064

Appendix XXXIX

Age group	Buying constraints	Percentage
Young adults (19-39 years)	Constraints-Religious	13.8
	Nutritional reasons + health	66.8
	Cultural beliefs (constraints)	3.08
	Financial reasons (high prices)	16.3
	Total	100
Middle age adults (40-59 years)	Constraints-Religious	5.97
	Nutritional reasons + health	75.3
	Cultural beliefs (constraints)	2.24
	Financial reasons (high prices)	16.4
	Total	100
Old adults (60-69 years)	Constraints-Religious	6.72
	Nutritional reasons + health	80
	Cultural beliefs (constraints)	4.48
	Financial reasons (high prices)	8.96
	Total	100

N=5,064

Appendix XL

Age group	Most Important Constraint	Percentage
Young adults (19-39 years)	Religion	17.5
	Nutritional reasons + health	48.75
	Financial reasons	23
	Cultural Beliefs	10.8
	Total	100
Middle age adults (40-59 years)	Religion	10.9
	Nutritional reasons + health	63.66
	Financial reasons	15.5
	Cultural Beliefs	10
	Total	100
Old adults (60-69 years)	Religion	8
	Nutritional reasons + health	70.63
	Financial reasons	12.7
	Cultural Beliefs	8.67
	Total	100

N=5,064

Appendix XLI

Home location	Buying Constraints	Percentage
Northern Nigeria	Constraints-Religious	12.5
	Nutritional reasons + health	62.5
	Cultural beliefs (constraints)	2.27
	Financial reasons (high prices)	22.7
	Total	100
Western Nigeria	Constraints-Religious	16.6
	Nutritional reasons + health	68
	Cultural beliefs (constraints)	0.59
	Financial reasons (high prices)	14.8
	Total	
Eastern Nigeria	Constraints-Religious	7.58
	Nutritional reasons + health	78
	Cultural beliefs (constraints)	3.79
	Financial reasons (high prices)	10.6
	Total	100
Southern Nigeria	Constraints-Religious	5.41
	Nutritional reasons + health	74.8
	Cultural beliefs (constraints)	1.8
	Financial reasons (high prices)	18
	Total	100
FCT or Middle Belt or Central	Constraints-Religious	7.53
	Nutritional reasons + health	74.2
	Cultural beliefs (constraints)	9.68
	Financial reasons (high prices)	8.6
	Total	100

N=5,064

Appendix XLII

Most important constraint			
Home location		Frequency	Percentage
Northern Nigeria	Religion	156	21.1382
	Nutritional reasons + health	324	44.71
	Financial reasons	126	17.0732
	Cultural Beliefs	126	17.0732
	Total	738	100
Western Nigeria	Religion	336	19.24
	Nutritional reasons + health	936	53.91
	Financial reasons	318	18.21
	Cultural Beliefs	150	8.59
	Total	1746	100
Eastern Nigeria	Religion	66	6.75
	Nutritional reasons + health	594	62.57
	Financial reasons	222	22.7
	Cultural Beliefs	78	7.98
	Total	978	100
Southern Nigeria	Religion	96	9.88
	Nutritional reasons + health	546	56.8
	Financial reasons	210	21.6
	Cultural Beliefs	114	11.73
	Total	972	100
FCT or Middle Belt Central	Religion	60	9.5
	Nutritional reasons + health	384	67.7
	Financial reasons	96	15.2
	Cultural Beliefs	48	7.6
	Total	630	100

Appendix XLII

Education	Buying constraints	Percentage
Non Graduate	Constraints-Religious	21.7
	Health constraints + Nutrition constraint	61.8
	Cultural beliefs (constraints)	2.55
	Financial reasons (high prices)	14
	Total	100
Graduate	Constraints-Religious	7.55
	Health constraints + Nutrition constraint	70.9
	Cultural beliefs (constraints	3.6
	Financial reasons (high prices)	18
	Total	**100**
Post graduate	Constraints-Religious	4.43
	Health constraints + Nutrition constraint	82.9
	Cultural beliefs (constraints)	3.16
	Financial reasons (high prices)	9.49
	Total	100

N=5,064

Appendix XLIII

Budget			
Home location		Frequency	Percent
Northern Nigeria	1-Within the Price range of most brands	450	61
	2-Can accommodate a little above	162	22
	3-Can accommodate much more	120	17
	Total	732	100
Western Nigeria	1-Within the Price range of most brands	1158	66.3
	2-Can accommodate a little above	306	17.5
	3-Can accommodate much more	264	15.2
	Total	1728	100
Eastern Nigeria	1-Within the Price range of most brands	600	61.3
	2-Can accommodate a little above	210	21.5
	3-Can accommodate much more	168	17.2
	Total	978	100
Southern Nigeria	1-Within the Price range of most brands	654	67.3
	2-Can accommodate a little above	216	22.2
	3-Can accommodate much more	102	10.5
	Total	972	100
FCT or Middle Belt or Central	1-Within the Price range of most brands	354	56.2
	2-Can accommodate a little above	174	27.6
	3-Can accommodate much more	102	16.2
	Total	630	100

Across all regional home locations, 56.2 – 67.3% of respondents buy processed (flavored) and packed foods within the price range of most brands. Highest percentage of FCT/middle Belt or Central are willing to pay a little above price range of most brands, while Southern has the least that are willing to pay much more, and Western has the least percentage respondents who are willing to accommodate a little above the price range of most brands if there are other benefits.

Appendix XLIV

Extent_of_social_group_influence		
Home_location	Frequency	Percentage
Northern Nigeria 1 - Regular/Often	288	39
2 - None at all	204	27.6
3 - Seldom	204	27.6
4 - Others	36	4.9
Total	732	100
Western Nigeria 1 - Regular/Often	570	32.9
2 - None at all	486	28
3 - Seldom	660	38.06
4 - Others	18	1.04
Total	1734	100
Eastern Nigeria 1 - Regular/Often	354	36.4
2 - None at all	366	37.7
3 - Seldom	252	25.9
	972	100
Southern Nigeria 1 - Regular/Often	324	33.5
2 - None at all	354	36.6
3 - Seldom	288	29.8
Total	966	100
FCT or Middle Belt or Central 1 - Regular/Often	210	33.7
2 - None at all	180	28.8
3 - Seldom	234	37.5
Total	624	100

72.4% of Northern, 72% of Western, 62.3% of Eastern, 63.4% of Southern and 71.2%

of FCT or Middle Belt or Central indicated that there is social group influence in their

purchasing decision towards processed (flavoured) and packed foods and drinks.

