



Factors influencing the price premiums that consumers pay for national brands over store brands

Raj Sethuraman

Assistant Professor of Marketing, Cox School of Business, Southern Methodist University, Dallas, Texas, USA

Catherine Cole

Associate Professor of Marketing, College of Business Administration, University of Iowa, Iowa City, Iowa, USA

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Abstract *Identifies some managerially relevant factors that influence the size of the price premium that consumers will pay for national brands over store brands in grocery products. We define price premium as the maximum price consumers will pay for a national brand over a store brand, expressed as the proportionate price differential between a national brand and a store brand. Overall, perceived quality differential accounts for about 12 percent of the variation in price premiums across consumers and product categories and is the most important variable influencing price premiums.*

Private labels or store brands are generally brands owned, controlled, and sold exclusively by retailers. Private labels are well established in several European countries such as the UK. Sales of private labels have also been growing in the USA and now account for over \$48 billion in grocery products (Hoch and Banerji, 1993). In fact, in 1995, private labels gained share in 71 percent of 238 grocery product categories; by early in the next century, they are expected to grow to over 20 percent dollar share (Khermouch, 1996).

Price premium

A major selling point for private labels is their lower price relative to national brands. For instance, an 18-oz. box of Kellogg's corn flakes costs \$2.95 while the same size box of a local retailer's store brand costs \$1.69. That is, the price of the store brand is about 43 percent lower than the national brand price. Those consumers who are willing to pay a 43 percent premium for Kellogg's will purchase the national brand while those who will not pay the 43 percent premium would purchase the store brand. We define price premium as the maximum price consumers will pay for a national brand relative to a store brand expressed as the proportionate price differential between a national brand and a store brand.

To counter the private label threat, a number of national brand manufacturers including Philip Morris, Procter & Gamble, Kodak, and Nabisco have cut

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prices and/or altered their promotional strategies to protect their market share (Ortega and Stern, 1993). Price cuts, however, reduce margins and can adversely affect financial performance. For instance, when Philip Morris cut the price of Marlboro cigarettes in 1993 to compete with the cheaper private label cigarettes, its stock value fell by \$14 billion because analysts believed that such a strategy would result in deterioration of brand value and long-term profits (Quelch and Harding, 1996). Therefore national brand manufacturers face a dilemma: should they cut their prices to compete with private labels? Or, should they adopt other non-price-related strategies to enhance the value of their brands so that consumers are willing to pay larger premiums for their brands?

Factors which influence price premiums

We attempt to shed some light on these issues by investigating the following questions: in what type of product categories are consumers willing to pay a price premium for national brands over store brands? What factors influence the size of this price premium? Our research follows in the tradition of Rao and Monroe (1996) who develop propositions about the causes and consequences of price premiums. However, we use the store brand/national brand context to test our propositions. We specifically investigate whether the perceived quality differential between national and store brands, average purchase price, purchase frequency, familiarity with store brands, price-quality inference, perceived deal frequency, the amount of pleasure derived from consuming the product, and demographic variables such as income and age influence the size of the premium consumers are willing to pay for national brands.

Empirical research on store brands has progressed in two streams. One stream of research attempts to understand cross-category variation in private label shares through analysis of aggregate supermarket data (e.g. Hoch and Banerji, 1993; Sethuraman, 1992). Another stream of research attempts to understand the characteristics of private label consumers (those who purchase more private labels) using consumer-level data (e.g. Richardson *et al.*, 1996; Szymanski and Busch, 1987). To the best of our knowledge, there is no comprehensive empirical study that identifies factors influencing the size of the price premiums that consumers are willing to pay for national brands over store brands. Identifying these factors would help gain insights into price and non-price strategies that national brand managers can adopt when competing with private labels.

Perceived risk

Variables investigated and hypotheses

When will consumers pay a larger or smaller premium for the national brand? Conceptually, we can state that the premium a consumer is willing to pay for a national brand depends on the perceived risk associated with the store brand. Perceived risk arises from consumers' perceptions about the magnitude of the adverse consequences and the probabilities that these consequences may occur if the store brand is purchased. Although risk can be of many types (i.e. performance, financial, social, time, and safety), Dunn *et al.* (1986) found that the first two types – performance and financial risks – were most closely associated with the store brand/national brand choice. Performance risk refers to the performance consequences of a product failure as well as to the probability that these consequences will occur; financial risk refers to the monetary consequences of product failure as well as to the probability that these consequences will occur (Grewal *et al.*, 1994). We use the concepts of perceived performance and financial risk to develop hypotheses regarding the influence of some managerially relevant variables on the price premium; however, we do not measure perceived risk directly.

