Quantifying the Effect of a Logotype on Perceived Market Value of Consumer Products

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Abstract

This study is designed to measure the effect of a logotype on the perceived market value of consumer products among Vanderbilt undergraduates. An analysis of quantitative descriptive research from 291 Vanderbilt University undergraduate students shows that adding the logotype of a premium brand can increase the perceived value of a product compared to the unbranded version while adding a budget brand’s logotype can either increase or decrease the perceived value of the unbranded version. These findings illustrate the importance of determining the perceived value of a brand and developing strategies to increase positive brand perception among consumers even if that means disassociating the product from its brand name. This is the only research to date examining the impact of a logotype on the perceived market value of consumer goods.

I. Introduction

In a marketplace full of alternatives for consumers, brands are fighting for a way to establish superiority over the competition. Some brands are focusing on external issues such as “going green” and being environmentally friendly, while other brands are renovating their images from within. These changes are designed to improve the image of the brand in the eyes of consumers. Consumers’ perceptions of a given brand have the potential to enhance the brands’ success if positive brand equity is established.

Farquhar (1989) defines brand equity as the additional value with which brands endow products. Aaker (1991), Swait et. al, (1993), and Keller (1993) support Farquhar’s (1989) definition by defining brand equity as the value that a brand adds to a product. A third definition is provided by other researchers, who state that brand equity is the incremental preference endowed by the brand to the product as perceived by an individual consumer (Park and Srinivasan 1994). The market share premium due to brand equity shows, when all else is equal, how much of a brand’s current market share is due to the brand’s equity (Park and Srinivasan 1994). The portion of Coca-Cola’s market share due to brand equity, for
example, is due to the brand name “Coke” and the emotional connection to the brand rather than taste preference for the actual product.

Significant research has indicated that brand equity is driven by brand associations and brand image (Aaker 1991; Keller 1993; Aaker & Keller 1990; Biel, 1992). Research has attempted to calculate exactly how brand equity is influenced by several factors, including product attributes and advertising initiatives, and measured in a number of ways from surveys (Park and Srinivasan 1994) to scanner panel data (Erdem, Zhao, and Valenzuela, 2004). Although many people assume that stronger, higher-quality brands have more equity than weaker competitors (Biel, 1992), brand quality and brand equity are not causally related. K-mart, for example, is a strong brand with high brand equity, but it is not associated with high quality. Erdem, Zhao, and Valenzuela, (2004) found that brand equity is driven by a brand’s consistency and credibility, not necessarily by perceived quality of the brand. Even though K-mart is not associated with high quality, it is a consistent brand with a stable brand image and has considerable brand equity.

Variables such as extrinsic product cues can influence the perceived value of a given product. Extrinsic cues are market determined, intangible attributes and characteristics associated with a product (Cordell, 1997). Examples of extrinsic cues that relay important information to consumers include the product’s country of origin, the brand itself, and the retail outlet where the product is sold. Respected retailers are believed to develop positive attitudes about the product (Cordell, 1997) and thus increase perceived value. A consumer might feel more confident purchasing a camera from Best Buy than they might be buying that same camera elsewhere because of Best Buy’s expertise and experience in electronics. Similarly, one might have a more positive perception of a diamond ring purchased at Tiffany & Co. than a similar ring purchased from a dark booth in a marketplace. The relationship between the type of retail outlet and the perceived quality of an item, however, has not been shown to be statistically significant (Rao and Monroe, 1989). In addition to retail outlets, previous research has also found that consumers report perceptions of products from industrialized countries as being superior to products made in unindustrialized countries (Cordell, 1997).

Brand perceptions are strongly attached to the brand logo. A brand’s logo is the identifying symbol of brand that conveys a plethora of information to consumers. Previous research supports that when logos are altered or missing, consumers may attribute entirely different characteristics to the product. A particularly interesting area of research has emerged from discrepancies in reported taste preferences due to the presence or absence of brand identification on labeled and unlabeled drinks. Alison and Uhl (1964) conducted a study in which beer drinkers sampled several labeled and unlabeled beers and completed an evaluation on each beer to identify the influence of the brand’s identification on the perception of taste among participants. They found that overall ratings for each of the brands tested increased with brand identification.

