Consumer-based brand equity and brand performance

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ABSTRACT

The relation between consumer-based brand equity and brand performance was investigated across fifteen product categories in Brazil and the UK. Brand equity was conceptualized as related to the level of social benefit offered by each brand and was measured with a simple questionnaire that asked consumers to rate brands with respect to their familiarity and quality levels. These measures were then related to brand market share and revenue. Results showed that the relation between consumer-based brand equity and brand performance varies across product categories, indicating that products differ with respect to their level of brandability and suggesting ways to measure it.

Brand equity has been one of the most popular and potentially important marketing concepts since the 1980s (cf. Keller, 1998). Its relevance is related to the recognition that branding is often essential to firm success, particularly in highly competitive business environments, and may become one of the most valuable assets of firms. As a consequence, marketing and advertising companies have given increased emphasis to brand equity, by creating, for example, the position of brand equity manager, while consulting practices have developed methods to measure and track brand equity (cf. Ailawadi, Lehmann, & Neslin, 2003). In the academic literature, different definitions and models have been proposed, most of which following cognitive frameworks that attempt to predict brand purchasing (or intention to purchase) on the basis of what consumers know and believe about the brand. The main interest is usually to identify the cognitive processes involved in this prediction, independently of context. As strategic tool, however, this focus on branding raises the question of when should a company invest in building brand equity, for it seems unreasonable to assume that this is the best strategy to follow independently of context. Branding seems to be relevant particularly in the context of product categories. As a preliminary attempt to answer this question, the purpose of the present paper was to examine the relation between customer-based brand equity and brand performance in several supermarket product categories. In order to do so, a simple, theoretically consistent, measure of consumer-based brand equity was adopted. The measure was developed in the context of the behavioral perspective model of consumer behavior which may complement cognitive models by emphasizing the influence of situational variables, in the present case, the product category.

CONSUMER-BASED BRAND EQUITY

In the last two decades, a growing amount of attention has been devoted by practitioners and academics to the conceptualization, measurement and management of brand equity (e.g., Aaker, 1991, 1996; Aaker & Keller, 1990; Ailawadi et al., 2003; Erdem, Swait, & Valenzuela, 2006; Keller, 1993, 1998; Netemeyer et al., 2004), resulting in "several often-divergent view-points on the dimensions of brand equity, the factors that influence it, the perspectives from which it should be studied, and the ways to measure it" (Ailawadi et al., 2003, p. 1). Despite the divergence of opinions and perspectives, a reasonable agreement concerning the definition of brand equity has been reached, which, in general sense, "is defined in terms of the marketing effects uniquely attributable to the brand—for example, when certain outcomes result from the marketing of a product or service because of its brand name that would not occur if the same product or service did not have that name" (Keller, 1993, p. 1). The specific marketing effects related to brand equity can be analyzed at the level of firm outcomes, such as brand market share, revenue, and premium prices, or at the consumer level, such as consumer's brand knowledge, image, awareness and attitudes. These two levels of analyses are clearly linked because changes in firm outcomes, such as sales volume and profit, are usually aggregated consequence of consumer-based brand equity, such as brand image and attitude (cf. Ailawadi et al., 2003; Keller, 1998). Due to this relevance to strategic managerial decisions, much effort has been put into defining and measuring consumer-based brand equity.

Two influential frameworks were proposed by Aaker (1996) and Keller (1993). Aaker proposed ten measures of brand equity, divided into five categories, four of which are related to consumer-based equity and one category that includes market performance measures. The four consumer-based categories are loyalty (including

willingness to pay price premium and satisfaction), perceived quality (including perceived quality and leadership), differentiation (perceived value, brand personality, organizational associations), and brand awareness. Keller proposed that brand equity depends primarily on brand knowledge, conceptualized according to an associative network memory model in terms of two components, brand awareness (i.e., recognition and recall) and brand image (e.g., associations related to attributes, benefits and attitudes).

More recently, Netemeyer et al. (2004) presented a model containing four core or primary facets of consumer-based brand equity: perceived quality, perceived value for cost, and brand uniqueness, which would influence purchase intention and behavior through the mediation of a fourth construct, the willingness to pay a price premium. The model also included secondary facets of consumer-based brand equity, such as brand awareness, familiarity, and popularity. The authors conducted four empirical investigations to test different aspects of the model, including its predictive validity with respect to purchase behavior. Their results indicated that the best predictors of future behavior were perceived quality of the brand, which could not be distinguished from perceived value for cost, and brand uniqueness, whose influence on purchase behavior was found to be mediated by the willingness to pay a price premium.

