Influence of Brand Name on Preference

Abstract:

The goal of this study is to discover how awareness of brand name in a taste test affects the proportion of those who prefer name brand peanut butter (JIF), as opposed to store brand peanut butter (Good & Gather). Initially, I did not find a significant preference between JIF and Good & Gather in a blind taste test. However, when the subjects knew which brand of peanut butter they were consuming, they were significantly more likely to prefer JIF over Good & Gather. Finally, the proportion of those who preferred JIF in a test of preference where brand name was known was significantly greater than the proportion of those who preferred JIF in a blind test.

Background and Significance:

In today's world of abundance, consumers encounter hundreds of name brands and store brand substitutes on a typical trip to the grocery store. Store brand items, which are solely identified by product characteristics, share the same purpose as their name brand counterparts. Yet, they are sold at a fraction of the cost. This presents the argument: are name brand products truly better quality or do consumers find themselves paying extra for the name printed on a label? The truth is brand name plays a major role in the consumer decision-making process and consumer preference.

Brands have symbolic value to consumers, who perceive name brands as quality (Aaker, 1991). This idea of perceived quality varies from real quality because it has little to do with the usefulness of a product. It is a relative concept based solely on the consumer's thought processes and experience (Leslie & Malcom, 1992). To further illustrate, a consumer survey conducted in India regarding car brands determined that 69% of the 100 respondents believed "branded products have better quality" and, therefore, were the preferred consumer choice (Alagmir et al., 2010). This is due in part to brand name awareness. Name brands are well known and familiar to most consumers which make the consumer more comfortable at the time of purchase. Essentially, the higher brand awareness, the higher the consumer's perceived quality. It is also noteworthy that consumers often choose name brands to enhance their self-esteem in society (Leslie & Malcom, 1992).

The impact of brand name on consumer preference has been studied extensively. However, these studies often focus on expensive, luxury items like cars. There is significantly less research regarding consumer preference toward name brands in the food sector (Ho, 2007). Likewise, most studies conducted in this field are surveys like the 1984 telephone survey of 195 household grocery shoppers. This found store brands were perceived as poorer in overall quality than national and name brands (Rosen, 1984). However, a survey does not properly asses the difference in real quality and perceived quality because no sampling of products is involved. My study aims to further investigate how brand name affects consumer preference and ultimately the difference between real and perceived quality of an affordable, household good. The household good chosen in this study was peanut butter, seeing as 90% of households purchase peanut butter and there is a variety of store brand substitutes (Ward, 2018). Specifically, this study will assess 1) if there is a difference between the real quality of a store brand (Good & Gather) and a name brand peanut butter (JIF) and 2) if awareness of brand name increases the preference of JIF peanut butter.

Methods:

To collect data for this study, a total of 54 college students were approached in their campus residences in the late afternoon (approximately 3:30 pm to 5:00 pm). This group of students was broken into two samples of 27 students. The first group of 27 students was given two plastic cups of peanut butter that had been previously prepared. One cup contained JIF creamy peanut butter (the number one selling peanut butter (Ward, 2018)) and the other contained Good & Gather creamy peanut butter, which is a Target brand. The students were asked to taste the peanut butter samples and report which they preferred based on overall quality (taste/peanut flavor, texture, etc.). The tasters in the first sample were unaware of the brand names. This was the "blind" condition. The order in which tasters ate the peanut butter

was randomly determined. I had a large bag of plastic cups that I mixed up. I reached in and grabbed a cup. The first cup I drew was tasted first. I was able to tell the difference between the samples by marking the JIF samples with a small orange dot on the bottom of the cup. The goal was to make this dot unnoticeable and the appearance of the samples almost identical.

The second group of 27 students was asked to taste the peanut butter in a similar manner. The order in which they tasted the sample was again randomly determined and the only instruction they received was to report which sample they preferred based on overall quality. However, these students were told the brand name of the peanut butter they were tasting before sampling. This created the "know" condition.

Results of Test 1: Blind condition

The first test determined if people had a preference as to what brand of peanut butter (JIF or Good & Gather) they consumed in a blind test. The proportion of those who preferred JIF was 16/27 or 59.26%, thus the proportion of those who preferred Good & Gather was 11/27 or 40.74%. The proportion of those who preferred JIF was the statistic in this test.

A simulation-based, one proportion test with 10,000 repetitions was performed. This resulted in a (two-sided) p-value of 0.4393, so there is not strong evidence that the proportion of those who preferred JIF was significantly different than 0.5.