Another study conducted by Wansink, Payne, & North (2007) also illustrates how logos and labels can give valuable information to consumers that can alter their perceptions of a product. In their study, forty-nine undergraduate students were shown one of two bottles of wine that were relabeled to clearly stated the origin of the wine as being from California or
North Dakota (although the same wine was in each bottle). The only difference between the two bottles was that the researchers manipulated the wine label to state that the wine was from California for one group or North Dakota for another group. After being shown the bottle, participants were asked to rank how tasty they expected the wine to be on a 9-point scale. After tasting the wine and a cube of cheese that researchers gave participants with their wine the participants ranked how tasty the wine and the cheese were.

The participants who were shown a bottle from “California” ranked the expectation and actual taste of the wine and the taste of the cheese more highly than the participants who were shown the “North Dakota” wine. The California labeled wine was ranked 5.19 for expectation, 5.18 for taste, and the cheese that accompanied it was ranked 4.46. The North Dakota labeled wine was ranked 2.76 for expectation, 3.68 for taste, and the cheese that accompanied it was ranked 3.31. Since the only difference between the group were the words “North Dakota” and “California” on the label, one can assume that the differences in the groups stems from perceptions of California and North Dakota wine (Wansink, Payne, & North, 2007).

An expression of consumer’s perceived value of a given brand can be seen in the prices that consumers are willing to pay for such an item. A common place to see price discrepancies due to perceived value is in supermarkets, where canned foods that are made by the same manufacturers are then labeled and branded with different companies’ logos before being distributed to retail outlets. Hawes and Kiser (1980) found that “generic brand grocery products were 30 percent to 40 percent less expensive than respective manufacturers’ brands and about 20 percent below the retail price of respective private brands” (Hawes and Kiser, 1980 as cited in Herstein and Tifferet, 2007). If the quality of the food is kept constant across these brands, it is the consumers’ perception of one brand having more value than another that allows stores to charge a 40-percent price increase on some brands and not others.

In addition to extrinsic cues, another set of cues that shape consumer’s perspectives of a given brand are intrinsic cues. Intrinsic cues are palpable physical attributes and performance specifications, such as 1”50 horsepower” or “1200 watts” (Cordell, 1997). The present study does not rely on intrinsic cues because “to give specific model information may direct the study to be more a test of familiarity” (Dodds, Monroe, Grewal, 1991). Any additional intrinsic cues that may be conveyed through the images shown to participants are equated in the design of this study.

A consumer’s familiarity with a product also shapes his or her perception of the brand. Familiarity refers to number of product related experiences that have been accumulated by the consumer (Alba and Hutchinson 1987). Familiarity has been operationalized to mean accumulated purchases (Anderson, Engeldow, & Becker, 1979), product usage (Johnson & Russo, 1984), search, ownership, and experience (Park & Lessig, 1981; Park, Mothersbaugh, & Feick, 1994). In order for consumers to recognize a given logotype he or she must be familiar with the brand. Researchers Rao & Sieben (1992) found that consumers with both low and high expertise with a given brand place greater confidence on the brand name as an indicator of the quality than consumers with moderate familiarity. The present study chose to use brands with which Vanderbilt undergraduate students were highly familiar.
In a previous study investigating undergraduate students, Dodds, Monroe, Grewal (1991), evaluated college students’ perceived value for different brands using a 5 x 3 x 3 between subjects factorial design for two products with four store names, and four brand names. After conducting pretests, they chose to test a calculator (Hewlett Packard or Royal brands sold in either a campus bookstore or Roses) and a stereo headset player (Sony or Grand Prix brand sold in either Best or K-mart). Dodds, Monroe, and Grewal chose three prices “determined to be perceptively different, yet within the subject’s acceptable price ranges. . . positioned as a high price, a medium price, and a low price for each product” (1991). Perceived value was operationalized in terms of monetary exchange in this study.