Another line of research has cast doubts about the relevance of uniqueness or distinctiveness in predicting consumers' preferences. Romaniuk, Ehrenberg, and Sharp (2004) investigated whether consumers' considered the brand that they purchased as different, distinct, original or unique. Data were collected in two countries (USA and UK) based on different survey methods (telephone and questionnaire) and covered 13 different product categories, ranging from soft drinks to computers. Results showed that only 10% of consumers associated the brand they bought with any one of the adjectives,

50% of consumers did not associate the purchased brand with any of the adjectives, and these percentages varied little from brand to brand. The authors concluded that differences in brand performance seem to be related to their levels of salience or awareness rather than based upon brand differentiation.

Taken together, these studies suggest that, although there is no clear agreement concerning the dimensions of brand equity, most existing models seem to agree that at least brand quality and brand awareness should be included. When one considers the difficulties associated with using what consumers say about what they would spend and what they actually spend, the willingness to pay a price premium, also included in several proposal, would be more accurately assessed by actual prices found in the marketplace, which would make this construct more closely related to firm outcomes than to consumer perceptions (Ailawadi et al., 2003). The suggestion that this construct functions as mediator between consumer-based facets and consumer's intention (cf. Netemeyer at al., 2004) is an indication that the construct should not be interpreted as belonging to the same level as the other consumer-based dimensions. In fact, some recent proposal of brand equity measure based upon market outcomes, such as revenue premium, depends heavily on the possibility of charging a price premium for the brand (cf. Ailawadi et al., 2003).

A behavioral perspective approach to consumer behavior may provide a theoretical consistent alternative for conceptualizing consumer-based brand equity, which would include variables related to brand quality and brand awareness, and would emphasize the role of situational and contextual variables. This viewpoint will now be explored.

A BEHAVIORAL INTERPRETATION OF CONSUMER CHOICE

The area of consumer research has been dominated by social-cognitive theories, which assume that cognitive constructs, such as attitudes, knowledge, and beliefs, influence consumers' intention of purchasing products and services, which, in turn, influences what consumers do. The previously mentioned frameworks of consumer-based brand equity well illustrate this tendency well. One of the problems with this type of approach is the low correlation between attitudes and behavior, repeatedly reported and discussed in the literature (e.g., Wicker, 1969; Glasman & Albarracin, 2006). Moreover, it has been shown that the strength of the relation between attitude and behavior increases when situational and behavioral variables are taken into consideration, a finding that points to another problem with cognitive approach, namely, the little emphasis they give to the possible influence of such variables (cf. Foxall, 1997, 2005). According to some epistemologists, the excessive dominance of social-cognitive theorizing may also hinder the progress of the field, for scientific development seems to depend on diversity of ideas, on opposing, incompatible views strongly held by different research groups (cf. Feyerabend, 1993).

These limitations associated with social-cognitive approaches led Foxall (1990; 1997; 2005) to propose the Behavioral Perspective Model (BPM) to interpret and explain consumer behavior. According to this model, consumer behavior occurs at the intersection of the consumer's learning history and the current behavior setting, that is, at the consumer situation. Thus, the BPM provides an environmental perspective to consumer behavior and hence includes situational influences into the analysis of purchase and consumption. In behavioral terms, consumer behavior, the dependent variable, is a function of the individual's learning history related to a given type of

consumption, the behavior setting and the consequences the behavior produces. Figure 1 combines all these variables to provide a general picture of the BPM.

The behavior setting is defined as the social and physical environment in which the consumer is exposed to stimuli signaling a choice situation. A store, a theater, a waiting room, or an open-air festival in a public park, are all examples of behavior settings, varying in their scope and capacity of evoking consumer responses. This scope translates into a continuum between an open and a closed setting, allowing consumers different degrees of control over their behavior. The more open setting, like for instance the park festival, grants consumers to behave in a relatively free way with the option to wander around, talk, listen to music, eat, drink, smoke or even leave the scene. Towards the other end of the spectrum consumers are less free in their choice and are indeed expected to conform to a pattern of behavior set by someone else. For example, according to society's norms, patients in a surgery's waiting area are expected to sit quietly and wait in a patient manner until they are called for their treatment. Of course, they are free to read magazines, possibly chat with other waiting patients or walk out of the surgery if the waiting time is considered too long (in which case they will not receive treatment).