Appendix XLV: Correlation of Independent Variables

		Regional native zone	Age group	Gender	Educational status	Monthly earning	Religion	Birth location	Home location	Marital status	Tribe	Family _Size
Regional native location	Pearson Correlation	1	0.03	.164**	-0.019	.082*	.443**	.114**	0.051	.088*	.260**	-0.015
	Sig. (2-tailed)		0.382	0	0.589	0.017	0	0	0.135	0.01	0	0.664
	N	5064	5064	5064	5046	5040	5064	5058	5064	5064	5064	5058
Age group	Pearson Correlation	0.03	1	-0.056	.097**	.074*	.071*	.158**	.188**	-.218**	-.097**	0.051
	Sig. (2-tailed)	0.382		0.105	0.005	0.033	0.04	0	0	0	0.005	0.139
	N	5064	5064	5064	5046	5040	5064	5058	5064	5064	5064	5058
Gender	Pearson Correlation	.164**	-0.06	1	-0.002	.079*	.100**	0.06	0.063	.073*	-0.026	0
	Sig. (2-tailed)	0	0.105		0.965	0.021	0.003	0.07	0.066	0.035	0.443	0.984
	N	5064	5064	5064	5046	5040	5064	5058	5064	5064	5064	5058
Education	Pearson Correlation	-0.019	.097**	-0.002	1	0.048	.185**	-0	-.105**	-.112**	0.044	0.042
	Sig. (2-tailed)	0.589	0.005	0.965		0.164	0	0.34	0.002	0.001	0.204	0.226
	N	5046	5046	5046	5046	5022	5046	5040	5046	5046	5046	5040
Monthly	Pearson	.082*								.074*	.079*	0.048

		1	0.055	.114**	.100**	0.058	-0.039							
						-.114**								
Earning	Sig. (2-tailed)		0.017	0.033	0.021	0.164		0.111	0	0.004	0.094	0.001	0.262
	N		5040	5040	5040	5022	5040	5040	5034	5040	5040	5040	5034
Religion	Pearson Correlation	.443**	.071*	.100**	.185**	0.055	1	.204**	.158**	.112**	.102**	-0.043

	Sig. (2-tailed)	0	0.04	0.003	0	0.111		0	0	0.001	0.003	0.208
	N	5064	5064	5064	5046	5040	5064	5058	5064	5064	5064	5058
Regional Birth location	Pearson Correlation	.114**	.158**	0.063	-0.033	.114**	.204**	1	.594**	.170**	-.165**	-.077*
	Sig. (2-tailed)	0.001	0	0.069	0.34	0.001	0		0	0	0	0.025
	N	5058	5058	5058	5040	5034	5058	5058	5058	5058	5058	5052
Regional Home location	Pearson Correlation	0.051	.188**	0.063	-.105**	.100**	.158**	.594**	1	.129**	-.201**	-0.062
	Sig. (2-tailed)	0.135	0	0.066	0.002	0.004	0	0		0	0	0.073
	N	5064	5064	5064	5046	5040	5064	5058	5064	5064	5064	5058
Marital Status	Pearson Correlation	.088*	-.218**	.073*	-.112**	0.058	.112**	.170**	.129**	1	0	-0.01
	Sig. (2-tailed)	0.01	0	0.035	0.001	0.094	0.001	0	0		0.989	0.775
	N	5064	5064	5064	5046	5040	5064	5058	5064	5064	5064	5058
Tribe	Pearson Correlation	.260**	-.097**	-0.026	0.044	-.114**	.102**	-.165**	-.201**	0	1	.156**
	Sig. (2-tailed)	0	0.005	0.443	0.204	0.001	0.003	0	0	0.989		0
	N	5064	5064	5064	5046	5040	5064	5058	5064	5064	5064	5058
Family_Size	Pearson Correlation	-0.015	0.051	0	0.042	-0.039	-0.043	-.077*	-0.062	-0.01	.156**	1
	Sig. (2-tailed)	0.664	0.139	0.984	0.226	0.262	0.208	0.03	0.073	0.775	0	
	N	5058	5058	5058	5040	5034	5058	5052	5058	5058	5058	5058

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

* Correlation is significant at the 0.05 level (2-tailed)

Appendix XLVI: Correlation of Dependent Variables

		HC	SG	ESGI	HO	FP	DF	WD	BC	MIC	MDA	PP	BDP	BDG	IFF	BFF	BDF	LS
HC	Pearson Correlation	1	-0.006	-0.003	.108**	0.038	.080*	0.053	.220**	-0.024	-0.017	-.073*	-0.051	-0.029	-0.064	-0.013	-0.063	-0.033
	Sig. (2-tailed)		0.858	0.922	0.002	0.272	0.019	0.121	0	0.478	0.632	0.035	0.142	0.397	0.065	0.717	0.067	0.342
	N	5064	5064	5040	5064	5046	5064	5064	5058	5064	5064	5064	5052	5040	4998	5028	5004	5052
SG	Pearson Correlation	-0.006	1	0.065	.103**	0.019	.129**	0.013	0.039	-0.014	-0.003	0.017	0.048	-0.005	-0.016	0.015	-0.027	-0.017
	Sig. (2-tailed)	0.858		0.06	0.003	0.588	0	0.715	0.259	0.674	0.942	0.631	0.167	0.889	0.642	0.658	0.441	0.625
	N	5064	5064	5040	5064	5046	5064	5064	5058	5064	5064	5064	5052	5040	4998	5028	5004	5052
ESGI	Pearson Correlation	-0.003	0.065	1	.070*	0.023	.076*	.167**	0.028	.102**	0.032	0.021	-0.016	-0.052	0.008	-0.017	0.01	-0.04
	Sig. (2-tailed)	0.922	0.06		0.042	0.503	0.028	0	0.416	0.003	0.353	0.537	0.653	0.132	0.827	0.632	0.767	0.243
	N	5040	5040	5040	5040	5022	5040	5040	5040	5040	5040	5040	5028	5016	4974	5004	4980	5028
HO	Pearson Correlation	.108**	.103**	.070*	1	.092**	.258**	-0.015	.188**	0.066	.126**	-.070*	-0.052	-0.038	-0.057	0.02	0.046	0.027
	Sig. (2-tailed)	0.002	0.003	0.042		0.007	0	0.66	0	0.054	0	0.042	0.133	0.267	0.1	0.56	0.188	0.441
	N	5064	5064	5040	5064	5046	5064	5064	5058	5064	5064	5064	5052	5040	4998	5028	5004	5052
FP	Pearson Correlation	0.038	0.019	0.023	.092**	1	.110**	0	-0.006	0.066	0.04	-.090**	0.06	0.025	0.001	-0.002	0.037	-0.05
	Sig. (2-tailed)	0.272	0.588	0.503	0.007		0.001	0.996	0.871	0.057	0.244	0.009	0.083	0.475	0.986	0.96	0.29	0.149
	N	5046	5046	5022	5046	5046	5046	5046	5040	5046	5046	5046	5034	5022	4980	5010	4986	5034
DF	Pearson Correlation	.080*	.129**	.076*	.258**	.110**	1	-0.014	.178**	0.067	0.004	-0.061	0.033	0.045	-.085*	0.017	0.035	-0.051
	Sig. (2-tailed)	0.019	0	0.028	0	0.001		0.69	0	0.052	0.903	0.076	0.345	0.194	0.015	0.618	0.316	0.14
	N	5064	5064	5040	5064	5046	5064	5064	5058	5064	5064	5064	5052	5040	4998	5028	5004	5052
WD	Pearson Correlation	0.053	0.013	.167**	-0.015	0	-0.014	1	-0.023	0.033	0.022	0.037	0.037	0.026	.100**	0.002	-0.012	-.085*

