

original research paper

Consumers' Loyalty to bottled Water Brands in Nigeria: An empirical Study

ABSTRACT

AIMS: This study operationalized a theoretical framework, the “brand-choice sequences” theory, to empirically measure and analyze consumers’ loyalty to brands of bottled water in Nigeria, using Awka, a capital city of Anambra State, Nigeria, and six bottled water brands as study slices. The study objectives focused on determining if brand loyalty exists among the bottled water consumers and to what extent, across the bottled water brands, and across selected demographic and socioeconomic segments of bottled water consumers.

Study Design: The research design adopted for the study is the survey method in which a convenience sample of 280 bottled water consumers (broken into six independent samples) was selected from bottled water consumers who were resident in the place of study, and also purchased for their own consumption any of the six brands of bottled water chosen for the study. The selected bottled water brands included both national and non-national brands available in the place and time of the study.

Place and Duration of Study: The place of study is Awka a capital city of Anambra State, Nigeria. The duration of the study was from August 1st to August 30th, 2013.

Methodology: Quantitative methodology involving the use a questionnaire with interval and nominal scales was used to collect data on consumers’ purchases and repeat purchases of the bottled water brands under consideration. The interval scales on the measurement instrument yielded a Cronbach’s alpha of .63. The method of data analysis was a computerized analysis involving single sample t-tests and analysis of variance (ANOVA).

Results: This study found that, generally, based on the theoretical framework, the “brand-choice sequences” theory, on which this study rests, significant unstable to divided loyalty exists among the bottled water consumers, and across the bottled water brands; and that no significant undivided loyalty exists among the bottled water consumers, and across the bottled water brands selected for the study. However, there is significant variation in brand loyalties across the brands, but no significant variation in brand loyalties across the selected demographic and socioeconomic segments considered in the study.

Conclusion: The study concludes that the “brand-choice sequences” theory can be empirically applied to measure, and analyze brand loyalty in the bottled water market in Nigeria, thus extending the testing and universality of the theory. This extension is significant in the study of brand loyalty, an area of marketing where there appears to be insufficient application of theoretical frameworks in measuring and analyzing brand loyalties in various consumer goods categories in Nigeria.

Keywords: “brand-choice sequences”, bottled water loyalty

1. INTRODUCTION

As I have previously stated, consumers’ buying behavior in terms of purchases and repeat purchases of consumer products or services may be perceived, instinctively, as depicting brand loyalty to that product or service [1] and [2]. However, in the arena of marketing theory and practice, evidence exists in the

literature of works by several academics and authors to establish theoretical frameworks for structured definitions, measurements and analysis of brand loyalty in the consumer goods categories. [1] used one of such theoretical frameworks, the “brand-choice sequences” theory, postulated by [3], to measure and analyze brand loyalty to beer brands in a part of Nigeria. [2] also used the same theoretical framework by [3] to measure and analyze consumers’ loyalty to toothpaste brands in a part of Nigeria. The theoretical framework for this empirical measurement and analysis of consumers’ loyalty to bottled water brands in Nigeria also rests on the “brand-choice sequences” theory postulated by [3], as cited in [7].

As presented in [7], and previously discussed by [1] and [2], the “brand-choice sequences” theory enunciated by [3] posits that if, for instance, A, B, C, D, E, F are different brands (Eva, Gossy, Ragolis, Ivy, Aquafina and Marvel) in the bottled water category, then for at least five consecutive purchases of bottled water by a consumer or household, the consumer or household is classified as exhibiting one of the following loyalty types, thus yielding a four-fold typology of brand loyalty, represented by:

“AAAAAA	Undivided Loyalty
ABABAB	Divided Loyalty
AAABBB	Unstable Loyalty
ABCDEF	No Loyalty”. [3]

The bottled water brands in Nigeria fall into national and non-national brands. At the time of this study, outstanding national brands available in the area of study included Eva and Gossy, with Eva being a leading national brand. Some non-national brands of bottled water available in the area of study when this study was done included the Marvel brand. Both the national and non-national brands are produced locally in Nigeria by a profusely fragmented competitive bottled water industry led by Coca Cola, the producer of the leading Eva brand of bottled water, which in 2012 held about 12% share of the bottled water market in Nigeria [8].