The present study was designed to investigate the effect of a logotype on the perceived market value of consumer products among Vanderbilt Undergraduates. No research has been done to date that measures incremental changes in brand equity by isolating a logotype. One study does, however, analyze how a well known vs. unknown brand’s logotype influences recall of an advertisement that is identical except for the logotype shown (Manville, 1965). The present study operationalized perceived value as the suggested retail price for a given item.

The present study is interested in identifying the estimated perceived market value for identical products labeled with different brand logos. Since a given brand’s extrinsic characteristics can be changed without fundamentally altering the physical makeup of the product itself, this study will keep the image of the product shown to participants constant and will only alter the identifying brand information of the logotype. The only information provided about the products is the brand. This is similar to real life shopping experiences, when extrinsic cues such as a brand or logo are the only source of identifying information about a product (i.e., when no description of the product is given or when ordering an item online or from a magazine).

Any biases associated with information conveyed to consumers via extrinsic cues have been accounted for in this present study. The influences retail outlets are eliminated since the type of store environment (boutique, shopping mall, or website order) is not provided for the participants. The only identifying information of the brand in the image presented to participants is the logotype itself. Country of origin is accounted for in this study because all products were either chosen from industrialized countries or were viewed as neutral.

II. Methods – Participants

A total of 291 Vanderbilt University undergraduate students participated in the study. There were 133 males, 158 females between the ages of 18 and 22. Participants were recruited by undergraduate research assistants. Students participated willingly and were given neither incentives nor rewards for participating in the study.

The Vanderbilt undergraduate student population can be broken down as follows: 4% of the student body is from New England, 14% from the Midwest, 46% from the South, 13% from the middle states, 6% from the West, 8% from the Southwest, and 8% are international students. Although some parts of the country are represented more heavily than others, all
parts of the US are represented in the Vanderbilt student body. The estimated average cost for full-time undergraduate students attending Vanderbilt for the 2007-2008 academic year is $49,834, but 60% of the student body receives some form of financial aid ("VU at a Glance").

Since this study is about consumers’ perceived value of various brands, the participants were asked to disclose their monthly discretionary budget to see if the amount of discretionary income available to a student impacts their perceptions of the different brand conditions. The average monthly discretionary budget for the participants was $279.63 with a confidence level (95%) of 26.30.

III. Design

A quantitative descriptive research design was used to measure whether or not there is a descriptive difference in the perceived value of one of three brand conditions assigned to identical products as measured by the suggested retail price reported by the participants. From pretests with a smaller population, three products were chosen from three different product categories and three brand names were chosen that would be easily recognizable to Vanderbilt undergraduates. The three products (water bottle, digital camera, and sandals) represent consumable products, electronics, and clothing. These items were chosen because participants could be potential consumers of these items and because they appeal equally to males and females. The three brand levels tested included a no-brand condition with no identifying brand information, Target as a budget brand, and a premium brand. The premium brands chosen were San Pellegrino for the water, Canon for the camera, and Rainbows for the sandals. These brands were chosen because they are well known and easily recognized by college students for the three product categories. Target was chosen as a budget brand that would be likely to sell water, a camera, and sandals, would be easily recognizable, and would sell these products at lower price points than the premium brands.

IV. Procedure

Using Photoshop, high-resolution images of a hand holding a bottle of water, a digital camera, and a sandal were altered so that no identifying brand information such as logos were visible on the images. Then, the selected brand logos (Target, San Pellegrino, Cannon, and Rainbow) were added to the images. The product image remained constant throughout the study with the only change being the brand logotype.

Two hundred ninety-one undergraduate students at Vanderbilt University (133 males, 158 females) filled out a one page survey titled “Retail Survey” (see Appendix A). In the survey, they used self-report measures to provide their monthly discretionary budget and the suggested retail prices for the three items pictured on the survey. Each student was exposed to one picture of a bottle of water, one picture of a camera, and one picture of a sandal. Participants were asked about each product only once to eliminate bias. Twenty-seven
variations of the retail survey were created to randomize the three conditions assigned to the products.

V. Results

An analysis of the research showed that a logotype’s effect differs among males and females and across product categories. The logotypes either added to or took away from consumers’ perceived market value depending on the product and brand condition.

