Consumers’ Ranking of Brands of Pocket-Friendly Sized Beverages Packaging in Southwest, Nigeria (An Analytic Hierarchy Process Approach)

Olapade Grace Ayeni, Omobola Monsurat Ajayi, Kayode Kingsley Arogundade

ABSTRACT

The study determined consumers' relative importance ranking of the brands of pocket-friendly sized beverages packaging. The study adopted a descriptive survey design. Of the total population of 314,797 from the selected University students in Southwest, Nigeria, 384 respondents were sampled using Multistage sampling technique using the Krejcie and Morgan (1970) formula as a guide. A structured questionnaire was administered to the respondents, with a success response rate of 381 (99.22%). Data collected were analysed using descriptive statistics and Analytical Hierarchy Process (AHP) technique. The result revealed that depending on the brand of the product, the factors preferred are different but the synthesis revealed the priority weight of the most preferred brand is Cadbury, Bournvita, the study concluded that depending on the brand of the product, the sub-criteria factors preferred are different but the actual most preferred is done by synthesis. The synthesis revealed the priority weight of the most preferred which according to the analysis, Bournvita is the most preferred brand followed by Nestle, Wringer, Promasido, and finally, Friesland Campina. It was recommended that Beverage industries should not relent in improving the quality of their product as this is very useful in influencing consumers’ purchase decisions.

Keywords: Beverages, Consumers, Patronage, Ranking of Brands.

I. INTRODUCTION

For any typical product to get to the consumer from the producer, it must be packed satisfactorily to protect it from any form of infringement. In similar circumstances especially beverage products need packaging so that the product fulfills its main requirement in terms of uniformity, safety, efficacy, and purity, thereby enhancing excellent patronage. “The function of packaging has changed a great deal from mere protection to include a promotion, information, convenience, and handling due to the present day innovations and respond to changing consumer preferences and demands” (Omah, 2017).

Pocket-friendly sized packaging is one of such innovations in the beverage industry. As further contributed by Wells, Farley and Armstrong (2007) hold the view that “careful thought ought to be given to size by manufacturers in crafting efficient package because it is believed that consumers pick the product not by their characteristics but by the distinctiveness of their package”. Opinions have it that while a student is incapable of affording beverage products in large packs that would last weeks to finish, but would rather buy them in small, single-serve sizes. Gopinathar, Prabha and Ravichandran (2016) noted that “there was an increase in demand for smaller pack sizes, which require a lower financial outlay, which enables consumers to meet the expense of products that possibly would have been outside of their financial capability”.

The Nigeria economy is characterized by rapid industrialization, thus the establishment of industries of different sizes, functions, and capacities (Ibidunni, 2009). It is worthy of note that these industries contribute to providing the needed satisfaction for the populace. Ibidunni, (2009) citing Bovee and Thill asserted that one of the most significant features of the overall marketing environment is competitive. He defined competition as the rivalry among sellers trying to increase the sale of their brands, profits or market shares while dealing with the same set of consumers. According to Coyne cited in Ibidunni (2009) accomplishment in business does not depend only on the type of the commodity to produce, but also on choices about the style of the commodity, the quality of its materials, the sizes, the colours, the packaging, and the selling effort. In this case, the distinctiveness shown by a product or brand provides some supremacy to the product over other competing brands”.

“Researchers have attempted to estimate the different significant features of the products which affect the purchasing decision of consumers” (Enneking et al. cited in Saha et al., 2020). “Today, packaging is being considered as one of the major parts of the product and the consumers firstly interact with the brand through packaging of the product” (Rundh, 2005). There is no gainsaying that branding participate in helping to make the right decision when it comes to purchasing goods and services (Mishra, 2018). “A brand is a name, term, symbol, design or...
combination of these identifies a seller’s product and differentiates them from competitors’ product, it represents the customer’s perception and opinion about the performance of the product” (Foorg & Sidek, cited in Ogbulie et al., 2019).

“It is really important for companies to find out consumer’s decision-making process and identify the conditions, which consumers apply while making a decision (Cravens & Piercy cited in Alamgir, Nasir & Shamsuddoha, 2014; Mishra, 2018). The above statement is the reason why the study is been carried out, to understand which brand of the pocket-friendly sized packaging they prefer.