The variables we investigate are classified as:

- perceptual variables related to consumer perceptions;
- behavioral variables related to consumer purchasing behavior; and
- demographic variables.

Perceptual variables

We include as perceptual variables: perceived quality differential, purpose of consumption, price-quality inference, perceived deal frequency, and store brand familiarity.

Perceived quality differential. It is well accepted that consumers will pay a higher premium for a national brand if they perceive that a store brand is lower in quality than a national brand. If a high quality differential exists, then relatively the store brand is low in quality. This perceived low quality increases the perceived performance risk associated with the store brand.

H1: Other things being equal, the price premium a consumer will pay for a national brand over a store brand increases as the perceived quality differential between the national brand and the store brand increases.

Consumption pleasure. While some goods are consumed for their usefulness (utilitarian goods), other goods are consumed for their ability to provide pleasure (hedonistic goods) (Richins, 1994). Consumers may attribute high performance risk to store brands in hedonistic product categories because they worry that store brands cannot deliver the desired emotional benefits. As a result, they may pay larger premiums for national brands.

H2: Other things being equal, the premiums consumers will pay for national brands is higher in more hedonic products (with high consumption pleasure) than in less hedonic products (with low consumption pleasure).

Price-quality inference. Rao and Monroe (1989) found that for consumer products, the relationships between price and perceived quality are positive and statistically significant. Consumers who feel higher quality brands are in general higher priced (who believe in "you get what you pay for") will be more likely to pay greater premiums for national brands. Perhaps these consumers believe that a higher price reduces performance risk.

H3: Other things being equal, the price premium consumers will pay for a national brand increases as their beliefs in price-quality relationships become stronger.

Perceived deal frequency. Several studies have shown that consumers' price expectations decrease for brands that are perceived to be frequently on deal (e.g. Kalwani and Yim, 1992). Hence, they would pay a lower price premium in categories in which brands are perceived to be frequently discounted.

H4: Other things being equal, as the perceived frequency of deals in the category increases, the price premium consumers will pay for national brands decreases.

Store brand familiarity. Previous research has established that brand familiarity affects price perceptions and consumers' willingness to pay for brands (e.g. Rao and Monroe, 1988). As consumers become more familiar with a brand, their knowledge structure about the brand changes so that their uncertainty about the brand decreases (Alba and Hutchinson, 1987). In the supermarket industry, as consumers' familiarity with store brands increases, then the perceived performance risk should decrease because uncertainty is

Hedonic products

Discounted brands

reduced. Monroe (1976) found that levels of past experience affected housewives' preferences for national and store brands. In the context of national vs store brand competition, we posit that:

H5: Other things being equal, the price premiums that consumers will pay decrease as consumers' familiarity with the store brands increase.

Behavioral variables

The variables related to consumer purchasing behavior are the average purchase price paid by consumers when purchasing brands in a category, and the frequency of purchase.

Product price categories

Average purchase price. Consumers' perception of financial risk increases as the product price increases (Grewal *et al.*, 1994). That is, consumers may hesitate to buy store brands in high-priced product categories because if the brands do not perform satisfactorily, they have lost a relatively large amount of money.

H6: Other things being equal, consumers will pay larger price premiums for national brands in high-priced product categories than in low-priced product categories.

Purchase frequency. The adverse consequences of buying a lower quality brand can last for a shorter or longer period of time. For instance, if an item is bought every week (say frozen vegetables), a slightly lower quality item has to be endured for only one meal or one week, whereas if an item is bought once every month (say laundry detergent), the lower-quality brand has to be endured for one month. Thus, as the interpurchase time increases, consumers should attribute more performance risk to store brands and as a result will pay higher premiums for national brands.

H7: Other things being equal, the price premium a consumer will pay for a national brand is higher in less frequently purchased product categories than in more frequently purchased product categories.

Demographic variables

We also test whether there are systematic variations in the premium consumers are willing to pay due to the following demographic variables – annual household income, family size, age, gender, and education level of respondent.