	Sig. (2-tailed)	0.121	0.715	0	0.66	0.996	0.69		0.506	0.34	0.525	0.278	0.283	0.443	0.004	0.943	0.726	0.014
	N	5064	5064	5040	5064	5046	5064	5064	5058	5064	5064	5064	5052	5040	4998	5028	5004	5052
BC	Pearson Correlation	.220**	0.039	0.028	.188**	-0.006	.178**	-0.023	1	-0.007	0.025	-0.032	-.096**	-.069*	-0.016	0.048	0.028	0.046
	Sig. (2-tailed)	0	0.259	0.416	0	0.871	0	0.506		0.831	0.473	0.347	0.005	0.047	0.642	0.164	0.411	0.187
	N	5058	5058	5040	5058	5040	5058	5058	5058	5058	5058	5058	5046	5034	4992	5022	4998	5046
MIC	Pearson Correlation	-0.024	-0.014	.102**	0.066	0.066	0.067	0.033	-0.007	1	0.022	-0.011	.107**	0.024	-0.027	.074*	.076*	0.047
	Sig. (2-tailed)	0.478	0.674	0.003	0.054	0.057	0.052	0.34	0.831		0.515	0.74	0.002	0.479	0.443	0.031	0.029	0.173
	N	5064	5064	5040	5064	5046	5064	5064	5058	5064	5064	5064	5052	5040	4998	5028	5004	5052
MDF	Pearson Correlation	-0.017	-0.003	0.032	.126**	0.04	0.004	0.022	0.025	0.022	1	-0.027	0.009	-0.005	0.028	-0.003	.099**	-0.039
	Sig. (2-tailed)	0.632	0.942	0.353	0	0.244	0.903	0.525	0.473	0.515		0.425	0.796	0.896	0.418	0.939	0.004	0.261
	N	5064	5064	5040	5064	5046	5064	5064	5058	5064	5064	5064	5052	5040	4998	5028	5004	5052
PP	Pearson Correlation	-.073*	0.017	0.021	-.070*	-.090**	-0.061	0.037	-0.032	-0.011	-0.027	1	.083*	-0.051	.148**	0.015	-0.012	0.017
	Sig. (2-tailed)	0.035	0.631	0.537	0.042	0.009	0.076	0.278	0.347	0.74	0.425		0.016	0.144	0	0.674	0.724	0.626
	N	5064	5064	5040	5064	5046	5064	5064	5058	5064	5064	5064	5052	5040	4998	5028	5004	5052
BDP	Pearson Correlation	-0.051	0.048	-0.016	-0.052	0.06	-0.033	0.037	-.096**	.107**	0.009	.083*	1	-0.022	.104**	0.056	0.012	-.082*
	Sig. (2-tailed)	0.142	0.167	0.653	0.133	0.083	0.345	0.283	0.005	0.002	0.796	0.016		0.529	0.003	0.105	0.724	0.018
	N	5052	5052	5028	5052	5034	5052	5052	5046	5052	5052	5052	5052	5028	4986	5016	4992	5040
BDG	Pearson Correlation	-0.029	-0.005	-0.052	-0.038	0.025	-0.045	0.026	-.069*	0.024	-0.005	-0.051	-0.022	1	0.05	0.055	-0.035	0.024
	Sig. (2-tailed)	0.397	0.889	0.132	0.267	0.475	0.194	0.443	0.047	0.479	0.896	0.144	0.529		0.147	0.111	0.309	0.48
	N	5040	5040	5016	5040	5022	5040	5040	5034	5040	5040	5040	5028	5040	4974	5004	4980	5028
IFF	Pearson Correlation	-0.064	-0.016	0.008	-0.057	0.001	-.085*	.100**	0.016	-0.027	0.028	.148**	.104**	0.05	1	-0.016	-.081*	-.072*
	Sig. (2-tailed)	0.065	0.642	0.827	0.1	0.986	0.015	0.004	0.642	0.443	0.418	0	0.003	0.147		0.642	0.02	0.039
	N	4998	4998	4974	4998	4980	4998	4998	4992	4998	4998	4998	4986	4974	4998	4968	4956	4986
BFF	Pearson Correlation	-0.013	0.015	-0.017	0.02	-0.002	-0.017	0.002	0.048	.074*	-0.003	0.015	0.056	0.055	-0.016	1	.186**	0.004
	Sig. (2-tailed)	0.717	0.658	0.632	0.56	0.96	0.618	0.943	0.164	0.031	0.939	0.674	0.105	0.111	0.642		0	0.912
	N	5028	5028	5004	5028	5010	5028	5028	5022	5028	5028	5028	5016	5004	4968	5028	4992	5016

BDF	Pearson Correlation	-0.063	-0.027	0.01	0.046	0.037	0.035	-0.012	0.028	.076*	.099**	-0.012	0.012	-0.035	-.081*	.186**	1	-0.025
	Sig. (2-tailed)	0.067	0.441	0.767	0.188	0.29	0.316	0.726	0.411	0.029	0.004	0.724	0.724	0.309	0.02	0		0.478
	N	5004	5004	4980	5004	4986	5004	5004	4998	5004	5004	5004	4992	4980	4956	4992	5004	4992
LS	Pearson Correlation	-0.033	-0.017	-0.04	0.027	-0.05	-0.051	-.085*	0.046	0.047	-0.039	0.017	-.082*	0.024	-.072*	0.004	-0.025	1
	Sig. (2-tailed)	0.342	0.625	0.243	0.441	0.149	0.14	0.014	0.187	0.173	0.261	0.626	0.018	0.48	0.039	0.912	0.478	
	N	5052	5052	5028	5052	5034	5052	5052	5046	5052	5052	5052	5040	5028	4986	5016	4992	5052

Appendix XLVII: *KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.506
Bartlett's Test of Sphericity	Approx. Chi-Square	205.874
	df	105
	Sig.	.000

Appendix XLVIII: *Component Transformation Matrix*

Component Transformation Matrix

Component	1	2	3
1	.493	.666	-.316
2	.802	-.443	.305
3	-.321	-.014	.284
4	-.029	.447	.670
5	.066	.170	.481
6	.068	.352	-.133
7	-.003	.089	.165

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Questionnaire for Quantitative Research

Survey Questions

You are invited to complete this questionnaire which aims at examining the influence of consumers diversities on purchasing behavior and global marketing mix strategy- adaptation or standardization in food flavor industry in an emerging market (Nigeria).