II. METHODOLOGY

The study adopted a descriptive survey design. From the total population of 314,797 of the selected University students in Southwest, Nigeria, 384 respondents were sampled using Multistage sampling technique using the Krejcie and Morgan (1970) formula as a guide. A structured questionnaire was administered to the respondents, with a success response rate of 381 (99.22%). Data collected were analysed using descriptive statistics and Analytical Hierarchy Process (AHP) technique

III. RESULTS

A. Determine Consumers’ Relative Importance Ranking of the Brands of Pocket-Friendly Sized Beverages Packaging

As pointed out by Showunmi et al. (2021), the success or failure that an organization experiences, depends to a large extent on the ability to make acceptable decisions on time. In order to arrive at such a decision, the decision-maker (in this case pocket-friendly sized beverage packaging consumers) needs to enumerate feasible and viable courses of action (alternatives or strategies), the projection of consequences associated with each course of action and measure of effectiveness (an objective) to identify the best course of action. The knowledge of total weight (which are the product of criteria vector priority and alternative vector priority), in AHP is appropriate in formulating appropriate strategies for growth and survival in the beverage industry.

B. Computation of the Total Weight

After the weight of elements at all levels is computed, the weight of the whole level is then calculated. It is observed, from the hierarchical structure of the AHP and its characteristics, that each level in the hierarchy is independent of one another which implies that the probability multiplicative law holds. Hence, probability (alternative) = * pr(alternative/corresponding decision criterion).

The total weight of each alternative is calculated by multiplying the weight of decision criteria by decision alternative weight respectively, where decision criteria and decision alternatives are independent even of one another. Owing to the independent relationships that exist between the criteria and the alternatives in AHP, the above formula holds, and the total weight is presented in Fig. 1.

Synthesizing the criteria and sub-criteria of pocket-friendly sized beverage packaging in order to understand the purchase decision or otherwise of the brands, the composite priorities that is priorities for the purchase decision or otherwise is as follows:

\[
\text{Cadbury} = \left[0.4382 \times \left\{ (0.5771 \times 0.2258) + (0.2590 \times 0.4634) + (0.1639 \times 0.0455) \right\} \right] + \\
\left[0.2365 \times \left\{ (0.5194 \times 0.4907) + (0.3206 \times 0.1823) + (0.1600 \times 0.2290) \right\} \right] + \left[0.1349 \times \left\{ (0.5349 \times 0.4649) + (0.3331 \times 0.1376) + (0.1320 \times 0.1434) \right\} \right] + \\
\left[0.1342 \times \left\{ (0.5409 \times 0.2820) + (0.3233 \times 0.1294) + (0.1268 \times 0.5048) \right\} \right] + \left[0.0562 \times \left\{ (0.6333 \times 0.4185) + (0.2430 \times 0.2388) + (0.1237 \times 0.1153) \right\} \right] = 0.2919
\]

\[
\text{Nestle} = \left[0.4382 \times \left\{ (0.5771 \times 0.3251) + (0.2590 \times 0.1328) + (0.1639 \times 0.1026) \right\} \right] + \left[0.2365 \times \left\{ (0.5194 \times 0.2280) + (0.3206 \times 0.2942) + (0.1600 \times 0.0497) \right\} \right] + \\
\left[0.1349 \times \left\{ (0.5349 \times 0.2647) + (0.3331 \times 0.0555) + (0.1320 \times 0.2376) \right\} \right] + \left[0.1342 \times \left\{ (0.5409 \times 0.4681) + (0.3233 \times 0.0565) + (0.1268 \times 0.1754) \right\} \right] + \\
\left[0.0562 \times \left\{ (0.6333 \times 0.2675) + (0.2430 \times 0.1313) + (0.1237 \times 0.1095) \right\} \right] = 0.2343
\]

Fig. 1. AHP diagram of the study showing the weights of decision criteria, sub-criteria and alternatives.

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C. Table I: Results from the Synthesis

From Table I, the results show that Cadbury is the most preferred brand of pocket-friendly size beverages packaging. The Ideal column shows the result divided by the largest value so that the preference has a priority of 1. The others are in the same proportion as in Normal column and are interpreted this way: Nestle brand is 80.27% as preferred as Cadbury brand, Wringing brand is 75.13% as preferred as Cadbury brand, Promasido brand is 48.37% as preferred as Cadbury brand, and Friesland Campina brand is 38.81% as preferred as Cadbury brand.