The other element of the consumer situation, the learning history, refers to the similar or related experiences a consumer has had before encountering the current behavior setting. This previous experience helps the consumer to interpret the behavior setting accurately by predicting the likely consequences her behavior in this situation will incur. Utilitarian reinforcement refers to the direct and functional benefits the purchase and/or consumption of a product (or service) involves. These are benefits mediated by the product or service. As an example, one of the utilitarian consequences of buying a car is the benefit of owning and using the products afterwards, in a purely

functional and hedonic sense, for it gives, for instance, door-to-door transportation, with minimum weather exposure and free time schedule. Utilitarian punishment may be related to surrendering money, time spent searching, or aversive functional consequences, such as buying a product that does not work properly. Informational reinforcement circumscribes the more indirect and symbolic consequences of behavior, such as social consequences (e.g., social status and self-esteem). These are consequences mediated by other people and function as feedback to the consumer as how well he or she is performing as a consumer. The informational reinforcement of owning a car might be related to the social status and admiration of others, particularly if it is a prestigious and expensive car make (e.g., a Bentley or Mercedes). Informational punishment occurs when other people do not approve or criticize what the consumer purchased, because they do not find it aesthetically pleasing or they do not trust the brand, or when the person finds out that she paid too much for the product, which may also function as negative feedback. Foxall (1990) argues that all products or service contain an element of utilitarian and informational reinforcement and punishment, which do vary in degree from product to product and from situation to situation. Thus, the probability of purchase and consumption depends on the relative weight of the reinforcing and aversive consequences that are signaled by the elements in the consumer behavior setting (cf. Alhadeff, 1982).

According to this view, product, brand, and service attributes, including price, may be interpreted as programmed reinforcing (i.e., benefits) and aversive events. Manufacturers, retailers, and brand managers direct all their efforts to modifying and shaping the reinforcing and aversive properties of the attributes of their products and brands, so as to make them more attractive to the consumer. Branding, promotional activities, new product development and product selection are just a few options open to

the supply side. These endeavors may or may not work, and this is why they ought to be interpreted as programmed reinforcing (or aversive) events rather then actual reinforcing (or aversive) events. According to this theoretical perspective, one of the main tasks in marketing is to identify what events can function as benefits (or aversive stimuli), to what extent, for what consumers, and under what circumstances (Foxall, 1992).

A BEHAVIORAL INTERPRETATION OF CONSUMER-BASED BRAND EQUITY

The BPM can provide a consistent interpretation of branding. Positive brand equity would increase with increases in the level of utilitarian and informational reinforcing consequences of purchasing a giving brand, whereas negative consumer-based brand equity would increase with increases in the level of utilitarian and informational punishing consequences. In previous investigations (cf. Foxall, Oliveira-Castro, & Schrezenmaier, 2004; Oliveira-Castro, Foxall, & Schrezenmaier, 2005), based on consumer panel data, brands were ranked according to two levels of utilitarian benefit and three levels of informational benefit. Benefit levels were ranked based on the interpretation that brands represent programmed reinforcement contingencies arranged by managers and producers. In the marketing context of routinely-bought supermarket food products, higher levels of utilitarian benefit can be identified by the addition of (supposedly) desirable attributes. These attributes are considered to have value-adding qualities for the product or its consumption, they are visibly declared on the package or are part of the product name, and ultimately justify higher prices. Moreover, in most cases, several general brands offer product varieties with and without these attributes. In Foxall et al.'s (2004), utilitarian levels were assigned based on additional attributes (e.g., plain baked beans vs. baked beans with sausage) and/or

differentiated types of products (e.g., plain cookies vs. chocolate chip cookies). In the case of differentiated product types, several manufacturers tend to offer the different product types at differentiated prices (e.g., plain cookies were cheaper than more elaborate cookies for all brands examined).

By contrast, informational reinforcement can be linked to brand name, brand differentiation, and such like, perhaps more closely to branding and brand equity, which in turn is usually also related to price differentiation, because the most promoted and best known brands tend to be related to higher levels of prestige, social status, and trustworthiness. As an example, when comparing the levels of brand differentiation of Tesco Value and Kellogg's Cornflakes, Kellogg's is clearly the better known, more differentiated and also more expensive brand, with a higher programmed level of informational reinforcement. This type of variation among brands has been translated into different levels of informational reinforcement. It should be noted that the classification of informational reinforcement levels does not rule out the possibility of there also being different degrees of utilitarian reinforcement between two informational levels (cf. Foxall et al., 2004). Because brands usually have almost identical formulations (cf. Ehrenberg, 1988; Foxall, 1999), the ranking of informational reinforcement was based on the predominant, more obvious differences between brands. In fact, there is evidence that consumers may not even be able to distinguish between brands of one product category on the basis of their physical characteristics (e.g., in blind tests). In Foxall et al.'s (2004) study, the following criteria were the basis for determining the different levels of informational reinforcement: 1) increases in prices across brands for the same product type (e.g., plain baked beans, plain cookies or plain cornflakes) were considered to be indicative of differences in informational levels; 2) the cheapest store brands (e.g., Asda Smart Price, Tesco Value, Sainsbury Economy)

were considered to represent the lowest informational level (Level 1); 3) store brands without the add-on good value for money or economy (e.g., Asda, Tesco, Sainsbury) and cheapest specialized brands were thought to embody the medium informational level (Level 2); and 4) higher-priced, specialized brands (e.g., Heinz, McVities, Kelloggs, Lurpak), were assigned to Level 3, the highest informational level.

