Consumer Perception of Product Quality: Comparative Study of Voltic Mineral Water and Bonaqua Mineral Water in Ghana

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Abstract: This study explored the factors that influence perception of a product and how they affect the buying behaviour of the consumers of bottled Voltic mineral water and Bonaqua mineral water. The study is based on a cross-sectional survey method, and comprised both qualitative and quantitative techniques. The study was conducted in Madina, a suburb of Accra where three hundred (300) customers of Bonaqua and Voltic were selected as respondents. The results of the study revealed that the factors that influence consumers' perception about Voltic and Bonaqua are advertisement, taste, company/brand image, availability, purity, packaging as well as family/friends influence. The principal conclusion was that Voltic is currently dominating the bottled mineral water market with a wider market share and more loyal customers than Bonaqua. The study also finds out how consumers are loyal towards each of the brands which pave way for further studies.

Keywords: consumer perception, Ghana, voltic mineral water, bonaqua mineral water

1. Introduction

The increased demand for bottled water individuals, households, companies, etcetera has led to a heightened competition among the Water Bottling Firms in Ghana. Technological innovations coupled with water purification for consumption is believed to have caused many Ghanaians to change from buying ‘pure water’ to ‘bottled water’ for sound health among other benefits like satisfaction and prestige. Water Bottling Companies have identified this opportunity in the Ghanaian market and are constantly mapping out strategies to increase their customer base.

The influx of adverts, sales promotions, publicity and other communication related activities has tend to be the major contributing factors in the formation of consumer’s perceptions and decisions to purchase. Perception of consumers is defined as the complex process by which people select, organize and interpret sensory stimulation into a meaningful and coherent picture of the world (Schifman & Kanuk, 2007). Therefore the choices consumers make are largely dependent on the various stimuli (adverts, brands etc.) they have been exposed to because the heart has eyes which the brain knows nothing of (http://AmazingService.com).

As bases for this research, the behavior of the consumers of bottled waters in Ghana can be attributed to the perceptions they have about the various brands they patronize. Water Bottling Companies have capitalized on this phenomenon in the Ghanaian market and are constantly mapping out strategies to position their brands in the minds of their consumers. Recent investigations reveal not less than seven (7) brands of bottled water in the country with the market leader in the industry being Voltic with a strong challenger like Bonaqua and followers like Privada, Safina, etc. (Africa Business Directory, 2014).

Voltic has today become a generic name for mineral and bottled water in the entire West African sub-region. It has acquired this profile by providing world-class products known for their pure natural freshness with a 75% market share in the Ghanaian market (volticghana.com, 2015). This is because the company has succeeded in positioning itself as a unique brand that is of quality and excellence for the past twelve years.

Bonaqua, a product of The Coca-Cola Bottling Company of Ghana limited, believed to be the top producer of soft drinks in the country, has made a mark in the Ghanaian industry. Bonaqua was introduced into the market in 1999. The company in its urge to gain more market share, re-branded Bonaqua...to stay on top of the market (Business & Finance Thursday, 28 May 2009).

The competences of these two giants (Voltic and Bonaqua) have significant impacts on the perception of their consumers. It is believed that these companies have acquired for themselves consumers that are amazingly loyal to their respective brands. Though water is a fast moving good that is normally consumed by consumers at a regular interval like other goods such as milks, biscuits, toffees, etc, it cannot be easily differentiated in its raw state without a package since it is colorless.

This awareness has caused Water Bottling Companies to brand and package their products (water). Voltic and Bonaqua have successfully distinguished themselves with their branding strategies and have made maximum impacts on their consumers’ minds due to the belief that customer satisfaction is worthless. Customer loyalty is priceless (http://AmazingService.com).

The two companies therefore have extremely influenced the perceptions of their consumers in their (company’s) favor.

Beyond this improvement by the companies is the challenge of knowing the exact thoughts (perceptions) of their consumers about their brands. This research is therefore to...
An understanding of the customers’ perceptions about Voltic and Bonaqua is necessary to appreciate why consumers would choose one of the two products over the other.

2. Related Work

2.1 Theoretical Literature

2.1.1 Perception and Consumer Behavior

The entire premise of the study of consumer behaviour and their decision making abilities is based on the study of ‘Perception’ or the ‘Cognitive Process’. The process of perception is primarily a conscious act.

People can emerge with different perceptions of the same object primarily because of three perceptual processes: selective attention, selective distortion, and selective retention.