Results of Test 2: Know Condition

The second test determined if people had a preference as to what brand of peanut butter (JIF or Good & Gather) they consumed in a test of preference where brand name was known. The proportion of those who preferred JIF was 23/27 or 85.19%, thus the proportion of those who preferred Good & Gather was 4/27 or 14.81%.

A simulation-based one proportion test with 10,000 repetitions was performed. This test of strength found a p-value of 0.0001 so there is very strong evidence that the probability of those who preferred JIF was significantly more than 0.5 when brand name was known.

Results of Test 3: Difference in the proportions of preference in "know condition" and "blind condition"

The final test determined if the proportion of those who preferred JIF in the "know" condition was significantly greater than the proportion of those who preferred JIF in the "blind" condition. The proportion of those who preferred JIF in a taste test where brand name was known was 23/27 or 85.19%. The proportion of those who preferred JIF in a blind test was 16/27 or 59.26%. (See Figure 1.)

Figure 1. The segmented bar graph displays the proportions of brand preference in the "blind" and "know" conditions. The difference in proportions suggest association between preference and brand name.



The data were analyzed using a simulated, two proportions test. A one-sided p-value of 0.0317 was found. This indicates that a significantly larger proportion of students preferred JIF in a taste test where brand name was known as compared to a blind taste test. Specifically, a 2SD confidence interval determined that the proportion of those who prefer JIF peanut butter is between 0.013 and 0.505 greater when tasters are aware of the brand name.

Discussion/Conclusion

The results indicate that people do not significantly prefer name branded peanut butter in a blind test. Because people could not distinguish store brand from name brand peanut butter in a blind test, I altered the conditions. I then told the subjects which brand of peanut butter they were sampling to see what effect it would have on preference. This test indicated that subjects were significantly more likely to prefer JIF over Good & Gather when they knew which brand they were sampling. I ran the third test to ensure that these proportions varied significantly. I found the proportion of those who preferred JIF in a test of preference where brand name was known was significantly greater than the proportion of those who preferred JIF in a blind test. Overall, these findings fulfilled the purpose of this study and confirmed that being aware of the brand name does influence preference. Additionally, these findings are consistent with the data collected in previous studies. In modern society brands not only represent the product or company but also have a strong association with perceived quality. This increases the tendency for consumers to lean toward name brand products (Leslie & Malcom, 1992).

This study reveals that brand name can impact consumer preference of affordable, household goods and contributes to the study of perceived quality/consumer behavior. It has often been studied in reference to luxury items, yet this study suggests it applies to a wider range of products. In the future, it may be beneficial to test this with other affordable goods to see if results are consistent.

A few things could have been done differently in this study. I only compared JIF to one other store brand substitute. It is important to note that the results may have been different if I had compared it to Meijer True Goodness peanut butter or Peanut Delight from Aldi. Additionally, the sample could have been more diverse. Preference or perceived quality is affected by past experiences like education, social background, or socioeconomic status (Leslie & Malcom, 1992). This study solely surveyed college students which may have impacted results. Many people at my college come from higher socioeconomic classes which may have given them the ability to consume name brand foods, seeing as store brand consumers tend to be on a lower income (Prendergast & Marr, 1997). As a result, they may be more familiar with JIF and therefore more likely to prefer it. Although I found significant results that correspond with literature regarding consumer behavior, further research is required. To further explore this topic, it would be helpful to gather data asking, "Have you heard of JIF?" or "Did you grow up eating JIF?" This would strengthen the idea that familiarity with a product is connected to preference and ultimately gain more evidence regarding consumer behavior.

References:

- Aaker, D. A. (1991). Managing Brand Equity, Capitalizing on the value of a brand name. New York Free Press, Retrieved November 16, 2019.
- Alamgir, M., Nasir, T., Shamsuddoha, M., & Nedelea, A., (2010). Influence of Brand Name on Consumer Decision Making Process - An Empirical Study on Car Buyers. Va Trimitem Atasat, Vol. 10, No. 2, p. 12, 2010. Available at SSRN: https://ssrn.com/abstract=1778163, Retrieved November 16, 2019.
- Ho, Y. C. (2007). A study of consumers' purchase intentions toward retail store brands in the food sector. Unpublished master thesis, Ming Chuan University, Taiwan, Retrieved November 16, 2019.
- Leslie, D. C., Malcom, M., (1992). Creating powerful Brands- The strategic root to success in consumer, industrial and service markets, Oxford, Butterworth Heinemann, p 140-160, Retrieved November 17, 2019.
- Prendergast, G. and Marr, N. (1997), "Generic products: who buys them and how do they perform relative to each other?", *European Journal of Marketing*, Vol. 31 No. 2, pp. 94-109. https://doi.org/10.1108/03090569710157070, Retrieved November 23, 2019.
- Rosen, D. L. (1984). Consumer perceptions of quality for generic grocery products: A comparison across product categories. *Journal of Retailing*, *60*(4), 64–80. Retrieved November 24, 2019.
- Ward, D. (Ed.). (2018). 24 Fun Facts about Peanuts & Peanut Butter. Retrieved from https://www.nationalpeanutboard.org/peanut-info/fun-facts.htm. Retrieved November 16, 2019.