Having completed the informed consent form, kindly proceed to the questionnaire. Respond to as many questions as possible, however, you can withdraw from participating in this survey at any time or stage if you are not comfortable with proceeding with the survey, or you skip any question you are not comfortable with. If you want to discontinue with the survey, of which you have right to do, please note that data you input in this case will be deleted. Feel comfortable to participate and respond to as many questions as possible, as this would help me in the survey.

Kindly complete all questions and ensure you follow the instructions for each of the questions. The questionnaire should only take about 15 minutes to complete.

Part one: Demographics

1. **What gender do you identify as? Choose one**

   ( ) Male   ( ) Female

2. **What is your age? Write exact age in years**

   ………………………………… years

3. **Where is your home located? Choose one option.**

   a. Northern Nigeria

   b. Southern Nigeria

   c. Eastern Nigeria

   d. Western Nigeria

   e. Federal Capital Territory or Middle Belt or Central

4. **Indicate highest level of education attained? Choose one option**

   - Non-graduate   (Primary, Secondary Schools, Technic College)

   - Graduate   (University, Polytechnic, College of Education)

   - Postgraduate   (PGD, Master's Degree, Ph.D.)

5. **Are you married? Choose one option**

   (a) Yes

   (b) No

   (c) Separated / Divorced

   (d) Prefer not to say

6. **What tribe do you belong to? Choose one option**

   (a) Yoruba

   (b) Igbo

   (c) Hausa/Fulani

   (d) Middle belt (TIV, Mumuye, Plateau)

   (e) Others………please specify

7. **Where were you born? Choose one option**

   (a) Northern Nigeria

   (b) Southern Nigeria

   (c) Eastern Nigeria

   (d) Western Nigeria

   (e) Federal Capital Territory or Middle Belt or Central

8. **What is your family size? Choose one option**

   (a) 2

   (b) 3

(c) 4

(d) 5

(e) Others………………please specify

9. **What religious sect do you belong? Choose one option**

   (a) Christianity

   (b) Islam

   (c) Traditional

   (d) Atheism

   (e) Others………………please specify

10. **What is your current employment status? Choose one option**

(a) Employed Full-Time

(b) Employed Part-Time

(c)) Seeking opportunities

(d) Retired

(e)Others……………….please specify

11. **What is your current monthly earning? Choose one option**

   (a) Less than NGN50,000 per month

   (b) NGN50,000 – less than NGN100,000 per month

   (c) NGN 100,000 – less than NGN 250,000 per month

   (d) N250,000 - less than NGN 500,000 per month

   (e) Above 500,000 per month

   (f) Prefer not to disclose…………………………

12. **What are your health concerns? Choose as many options as possible.**

   (a) Weight control

   (b) High nutrition

(c) High blood pressure

(d) High blood Sugar level

(e) Others……………………..please specify

13. What social group do you belong? Choose as many options as possible

(a) Professional group membership

(b) Ethnic identification / membership

(c) Other social bonding groups……….. please specify

14. How frequently does the social group you belong influence your decisions?

(a) Regularly/Often

(b) Seldom

(c) None at all

(d) Others……Please specify

Part 2: Psychographics

15. What are your hobbies? Choose one option

(a) Cooking

(b) Wining and Dining

(c)) Reading

(d) Travelling

(e)) Games/Sport

16. What form (s) of processed foods and drinks do you buy and consume most frequently?

(a) Noodles   (b) Stock cube, seasoning powder   (c) tomato paste

(d) Margarine, mayonnaise, butter   (e) biscuit, bread, cake

(f) extruded snacks – cheese balls, corn curls,

(g) chocolate beverage drink (milo, bournvita)

(h) Ice-cream, yoghurt

(i) soft drinks – carbonated drinks

(j) candies

(k) fruit drink, juice, squash

17. How often do you buy and consume one form of the listed packed food products and/or drinks, or the other?

    (a) Two or more times per day

    (b) Once per day

    (c) About three times a week

    (d) Once a week

18. What are the reasons for buying and consuming packed food products and/or drinks?

    (a) Convenience

    (b) Price (affordability)

    (c) Delicacy and Palatability due to taste and flavor enhancement

    (d) Availability

    (e) All of the above

19. Most of the time, who decides the type of packed foods and/or drinks you buy and consume in your family?

    (a) I decide

    (b) My spouse decides

    (c) My parent (mother or father) decides

    (d) My children decide

    (e) My cook or steward decides

    (f) Other members of my family or colleagues/friends decide

20. What constraints do you have in buying and consuming some packed foods and/or drinks, or to more frequent consumption?

   (a) Religious constraints

   (b) Health constraints

   (c) Cultural beliefs (constraints)

   (d) Nutritional reasons

   (e) Financial reasons (high prices)

   (f) All of the above

21. Of all the constraints below (a) to (e), which constraint is most important to you?

   (a) Religious constraints

   (b) Health constraints

   (c) Cultural beliefs (constraints)

   (d) Nutritional reasons

   (e) Financial reasons (high prices)

22. What attribute is most appealing to you in processed and packed foods and drinks?

   (a) Appearance

   (b) Taste/Flavor

   (c) Price

   (d) Health benefits and/or safety

   (e) Ease to use

23. Where do you go when you are looking for packed foods/drinks?

   (a) Supermarket

   (b) Retail outlets (on the street)

   (c) On the go from hawkers in traffic

   (d) Open market

24. How long does it take you to make a buying decision for packed foods/drinks?

(a) Spontaneous

(b) After inspection on the product

(c) After enquiry from friends/family members

(d) After considering or comparing price

25. What is your typical budget for packed foods/drinks?

(a) Within the price range of most common brands in their categories

(b) Can accommodate a little above the price of most common brands in their categories

(c) Can accommodate much more above the price of most common brands in their

categories, if they have other benefits

26. How important is flavor and taste of packed foods and drinks to your decision to

buy and consume them?

(a) Very important

(b) Moderately important

(c) Slightly important

(d) Neither important nor unimportant

(e) Not important

27. What are your favourite flavors? Select the best 2 flavor category in packed foods

(a) Spices: Pepper spice, Ginger, onion, curry, thyme, tomato

(b) Beef, chicken, seafood (fish, crayfish, prawn, crab)

(c) Dairy: Milk, cream, butter flavor

(d) Chocolate, malt

(e) Nuts: Coconut, groundnut, walnut

28. What are your favourite flavors? Select the best 2 flavor category in packed drinks

(a) Spices: Ginger and others

    (b) Dairy: Milk, cream

    (c) Chocolate, malt

    (d) Fruits flavors

29. **How satisfied are you with flavor category of packed foods and drinks sold in Nigeria?**

Choose one option

    (a) Very dissatisfied

    (b) Not satisfied

    (c) Neither satisfied nor dissatisfied

    (d) Satisfied

    (e) Very satisfied

    Thanks for participating in this survey.

Questionnaire

Focus Group Discussion

Different sessions were held for the various groups of participants. There were six regional

native groups, and there were three different sessions for the three different age groups; - age

19-39 years (young adult); age 40-59 years (middle age); and age 60-70 years (old age).

Minimum of six participants were each focus group discussion.