Brand loyalty may exist in the Nigerian bottled water market generally, considering the multiplicity of brands of bottled water in Nigeria, and market research reports by [8]. However, it is not clear from the literature the extent to which consumers’ loyalty to different bottled water brands exists in different parts of Nigeria. The desire to study consumers’ loyalty to bottled water brands in different parts of Nigeria, using a theory on brand loyalty, informed this research on consumers’ loyalty to bottled water brands, using Awka, capital and a commercial city of Anambra State, Nigeria, as a study slice.

1.1 Statement of the Problem

Probably, brand loyalty exists in the Nigerian bottled water market, and perhaps the loyalty is manifested to different extents in different parts of Nigeria. Consequently, the research problem in this study is focused on the possible lacuna that seems extant in the non-application of theoretical frameworks to measure and analyze consumers’ loyalty to bottled water brands in different parts of Nigeria, using Awka, capital and a commercial city of Anambra State, Nigeria, as a study slice.

1.2 Scope of the Study

Consumer brand loyalty in the area of consumer behavior in marketing is the subject scope of this study. Brand loyalty is one of the variables considered in the study, and has a range of ‘no loyalty’ to ‘undivided loyalty’, as per the theory of behavioral brand loyalty, “brand-choice sequences” theory, operationalized in this study. The continuum of ‘no loyalty’ to ‘undivided loyalty’ presumably makes brand loyalty both an interval and ordinal variable. Education, income, and age, are categorical variables in the study. The geographical scope of the study is Awka, Anambra State, Nigeria. Awka is the capital and a major commercial city of Anambra State, Nigeria. Anambra state, one of the thirty six states of Nigeria, has a population of about 4.1 million people, which is about 3% of Nigeria’s 140.5 million people [14]. Anambra State of Nigeria consists of a constellation of closely related cultural groups, in terms of language, customs and traditions, with nuances that may or may not be distinguishable. Nigeria is one of Africa’s most populous countries, thus suggesting a sizeable market that should attract the attention of consumer goods producers, marketers, and researchers. The study unit scope is only the adult bottled water consumers who buy bottled water by themselves and use any of the following brands of bottled water:

Eva, Gossy, Ragolis, Ivy, Aquafina and Marvel, which are the brands of bottled water of interest in the study. The study units, at the time of the study, resided in the geographical area described above. In this study, several limitations and exigencies, both anticipated and unanticipated, were encountered in various forms and degrees. It is not possible to comprehensively describe the limitations. The concept of consumer based marketing research is perhaps still in its infancy in many parts of the world, including the part of Nigeria in this study. In view of this, cooperation of the respondents was not as readily available as expected. The literacy levels of some respondents also came into question at some points, in terms of their requiring additional explanation to fully comprehend the questions posed in the data collection instrument. However, these limitations were adequately managed so as not to compromise the findings from this study.

1.3 Objectives of the Study

In line with the problem statement, this study using empirical quantitative data from bottled water consumers in Awka, Anambra State, Nigeria, has the following objectives which are to:

1. know whether the bottled water consumers are brand loyal to the brands under study and to what extent, based on the “brand-choice sequences” theory
2. examine any variability that may exist in brand loyalties across the bottled water brands under study, based on the “brand-choice sequences” theory
3. compare across levels of socioeconomic and demographic groups (age, income, and education), consumers’ brand loyalties, based on the “brand-choice sequences” theory

1.4 Research Questions

In order to accomplish the objectives of the study, the following research questions (RQs) were addressed:

- RQ1. Are consumers of bottled water brands in Awka undividedly brand loyal to the brands under study, based on the “brand-choice sequences” theory?
- RQ2. Is there any significant variation in brand loyalties across the bottled water brands in Awka, based on the “brand-choice sequences” theory?
- RQ3. Across levels of socioeconomic and demographic groups (age, income, and education), are there any significant differences in the brand loyalties of bottled water consumers in Awka, based on the “brand-choice sequences” theory?

1.5 Research Hypotheses

The following hypotheses, in the null forms, were formulated to guide the study.

- Ho1: Based on the “brand-choice sequences” theory, bottled water consumers in Awka are undividedly brand loyal to the brands under study.
- Ho2: Based on the “brand-choice sequences” theory, there is no significant variation in brand loyalties across the bottled water brands in the study.
- Ho3: Across levels of socioeconomic and demographic groups (age, income, and education), there are no significant differences in the brand loyalties of bottled water consumers in Awka, based on the “brand-choice sequences” theory.