<table>
<thead>
<tr>
<th>Pocket-friendly size beverages packaging brands</th>
<th>Ideals</th>
<th>Normal</th>
<th>Raw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadbury</td>
<td>1.0000</td>
<td>0.2919</td>
<td>0.2919</td>
</tr>
<tr>
<td>Nestle</td>
<td>0.8027</td>
<td>0.2343</td>
<td>0.2343</td>
</tr>
<tr>
<td>Wringing</td>
<td>0.7513</td>
<td>0.2193</td>
<td>0.2193</td>
</tr>
<tr>
<td>Promasido</td>
<td>0.4837</td>
<td>0.1412</td>
<td>0.1412</td>
</tr>
<tr>
<td>Friesland Campina</td>
<td>0.3881</td>
<td>0.1133</td>
<td>0.1133</td>
</tr>
</tbody>
</table>

D. Discussion of Findings

The objective determines consumers’ relative importance ranking of the brands of pocket-friendly sized beverages packaging. The consumers’ perception with regards to the decision alternatives of single-serving size using the composite priorities revealed that respondents mostly preferred the brand Nestle with priority 0.3251, next is Wringing with priority 0.2570, followed by Cadbury with priority 0.2258, Promasido with priority 0.1188, and the least importance is Friesland Campina brand with a priority of 0.0733 while consumers perception with regards to the decision alternatives of large size using the composite priorities mostly preferred the brand Cadbury with priority 0.4634, next is Wringing with priority 0.2493, followed by Nestle with priority 0.1328, Friesland Campina with priority 0.0909, and the least importance is Promasido brand with a priority of 0.0635. Undergraduate students who are consumers of pocket-friendly sized beverage packaging mostly preferred the brand Wringing with a priority of 0.3190, next is Promasido with a priority of 0.3014, followed by Friesland Campina with a priority of 0.2315, Nestle with a priority of 0.1026, and the least importance is Cadbury brand with the priority of 0.0455 when it comes to small size using the composite priorities.

The consumers’ perception with regards to the decision alternatives of cutting the edge using the composite priorities revealed that respondents mostly preferred the brand Wringing with priority 0.4907, next is Nestle with priority 0.2280, followed by Friesland Campina with priority 0.1071, Promasido with priority 0.1031, and the least importance is Wringing brand with a priority of 0.0711. While consumers’ perception with regards to the decision alternatives of the press to open using the composite priorities mostly preferred the brand Wringing with a priority of 0.4029, next is Nestle with a priority of 0.2942, followed by Cadbury with a priority of 0.1823, Promasido with a priority of 0.0631, and the least importance is Friesland Campina brand with the priority of 0.0575. Undergraduate students who are consumers of pocket-friendly sized beverage packaging mostly preferred the brand Friesland Campina with a priority of 0.4062, next
The consumers' perception with regards to the decision alternatives of safety is Cadbury with priority 0.4649, next is Promasido with priority 0.3132, followed by Wringing with priority 0.2388, Nestle with priority 0.0565, and the least importance is Friesland Campina with priority 0.4681. Next is Cadbury with priority 0.2820, followed by Wringing with priority 0.1754, Friesland Campina with priority 0.1830, Promasido with priority 0.0555. Undergraduate students who are consumers of pocket friendly size beverages prefer the brand Cadbury with priority 0.1376, Friesland Campina with priority 0.0684, and the least importance is Nestle brand with priority 0.5974, next is Cadbury with priority 0.5129, next is Promasido with priority 0.3975, and finally, Cadbury is the most preferred brand of pocket friendly size beverages. It was recommended that Beverage industry should not neglect the promotion of the actual most preferred product in the future to ensure that their customers have a positive perception. The actual most preferred product is Cadbury brand, Wringing brand is 69.75% as preferred as Bournvita, Promasido is 38.68%, Nestle is 53.25%, and Friesland Campina is 38.18%. The percentage of respondents who are familiar with the product is more than 40% except for Promasido and Friesland Campina where it is less than 30%. The most preferred brand is Cadbury with a percentage of 38.68% followed by Nestle with a percentage of 31.32% and Promasido with 24.66%. The most preferred brand in terms of the most important attribute is Safety with 75.13% as preferred as Bournvita, Nestle is 71.12%, next is Promasido with 69.13%, followed by Wringing with 64.51%, and finally, Cadbury is the last. The most preferred brand of pocket friendly size beverages is Cadbury followed by Nestle and Promasido. This study concluded that depending on the brand of the product, the consumers have different perceptions and preferences. The results of the study are consistent with previous studies conducted by Alamgir, Nasir and Shamsuddoha (2014), Chovanová, Korshunov and Babčanová (2015), and Ivanov, Akiba and Maliha, Alam and Aziz (2020). The consumers' perception with regards to the decision alternatives of safety is Cadbury with priority 0.4649, next is Promasido with priority 0.3132, followed by Wringing with priority 0.2388, Nestle with priority 0.0565, and the least importance is Friesland Campina with priority 0.4681. Next is Cadbury with priority 0.2820, followed by Wringing with priority 0.1754, Friesland Campina with priority 0.1830, Promasido with priority 0.0555. 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