The Effect of Shape of Product Packaging on Consumer's Intention to Purchase

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Abstract

This research examines the effect of beverage bottle shape on the intention to buy among teenagers. Twenty participants between the ages of thirteen and seventeen years residing in Jakarta took part in this study. Data collection was done using a questionnaire assessing intent to purchase, which consisted of a single item that used a Likert scale response as the basis for determining the intention to buy. The final results showed that a tall and thin-shaped bottle generates stronger intention to purchase compared to a short and wide-shaped bottle.

Keywords— component; intention to buy; bottle shape; packaging

1. Introduction

Beverage products nowadays are available in many different forms, flavors, colors, and formulas. These various aspects have been a concern for market researchers and social scientists because of their potential influence on consumer’s intention to buy. Ahmad, Biloo, and Lakhan (2012) stated that in buying a product, people do not merely evaluate the function but also the packaging of the product. Gonzalez (2007, in Ahmad, Biloo & Lakhan, 2012) stated that the primary function of packaging is to protect products against potential damage when the goods are transported, stored, sold, and used. One element in product design is packaging shape and size. Typically, a product with an elongated shape is likely to create elongation bias, where consumers tend to perceive tall and thin-shaped bottles as having more product content than short and wide-shaped bottles (Raghubir & Krishna, 1999, in Seniati, 2010). Past research has also shown the effect of such a bias in the perception of volume on the decision to consume a product (Yang & Raghubir, 2005). According to Jean Piaget’s (Miller, 2011), stages of cognitive development, individuals aged eleven or older should have fully grasped the concept of ‘conservation’, whereby any amount of liquid retains its exact volume in any form of container. Despite having gone through such a stage of cognitive development, individuals aged eleven or older are not completely free from elongation bias (Yang & Raghubir, 2005). Based on this phenomenon, the researchers of the current study were interested in examining the effects of the shape of a product's packaging on the intention to purchase a product, in the hopes of explaining the effect of a beverage bottle’s shape (tall-and-thin versus wide-and-short) on the buying intention of teenagers.

2. Literature Review

A. Intention to buy

Bhakar, Dubey, Mittal, Singh, Nigam, Singh, and Sharma (2016) defined purchase intention as the degree of a consumer’s willingness to purchase a product presented to them. A study conducted by Shafiq, Raza, and Zia-ur-Rehman (2010) found that three factors significantly affected the intention to buy: consumer’s knowledge about the product, celebrity endorsement, and product packaging or design.

Yet a customer often relies on quick judgments that are based mostly on the physical appearance of the product they encounter upon entering a store, which they sometimes make without even having a clear product in mind (Silayoi & Speece, 2007).

Based on previous studies, in the present we formulate the following hypothesis.
H1: Tall and thin-shaped bottles will generate stronger intention to purchase among teens compared to short and wide-shaped bottles.

The variables of this research include the shape of the bottle (tall-and-thin and short-and-wide) as the independent variable (IV) that influences the intention to buy, as well as the intention to buy (measured using a Likert scale) acting as the dependent variable (DV).

3. Research Methods

A. Population and Sample

Due to limitations in obtaining a representative sample from the general public, the researchers of the present study used a convenience sampling technique to recruit teenage high school students as participants. The participants were comprised of students from various schools in South Jakarta. A total of 20 students participated; ten participants were aged between thirteen and fifteen years old, while ten others were between the ages of fifteen and seventeen years. The participants were directly recruited while they were at school and were asked for willingness to participate in the study.

B. Instrument

Two kinds of custom-made clear plastic bottles were used in the study: the thin-and-tall bottle with greater height and smaller diameter, and the short-and-wide bottle with lower height and larger diameter. Both bottles were of 350ml maximum volume and were filled to the brim with plain milk. To control other potential confounds such as brand recognition, the two bottles were presented with no labels and the bottle caps were the same shade of black.

C. Measure

The researchers distributed hard copies of the questionnaire to participants. The intention to buy was measured using a Likert scale ranging from 1 (no interest to purchase at all) to 5 (very interested to purchase).

D. Experimental procedure

The researchers conducted two separate experiments: one in a private junior high school and another in a private senior high school. Both schools are located in Jakarta. During each experiment, the sessions were conducted between 12 to 3 p.m. during school recess. All participants were shown both bottles, one at a time, and asked to indicate intention to buy. For counterbalancing purposes, half of the participants were shown the tall-and-thin bottle first and asked to rate their intention to buy before being shown the short-and-wide bottle and once again asked to rate their intention to buy. The other half of the participants were shown the short-and-wide bottle first and the tall-and-thin bottle afterward.