1.6 Significance of the Study

The development, early tests, and applications of the theory of “brand-choice sequences” were done using data from consumers outside Nigeria, and mostly in the USA. This study, utilizing data from bottled water consumers in Awka, Anambra State, Nigeria, extends the testing and application of the “brand-choice sequences” theory to outside the USA and the so-called developed nations. By adding to and extending the testing and application of this theory, this study not only enhances the universality of the theory, but also provides additional resource in the literature, knowledge management, and pedagogy in brand loyalty in the Nigerian bottled water market. The methodology adopted in the study can also be used or adapted by other academics in studies relating to measuring and analyzing brand loyalties in the consumer goods categories.

Using the theoretical framework adopted in this study to measure and analyze consumers' loyalty to brands of bottled water in this part of Nigeria, and estimating the distribution of brand loyalties across the bottled water brands, and across the socioeconomic and demographic groups in the study, provides bottled water marketers and bottled water brands' managers with marketing intelligence on consumers' loyalty to bottled water brands in this part of Nigeria. Marketing intelligence on loyalty to brands of bottled water in this part of Nigeria, may lead to reformulation of promotional strategies aimed at the different socio-economic and demographic groups. Brand managers of bottled water brands in this part of Nigeria may then harness the benefits of such promotional reformulations for their individual brand management, with subsequent impact on consumers' loyalty. Promotional contents are expected to also produce more and better informed consumers. As I have previously discussed on the relevance of continual brand loyalty, sustaining and increasing brand loyalty for a bottled water brand in this part of Nigeria is expected to enhance a brand's sales volume with, perhaps, accompanying positive impact on the brand's profitability and equity. Brand loyal consumers constitute a market niche for a brand. A market niche ultimately gives a brand a competitive position, based on the brand's attributes that have emotional appeals to its loyal consumers.

1.7 Brief Literature Review

As canvassed in the brand loyalty studies in [1] and [2], present in the literature and pedagogy on consumer behavior are various works on brand loyalty, continuums of brand loyalty, and variations of brand loyalty across socioeconomic and demographic groups. Among the works, as cited in [7], are early studies by [3], [6], [11]. Later studies on brand loyalty include the works of [10], [18], [16], [1], and [2]. [3] propounded the "brand-choice sequences" theory, while some other works in the literature pointed to a "preference-purchase" theory of brand loyalty. [16] presented an approach to "classify a brand's buyers into groups with varying degrees of loyalty along a continuum from hard-core loyal to hard-core switcher". [16]'s presentation showed a four-fold typology of brand loyalty, and supports a visualization of a continuum imbedded in brand loyalty measurements. Other structures for defining and measuring brand loyalty are also found in the literature, but the essential ingredients encapsulated in [3]'s "brand-choice sequences" theory are found in traces in the various forms of postulates on brand loyalty.

As I have discussed previously, the studies by the authors, cited above, measured brand loyalty to specified categories of consumer products, such as toilet paper, tea, orange juice, coffee, beer, toothpaste, etc. Except [1] and [2], the studies were based on data from consumer goods markets outside Nigeria, a country with a multiplicity of cultures, some of which are closely related. The literature on brand loyalty to consumer products in Nigeria and Africa is apparently lean. Besides [1] and [2], some of the brand loyalty studies done in Nigeria include the work of [15] whose study focused on examining relationships between brand loyalty and variables such as promotions and customer satisfaction, but not in the bottled water market. This work by [15] is not clear on whether brand loyalty theories were applied in measuring the construct of brand loyalty used in the study. Marketing research organizations such as [4] and [8] have studied, analyzed, and reported on the increase in beer sales in Nigeria, and the proliferation of breweries in Nigeria. Their reports point to 'strong consumer loyalty', especially among consumers of the premium beer brands as a major variable that can help to explain the differentiations in sales among the competing brands of beer in Nigeria. Again, the research reports by [4] and [8] did not specify if any brand loyalty theory was used to obtain what they characterized as 'strong consumer loyalty' in their reports. These studies discussed the health effects and growing markets of various brands of bottled waters but did not measure brand loyalty to the brands of bottled water in Nigeria.