Having completed the informed consent form, participants proceeded to the focus group

discussion.

Questions Discussed

1. What are your specific needs and strongest attributes desired in foods?

2. What are your peculiar taste preferences for foods?

3. Do the processed and packed food products in your local markets meet your

   needs?

4. What level of satisfaction do you get from processed and packed food

   products?

5. What constraints are you aware limit the level of customer satisfaction based

   on your identified need?

6. What is the retail price points of different categories of processed and packed

   food products?

(a) Noodles (b) Stock cube, seasoning powder (c) tomato paste

(d) Margarine, mayonnaise, butter (e) biscuit, bread, cake

(f) extruded snacks – cheese balls, corn curls,

(g) chocolate beverage drink (milo, bournvita)

(h) Ice-cream, yoghurt (i) soft drinks – carbonated drinks (j) candies

(k) fruit drink, juice, squash

7. What level of influence do words of mouth have on your buying decision?

8. Do cultural values have effect on your buying decisions, or what are the cultural
    constraints to your choice of food, such as taboo?

9. Are there some cost constraints to your choice of food?

10. Are there some local or national governmental /legal policies (importation,
    regulations) which restrict your food choices?

11. Are there technological restrictions to your food choices?

12. Are there environmental restrictions to your food choices?

13. Are there technological restrictions to your food choices?

14. What are the reasons for buying and consuming packed food products and/or drinks?

15. Who in the family decides the type of packed foods and/or drinks that are
consumed by everyone?

16. What are the most important attributes in processed and packed foods and drinks?

17. Where are most of the packed foods/drinks available to buy?

18. How long does it take you to make a buying decision for packed foods/drinks?

19. What is your typical budget for packed foods/drinks?

20. How important is flavor and taste of packed foods and drinks to your decision to
    buy and consume them?

21. What are the most favourite flavors in packed foods and drinks? Why those
    flavors?

22. What is the level of satisfaction consumers derive from packed foods and drinks?

23. What do you suggest processed and packed food manufacturers should do to
    improve on consumers' satisfaction?

Questionnaire of Elite and In-Depth Interview

Professionals and market experts in food flavor and processed and packed food and drink

manufacturing industry participated in the interview.

Having completed the informed consent form, participants proceeded to the focus group

discussion. It was a one-on-one interview that took place and audio/video-recorded via zoom

meeting.

Part one: Demographics

1. **What gender do you identify as? Choose one**

    ( ) Male   ( ) Female

2. **What is your age? Write exact age in years**
    ………………………………… years

3. **Indicate highest level of education attained? Choose one option**

    - Non-graduate   (Primary, Secondary Schools, Technic College)

    - Graduate   (University, Polytechnic, College of Education)

    - Postgraduate   (PGD, Master's Degree, Ph.D.)

4. **Are you married? Choose one option**

    (e) Yes

    (f) No

    (g) Separated / Divorced

    (h) Prefer not to say

5. **What tribe do you belong to? Choose one option**

    (f) Yoruba

    (g) Igbo

    (h) Hausa/Fulani

    (i) Middle belt (TIV, Mumuye, Plateau)

    (j) Others………please specify

6. **Where were you born? Choose one option**

   (f) Northern Nigeria

   (g) Southern Nigeria

   (h) Eastern Nigeria

   (i) Western Nigeria

   (j) Federal Capital Territory or Middle Belt or Central

7. **What is your family size? Choose one option**

   (f) 2

   (g) 3

   (h) 4

   (i) 5

   (j) Others………………please specify

8. **What religious sect do you belong? Choose one option**

   (f) Christianity

   (g) Islam

   (h) Traditional

   (i) Atheism

   (j) Others………………please specify

9. **What social group do you belong? Choose as many options as possible**

   (d) Professional group membership

   (e) Ethnic identification / membership

   (f) Other social bonding groups……….. please specify

10. **What are your hobbies? Choose one option**

    (b) Cooking

    (b) Wining and Dining

(c)) Reading

(d) Travelling

(e)) Games/Sport

Questions Discussed

1. What are descriptions of consumers of processed and packed foods in Nigeria in relation to culture, ethnicity, age, gender, faith and socio-economic class?

2. How can you relate the demographics of Nigerian consumers of flavoured foods to their purchasing behaviors?

3. What do you know are the specific needs of customers and the strongest attributes desired by Nigerian consumers in processed and packed foods?

4. Are there some local or national governmental /legal policies (such as related to importation, food regulations) which restrict consumers' food choices?

5. Are there technological restrictions to consumers' food choices as it relates to food flavors as food additives?

6. Are there environmental restrictions to consumers' food choices as it relates to food flavors as food additives?

7. Are there technological restrictions to consumers' food choices as it relates to food flavors as food additives?

8. To what extent do food flavors have positive and cost implication on processed and packed foods?

9. What standards are put in place to ensure uniformity across the globe?

10. Are there adjustments you have made to improve performance in Nigeria?

11. What constraints need to be addressed in the industry?

- 11a. Constraints in customers

- 11b. environmental constraints

- 11c. economical constraints

- 11d. regulatory (legal) constraints

- 11e. technological constraints

- 11f. political constraints

12. What can be done to overcome these constraints?

Thanks for participating in this interview.

REAF DS document

UNICAF UNIVERSITY RESEARCH ETHICS APPLICATION FORM DOCTORAL STUDIES	UREC USE ONLY: Application No: Date Received:

Student's Name: Oluyemi Arosoye

Student's E-mail Address: bussyemmy@yahoo.com

Student's ID #: R1801D4338598

Supervisor's Name: Prof. Assoc. Elenica Pjero

University Campus: Unicaf University Malawi (UUM)

Program of Study: UUM: DBA - Doctorate of Business Administration

Research Project Title: Influence of Consumers Diversities on Purchasing Behavior and Global Marketing Mix Strategy- Adaptation or Standardization in Food Flavour Industry in an Emerging Market (Nigeria)

1. **Please state the timelines involved in the proposed research project:**

Estimated Start Date: 16-Mar-2021   Estimated End Date: 16-Apr-2021

2. **External Research Funding (if applicable):**

   2.a. **Do you have any external funding for your research?**

   ☐ YES   ☑ NO

   If YES, please answer questions **2b** and **2c**.

   2.b. List any external (third party) sources of funding you plan to utilise for your project. You need to include full details on the source of funds (e.g. state, private or individual sponsor), any prior / existing or future relationships between the funding body / sponsor and any of the principal investigator(s) or co-investigator(s) or student researcher(s), status and timeline of the application and any conditions attached.

   Not Applicable

   2.c. If there are any perceived ethical issues or potential conflicts of interest arising from applying or and receiving external funding for the proposed research then these need to be fully disclosed below and also further elaborated on, in the relevant sections on ethical considerations later on in this form.

   Not Applicable

1

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3. **The research project**

3.a. **Project Summary:**

In this section fully describe the purpose and underlying rationale for the proposed research project. Ensure that you pose the research questions to be examined, state the hypotheses, and discuss the expected results of your research and their potential.