The results from the water show that there was a -6.00% decrease in the perceived value of the water when branded with the Target label and a +33.6% increase when branded as San Pellegrino water. Both males and females showed similar changes when the water was branded as Target water, but women showed a +50% increase in perceived value while men showed a +38% increase in perceived value when branded as San Pellegrino. (Charts illustrating differences between male and female responses are reported in Appendix B.) Unbranded water was estimated to cost $1.24 (std dev=0.41, median=1.09, mode=1). Target water was estimated to cost $1.16 (std dev=0.40, median=1.00, mode=1.00). San Pellegrino water was estimated to cost $1.66 (std dev=0.89, median=1.50, mode=1.00).
The results from the camera showed a +2.00% increase in the perceived value of the water when branded with the Target label and a +13.50% increase when branded as a Canon. There was a discrepancy, however, between men and women when the camera was labeled with a Target logotype. Women reported an increase of +2.00% from the perceived value of the unbranded camera when the camera was labeled with a Target logotype. Males, on the other hand, reported a -3.00% decrease in perceived value with the camera was a Target brand camera. (Charts illustrating the differences between the responses of males and females for the camera are reported in Appendix C.)

Overall, the unbranded camera was estimated to cost $166.62 (std dev=97.56, median=150.00, mode=150.00). The Target camera was estimated to cost $170.00 (std dev=90.77, median=155.00, mode=200.00). The Canon camera was estimated to cost $189.16 (std dev=85.69, median=199.00, mode=250.00).

The results from the sandals showed a -31% change in the perceived value of the sandals when branded with the Target logotype and a +18% change when branded with the Rainbow logotype as opposed to an unbranded sandal. Males showed a -12% change in perceived value when branded with the Target logotype while women saw a -42% change. When branded with the Rainbow logotype, males showed a +20% increase in perceived value while women showed a -2.00% change. (Male and female responses for sandals are reported in Appendix D.) Unbranded sandals were estimated to cost $32.30 (std dev=16.55, median=30.00, mode=20.00). Target sandals were estimated to cost $22.27 (std dev=13.86, median=20.00, mode=20.00). Rainbow sandals were estimated to cost $38.21 std dev=19.26, median=40.00, mode=45.00).
The monthly discretionary budget for participants was found to be $239.01 (std error= 13.39, std dev= 277.83, median= 162.36, mode=100.00). (See Chart 1 below). The monthly discretionary income for females is $278.71 (std error=16.52, std dev= 271.34 median=200.00, mode=200.00) with a confidence level of 32.57. The monthly discretionary income for males at Vanderbilt is $280.56 (std error= 21.12, std dev=345.03, median=200.00, mode=100.00).

**Chart 1: Monthly Discretionary Budget Results**

<table>
<thead>
<tr>
<th>Males &amp; Females</th>
<th>Males Only</th>
<th>Females Only</th>
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<tr>
<td>Mean</td>
<td>279.63</td>
<td>280.56</td>
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<td>Standard Error</td>
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<td>21.12</td>
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<tr>
<td>Median</td>
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<td>200.00</td>
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<tr>
<td>Mode</td>
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<tr>
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<td>Maximum</td>
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<tr>
<td>Count</td>
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<td>Count</td>
</tr>
<tr>
<td>Largest(1)</td>
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<td>Largest(1)</td>
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<tr>
<td>Smallest(1)</td>
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</tr>
<tr>
<td>Confidence Level(95.0%)</td>
<td>26.30</td>
<td>Level(95.0%)</td>
</tr>
</tbody>
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VI. Discussion

The results of this study show that the general trend for a brand’s perceived value is not consistent across three basic product categories tested (consumables, technology, and clothing). Both water and sandals decreased in perceived value when associated with the budget brand Target and increased in value when associated with the premium brands San Pellegrino and Rainbow. When the results for the sandals are broken down by gender, however, females reported a decrease in perceived value for both Target and Rainbow brands as compared to the unlabeled version of the sandal. When averaged across all participants, the perceived value of the camera increased when associated with both brands Target and Canon. When broken down by gender, however, males reported a decrease in the perceived value when the camera was associated with Target while females reported an increase in the perceived value.