Especially noticeable in the literature is the absence of the application of brand loyalty theories to study consumers' loyalty to bottled water brands in Nigeria. What is also clear from literature is the existence of at least ten brands of bottled water in Nigeria, suggesting that competition may be scattered among the brands. The bottled water brands seem to be widely distributed and available at in-store and out-store displays, shelves, and cooling units in supermarkets, and various local shops and markets in states in Nigeria. As I have previously discussed, Anambra state in Nigeria is one of the thirty six states of Nigeria, and has a population of about 4.1 million people, which is about 3% of Nigeria's 140.5 million people

(Nigerian Population Commission, 2006), thus having a sizeable market worthy of the attention of researchers and marketers of consumer products.

As canvassed in [1] and [2], consumer characteristics, such as socioeconomic and demographic variables (income, education, and age) may or may not produce differentiations in consumers' loyalty to brands of consumer products, such as bottled water, toothpaste, beer, etc. The same view is also upheld by [7]. The work of [7] did not relate the demographic factors to consumers' loyalty to bottled water, which this study does. Researchers on brand loyalty such as [9], as cited in [7], used panel data from the Advertising Research Foundation, USA, and focused on bottled water, coffee, and tea purchasing behavior of the consumers. They found a mild correlation between brand loyalty and socio-economic, demographic, and personality variables. Bottled water is a household consumer product that is often used by many consumers on a daily basis, and this study considered the variation in brand loyalty across segments of some selected demographic and socioeconomic variables, such as income, education, and age in a part of Nigeria.

2. MATERIALS AND METHODS

As I have previously discussed, quantitative and qualitative research methodologies exist in the literature on research methodology [13]. Quantitative methodology was used in this study. Unlike qualitative methodology, quantitative methodology uses quantifiable and structured data, as were collected for this study, and statistically analyzed the data to make inferences and recommendations. This section on materials and methods considers also the research design for this study, geographical area of the study, population, sampling method and sample size, measuring instrument for data collection, reliability and validity of the instrument for data collection, data collection, analytical techniques, and assumptions.

2.1 Research Design

As used in [1] and [2], the survey method was used as the research design for the study. The survey method involved a descriptive, single cross-sectional design in which non-probability sampling methods (convenience and judgmental sampling methods) were used to obtain a one-time (single cross-sectional) sample from a specified population of bottled water consumers in Awka, Anambra State, Nigeria. This quantitative study permitted the quantification of brand loyalty, as defined by the operationalized theory. As I have previously discussed, the quantitative methodological approach also permitted the use of analysis of variance to study and analyze the data collected from the study. The quantitative methodology was used on the assumption that behavioral brand loyalty can be measured on a continuum, and thus be treated as an interval variable that possesses means and variances which permitted statistical analysis of and inference on the brand loyalty means generated from the consumers' responses.

Area and Population of the Study

The geographical area in which the study was done is Awka, Anambra State, Nigeria. The population for the study consisted of only adult bottled water consumers in Awka who made their own purchases of bottled water for their personal consumption, and at the time of the study resided in Awka, Anambra State, Nigeria. Anambra state, one of the thirty six states of Nigeria, has a population of about 4.1 million people, which is about 3% of Nigeria's 140.5 million people [14].

2.3 Sample and Sampling Procedure

At the time of the study, there was no data base of adult bottled water consumers who made their own purchases of bottled water brands, and resided in Awka, Anambra State, Nigeria. Consequently, there was no sampling frame, i.e., a listing of all adult bottled water consumers in Awka, Anambra State, Nigeria. As discussed in [1] and [2], where no sampling frame exists, probability sampling techniques cannot be used, and [13] suggests the use of non-probability sampling techniques, such as convenience or/and judgmental sampling methods, to reach subjects in such a situation. [13] further suggests a minimum sample size of 200 in non-probability sampling techniques aimed at problem solving.

Consequently, a non-probability sample of size 280 was obtained from the defined population of bottled water consumers in Awka. Using the convenience sampling method, the sample was obtained using the equivalent of a 'mall intercept' in which the qualified respondents were conveniently and judgmentally located in and around shops, markets, neighborhoods, and university communities in the commercial city of Awka, capital of Anambra State, Nigeria [1] and [2]. Using a questionnaire in a polite face to face setting, information about the consumers' behavioral brand loyalties was obtained from the bottled water consumers who were willing to participate in the study, see appendix for questionnaire adapted from [1] and [3].