Insurance against product failure

Annual household income. On the one hand, consumers with lower income may pay a higher premium for national brands, as insurance against product failure. Low income consumers will regret the wasted money more than higher income consumers. Thus, because low-income consumers may associate higher performance risk with store brands than higher income consumers, they may pay a higher premium for national brands.

On the other hand, conventional economic wisdom suggests that consumers with higher income have a higher utility for the high-quality national brand, can afford to pay a higher premium, and will be less price sensitive. Consistent with this argument, Hoch (1996) finds that in areas with higher household income, price sensitivity is lower and private labels do not perform very well. Based on this argument and evidence, we hypothesize that:

H8: Other things being equal, consumers with higher household income will pay a larger premium for national brands than consumers with lower income.

Larger families more price sensitive

Family size. For a given income, larger families should be more price sensitive since the fixed income has to be divided among a larger number of people. Consistent with this argument, Hoch (1996) finds that trading areas populated by large households are more price sensitive and more prone to purchasing private labels.

H9: Other things being equal, large families will be willing to pay smaller premiums for national brands than small families.

Age. Preliminary research suggests that brand loyalty increases as people age (Cole and Balsubramanian, 1993). Thus, younger consumers may be willing to pay smaller premiums for national brands, because their preferences are not as strongly formed as older consumers. This prediction is consistent with the Szymanski and Busch (1987) meta-analysis finding that, across eight studies, age had a small, but negative influence on propensity to purchase generic brands. On the other hand, younger consumers may be more image oriented and less familiar with store brands than older consumers. As a result, younger consumers may be willing to pay more for the national brands. Hence the influence of age on price premium is ambiguous.

The influence of education is ambiguous

Education. An opportunity cost argument suggests that those with higher education have greater opportunity costs for time and hence will not spend time looking for good deals. That is, they are less price sensitive (Hoch, 1996). As a result, consumers with higher education will pay greater premiums for national brands than less-educated consumers.

On the other hand, more educated consumers are likely to be better informed about the relative quality of private labels compared to national brands (Hoch, 1996). Hence, their perceived risk associated with store brands may be lower and they may not be willing to pay a high premium for national brands. Thus the influence of education on premium is ambiguous.

Gender. We do not have specific predictions about the effect of gender on willingness to pay a higher premium for national brands.

Operationalization of variables

We test the hypotheses using a consumer survey on grocery products. The dependent and independent variables are operationalized as follows.

Dependent variable

Price premium. We state that the price of the national brand in a product category is 100 (100 can be taken as their normal purchase price for the national brand). We ask respondents to indicate on a scale ranging from 0 to 200 (with intervals of 10), the price they will pay for store brands. If X is the price they say they will pay for the store brand, then the premium consumers are willing to pay for the national brand is computed as $\text{PREMIUM} = 100 - X$.

Independent variables

Perceived quality differential. Corresponding to the premium question above, we state to the consumers that the quality of national brands is 100 and ask them to rate the quality of the store brand on a scale between 0 and 200 with intervals of 10. The 0 endpoint is labeled "much worse than national brand quality," while the 200 endpoint is labeled "much better than national brand quality." Since we are interested in their opinions/perceptions rather than actual knowledge, respondents are encouraged to answer the comparison questions even if they have not bought a national or a store

Hypotheses tested

Two phases

brand, but have an opinion about it. If Y is the quality of the store brand perceived by the consumers, quality differential is computed as $QUALDIF = 100 - Y$.

Consumption pleasure. Consumers indicate how much consumption pleasure they derive from the product category by responding to two phrases:

- (1) the product is "fun to have"; and
- (2) the product "gives me pleasure" on a three-point scale: 1 = very true for me; 2 = somewhat true for me; and 3 = not true for me.

Price-quality inference. We measure price-quality inference on a seven-point Likert scale ranging from strongly agree (1) to strongly disagree (7) for two statements:

- (1) In this product category, the higher the price for a brand, the higher is the quality of the brand.
- (2) In this product category, it is certainly true that you get the quality that you pay for.

Perceived deal frequency. We measure perceived deal frequency on a seven-point Likert scale ranging from strongly agree (1) to strongly disagree (7). The two statements assessed both the perceptions (frequency of deal) and behavioral consequences of deals (willingness to delay purchase for a deal). We ask consumers to agree or disagree with two statements:

- (1) In this product category, the brands I normally buy are frequently on deal.
- (2) In this product category, I usually wait for a sale to buy the brand I want.