The classification of brands on the basis of utilitarian and informational benefits they offer to consumers opened the way to several interesting findings related to consumer brand choice. The authors found, for example, that: 1) most consumers make their purchases within brands belonging to the same level of informational and utilitarian reinforcement (Foxall et al., 2004); and 2) consumers change the quantity they buy on each shopping occasion (i.e., demand elasticity) as a function of changes in prices of the particular brand, changes in the level of utilitarian reinforcement across brands, and changes in the level of informational reinforcement across brands, in this order of importance.

In the case of frequently purchased packaged goods, where utilitarian level tend to be similar across brands, because product formulation is almost identical across brands and most (large) brands offer several versions within each product category (most cookie brands offer rich-tea and chocolate-chip cookies), brand equity would be more closely related to informational benefit. This is compatible with Farquhar's (1989) position that "a brand enhances the value of a product beyond its functional purpose" (p. 25). Considering that informational benefit, according to the BPM, is social and related to feedback received by the consumer concerning his or her behavior as consumer, one way of measuring informational reinforcement would be to probe the programmed social contingencies by examining which brands would be considered by the social environment as "good" brands. There would be higher probabilities and larger

magnitudes of social reinforcement programmed for buying the "good" brands than the others. This would provide, based upon the BPM, a theoretical consistent interpretation of customer-based brand equity often measured on the basis of surveys. When one asks large numbers of people to evaluate different brands with respect to their quality, familiarity, differentiation, and all the other commonly investigated dimensions, the person is probing the programmed social contingencies for buying in that particular product category or market. Brand names, logos, packages, and such like, would be interpreted as events in the consumer-behavior setting that signal, based upon each consumer's history, the likelihood and magnitude of informational (and utilitarian, depending on the product) reinforcement. According to this approach, customer-based brand equity can be measured by asking consumers in general about brands, who are not necessarily the same consumers whose buying behavior the researcher is investigating. Consumers, in most cases, can tell which are the best brands in a given market, even if they have no intention of purchasing them because they cannot afford them, do not like them, are not sensitive to social reinforcement, do not consume such product, or such like. In this sense, the present interpretation is in part similar to the type of brand equity evaluation conducted by large consultancy firms (e.g., Young and Rubicam's Brand Asset Valuator, and Interbrand).

This behavioral approach may complement the typical interpretation provided by cognitive models, where the main purpose is to predict purchase or intention to purchase a certain brand given that the consumer has certain knowledge or belief about the brand. In typical cognitively-oriented investigations, the same consumer answer questions about the brand and about the intention of buying the brand (or is observed actually buying it). This is usually done independently of the context or situation where consumption occurs, for the main focus of the approach is to identify the cognitive

processes involved in brand choice in any context. In order to achieve this, such investigations conceive brand equity across different product categories (e.g., Aaker, 1996; Ailawadi et al., 2003; Keller, 1993; Netemeyer et al., 2004), where a good model of consumer-based brand equity would have to show high correlations between consumers' knowledge or beliefs about the brand and their intention to purchase (or actual purchase) across product categories. A behavioral approach would emphasize the possible influence of situational and contextual variables, whose effect has been extensively demonstrated to increase the correlation between other cognitive constructs, such as attitudes, and behavior (cf. Foxall, 1997; 2005).

The primary context of brands is their product category. Therefore, one way of locating consumer-based brand equity in space and time (cf. Foxall, 1997) is to investigate the efficacy of programmed informational reinforcement in different product categories. Following this line of reasoning, in the present paper, consumer-based brand equity was measured with the use of a questionnaire which asked consumers to rate the quality and knowledge (how well known is the brand) levels of each brand in a product category. With the purpose of examining in which product categories may be worth investing in branding, this consumer-based equity measure was related to measures of brand performance, such as market share and average price, in eleven supermarket product categories in Brazil (Study 1) and four categories in the United Kingdom (Study 2).