2.4 Measuring Instrument

As I have previously discussed and as presented in the literature review above, the construct of brand loyalty has theoretically been characterized as a variable that can be scaled on a continuum. Leaning on the continuum property of brand loyalty, as espoused in the literature, a structured questionnaire containing interval and nominal variables was used for data collection in the study. Interval variables on the questionnaire were used to measure consumers' behavioral loyalty and attitudinal propensity for the brands of bottled water. Behavioral loyalty was scaled on a continuum represented by an interval variable with a range of 'no loyalty' to 'undivided loyalty'. Nominal variables on the questionnaire were used to facilitate the description of classes that may exist. There are typologies of reliability tests in the literature including test-retest, alternative forms, internal consistency, and split-half which yields the Cronbach's alpha reliability tests [13]. The Cronbach's alpha reliability test approach seems to have an edge in the literature over the others, given its user friendliness which is easily facilitated through the use of SPSS computer software, and the interpretability of the resulting Cronbach's alpha. Cronbach's alpha is a correlation coefficient which ranges from 0 to 1. Values of Cronbach's alpha greater than .6 are indicative of satisfactory internal consistency reliability (Malhotra, 2007). The Cronbach's alpha internal consistency reliability test was used to test the internal consistency reliability of the interval scales. A reasonable Cronbach's alpha of .63 was obtained, pointing to a reasonable internal reliability of the scales. A convenience sample of 40 bottled water consumers in Awka was used to pretest the questionnaire, and Cronbach's alpha was computed from the pretest data, using the SPSS computer software. As in reliability tests, a multiplicity of validity tests exists in the literature. Among these are content, criterion, construct (including convergent, discriminant, and nomological) validity tests (Malhotra, 2007). The validity of the test instrument was ascertained to be reasonably adequate by five marketing lecturers in Awka, Anambra State, Nigeria.

2.5 Procedures and Analytical Techniques

One objective of this study is to know whether bottled water consumers in Awka, Anambra State, Nigeria, are brand loyal to the bottled water brands under study and to what extent, based on the "brand-choice sequences" theory. To accomplish this objective, one sample t-tests were used to compare the consumers' mean behavioral loyalty to the measurement scale value of 4.00 which represents 'undivided loyalty'. The second objective of the study is to compare the brand loyalties for the bottled water brands under study, based on the "brand-choice sequences" theory. To accomplish this objective, computerized analysis of variance (ANOVA), with post-hoc multiple means comparisons and overlap analysis, were used to compare the mean brand loyalties attracted by the bottled water brands in the study. Based on the "brand-choice sequences" theory, the third objective of the study is to compare across levels of socioeconomic and demographic groups (age, income, and education), consumers' behavioral brand loyalties, based on the "brand-choice sequences" theory. To accomplish this objective, computerized analysis of variance (ANOVA), with post hoc multiple means comparisons, and overlap analysis were done.

2.6 Assumptions

As I have also previously discussed, the notion that statistical inferences can be made on the basis of non-probability sample information, such as information obtained through convenience and judgmental

sampling methods, is a 'painful' assumption that must be noted. The results from a non-probability sample may not be generalized to the population, simply because the convenience and judgmental sampling methods do not produce representative samples. However, [13] notes that even though convenience sampling has its limitations, yet it is used in huge market research surveys, and the author recommends sample sizes that are experientially suitable for market research surveys involving non-probability sampling [13]. The assumption that typologies of brand loyalty can be measured on continuums bearing the semblance of interval scale may be arguably overbearing. Using interval scales for collecting data in the study presents some theoretical and pragmatic issues that may be considered to be painful assumptions. Using an interval scale to measure consumers' behavioral brand loyalty suggests that brand loyalty, in the context of this study, is a continuous variable. Arguably, the calibration on the scale does not represent equal distances, but the scale suggests that it does. [5] posited that there was some controversy surrounding the use of itemized rating scales that are used to measure variables that may be non-continuous. To worsen the pain in the assumption of continuity in the scale of measurement, theoretical statistics requires that such variables assumed to be continuous should be normally distributed; and the error terms in the analysis of variance models should be uncorrelated, normally distributed, with means equal to zero, and variances that are constant [13]. However, [13] opined that, often, the statistical theory requirements are satisfied in pragmatic data analyses involving analysis of variance, and regression analysis, thus making them commonly used analytical techniques. Furthermore, the assumption that the variables involved in the study need not be transformed into other forms, such as log-linear, quadratic, and other forms, may be erroneous. The assumptions made in this study are by no means exhaustive.