A three-point scale

Store brand familiarity. We measure store brand familiarity for each product category on a three-point scale:

- (1) representing very familiar with the store brand;
- (2) somewhat familiar with the store brand; and
- (3) unfamiliar with the store brand.

Average price per purchase. Respondents indicate the average price per purchase for each product category on a five-point scale:

1 = about \$1 (\$0.50-\$1.49); 2 = about \$2 (\$1.50-\$2.49); 3 = about \$3 (\$2.50-\$3.49); 4 = about \$4 (\$3.50-\$4.49); 5 = over \$4.50.

Purchase frequency. Respondents indicate how often they purchase each product on a five-point scale: 1 = at least once every two weeks; 2 = once every 3-5 weeks (about once a month); once every 6-10 weeks (about once in two months); once every 10-14 weeks (about once in three months); 5 = less often than once every three months; DB = never (don't buy).

Demographic variables. Age, education and income are measured as follows:

Age: under 18; 18-22; 23-40; 41-60; over 60

Education: High school graduate; College graduate

Annual household income: under \$15,000; \$15,000-\$24,999; \$25,000-\$34,999; \$35,000-\$49,999; \$50,000-\$74,999; \$75,000-\$99,999; over \$100,000.

Family size is the number of people living in the household.

Products selected

Data

A sample of 350 randomly selected households from a medium-sized midwest metropolitan area received the questionnaire. Respondents could receive \$10 for completing the questionnaire; 140 questionnaires were returned. Each respondent provided answers (variable measures) for up to 20 product categories. These 20 categories were selected from a list of top 100 dollar-volume grocery products obtained from *Infoscan Supermarket Review* (1994) provided by Information Resources, Inc. The products were selected so as to ensure reasonable variation in the category variables we investigate (i.e. varying price, purchase frequency, and consumption pleasure). The products surveyed were: aluminium foil, analgesic, liquid bleach, cake mix, cold cereal, cheese, ground coffee, cookies, dishwashing liquid, dog food, fabric softener, flour, frozen pizza, frozen vegetables, jams/jellies, ketchup, orange juice, shampoo, soft drink, and toilet tissue.

Several consumers did not respond to some product categories because they do not buy them and some consumers did not provide information on all variables. As a result, there are 2,156 observations from 131 consumers for investigating the determinants of price premium.

The correlation between the two items for price-quality inference is 0.80 and for deal frequency is 0.76. We average the score from the two items to obtain a measure of each of the two constructs. In the case of consumption pleasure, the two items (fun and pleasure) correlate 0.81. We average the two items and classify consumption pleasure as high (average = 1), moderate (average = 1.5-2.5), and low (average = 3). All other variables are single-item measures and kept as such.

Combined categories

In the case of two demographic variables – age and income, there were very few customers representing some categories. For instance, there were only six consumers below 18 years old and only seven respondents who earn over \$100,000. So, we combined some of these categories in order to obtain reasonable sample size and improve interpretability.

The demographic characteristics of the sample are as follows:

Annual income: Less than \$25,000 (32 percent); \$25,000-\$50,000 (33 percent); over \$50,000 (35 percent)

Age: 18-40 years (46 percent); 41-60 years (38 percent); over 60 years (16 percent)

Education: High School (39 percent); College (61 percent)

Gender: Male (31 percent); Female (69 percent)

Analysis and findings

Preliminary analysis

The mean perceived quality differential across the 2,156 observations is 20.8 percent. In less than 8 percent of the observations, consumers perceived the quality of private labels to be higher than that of store brands. This finding is consistent with the general notion that private labels are as good as or inferior to national brands. However, in a substantial number of observations (about 30 percent), consumers perceived the private labels to be equal in quality to that of the national brands. This finding is also consistent with recent trends which suggest that a large number of consumers feel store brands usually perform as well as or taste as good as nationally advertised brands (Fitzell, 1992).

Results of regression model

The mean price differential across all observations is 35.7 percent. While in about 40 percent of the observations, consumers perceive the store brands to be equal or higher in quality to national brands, in only 7 percent of the cases would they pay the same or higher price for the store brand. This finding is also consistent with the positioning of store brands as comparable quality brands at lower prices.