It is important in your description to use plain language so it can be understood by all members of the UREC, especially those who are not necessarily experts in the particular discipline. To that effect ensure that you fully explain / define any technical terms or discipline-specific terminology (use the space provided in the box).

Diversities in consumers ways of life, culture and taste preference cause a threat to global marketing, and these affect consumers' buying behavior and marketing strategies that any global organization would employ. Nigeria is a peculiar country with multicultural thick population which is the focus for this research, to investigate marketing strategy that would be employed by international food flavor manufacturing organizations which are either new entrants or existing players in food flavor industry. Therefore, for any organization to excel in global market, part of which is Nigeria where there are dissimilarities in culture, it becomes crucial to either standardize or adapt the marketing elements which are product, price, place and promotion. Furthermore, as there is solid theory on effect of diversities of consumers based on demographics on their purchasing patterns, it is paramount to understand these factors that are peculiar to Nigerian consumers, and based on their influence, to establish marketing strategies for international food flavor organizations. Research questions would be to explore what consumers' demographics affect their taste preference and buying patterns, and which marketing strategies which have been identified as successful. The hypotheses are that ; In Nigeria, demographics of consumers of manufactured foods affect their attitude towards food flavour; demographics of these consumers affect the marketing strategy to be employed or that is being employed by international manufacturers of flavor.

3.b. Significance of the Proposed Research Study and Potential Benefits:

Outline the potential significance and/or benefits of the research (use the space provided in the box).

Global food flavor market is advancing and becoming popular as a result of the importance of food flavors as essential additive in food manufacturing which drive consumers' acceptance and choice for manufactured food. New entrants and existing multinational food flavor manufacturing organizations can only succeed in worldwide food flavor market where there are dissimilarities in culture. It is essential to understand diversities in demographics of Nigerian manufactured food consumers, and their effects on their purchasing behaviour and marketing strategies of standardization and/or adaptation of the marketing components (product, price, place and promotion), for this peculiar prominent emerging market- Nigeria. As there are no publications on these information, this study aims at providing information that would be useful to B2B in food flavour manufacturing industry in Nigeria, in making informed decision on strategies to be employed based on knowledge of Nigerian consumers' peculiar needs, culture, beliefs, basic taste trend, and individual PESTLE element of the country.

4. Project execution:

4.a. The following study is an:

- [✔] experimental study (primary research)
- [ ] desktop study (secondary research)
- [ ] desktop study using existing databases involving information of human/animal subjects
- [ ] Other

If you have chosen 'Other' please Explain:

4.b. Methods. The following study will involve the use of:

Method	Materials / Tools

Qualitative:
- ☑ Face to Face Interviews
- ☑ Phone Interviews
- ☑ Face to Face Focus Groups
- ☑ Online Focus Groups
- ☐ Other *

Quantitative:
- ☑ Face to Face Questionnaires
- ☑ Online Questionnaires
- ☐ Experiments
- ☐ Tests
- ☐ Other *

*If you have chosen 'Other' please Explain:

I would carry out investigation using qualitative and quantitative research approach. Questionnaire would be administered while interview would be conducted to obtain information from respondents. Information obtained would be compiled.

5. **Participants:**

5 a. Does the Project involve the recruitment and participation of additional persons other than the researcher(s) themselves?

- ☑ YES — If YES, please complete all following sections.
- ☐ NO — If NO, please directly proceed to Question 7.

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5 b. Relevant Details of the Participants of the Proposed Research

State the number of participants you plan to recruit, and explain in the box below how the total number was calculated.

Number of participants   495

Minimum of 75 respondents would participate in each of the identified six (6) basic regional/tribal groups of Nigeria. Sample size for study is minimum of 450 participants, however, pilot study would first be conducted to check validity and reliability of my tool. Minimum of 10% of sample size would be used for pilot study, after obtaining a reliable result, a new sect of not less than 400 participants would be recruited for the actual study.

Describe important characteristics such as: demographics (e.g. age, gender, location, affiliation, level of fitness, intellectual ability etc). It is also important that you specify any inclusion and exclusion criteria that will be applied (e.g. eligibility criteria for participants).

Age range   From 19   To 70

Gender   ☑ Female
           ☑ Male

Eligibility Criteria:

- Inclusion criteria

  The identified eight regional/tribal makeup-south,west, north, east, middle belt, others; Age (19-70); socio-economic class (education, income, occupation); religion (Christianity, Islam, Traditional); Gender.

- Exclusion criteria

  Participants below age 18.
  Disabled people who cannot provide informed consent for themselves, that is, the mentally ill, are exempted.

Disabilities

People without mental disabilities and those who can provide informed consent for themselves would participate.

Other relevant information (use the space provided in the box):

Only persons without mental disabilities and those who could provide free and written informed consent for themselves would be used for this study. 6-8 participants per focus group of each of the six (6) identified regional groups would participate in discussion. While minimum of 8 food and flavor professionals who are members of Nigeria Institute of Food Science and Technology would participate in in-depth interview. For elite interview, minimum of 8 top management of both food and flavor industry.

5 c. Participation & Research setting:

Clearly describe which group of participants is completing/participating in the material(s)/ tool(s) described in 5b above (use the space provided in the box).

As every Nigerian takes one form or the other of processed and packed foods and /or drinks, eligible participants are therefore, male and female Nigerians, from age 19 -70 years, across different ethnic groups and socio-economic classes.

However, for qualitative research, interviews would be done for randomly selected professionals in food and flavor industry. There are very few players (less than 20) in flavor industry, and through the directory of Nigerian Institute of Food Science and Technology, food professionals would be randomly selected. Participants in focus groups discussion would be different groups on regional basis,and sub-groups on age basis, educational and income basis.

5 d. Recruitment Process for Human Research Participants:

Clearly describe how the potential participants will be identified, approached and recruited (use the space provided in the box).

Potential participants are identified based on ethnicity- and this takes priority, in other to really detect the effect of diversity in culture on Nigerian consumers' buying behavior as influenced by taste and flavor preference across different age and socio-economic class. Very importantly, participants above 18 years will be used. Workplace settings would be used to identify and approach participants. Having identified the primary contacts for each of the workplaces, email will be sent to the gatekeepers to allow me have access to research participants within their organization, while I make further request to assist me in sending emails of the questionnaires to potential participants. Furthermore, informed consent will be attached to the questionnaire for participants to fill and give their consent before proceeding to answering the questions.

5 e. Research Participants Informed Consent.

Select below which categories of participants will participate in the study. Complete the relevant Informed Consent form and submit it along with the REAF form.

Yes	No	Categories of participants	Form to be completed
✔	☐	Typically Developing population(s) above the maturity age *	Informed Consent Form
☐	☐	Typically Developing population(s) under the maturity age *	Guardian Informed Consent Form

* Maturity age is defined by national regulations in laws of the country in which the research is being conducted.

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5 f. Relationship between the principal investigator and participants.