Selective retention again works to the advantage of strong brands. It also explains why marketers need to use repetition— to make sure their message is not overlooked (Kotler and Keller, 2008). Wilkie (1994) indicates the fact that consumers translate stimulus inputs into mental identification, known as perceptual categorization. For consumers, this process happens extremely rapidly and is not usually perceived at a conscious level. A product with a strong image categorized in a consumer’s long-term memory is likely to be purchased when a need for that product arises (Wilkie, 1994). A good product image may also increase the level of product equity (the value that consumers assign to a product above and beyond the functional characteristics of the product) (Hawkins et al., 1998).

According to Dick et al. (1997), consumers base judgment of brand quality on direct and indirect factors. Direct attributes include ingredients, taste and texture, whilst indirect factors are represented by price and brand name. Direct factors are usually difficult for consumers to test without consuming the product, or completing various tests. Hence, reliance on indirect quality indicators such as brand name and price are more heavily relied upon. Through further investigation, the researchers identified brand, package and advertising as indirect factors which impact consumer perceptions and hence influence purchasing decisions. Chaudhuri and Holbrook (2001) suggest that consumers become brand loyal when they perceive some unique value in the brand that no alternative can satisfy. This uniqueness may be derived from a greater trust in the reliability of a brand or from a more favorable experience when a customer uses the brand. Schoenbachler et al. (2004) take this further, stating that not only does the brand loyal customer buy the brand but also refuses to switch, even when presented with a better offer.

If loyalty can be generated, it does increase profitability (Helgesen 2006). Since companies are often not good at acquiring new customers, loyalty becomes important (Ang and Buttle 2006). It also has the effect of reducing the evaluation of brand extensions – people tend to assume that the extension will be as good as the original brand (Hem and Iversen 2003).

2.1.2 Measurement of Brand Loyalty

Brand loyalty is an important consideration in promotional strategy, and it became apparent that Markov analysis might be used to advantage to predict the movement of buyers from one brand to another brand. The required data are estimates of the probability that the buyers will stay loyal to a given brand or switch to another. The Markov model, then, potentially can be utilized to advantage to predict the movement of market shares which a product may have, given an empirical estimate that the buyers will either stay with a given brand or switch to another.

The concern here is not with the computation of solutions but with the uses to which this type of analysis might be put. Comparatively little of substance has appeared in the published literature, but Markov Analysis has been found useful in two related ways:

1)Projection of market shares, periods by period into the future.
2)Analysis of the steady state solutions, resulting from experimental manipulation of promotional variables.

2.2 Empirical Literature

structured questionnaire was used to collect data which served as primary data to answer the research questions and objectives, planning to find out the factors that play a vital role about consumers’ perception towards pirated products. It can be identified that the dependent variable is consumer perception on piracy. Where the independent variables would be divided to social influence, personality/believe, culture, and the economy. These are the factors that could influence consumers’ perception on piracy thereby supporting out dependent variable. Social influence would include susceptibility, which means an individual might purchase a pirated product merely because his/ her friend or family members bought the product and introduced it to them.

Again, Kriti Bardhan Gupta (2009) has studied on Consumer Behavior for Food Products in India. Primary data was collected from 326 respondents in Uttar Pradesh a state in the Northern Region of India. The relative importance of various food purchasing criteria was estimated for four different food categories, food and vegetables; milk and milk products; food grains and pulses; and processed foods on a 1-5 scale of very strong preference to very weak preference. The study explored the consumer behavior for food products in India from different perspectives. People accepted the fact that their food habits get affected with the shifting to a new region, but many basic buying and consumption behaviors do not change. Some of the changes in buying and consumption behavior of relocated people, which were observed after their settlement to a new region, were not significantly different from the level of changes in behavior of non-moving people. However, compared to the last 10 years, people have started preferring more healthy foods and are willing to try out new dishes. They tend to learn cooking and eating new food items after relocation without discontinuing their traditional food items. There is also influence of children on the type of food items that they eat. This paper has shown that impulse buying is indeed a relevant factor in retailing, thus justifying the use of sales packaging. However, optimization is still important.

Furthermore, Adelina and Morgan (2007) studied on the consumer buying behavior and perception toward retail and branded baby products. A two-stage research methodology consisting of both qualitative and quantitative research techniques were adopted. The population was defined as ‘parents of children under the age of five who use baby care products’. Both the qualitative and quantitative research showed that respondents adopted similar risk reduction strategies in their purchase of baby care products. This research investigated consumer perceptions and buying behavior of baby care products. The results of the primary research indicated that consumers need to feel confident with the product in terms of reliability and performance and packaging.