Regression analysis

The results of the regression model with PREMIUM as the dependent variable and the hypothesized factors and other demographic variables as the independent variables are given in Table I. The R^2 for the model is 0.21 (adjusted $R^2 = 0.20$, $F_{22, 2133} = 26.0$, $p < 0.01$). Heteroscedasticity was detected using the Breusch-Pagan/Godfrey test (Greene, 1993, p. 395) and corrected using the weighted least squares approach (Kmenta, 1986, pp. 269-83). Collinearity was not a problem in this data set as evidenced by small condition indices (less than 10) and low correlations among independent variables (less than 0.5).

Five of the nine hypothesized variables showed significant influences on premium. The findings are summarized below:

Variable	Group	Estimate	Standard error
Perceived quality differential	(Ratio scale)	0.33	0.018**
Consumption pleasure	High	4.48	1.82**
	Moderate	1.09	1.12
	Low	0	
Price quality inference	(interval)	-0.66	0.34*
Perceived deal frequency	(interval)	-0.04	0.29
Store brand familiarity	Very familiar	-1.24	1.41
	Somewhat	-1.32	1.26
	Unfamiliar	0	
Average price	\$1	-0.39	1.96
	\$2	-2.50	1.79
	\$3	-2.53	1.87
	\$4	-1.44	2.21
	\$5 or more	0	
Purchase frequency	< 2 weeks	-5.34	1.72**
	2-6 weeks	-0.28	1.59
	6-10 weeks	-0.42	1.63
	10-14 weeks	-0.84	1.81
	> 3 months	0	
Income	< \$25K	0.79	1.44
	\$25-50K	-5.54	1.44**
	> \$50K	Base	
Family size	Ratio	-0.15	0.40
Age	18-40 years	10.5	1.64**
	41-60	7.55	1.71**
	> 60	0	
Education	College	0.18	1.14
	High School	0	
Gender	Female	2.83	1.15**
	Male	0	

Notes: * Significant at 5 percent level; **Significant at 1 percent level (one-tailed test for hypothesized variables and two-tailed test for others)

Table I. Regression results

- Overall, perceived quality differential accounts for 12 percent of the variation and is by far the most important factor in explaining variation in price premiums across consumers and products.
- Demographic variables appear to be next most important, accounting for about 5 percent of the variation. In particular:
 - The middle-income households (\$25-50K) are willing to pay smaller price premiums than either the higher income (> \$50K) or lower income (< \$25K) households.
 - Younger consumers are willing to pay larger price premiums than older consumers.
 - Females are willing to pay larger price premiums than males.
- Consumers will pay higher premiums for national brands:
 - in categories in which they purchase less frequently (less often than once in two weeks) than in categories in which they purchase more frequently (at least once in two weeks),
 - in categories which provide high consumption pleasure, and
 - if their price-quality inference is strong.

Effective brand strategies

A higher premium for national brands

Discussion of results and managerial implications

By understanding what factors influence the size of the price premiums consumers are willing to pay for national brands, national brand managers can better develop effective brand strategies. In the following discussion, we use the results from our survey to make some recommendations regarding price and non-price strategies that national brand managers can pursue when competing with private label brands.

Consider first the findings related to the significant perceptual variables: perceived quality differential, price-quality inference, and purpose of consumption. Because perceptions can be modified, they have interesting managerial implications. In selecting appropriate brand strategies, managers must consider whether consumer perceptions are favorable or unfavorable, accurate or inaccurate, and whether it is easy to change characteristics of the brand. If consumers' perceptions are favorable and accurate, then managers should maintain that favorable perception. If consumer perceptions are unfavorable but accurate, then national brand managers might want to try to alter the characteristics of the brand so that they are congruent with consumer perceptions favoring price premiums. If consumers' perceptions are unfavorable and inaccurate, then managers might want to try to change these perceptions through advertising or product positioning.

For example, our study validates the conventional wisdom that perceived quality is an important determinant of price premiums (Rao and Monroe, 1996). Our research also suggests that in categories where consumers believe that there is a strong price-quality inference (high correlation between price and quality), consumers would pay a higher premium for national brands. Together, these two findings provide some interesting implications.

If consumers perceive a large quality differential between national brands and store brands, managers should attempt to maintain the favorable high quality perceptions. Through marketing communications, they could enhance price-quality associations or emphasize the notion that cheaper products tend to be lower in quality.

If consumers perceive little quality difference between national brands and store brands, and their perceptions are correct, then national brand managers should strive to enhance the quality of their brands through product and/or package improvements. If it is difficult to increase perceived quality differential, then managers could consider lowering their prices to compete with private labels. However, they should be cautious in adopting the approach. Lowering prices may signal a lower quality, further eroding quality perceptions of the national brand and hence sales.