Is there any relationship between the principal investigator (student), co-investigators(s), (supervisor) and participant(s)? For example, if you are conducting research in a school environment on students in your classroom (e.g. instructor-student).

☐ YES   ☑ NO

If YES, specify (use the space provided in the box).

6. **Potential Risks of the Proposed Research Study.**

6 a. i. Are there any potential risks, psychological harm and/or ethical issues associated with the proposed research study, other than risks pertaining to everyday life events (such as the risk of an accident when travelling to a remote location for data collection)?

☐ YES   ☑ NO

If YES, specify below and answer the question 6 a.ii.

6 a.ii Provide information on what measures will be taken in order to exclude or minimise risks described in 6.a.i.

There is no known risk. Questionnaires will pass through gatekeepers as well before they are sent to participants.

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6 b. Choose the appropriate option

		Yes	No
i.	Will you obtain written informed consent form from all participants?	✔	
ii.	Does the research involve as participants, people whose ability to give free and informed consent is in question?		✔
iii.	Does this research involve participants who are children under maturity age? **If you answered YES to question iii, complete all following questions.** **If you answered NO to question iii, do not answer Questions iv, v, vi and proceed to Questions vii, viii, ix and x.**		✔
iv.	Will the research tools be implemented in a professional educational setting in the presence of other adults (i.e. classroom in the presence of a teacher)?		
v.	Will informed consent be obtained from the legal guardians (i.e. parents) of children?		
vi.	Will verbal assent be obtained from children?		
vii.	Will all data be treated as confidential? If NO, explain why confidentiality of the collected data is not appropriate for this proposed research project, providing details of how all participants will be informed of the fact that any data which they will provide will not be confidential.	✔	
viii.	Will all participants /data collected be anonymous? If NO, explain why and describe the procedures to be used to ensure the anonymity of participants and/or confidentiality of the collected data both during the conduct of the research and in the subsequent release of its findings.	✔	

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		Yes	No
ix.	Have you ensured that personal data and research data collected from participants will be securely stored for five years?	✔	
x.	Does this research involve the deception of participants? If YES, describe the nature and extent of the deception involved. Explain how and when the deception will be revealed, and who will administer this debrief to the participants:		✔

6 c. i. Are there any other ethical issues associated with the proposed research study that are not already adequately covered in the preceding sections?

☐ Yes   ✔ No

If YES, specify (maximum 150 words).

6.c.ii Provide information on what measures will be taken in order to exclude or minimise ethical issues described in 6.c.i.

Ethical considerations will be put in place as I put the interviewee first (be protected); ensuring confidentiality and not asking questions that could implicate them, and obtaining permission to audiotape. Furthermore, participants will not be coerced and be free to withdraw at any stage of the research. I would be transparent, and obtain informed consent before they participate in the survey.

6 d. Indicate the Risk Rating.

☐ High   ✔ Low

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7. **Further Approvals**

Are there any other approvals required (in addition to ethics clearance from UREC) in order to carry out the proposed research study?

[✓] YES   [ ] NO

If YES, specify (maximum 100 words).

Only Gatekeepers approval are required. There are no restrictions in constitution of Nigeria except in sharing of personal data and information. This study makes adequate provision for protecting participants' personal information.

8. **Application Checklist**

Mark √ if the study involves any of the following:

[ ] Children and young people under 18 years of age, vulnerable population such as children with special educational needs (SEN), racial or ethnic minorities, socioeconomically disadvantaged, pregnant women, elderly, malnourished people, and ill people.

[ ] Research that foresees risks and disadvantages that would affect any participant of the study such as anxiety, stress, pain or physical discomfort, harm risk (which is more than is expected from everyday life) or any other act that participants might believe is detrimental to their wellbeing and / or has the potential to / will infringe on their human rights / fundamental rights.

[ ] Risk to the well-being and personal safety of the researcher.

[ ] Administration of any substance (food / drink / chemicals / pharmaceuticals / supplements / chemical agent or vaccines or other substances (including vitamins or food substances) to human participants.

[ ] Results that may have an adverse impact on the natural or built environment.

9. **Further documents**

Check that the following documents are attached to your application:

		ATTACHED	NOT APPLICABLE
1	Recruitment advertisement (if any)	[ ]	[✓]
2	Informed Consent Form / Guardian Informed Consent Form	[✓]	[ ]
3	Research Tool(s)	[✓]	[ ]
4	Gatekeeper Letter	[✓]	[ ]
5	Any other approvals required in order to carry out the proposed research study, e.g., institutional permission (e.g. school principal or company director) or approval from a local ethics or professional regulatory body.	[ ]	[✓]

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10. **Final Declaration by Applicants:**

(a) I declare that this application is submitted on the basis that the information it contains is confidential and will only be used by Unicaf University for the explicit purpose of ethical review and monitoring of the conduct of the research proposed project as described in the preceding pages.

(b) I understand that this information will not be used for any other purpose without my prior consent, excluding use intended to satisfy reporting requirements to relevant regulatory bodies.

(c) The information in this form, together with any accompanying information, is complete and correct to the best of my knowledge and belief and I take full responsibility for it.

(d) I undertake to abide by the highest possible international ethical standards governing the Code of Practice for Research Involving Human Participants, as published by the UN WHO Research Ethics Review Committee (ERC) on http://www.who.int/ethics/research/en/ and to which Unicaf University aspires to.

(e) In addition to respect any and all relevant professional bodies' codes of conduct and/or ethical guidelines, where applicable, while in pursuit of this research project.

✔	**I agree with all points listed under Question 10**

Student's Name: Oluyemi Arosoye

Supervisor's Name: Prof. Assoc. Elenica Pjero

Date of Application: 13-Mar-2021

Important Note:
Save your completed form (we suggest you also print a copy for your records) and then submit it to your UU Dissertation/project supervisor (tutor). **In the case of student projects, the responsibility lies with the Faculty Dissertation/Project Supervisor.** If this is a student application, then it should be submitted via the relevant link in the VLE. Please submit only electronically filled in copies; **do not** hand fill and submit scanned paper copies of this application.

11

Examiner Report Form

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EXAMINERS' REPORT FORM

The Examiners' Report form should be completed by the Internal and External Examiner of the doctoral thesis. The report will be shared with the candidate and their department following approval by the Chair of the Viva Voce Examination.

Notes:

This report must be prepared after the Viva Voce Examination. It should be sent to the School of Doctoral Studies (doctoral.studies-aa@unicaf.org) The report should also be uploaded on the relevant link on VLE, as soon as possible and within a maximum of 3 days after the Viva Voce Examination.

The examiners' joint recommendation is subject to approval by the Research Degree Committee of the University.

In the case that the two Examiners have conflicting opinions on the decision taken and a joint recommendation cannot be reached, an External Adjudicator will be appointed by the Research Degree Committee. The External Adjudicator will examine the thesis and the Examiners' report and provide a recommendation on the outcome of the Examination. The recommendation will be forwarded to Research Degree Committee and the Committee will proceed with a decision.