Finally, Judy Rex, Stuart Wai and Antonio Lobo (2003), conducted an Exploratory Study into the Impact of Color and Packaging as Stimuli in the Decision Making Process for a Low Involvement Non-Durable Product. The consumers and the manager agreed that important factors when deciding which packet of potato crisps to purchase were the quality, the brand and the price of the product, with flavor also being an important factor for the consumers. The consumers used a constant sum scale (out of 100) to rate the six attributes of flavor, quality, brand, price, size and shape, and the color of the packaging. Overall, the consumers indicated that the flavor of the product was easily the most important stimulus when selecting potato crisps with an average rating of 38 points. This was about twice as important as the quality (21 points), which was more important than the brand (14 points) and the price (13 points). While brand and price were of about equal importance.

3. Methods

This section describes the basic plan of the research; how the research was conducted, the instrumentation used, and the tools used for analyses. The purpose of this study is to find out what consumers of Voltic and Bonaqua mineral water in Accra think about the two products. This study is based on an ex-post facto design and is a formal study to meet the academic requirements for the award of Bachelor of Science Marketing Degree. The study used a cross-sectional survey method, and comprised both qualitative and quantitative techniques. The study focused mainly on the consumers of Voltic and Bonaqua mineral water within Accra.

This study used a total sample size of 300 respondents. Kriti Bardhan Gupta (2009) used a sample size of 326 respondents for the study on Consumer Behavior for Food Products in India. Primary data was collected from Uttar Pradesh a state in the Northern Region of India. This therefore justifies the sample size of 300 respondents for this study.

In order to obtain varied opinions and consumer purchase characteristics, the total respondents defined for the research were divided into six (6) groups. This categorization was to guide data collection and also to determine which factor(s) each of the categories considered important in their purchase decisions. The categories of respondents used are outlined in table 3.1 below.

<table>
<thead>
<tr>
<th>Items</th>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nursing mothers with children below 2 years</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Men of age 45 years and above</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>Women of age 45 years and above</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>Men between the ages of 18 - 44 years</td>
<td>75</td>
</tr>
<tr>
<td>5</td>
<td>Women between the ages of 18 - 44 years</td>
<td>75</td>
</tr>
<tr>
<td>6</td>
<td>Pregnant women</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Total Number Of Respondents</td>
<td>300</td>
</tr>
</tbody>
</table>

Nursing mothers are believed to be more particular about their health and that of their babies as well. They therefore would buy bottled Voltic and Bonaqua mineral water for themselves and their babies since they consider these mineral waters to be more hygienic.

They however, purchase these mineral waters on regular basis and therefore stand in a good position to provide the required consumer information from their point of view. This justifies the inclusion of nursing mothers as one of the categories of the sample. The sample of 30 respondents was interviewed due to difficulty in getting nursing mothers to complete the questionnaires.

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In times of pregnancy, women are advised to be careful of what they consume by medical practitioners. Pregnant women therefore find bottled water more hygienic for consumption in such conditions.

Data was collected from 20 pregnant women because women in this state become more irritating and the researchers found it difficult getting them to cooperate in the study.

Men and women between the ages of 18years and 44years are believed to be more adventurous and deem it a luxury drinking the “best” bottled mineral waters (Voltic and Bonaqua). 75 respondents were chosen each for men and women since they are comparatively easier to find than nursing mothers and pregnant women and easily available for the study.

50 men and 50 women above 45years of age were also considered since they value good health at these ages and easily associate the number of the years of existence of a product to the quality of the product.

3.1 Sampling Method

Alpha Medical Centre and La Polyclinic all in Madina were visited during periods of antenatal care and nursing mothers who had the required information and were willing to participate in the study until the sum of 27 nursing mothers and 20 pregnant women were interviewed by the researchers. The hospitals were chosen because they are the easiest places to get most of the nursing mothers to participate in the study.

The researchers also interviewed respondents who possessed the required information and were willing to participate in the study on the streets of Madina for the other categories of the sample until the assigned sum were exhausted.

3.2 Data Collection Technique

The study instrument was a well-structured open and closed ended self and interviewer administered questionnaire. The questionnaire was adapted to the factors that influence perceptions such as price, purity, packaging, availability etc. The research team also used interviews where necessary, to capture information that could not be captured in writing. The interviewer administered questionnaire was used alongside the self-administered questionnaire to ensure that respondents who could not read and/or write also had the chance to participate in the study. The interviewer administered questionnaire also helped the research team to retrieve the questionnaires immediate without unnecessary delays.