The average monthly disposable income among participants was $279.63. The amount of monthly discretionary income was found to have no correlation on the participant’s perceived value on premium products (See Appendix E).

The products investigated were not perceived as having equal value across brand conditions which highlights the importance of “brand imaging” and “branding” to build value in the minds of consumers. If the results had shown no differences in value for a given object across brand changes the data would have supported that branding does not have a great influence on consumers but that it is the product itself independent of any brand association that holds worth and value.

Since the results showed a change in perceived market value when the logotype changed, the data supports the idea that consumers place value on the brand itself rather than...
just the appearance of the product. The results showed a change in perceived value that increased with the association of high quality brand names (San Pellegrino, Cannon, and Rainbow) which illustrates the importance of establishing a desirable brand image to increase the product’s perceived worth.

One reason why digital cameras might experience an increase in perceived value with any brand name association is because consumers do not know how to classify the camera without brand cues and therefore perceive it as less valuable. Also, Target, while not a premium brand, could be a more respected retailer among female college student for electronics than for consumables or apparel and may be a more respected retailer among female college students than male students.

When undesirable brand names diminish the perceived value of the product advertisers should diminish the association between the brand name and product. The water bottle and sandals were perceived to be more valuable when there was no label attached than when they was labeled with the Target logotype. This could imply that marketing initiatives for low-quality brands should strive to market the product independently of the label to increase the perceived market value of the product and be able to charge higher prices.

Such an idea can easily be applied to generic items found in grocery stores. If consumers perceived the generic brand to be less desirable when it is associated with the store name such as “Kroger green beans,” then the store should either disassociate the name from the product or create a new label for the products. This phenomenon has led several retailers to create a new name that alludes to higher quality such as Target’s Archer Farms, Publix Premium, and Kroger’s Naturally Preferred lines to try and build positive perceived worth. The grocery stores hope to increase perceived worth, brand equity, and revenue by attempting to change the store’s name and logo on the food’s label.

### VII. Limitations and Implications for Future Research

This study analyzes the influence of a logotype on consumer’s perceived market value of an object. It is important to research consumer’s perceptions for marketing and advertising. The degree to which brands can influence consumer’s perceptions of value could yield valuable information for consumers and businesses alike. This study uses three different products that encompass three different price ranges to try and gain insight into any similarities or differences between different price points and categories. Although this study examines the impact of perceived market value on three items at different price points, as research about the impact of brand perceptions continues to develop it will be important to look in greater depth at the impact of perceived market value on luxury items. The impact of brand image and brand perception may carry different weight in higher end, luxury product categories.

Additionally, this study indicates that technological products are impacted by brand logotypes differently than consumable products and apparel. It would be important to investigate different items such as a computer, calculator, mp3 player or alarm clock to see if
items that fall within the technology category all gain perceived value when associated with a brand as opposed to being unlabeled.

Additionally, in a marketplace where new brands and new names are constantly being introduced to consumers, it would be important to use an unknown brand in the future to provide insight to how consumers evaluate perceived market value for brand with which they are unfamiliar. According to Cordell (1997), the unknown brand condition “has reasonable external validity because consumers are frequently confronted with choices in which some alternatives are unknown brands for which the consumer has no prior knowledge base.”

References


Appendix A

Retail Survey

1) What is your monthly discretionary budget?  $ ______

2) What is your gender?  M    F

3) What do you think the suggested retail prices are for the following three items?

$    

$    

$    
Appendix B

Retail Prices for Water by Gender

Females

![Females Retail Prices Graph]

Males

![Males Retail Prices Graph]
Appendix C

Retail Prices for Cameras by Gender

Females

![Diagram showing retail prices for female cameras by brand and price range.]

Males

![Diagram showing retail prices for male cameras by brand and price range.]

Appendix D

Retail Prices for Sandals by Gender

### Females

<table>
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<th>Sandals</th>
<th>Generic</th>
<th>Target</th>
<th>Rainbow</th>
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### Males

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<th>Target</th>
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<td>Price ($)</td>
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<tr>
<td>200.00</td>
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*Note: The diagrams show the distribution of retail prices for sandals by gender.*
Appendix E

No correlation shown between budget and price paid for premium items.