Please type your answers and do not submit paper copy scans.

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ERF-01

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EXAMINERS' REPORT FORM

Internal Examiner's Name: Dr Mary Mwanzia

External Examiner's Name: Dr Shail Raina

Doctoral Candidate's Name: Oluyemi Arosoye

Doctoral Candidate's ID #: R1801D4338598

Supervisor's Name: Dr Elenica Piero

University Campus: Unicaf University Malawi (UUM)

Program of Study: UUM: DBA - Doctorate of Business Administration

Thesis Title: INFLUENCE OF CONSUMERS DIVERSITIES ON PURCHASING BEHAVIOUR AND GLOBAL MARKETING MIX STRATEGY- ADAPTATION OR STANDARDIZATION IN FOOD FLAVOUR INDUSTRY IN AN EMERGING MARKET (NIGERIA)

Part A: Decision.

Tick the relevant box:

☐	Pass with no corrections
☒	Pass with minor corrections (up to three months is given to the candidate to proceed with all relevant amendments)
☐	Pass with major corrections (up to six months is given to the candidate to proceed with all relevant amendments)
☐	Referral (the candidate is given a one-year extension and should proceed to re-write the thesis). In this case the candidate repeats the VVE.
☐	Fail

Part B: Complete questions 1 and 2 below.

1. Please comment on the quality of the thesis and provide any comments regarding the topic, research methods, innovation etc.:

Examiner 1

1. The Topic was well thought, but need to be aligned to read" Consumer Diversities, Global Marketing Mix Strategy Adaptation or Standardization on Purchasing Behavior in Food Flavour industry in Nigerian Emerging Markets" .

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2. Roman ii, iii we have grammatical errors which need to be checked use of the word 'were' instead of 'was' is to be corrected,

3. The introduction should be done it is missing here, what the researcher shows as introduction is actually back ground of the study which has got all elements included, promotional/marketing mix this is not same thing it should not be written or, the background should have paragraphs which shows , the Global, the regional and the Specific areas where the problem can be seen,

4. The research questions are ok but the researcher should change the Hypothesis 1-4 to null hypothesis because as is, shows alternate/ researchers hypothesis.

5. The Abstract is missing and this is what summarizes a research, this should be included

6.In the Literature review there should be a brief introduction, which is missing, it is relatively comprehensive and describes most relevant material, although significant gaps still exist, The purpose of the study is adequately described and there is good attempt to connect the material reviewed with the purpose of the study

7.A methods section is present,very well elaborated and diagrams provided for easy identification and explanation with all types of methodology used but there hypothesis and questions do not tally, one has to e removed

8.A good attempt is made to discuss both theoretical and practical implications, same to APA format, the introduction to chapter 4 need to be put,

9.The writing flows relatively well across sections and within sections, It is generally conscience and relevant to the topic being covered

10.The proposed study is important and there is a good attempt to build on existing research .

11. Evidence of proofreading is present Generally, the Correlation Between constructs and other parameters is not captured well e.g. Page 179 Table 8 the constructs are not well shown and this does not bring us to a conclusion, it should be correlation of independent variables and Dependent variable even the Anova tables, You have Mean and Chi square in your analysis and no supportive literature in these analysis, you need to support any analysis done in your work with literature

12. The conclusion must be clear

Examiner 2

The quality of thesis is good though the topic is too vast for a research there are two sub topics in one title one is the consumer diversities and second is the Marketing mix strategies. The Research is not narrow down to one particular state or district it has huge scope in it. The research methodology applied is appropriate but the sample size needs to be reviewed the sample of 844will not help in generalizing the research. Though the topic is highly recommended for research it has taken in consideration the diversities that influences the consumer while purchasing.

2. Please list below any recommendations you may have for the student.

Examiner 1

Recommendations / Changes / Comments	Chapter/Section/Page
The Topic was well thought, but need to be aligned to read" Consumer Diversities, Global Marketing Mix Strategy Adaptation or Standardization on Purchasing Behavior in Food Flavour industry in Nigerian Emerging Markets" .	Chapter one

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• Roman ii, iii we have grammatical errors which need to be checked use of the word 'were' instead of 'was' is to be corrected, • The introduction should be done it is missing here, what the researcher shows as introduction is actually back ground of the study which has got all elements included, promotional/marketing mix this is not same thing it should not be written or, the background should have paragraphs which shows , the Global, the regional and the Specific areas where the problem can be seen, • The research questions are ok but the researcher should change the Hypothesis 1-4 to null hypothesis because as is, shows alternate/ researchers hypothesis. • The Abstract is missing and this is what summarizes a research, this should be included	Chapter one
• In the Literature review there should be a brief introduction, which is missing, it is relatively comprehensive and describes most relevant material, although significant gaps still exist, The purpose of the study is adequately described and there is good attempt to connect the material reviewed with the purpose of the study	
• Methods section is present,very well elaborated and diagrams provided for easy identification and explanation with all types of methodology used but the hypothesis and questions do not tally, one has to e removed • A good attempt is made to discuss both theoretical and practical implications, same to APA format,	Chapter Three
• The introduction to chapter 4 need to be put, The writing flows relatively well across sections and within sections, It is generally conscience and relevant to the topic being covered • The proposed study is important and there is a good attempt to build on existing research . • Evidence of proofreading is present Generally, the Correlation Between constructs and other parameters is not captured well e.g. Page 179 Table 8 the constructs are not well shown and this does not bring us to a conclusion, it should be correlation of independent variables and Dependent variable even the Anova tables, You have Mean and Chi square in your analysis and no supportive literature in these analysis, you need to support any analysis done in your work with literature 12. The conclusion must be clear , words should be 8000 in Total	Chapter Four & Five

Examiner 2

ERF-01

Recommendations / Changes / Comments	Chapter/Section/Page
Citation, all the references used should have superscripts for citation	At every page where the references are mentioned by the researcher
Sample techniques needs to be revised	Page number-110
Factor Analysis can be considered since there are lot of diverse measures considered by researcher	128
Marketing Strategies adopted in Nigerian Market	Chapter-4.

Part C: Confirmation of Decision

I, Dr Mary Mwanzia, confirm that I agree with the decision taken in Part 1 and the points listed in Part 2.

Signature of Internal Examiner   mary

I, Dr Shail Raina, confirm that I agree with the decision taken in Part 1 and the points listed in Part 2.

Signature of External Examiner Shail Raina

Part D: Official Use Only

   To be completed by the School of Doctoral Studies

☒   Approved

☐   Not Approved

ADDITIONAL COMMENTS/SUGGESTIONS

No comments

School of Doctoral Studies' Dean: Dr Olga Novokhatskaya

03/05/2023

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RDC Decision

☒ Approved

☐ Not Approved

ADDITIONAL COMMENTS

No comments

Signature: Dr Elena Papadopoulou, Pro Vice-Chancellor (Doctoral Studies and Research)

Date: 03/05/2023