3. RESULTS AND DISCUSSION

Using computerized data analysis, the hypotheses in this study were tested, and Tables I, II, IIIA, IIIB, and IIIC below contain the results and findings from the tests. As used elsewhere in [1] and [2], in QII on the questionnaire, a score of 4 represents the sequence AAAAAA = Undivided Loyalty, a score of 3 represents the sequence ABABAB = Divided Loyalty, a score of 2 represents the sequence AAABBB = Unstable Loyalty, and a score of 1 represents the sequence ABCDEF = No Loyalty.

Table I

Ho1: Based on the "brand-choice sequences" theory, bottled water consumers in Awka are undividedly brand loyal to the brands under study.

Brand	n	Observed Mean Brand Loyalty	Test Value (Undivided Loyalty)	P-value	Significance Level (alpha)
AQUAFINA	53	3.00	4.00	.000	.01
IVY	76	2.72	4.00	.000	.01
EVA	39	2.64	4.00	.000	.01
MARVEL	30	2.50	4.00	.000	.01
GOSSY	54	2.44	4.00	.000	.01
RAGOLIS	28	2.07	4.00	.000	.01

The results of the computerized data analysis in Table I above indicate that, generally, bottled water consumers in Awka show no significant undivided loyalty to the bottled water brands in the study. This is shown by the observed values of the consumers' mean brand loyalties for each brand which are each significantly less than the test value of 4.00 that indicates undivided brand loyalty on the questionnaire. Relative to consumers of other brands in the study, the consumers of Aquafina, Ivy, and Eva show relatively higher mean brand loyalties than the consumers of the other three brands in the study.

Table II

Ho2: Based on the "brand-choice sequences" theory, there is no significant variation in brand loyalties across the bottled water brands in the study.
Mean Brand Loyalty Groupings*

Brands	n	A	B	C
AQUAFINA	53	3.00		
IVY	76	2.72	2.72	
EVA	39	2.64	2.64	
MARVEL	30	2.50	2.50	2.50
GOSSY	54		2.44	2.44
RAGOLIS	28			2.07

* Means with the same letter are comparable at the .05 significance level.

The model for the Analysis of Variance (ANOVA) results shown in Table II above is significant at .01 significance level ($p=.000$). This indicates that there are significant variations in brand loyalties across the bottled water brands considered in the study. The results shown in Table II indicate that although there are significant variations in mean brand loyalties across the bottled water brands, yet the mean brand loyalties are from unstable loyalty to, at best, divided loyalty. Aquafina tops the list with a mean brand loyalty of 3.00, indicative of divided loyalty, while the Ragolis brand is at the bottom of the list with the least mean brand loyalty of 2.07, suggestive of unstable loyalty.

Table IIIA

Ho3: There is no significant variation in brand loyalties across the education groups in the study, based on the "brand-choice sequences" theory.

Mean Brand Loyalty Groupings*

Education Groups	n	A
LT Secondary	82	2.72
University	77	2.69
Secondary	121	2.51

* Means with the same letter are comparable at the .05 significance level.

The ANOVA model that produced the results in Table IIIA above is not significant ($p=.642$). This indicates that there is no significant variation in mean brand loyalties across the education groups. The mean brand loyalties across the education groups all seem to suggest unstable loyalty at worst, and divided loyalty at best.

Table IIIB

Ho3: There is no significant variation in brand loyalties across the income groups in the study, based on the "brand-choice sequences" theory.

Mean Brand Loyalty Groupings*

Income Groups	n	A
Above N200,000 per month	101	2.70
Between N50,000 & N200, 000 per month	78	2.59
LT 50,000 per month	101	2.56

* Means with the same letter are comparable at the .05 significance level.

The ANOVA model that generated the results depicted in Table IIIB above is not significant ($p=.665$), indicating that there is no significant variation in mean brand loyalties across the income groups. Here also, the mean brand loyalties to the bottled water brands in the study are between unstable to divided loyalty.

Table IIIC

Ho3: There is no significant variation in brand loyalties across the age groups in the study, based on the "brand-choice sequences" theory.

Mean Brand Loyalty Groupings*

Age Groups	n	A
25 to 35 yrs	115	2.72
36 to 50 yrs	62	2.65
Above 50 yrs	103	2.50

* Means with the same letter are comparable at the .05 significance level.