STUDY 1

Data Collection

Two sets of data were used, both collected in Brazil. One of them, related to the measure of brand equity, was based on the application of a questionnaire. The other set

of data, from which brand performance measures were obtained, was based on observational data from research that investigates search behavior. All data were collected from May 2003 to September 2005. For each specific product category, observational and questionnaire data collection periods were not separated by more than two months.

Questionnaire data and measure of brand equity. Brazilian consumers, men and women, selected on the basis of convenience, answered the questionnaire. Their overall average age was 40. Table 1 shows the number of consumers that answered the questionnaire in each of the 11 product categories. A simple questionnaire was used, where respondents were asked to rate brands in each product category. The questionnaire contained a list of all the brands found in the investigated supermarkets during the time of the search behavior research (see next section). For each brand listed, consumers were asked to answer the following two questions (originally in Portuguese): 1) Is the brand well known? (0 - Not known at all, 1- Known a little, 2 - Quite well known, 3 - Very well known); and 2) What is the level of quality of the brand? (0 - Unknown quality, 1 - Low quality, 2 - Medium quality, 3 - High quality). Four questionnaires containing questions about different products were used. One of the questionnaires was responded by the same group of 128 consumers and contained questions about instant chocolate (8 brands), fabric conditioner (12), washing-up liquid (10), black beans (12), canned sweet corn (11), and soybean oil (12). Another questionnaire, containing questions about coffee (19), margarine (13) and laundry washing powder (16), was responded by a group of 171 consumers (170 of which did it for laundry powder). A third questionnaire containing questions about mayonnaise (13) was answered by a group of 157 consumers, and a fourth one, containing information about cookies (25, only sweet cookies), was responded by different 148 consumers.

Although the two answers to the questions were expected to be highly correlated, both of them were used because there was the possibility of there existing well known brands that have low quality (e.g., popularly positioned brands). In order to obtain one brand equity score for each brand, mean score for *knowledge* and *quality* was calculated for each consumer and for each brand. The average of these mean values when then calculated for each brand across all consumers, referred to as *MKQ* hereafter. Brand subtypes that differed with respect to utilitarian attributes, such as varied formulations of the same brand of laundry washing powder or of coffee or different flagrances of washing-up liquids, were grouped within the same brand name.

Observational data and measure of brand performance. Measures of brand performance were obtained from a research project that investigates search behavior for supermarket products using direct observations. In this type of research, search duration was measured by observing the time consumers spent between looking at a given product on the shelves until they put the selected product in the cart (e.g., Oliveira-Castro, 2003). Consumers were observed in the absence of any selection criterion as they approached the products, generating almost random samples of product sales. Observations were conducted in loco or with the aid of cameras in several stores of two brands of large national supermarkets (similar to Asda and Tesco Extra) and of one brand of medium-sized, regional supermarket. As many observations of different consumers buying different product categories were conducted and information concerning brands, quantities and prices were recorded, it was possible to derive brand performance measures, such as market share, from such data. Although such data cannot be assumed to be as accurate as those stemming from market research conducted by commercial firms (e.g., ACNielsen), they may serve as reasonable proxies. Market share, average price, and total revenue (market share multiplied by average price) were

calculated for each brand included in the observational data. The numbers of observations for instant chocolate, fabric conditioner, washing-up liquid, black beans, canned sweet corn, soybean oil, coffee, margarine, laundry washing powder, mayonnaise, and cookies, were 169, 255, 304, 276, 151, 449, 725, 367, 355, 145, and 560, respectively.

Results and Discussion

The values of MKQ varied from .03 to 2.95 across all brands in all product categories. For all products, maximum values of MKQ were higher than 2.40, with the exception of black beans, for which the maximum value was equal to 1.83. Figure 2 shows market share as a function of MKQ for each product category. As can be seen in the figure, market shares increased with increases in MKQ for most product categories, with the possible exceptions of black beans, sweet corn and cookies. Figure 3 shows market share as a function of average brand price for each product category. Market shares do not seem to have changed systematically with increases in average brand price, for most product categories. The possible exceptions were sweet corn, soybean oil and, perhaps, cookies, where there were apparent decreases in market shares, and for mayonnaise, where there might have been an increase in market share associated to increases in brand average price.

In order to test if such apparent changes were linearly statistically significant, multiple regression analyses of market share as a function of MKQ and average brand prices were calculated for each product category. Table 1 shows the values of R^2, constant (a), and coefficients associated with MKQ and average brand price with their respective standard errors and values of p. Values of R^2 varied from .068 to .834 and were higher than .300 for 9 of the 11 products. Values of b_{MKQ} were all positive and

were significant (.05) for seven of the products, showing that for these products market share increased significantly with increases in MKQ. The exceptions were black beans, sweet corn, soybean oil and washing powder. In the case of washing powder, the value of p was very close to the adopted significance level, which may have been related to sample size. Even among products for which the values of b_{MKQ} were significant, these values varied from 1.82, for cookies, to 20.87, for instant chocolate, showing that the level of influence of consumer-brand equity upon brand performance varies greatly across product categories. Values of The values of b_{price} were negative for nine products but were significant only for two products, fabric conditioner and cookies. This value was very close to significance level in the case of black beans.