Appendix:

Test 1:

The hypotheses regarding whether people have a preference as to what brand of peanut butter (JIF or Good & Gather) they consume in a blind test were as follows:

Null: The probability that JIF is preferred in a blind test is equal to 0.50. (H_0 : $\pi_{JIF} = 0.5$) Alternative: The probability that JIF is preferred in a blind test does not equal 0.50. (H_0 : $\pi_{JIF} \neq 0.5$)

I used the applets curated along with *Introduction to Statistical Investigations* text to analyze the data, <u>http://www.rossmanchance.com/ISIapplets.html</u>. I used the single proportion applet to test if the probability JIF was preferred in a blind test was more or less than 0.5. The probability 0.5 is based from the fact that participants were given two options, either JIF or Good & Gather. If participants were choosing samples based on chance alone, the probability of them choosing JIF in the long run would be 0.5. The data revealed a p-value of .4393 through 10,000 repetitions of 27 simulated coin tosses (probability of heads being 0.5). This p-value did not provide strong evidence against the null hypothesis. As a result, it is plausible that the probability JIF is preferred in a blind test is 0.5 and the observed statistic could have been the result of chance.



Test 2:

The hypotheses regarding whether people have a preference as to what brand of peanut butter (JIF or Good & Gather) they consume in a test where brand name was known were as follows:

Null: The probability that JIF is preferred in a test where brand name is known equals 0.50. (H_0 : $\pi_{JIF} = 0.5$)

Alternative: The probability that JIF is preferred in a test where brand name is known is greater than 0.50. (H_A : $\pi_{JIF} > 0.5$)

I used the single proportion applet to test if the probability JIF was preferred in a test where brand name was known was more than 0.5. The probability 0.5 is once again based from the fact that participants were given two options (JIF or Good & Gather) and the probability of them choosing JIF in the long run would be 0.5. The data revealed a p-value of 0.0001 through 10,000 repetitions of 27 simulated coin tosses with the probability of 0.5. This p-value provides very strong evidence for the alternative hypothesis. As a result, it is plausible that the that probability JIF is preferred in a test where brand is known is greater than 0.5. The observed statistic of 23/27 (.8519) did not occur by chance alone.



Test 3:

The hypotheses regarding whether in a test of preference, does being aware of brand names increase the preference of JIF were as follows:

Null: The proportion of those who prefer JIF in a blind test is the same as those who prefer JIF in a test of preference where brand name is known. ($H_0: \pi_{KnowJIF} = \pi_{BlindJIF}$) Alternative: The proportion of those who prefer JIF in a test of preference where brand name is known greater than the proportion of those who prefer JIF in a blind test. ($H_A: \pi_{KnowJIF} > \pi_{BlindJIF}$)

I used the two-proportion applet to analyze these data. I entered the data as a 2-way table. The two conditions "know" and "blind" were entered as the explanatory variables. The response variables were recorded as Target (Good & Gather) and JIF. The proportion of those who preferred JIF in a test of preference where brand name was known was 23/27 or 85.19%. The proportion of those who preferred JIF in a blind test was 16/27 or 59.26%. The observed statistic or difference in proportions (know – blind) was .259. After creating a simulated null distribution of 10,000 shuffled results (SD=.123), I found a p-value of .0317. This small p-value indicated I have strong evidence supporting the alternative hypothesis. It can be concluded that the proportion of those who prefer JIF in a blind taste test is significantly less than the proportion of those who prefer JIF in a test where brand name is known. Because the validity conditions for a theory-based tests were not met, a 2SD 95% confidence interval was constructed. It is (0.013, 0.505) = $.259 \pm 2(.123)$.