3.3 Analytical Tool and Technique

Descriptive statistics such as frequencies and percentages were used to report the findings of the questions. Finally, graphical presentation such as pie chart, bar charts and tables were used to explain the findings of the analysis. This was done to facilitate easy interpretation of results. The field data collected was coded and analyzed by the use of Statistical Package for Social Science (SPSS) and Excel.

4. Results and Discussion

This chapter consists of the presentation and analysis of data collected.

Out of the 300 questionnaires administered, 292 were retrieved representing 97.34% of the total questionnaires administered. This was due to the fact that some of the respondents were not able to complete the questionnaires.

The results and discussions contained in this chapter were therefore based on the 292 questionnaires retrieved.

The study adopted descriptive statistics in analyzing the data collected. The responses by the consumers of both products to all questions in the questionnaire were compiled into charts in accordance with the main variables being examined. Percentage analysis was used in examining the variables.

4.1 Results of the analysis and Discussions

Figure 1.0: Respondents’ Brand Choices

Source: Survey data, May 2015

The study found out which brand of water consumers mostly buy given Voltic and Bonaqua. 77% of the respondents stated that they buy Voltic mineral water. This indicates a strong preference for Voltic as against Bonaqua.

Respondents were also asked to indicate why they preferred a brand of water over the other. From the responses, 22% indicated that they buy because their brand is purer, 21% dwell on the brand image, 19% on taste, and 12% on the availability of their brand, while advert, brand name and packaging represented 10%, 9%, and 7% respectively.

It could therefore be concluded that purity, brand image, and taste were the major reasons for which consumers chose their brand of water over the other. Although the attractiveness of the bottle does the least trick, both intrinsic and extrinsic factors are relevant for the survival and growth of such products.
When respondents were asked, which of the two brands of water they thought other people preferred mostly, 93% endorsed Voltic to be the people’s preferred brand.

In the thinking of the respondents therefore, other consumers would buy Voltic rather than Bonaqua whether the respondents were consumers of the brand (Voltic) or not.

Citing reasons why other people preferred Voltic to Bonaqua, respondents said the following:

- 23% of the respondents said Voltic was the first bottled water to be introduced on to the market and thus widely known by majority of people.
- Voltic is widely available in the market and very easy to find when the need to purchase bottled water arises, 46% of the respondents stated.
- 18% of the respondents said Voltic is deemed to have a reputable image and also taken by individuals with high social class; naturally all persons would want to belong there or at least be associated to it.

Meanwhile, the remaining 12% indicated that they had no idea why other consumers prefer Voltic that much. In the case of Bonaqua, 63% of the respondents stated that the attractiveness of the bottle was convincing enough to influence other people to buy it instead of Voltic. The remaining 37% could not associate any reason to why others prefer the brand to the other.
Consumers were asked to identify which factor greatly influenced their purchase decisions, 61% stated that adverts showed on their brand was the major factor that persuaded them to buy, 15% were influenced by family/friends, 11% were captured by the attractiveness of bottles and 13% said that they were influenced by variables (including persons) to whom brands were associated.

Advertisement does the greatest trick in influencing or persuading individuals to purchase. Ineffective adverts therefore would pose a lot of danger to the existence or growth of products. Family and friends influence usually come in the form of ‘word of mouth’ communications in which satisfied consumers cause others to try out a product they are convinced about. Such communications are not paid for by the organization producing the product and therefore it is in the interest of these firms to produce products that satisfy consumer needs in order to enjoy this added benefit.

The research tested whether taste affects purchase decisions of Voltic and Bonaqua. In response, about 94% of the respondents agreed that tastes influence their purchase decisions.

Taste perceived as better by consumers is therefore essential for the purchase of such products as it has great influence on consumers. Though the researchers are of the view that the two products are of the same taste, respondents disagree to this.

In response to the statement that brand name strongly influences consumer purchase, 93% of the total respondents agreed to the statement. Brand names therefore have strong influence on consumer purchases of products as it can either cause buying or otherwise.
of the respondents agree to the statement. Although packaging does not add to the content in the bottle, evidence suggests that it indeed influences greatly consumer purchases.

Figure 1.9: Extent to Which Advertisement Influence Purchases
Source: Survey data, May 2015

In finding out the extent to which advertisement of products influence purchases of Voltic and Bonaqua, 92% respondents agreed to the statement that adverts on products strongly influence purchases while the rest declined. Appealing adverts are therefore very important influencers to purchases.

Figure 1.10: Influence of Availability of Products on Purchases
Source: Survey data, May 2015

In response to the statement that availability of products strongly influence purchases, 94% respondents agreed to the statement. It is evidenced therefore that brand image influences greatly consumer purchases.