The ANOVA model that produced the results in Table IIIC is not significant ($p = .591$), indicating that there is no significant variation in mean brand loyalties across the age groups. Here also, the mean brand loyalties to the bottled water brands in the study lie between unstable to divided loyalty.

4. CONCLUSION AND RECOMMENDATIONS

From the analysis contained in Tables I, II, IIIA, IIIB and IIIC above, and based on the study area, the following conclusions emanate.

1. Based on the theoretical framework operationalized in this study, brand loyalty exists among the bottled water consumers. However, the consumers of the bottled water brands in the study do not have significant undivided loyalty towards their brands.
2. The brands of bottled water in the study significantly do not attract undivided brand loyalties from their consumers.
3. Undivided brand loyalty does not exist across the socioeconomic and demographic segments considered in the study.

Consequently, the following recommendations are made.

1. As I have previously discussed, for academics and pedagogy on brand loyalty, since a behavioral construct, the "brand-choice sequences" theory, was used in the study, another study based on both behavioral and attitudinal constructs of brand loyalty is worthwhile to examine the extent to which the attitudinal antecedents of brand loyalty agree with the behavioral manifestations of brand loyalty. Furthermore, juxtaposing the two constructs in another study will provide verification of the extent to which the two constructs can be used interchangeably as valid paradigms and theories for measuring and analyzing brand loyalty. Additionally, the convergent construct validity of the two theories will be further substantiated when the correlation between the behavioral and attitudinal constructs is computed.
2. I have previously pointed out some opportunities that the absence of brand loyalty may engender. Therefore, bottled water marketers should cease the opportunities provided due to the lack of undivided brand loyalty among the bottled water consumers, by evolving innovative marketing strategies aimed at cultivating undivided loyalty for their brands. This may be a utopian recommendation, but the payoff in terms of sales and subsequent effect on brand equity may be rewarding for any bottled water brand that can attract and sustain undivided brand loyalty from its consumers.
3. While caution should be exercised in adopting and generalizing the results from this study, because non-probability sampling methods were used in data collection, a larger probability sample, if possible, should be used in future studies to make the results of the study more generalizable.

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COMPETING INTERESTS

The author declares that no competing interests exist.

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500 A. Data Collection Instrument (adopted from [1] and [2])

501 BOTTLED WATER PURCHASES STUDY

502 I am Okey Akabogu, a doctoral student at Anambra State University. I am conducting a research on how
 503 consumers, who reside in this state, purchase some brands of bottled water in this state. The information
 504 obtained from this study will be used strictly and only for the purposes of understanding the consumption
 505 patterns in the bottled water market, and also for the teaching of marketing in educational institutions.
 506 Your name is not required for this study, and all information that you volunteer will be used only for the
 507 purposes stated above. Please, would you be kind enough to freely partake in this study by completing
 508 this short questionnaire? Your cooperation will be highly appreciated.
 509 (Q1 is asked only after ascertaining that the respondents currently reside in Awka, Anambra State, and
 510 buy and consume the bottled water they buy.)

511
 512 QI Which one of the following brands of bottled water would you say is your brand of bottled water:
 513 Eva, Gossy, Ragolis, Ivy, Aquafina and Marvel ? (Choose one only.)

514
 515 QII Which one of the following statements best describes how you buy bottled water for your own
 516 consumption? (Choose one only.)

- 517 4. Buy your brand always.
- 518 3. Buy your brand now, buy another brand next time, buy your brand next time, and buy another
 519 brand next time....and so on in this manner.
- 520 2. Buy your brand half of the times, and buy any of the other five brands half of the times.
- 521 1. Buy your brand now, buy another brand next time, buy another different brand next time, and buy
 522 another different brand next time....and so on in this manner.

523
 524 QIII Now, in thinking about your brand of bottled water, what opinion do you think you have in your
 525 mind concerning your brand of bottled water? Please, indicate below, on a scale of 1 to 5, your
 526 opinion of your brand of bottled water. Select one number only.

- 527 5. Very favorable opinion
- 528 4. Somehow favorable opinion
- 529 3. Neutral opinion
- 530 2. Unfavorable opinion
- 531 1. Very unfavorable opinion

532
 533 QIV Please, what level of education do you have? Select one number only.

- 534 1. Less than secondary school education

- 535 2. Secondary school education only

- 536 3. University education