Taken together, these results indicate that, for five of the products, increases in market share were significantly related to increases in MKQ and not to price. Considering that brands with higher MKQ usually also charge higher average prices, increases in MKQ may be associated with positively accelerated increases in brand revenue. In order to test this possibility, the fit of three equations relating total revenue (i.e., market share multiplied by price) to MKQ were examined. The equations tested were linear, power and exponential, and the results showed that they were significant for seven, four and eight products, respectively. The exponential equation showed the largest r^2 for seven of the products, confirming the suggestion that increases in MKQ were related to positively accelerated increases in brand revenue for most products.

One possible shortcoming related to the results of the present study is the source of data used to derive brand performance measures, that is, market share and average price. These were based on data stemming from observational research that considered varied numbers of observations, ranging from 145 to 725. Although these can be interpreted as proxy measures of brand performance, larger samples of observations

would probably improve their reliability level. Despite such small sample for such measures, the results serve to illustrate a methodology that can be used to examine the possible relations between brand equity and brand performance in different contexts. Study 2 used much larger samples to derive brand performance measures and a simpler procedure to measure consumer-based brand equity.

STUDY 2

Data Collection

Two sets of data were also used, both collected in the United Kingdom. One of them, related to the measure of brand equity, was based on the application of a questionnaire. The other set of data, from which brand performance measures were obtained, was based on a consumer panel.

Questionnaire data and measure of brand equity. An English version of the questionnaire used in Study 1 was adopted. Consumers who were living in the UK for most of their lives were selected on a convenience basis and asked to answer one or more questionnaires. In this study, in order to measure brand equity, small samples of "expert" consumers were used instead of the larger samples used in the Brazilian. This was done with the purpose of developing a more practical and cheaper measure of brand equity. Four questionnaires were used, one for each of the products investigated, namely, cookies ("biscuits" in the UK, incorporating savory and sweet), fruit juice, baked beans and yellow fats (incorporating margarine, butter and spreads). These products were selected because they were the ones for which consumer panel data were available. Each questionnaire included for each product all the brands purchased by the sample of consumers in the panel, after filtering for attributes that are more related to utilitarian benefits rather than informational benefits. Then, because they are interpreted

as utilitarian attributes, different pack sizes and different product formulations (e.g., plain baked beans vs. baked beans with sausage; rich tea cookies vs. chocolate chips cookies; plain baked beans vs. organic) were all classified as the same brand. Brand names that belonged to a more general brand but differed with respect to their positioning were classified as different brands (e.g., Asda vs. Asda Smart Price; Tesco vs. Tesco Value). The same group of consumers answered the questionnaires about baked beans (23 respondents), fruit juice (22 respondents) and yellow fats (22 respondents), whereas another group (33 respondents) answered the questionnaire about cookies. The main reason for this separation was the number of brands in each category. The questionnaire for cookies included 315 brands, whereas for baked beans, fruit juice and yellow fats, the numbers of brands were 45, 99 and 89, respectively. Data were collected in October and November 2006. Brand equity scores were obtained following the same procedure adopted in Study 1 (i.e., mean score for *knowledge* and *quality*, *MKQ*, calculated for each brand across all consumers). Due to the small samples sizes, when compared to the Brazilian, reliability analyses of brand equity scores were conducted. In order to do so, respondents were randomly divided into two or three (in the case of cookies) groups of approximately equal sizes, whose average *MKQ* given to each brand were correlated (Pearson) across all brands (*N* ranged from 45, for baked beans, to 315, for cookies). Correlation coefficients between scores obtained by pairs of groups, three pairs for cookies and one for each of the other products, ranged from .872 to .984, showing good reliability.

Panel data and measure of brand performance. Consumer panel data were obtained from ACNielsen HomescanTM which, at the period of this research, included data from 10,000 households in Great Britain. Each home uses a barcode scanner to record their purchases. The panel was regionally and demographically balanced to

represent the household population. The data set used included information about four

product categories during 52 weeks from July 2004 to July 2005, from households that

purchased the product at least seven times during the period. Market share, average

price, and total revenue (market share multiplied by average price) were calculated for

each brand and were based on the total number of purchases of each product included in

the panel data, that is, 13,729 purchases by 832 consumers for baked beans, 75,847 by

1594 consumers for cookies, 21,400 by 895 consumers for fruit juice, and 30,906 by

1354 consumers for yellow fats.