E. Participant demographics

Demographic information of the participants was collected by means of the personal data section of the questionnaire, which asked for participant’s name initials, age, gender, and school. Below is the distribution of the participant’s demographic (only the age and gender).

4. Results & Discussion

The data was analyzed using a paired-sample t-test with the aid of IBM SPSS version 20 as the statistical software.

Table 1. Statistical Data Based on the Bottle’s Shape

<table>
<thead>
<tr>
<th>Statistical Data</th>
<th>Tall and Thin</th>
<th>Short and Wide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average (Mean)</td>
<td>4.20</td>
<td>2.95</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.696</td>
<td>0.686</td>
</tr>
<tr>
<td>Maximum Score</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Minimum Score</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 2. Participant Demographic

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Amount</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>14</td>
<td>70</td>
</tr>
<tr>
<td>Boys</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Amount</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>15</td>
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<td>17</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

A. Results

Statistical analysis using related samples t-test suggested that the tall-and-thin shaped bottle produced significantly greater intention to purchase as compared to the short-and-wide one. Fifteen participants preferred the tall-and-thin shaped bottle, four participants gave equal scores for the two bottle shapes, and only one participant preferred the short-and-wide shaped bottle. The mean scores of consumers’ intention to purchase for the tall and thin-shaped bottle and the short and wide-shaped bottle were 4.20 (SD = .70) and 2.95 (SD = .69), respectively.

Figure 1. Mean Purchase Intention

The results shown above suggest that the tall-and-thin bottle produced a significantly higher intention to purchase.
5. Discussion

As the main factor that communicates a product (Silayoi & Speece, 2007), packaging relies on physical appearance, which according to Ahmad, Billoo, and Lakhan (2012), includes its shape. In the present research, product shape was chosen as the main focus, more particularly to see how it influences a person’s selection of the product, which further indicates the person’s likelihood to buy the product.

The size and shape of a product’s packaging are considered important elements (Yang & Raghubir, 2005), as food or beverage packaging serves to communicate the volume content of a product to the consumer. In their previous study, Yang and Raghubir (2005) found that products packaged in elongated (tall) containers were seen as bigger or larger by consumers. This finding is in line with the results of the current research, as evidenced by the participants’ statements that the tall-and-thin bottle seemed to contain more volume. Although both bottles in fact held the same volume of liquid, most of the participants ended up giving a higher score to the tall-and-thin bottle, demonstrating the influence of elongation bias which was previously found to affect intention to buy and decision to purchase (Seniati, 2010).

Overall, the results indicated that packaging does affect people’s intention to buy, supporting previous theories of the factors that influence buying intention. While the current result contradicted the findings of Mirabi, Akbariyeh, and Tahmasebifard (2015) who discovered that packaging does not affect a person’s intention to buy, several other studies have shown results consistent with the findings of the current research. One such example is a study by Cahyorini and Rusfian (2011, in Mirabi, Akbariyeh, & Tahmasebifard, 2015), who claimed that aspects of a product’s appearance, more particularly its packaging, affect a person’s desire to buy. Aghazadeh et al. (2011, in Mirabi, Akbariyeh, & Tahmasebifard, 2015) and Deng (2009, in Mirabi, Akbariyeh, & Tahmasebifard, 2015) also concluded that packaging has a significant impact on consumer purchases. Similarly, Kawa et al. (2003, in Mirabi, Akbariyeh, & Tahmasebifard, 2015) showed a significant impact of packaging on a consumer’s purchase intention in their study. In the future, it may hold some merit to follow up the current research with a study that focuses more on uncovering the specific aspects of a product’s packaging that influence a person’s intention to buy.

Suggestions. Based on the above results and discussion, several suggestions can be taken into consideration for subsequent research. For example, future research can be conducted with a larger sample size and a more diverse pool of participants that is more varied in age range, employment status, as well as cultural backgrounds. Subsequent research can also be designed with specific details of the packaging (e.g., shape, color, etc.) in mind. Also, the location of the experiment can be better controlled to avoid participants from experiencing external factors that may influence the results of the research, such as sensitization or hearing about the experimental procedure from other participants. Future studies should also be carried out under more uniform conditions and in the same environment for all participants, to control for potential time-related and environmental extraneous variables. In the future, including teenagers who attend school outside the Jakarta area in the sample may also be preferable.

6. Conclusion

The current study suggests that the shape of a product significantly affects potential consumers’ intention to purchase. More specifically, we found that a tall-and-thin bottle produces higher purchase intention than a short-and-wide bottle, and that the result could at least be attributed to elongation bias.

Acknowledgment

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References


Miller, P. H. (2011). Theories of Developmental Psychology (5th ed.). New York: Worth Publisher


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