Figure 1.11: Influence of Brand Image on Purchase
Source: Survey data, May 2015

In response to the statement that brand images strongly influence purchases, 94% respondents agreed to the statement. It is evidenced therefore that brand image influences greatly consumer purchases.

Analysis based on Category of Respondents

The data was also analyzed based on the category of respondents. Consumers were tested on which variable they hold in order of priority given purity, taste, advert, packaging, availability, brand image, and first brand to be introduced into the market. When the pregnant women rated the factor Purity, 70% considered it as most important, 20% as more important and 10% as important. This implies that not a single pregnant woman considered purity as not important. In the case of taste, 30% ranked it as most important, 55% saw it as more important, and 15% saw it important. All the pregnant women therefore saw some level of importance as far as taste is concerned. For packaging, 15% saw it as more important and 45% as important.

As far as order of priority was concerned purity and taste were ranked equally as important (100% each) and then followed by packaging.

Since the factors are to be in order of priority, the important factors therefore include purity, taste and packaging respectively. Since the ‘most important’ rank constitute consumers principal option, nursing mothers consider first the purity level and then taste, availability, advert, brand image, packaging and first to be introduced respectively as shown in table 4.3 above.

Respondents within this category rate purity, and taste as most important. It is then followed by brand image, advert and availability, packaging, and first to be introduced respectively.
Respondents in this category also consider purity and brand image as most important factors. It is followed by taste, advert, availability and packaging respectively. These respondents consider purity first, followed by taste, brand image and advert, packaging and then availability respectively.

Purity and taste are the two most important factors in the purchase decisions of women above the age of 45 years. It is followed by brand image, availability and advert respectively. In consumer purchase decisions therefore, purity is the 1st variable all consumers consider. The 2nd variable most consumers consider is taste, the third is brand image, the 4th is advert, 5th is availability, 6th is packaging and the 7th factor is which brand was first introduced onto the market.

About 65% of the consumers of Bonaqua stated that for a possible switch, Voltic’s bottle should be made much easier to handle than it is now.

5. Conclusions and Recommendations

This study has found out that generally the factors that influence perception about product among consumers include product image, product type, price, advertising, and packaging, familiarity with a channel, brand awareness, family influence, shopping motives, and consumer personality. However, with respect to bottled water, factors include advertisement, taste, brand image, availability, purity, packaging as well as family/friends influence.

These factors above influence greatly the purchase decisions of Voltic and Bonaqua mineral water consumers.

Here are some views or opinions consumers hold of Voltic and Bonaqua bottled water.

- Voltic has many consumers than Bonaqua.
- Greater share of the market is likely to purchase Voltic than Bonaqua. Voltic has almost become the household name for bottled water due to its dominance.
- Consumers perceive Voltic to be purer and widely available than Bonaqua is.

Purity poses the greatest influence on consumer purchase decisions.

Consumers of Voltic are more loyal to the brand than that of Bonaqua are.

In consumer purchase decisions, purity is the 1st variable all consumers consider. The 2nd most consumers consider is taste, the third is brand image, the 4th is advert, 5th is availability, 6th is packaging and the 7th factor is which brand was first introduced onto the market.

5.1 Recommendations

Upon careful study of the information obtained, it was evident that there are more bottled water producers and marketers have or can do to either maintain leadership or overtake the market leader.

Researchers believe that if the brand is of high image, then not only would the content but also the ‘total product’ would be of high quality. Hence both intrinsic and extrinsic variables are relevant for the survival and growth of such products.

Since consumers are more unlikely to test the purity levels and tastes preference of the water they purchase, it is recommended that effective brand building strategies be develop, implemented and communicated through advertisement to promote the ‘differentiated water’ as being of higher standards and value.
Much producers of Bonaqua are advised to step up their marketing communications efforts and at the same time increase the availability of the product, producers of Voltic are to devise leadership strategies that will at least maintain their customer base and communicate the brand as the leading and number one brand in the country. The research team believes that much can be achieved if the marketers of Bonaqua would make efficient use of the name “Coca cola” as it is associated with the product and persuade consumers.

Producers and marketers therefore have a responsibility to ensure that their products contain the necessary intrinsic characteristics such as taste (perceived as good by consumers), meet purity standards, and then embark on effective marketing communications that put the brand second to none. Product availability, adverts that contain ‘message’, attractive packages are essential for the growth of bottled water.

Having known and understood some of the perceptions consumers hold of these bottled water, the researchers proposed this area for further research to aid a better understanding of the subject matter.

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