Results and Discussion

       The values of MKQ varied from .00 to 2.96 across all brands in all four product

categories. For all products, maximum values of MKQ were higher than 2.55. Figure 4

shows market share as a function of MKQ for each product category. As can be seen in

the figure, market shares increased with increases in MKQ for all product categories.

Figure 5 shows market share as a function of average brand price for each product

category. Visually, for only two products, cookies and fruit juice, market shares seem to

have decreased with increases in average brand price, although such decreases were

accompanied by high levels of variability.

       As in Study 1, multiple regression analyses of market share as a function of

MKQ and average brand prices were calculated for each product category with the

purpose of testing if such apparent changes were statistically significant. Table 2 shows

the obtained parameters. Values of r^2 varied from .219 to .450. Values of b_{MKQ} were all

positive and were significant (.05) for all products, showing that market share increased

significantly with increases in *MKQ*. Values of b_{MKQ} ranged from .75 to 5.00 indicating

that the influence of consumer-based brand equity upon brand performance differed

reasonably across products. The values of b_{price} were negative for three products but were not statistically significant, suggesting that changes in prices were not significantly related to changes in market share (at least not linearly).

These results indicate that increases in market share were significantly related to increases in MKQ and not to price, which suggest that increases in MKQ may be associated with positively accelerated increases in brand revenue. As in Study 1, the goodness of fitness of different equations was examined with the purpose of testing this. However, because in Study 2 *MKQ* for some brands in each product category was equal to zero, the power function was not used. So, only linear and exponential equations were used, where revenue was a function of *MKQ*. Although both equations showed statistically significant fit for all products, r^2 for all products was higher for the exponential function, confirming the suggestion that increases in MKQ were related to positively accelerated increases in brand revenue.

GENERAL DISCUSSION

The purpose of the present paper is to examine if the relations between consumer-based brand equity and measures of brand performance are dependent upon the product category. In order to do this, these relations were examined in eleven different product categories of supermarket products in Brazil and in four in the UK. This research question was inspired by a behavioral framework that emphasizes the possible influence of contextual and situational variables. The approach may complement more typical cognitive models that attempt to identify possible relations among cognitive constructs, independently of the context where behavior takes place. The measures of consumer brand-equity and brand performance were obtained from different samples of consumers. This procedure prevents possible correlations stemming

from investigating the same consumers at two different moments and makes the methodology and results applicable to existing markets. Consumer-based brand equity was assessed with the use of a simple questionnaire that asked consumers to rate brands according to how well they were known and their level of quality. This kind of measure is consistent with a behavioral interpretation, according to which consumer-based brand equity, particularly in the case of frequently purchased packaged products, is akin to informational or social reinforcement, such as status and positive feedback, derived from purchasing products and services. Higher levels of social reinforcement would be programmed for buying brands that are well known by other consumers in general and considered by them to have high quality. But the effect of social reinforcement will depend on the context, the consumer-setting (where consumption-related behavior occurs). Therefore, even if the consumers can identify potential sources of social reinforcement, depending on the context this may have little effect.

Results showed that for all products (except perhaps for black beans) the measure of brand equity varied considerably across brands, indicating that they differed with respect to how consumers evaluated how well-known they are and their level of quality. Despite this variation, brand performance measures did not change similarly across products. Increases in market share were significantly associated to increases in consumer-brand equity for eleven, out of fifteen, product categories and to decreases in average brand price for only two products. For four product categories, market share was not significantly related to changes in consumer-brand equity or in price. For eleven products, total brand revenue seemed to be a positively accelerated function of increases in consumer-brand equity.

These results suggest the possibility of using equation coefficients, such as b_{MKQ}, to measure the level of *brandability* of different product categories. Brandability can be

interpreted as how much branding influences consumer behavior and, consequently, brand performance in each product category. This conceptual approach may substitute the general dichotomous division of products into simple commodities or branded goods for a continuous dimension of brandability, which could be assessed for each product category. Rather than asking whether a product category is *brandable* or not, the question would be how much the product is brandable. Comparing the products investigated here, it is apparent, for example, that instant chocolate and fabric conditioner are much more brandable in Brazil than black beans and cookies, whereas cookies are less brandable than baked beans in the UK.