If the perceived quality differential is small, but their perceptions are incorrect, then national brand managers should pursue strategies that increase the likelihood that consumers will notice the quality differences. These strategies could include package design, advertising and sampling. In categories where the price-quality inference is strong, managers could also use a high price to signal higher quality.

Hedonistic value

Consumers will pay a higher premium for national brands in categories that provide high amounts of consumption pleasure. Therefore, national brand managers can maintain a premium pricing strategy in product categories consumed for hedonistic reasons. National brand managers might attempt to increase the hedonistic value of their brands through emotional advertising that shows consumers using the brand to meet emotional needs, and advertising that emphasizes the benefits delivered instead of the features of the product. However, enhancing consumption pleasure may be easier in some products such as cookies but quite difficult in some intrinsically functional products such as toilet tissue or laundry detergent.

Among behavioral variables, we find that consumers pay lower premiums in categories which they purchase more frequently (once every two weeks or less) than in categories which they purchase less frequently. Because changing purchase frequency may be a difficult task, national brand managers should consider lowering prices for brands in more frequently purchased categories so long as low prices do not signal lower quality.

Targeting strategies

The demographic variables that were significant in our analysis are important because they suggest targeting strategies. For example, national brand managers could target coupon drops to those segments who are unwilling to pay premiums for national brands. Interestingly, both low-income consumers (less than \$25K income) and high-income consumers (>\$50K) are more willing to pay larger premiums for national brands than middle-income consumers. One possible explanation is that the low income consumers may have less knowledge about the relative quality and may regret the potential waste of money if the store brand does not perform. Alternatively, they may be more influenced by the brand image associated with national brands – purchasing national brands may be viewed as enhancing their social status (Fitzell, 1992). In addition, high-income consumers may pay larger premiums simply because they can afford it.

Our results indicate that middle income consumers are willing to pay lower premiums than other income groups. Perhaps their price sensitivity has encouraged them to try out store brands and acquire knowledge about quality differentials. They may see themselves as “smart” consumers, who pay low price premium and who might find coupon offers especially attractive. We also find that younger consumers and females, who are more likely to be buyers of grocery products, will pay larger premiums for national brands.

Limitations and future research directions

An important limitation of this analysis is that our measure of price premium is based on self-reported measures. We measure stated price premium, not the actual premium, that consumers are willing to pay. Consumers' intentions may not match their actual behavior. We believe this limitation is not a major problem in a regression context where we are trying to measure the difference between two types of products (e.g. hedonistic or utilitarian) or two types of consumers (young versus old). Unless there is a systematic reporting difference among these types, there should be no bias. Furthermore, the average price differential across 116 grocery products observed at the national level in Sethuraman (1992) is 32.2 percent. It suggests that the mean premium of 35 percent in our data is realistic.

Actual purchase data

Nevertheless, in the future, it would be useful to obtain measures of the price premium that would be closer to their actual/intended behavior. One method is to look at actual purchase data. However, such data reveal only the premium consumers have paid (actual price differential), not what they are willing to pay (reservation price differential). Experiments dealing with actual money may better capture the premium consumers are willing to pay.

Our results are based on data from one consumer market. We have also considered national brand and private labels as single identities, though there are likely to be differences among national brands and among private labels (e.g. regular private labels and premium private labels). Future research can study other markets and consider individual national and store brands.

Another interesting question for future research is to test whether there is anchoring effect – i.e. whether the estimates of quality differential and price premium will change if we set private label at 100 instead of national brand.

In summary, returning to the first question we raised in the introduction section of whether national brand managers should reduce price to counter private label threat, our study finds that for frequently purchased products that are consumed more for functionality than for pleasure, and where the price-quality inference is weak, managers can reduce price to meet store brand competition. With respect to the second question of what non-price strategies to adopt, our study finds that brand managers can increase the objective quality of the national brand, use emotional advertising to increase perceived quality differential, strengthen the perceived price-quality relationship, and increase the hedonistic value of products, where possible. In addition, managers of premium national brands may be better off targeting the younger consumers (21-40 years old) than older consumers (over 40 years old); high-income consumers (over \$50,000 annual household income) than middle-income households (\$25,000-\$50,000 annual income); and female consumers than male consumers.

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