Taken together, such results demonstrate that the relations between consumer-based brand equity and brand performance depend upon the context in which they occur. This corroborates the argument in favor of emphasizing the influence of situational variables, locating behavior in space and time, in consumer research, as expounded by a behavioral interpretation (cf. Foxall, 1997).This interpretation is not incompatible with more typical cognitive ones (e.g., Aaker, 1996; Keller, 1993; Netemeyer et al., 2004), but differs from those with respect to the level of analysis of the phenomena. In the typical cognitive approach, the main question of interest is to identify which of several consumer responses to a questionnaire are correlated to the same consumer's intention to buy or buying behavior. The hope is to identify a psychological construct that predicts and explains consumers' response (intention or behavior) to a brand, which, almost independently of context, will work. Asking the questions to the same consumers may suggest that if they know and think highly about the brand, then they will buy it. The present research demonstrates that this is not necessarily so, for it would depend upon the context. The main context for branding is the product category itself, where although some brands may be better known and

perceived as having higher quality than others, consumers may not buy it more. In other words, the cognitive explanation can tell you that if the consumer knows the brand, thinks highly of it, and so on, he or she is more likely to buy it. But it cannot tell you when this will happen. The behavioral approach presented here shows how one can identify when these relations will hold.

The results also illustrate how the BPM can provide a theoretically consistent interpretation of branding, associated with informational, social reinforcement. The proposed measure, based on a very simple questionnaire, can be used to probe programmed social contingencies of reinforcement by asking consumers in general to rate the brands, in a given market. The measure, although quite simple, is closely related to dimensions often cited in the literature which take into account knowledge and quality of the brand. Despite the fact that these two measures were highly correlated in the present paper ($r = .95$, $p < .000$, in Study 1), it would be interesting to keep both of them to avoid such rare, but real, cases where a brand becomes well known despite its low quality level, as it might happen with popularly positioned brands or brands that have been exposed to strong negative advertisement.

Methodologically, the two studies reported here are complementary. Whereas Study 1 used reasonably large samples to measure brand equity but relatively small samples for brand performance measures, Study 2 used relatively small samples to measure brand equity but large samples for brand performance. Despite these methodological differences and the analysis of data from two countries, overall results were similar, suggesting that the findings are replicable. These similar results in combination with the high measurement reliability observed in Study 2 recommend the use of small groups of "experts" to measure brand equity rather than the survey adopted

in Study 1. The procedure is much cheaper and more agile, requiring one fifth or less of the total number of consumers used in the survey procedure.

Some managerial implications can be derived from the present results. First of all, it is clear that it may not be worth investing in branding in certain product categories, for they behave as simple commodities. This was undoubtedly the case for black beans, sweet corn, and soybean oil, where despite reasonable variation in consumer-based brand equity, they were not significantly related to increases in brand market share or revenue. In the case of washing powder, although there was no significant association between market share and brand equity, brand revenue increased exponentially, and significantly, as a function of brand equity. According to the present approach, investors and managers could determine the brandability of different markets. They could calculate how much increase in market share can be expected with increases in consumer-brand equity and how much decrease in market share can be expected with increases in price. This can be done by examining the b_{MKQ} coefficients. In the case of coffee, for example, the results indicate that each unity of increase in MKQ is associated to an increase of 11.45 per cent in market share, assuming that the relation is linear. This type of information can be valuable to brand managers in planning investments in promotions, pricing, and other strategies. If managers can estimate how much spending is needed to increase brand equity and know how much market increases with brand equity, they can decide whether the expected increased revenue compensates possible product investments.

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Table 1. Linear multiple regression parameters of market share as a function of *MKQ* and average brand price for each product in Study 1.

Product	R^2	a	b_{MKQ}	S.E.	p	b_{price}	S.E.	p
Coffee	.597	9.98	11.45	2.61	<.000	-22.15	16.87	.208
Margarine	.422	8.16	7.05	2.31	.009	-24.02	18.19	.209
Wash. powder	.209	-1.15	6.55	4.84	.199	-.672	41.63	.987
Inst. chocolate	.785	29.25	20.87	4.94	.008	-62.26	35.84	.143
Fabric cond.	.834	32.69	15.71	2.44	<.000	-255.14	61.66	.003
Wash. liquid	.545	12.16	12.57	4.66	.031	-202.38	217.76	.384
Black beans	.358	21.19	14.96	7.56	.079	-122.67	55.70	.055
Sweet corn	.068	10.19	3.27	6.15	.609	-6.06	13.33	.661
Soybean oil	.359	-.014	8.13	3.74	.058	.131	30.24	.997
Mayonnaise	.671	-24.53	10.79	3.06	.005	33.84	18.42	.096
Cookies	.413	5.22	1.82	.68	.014	-3.12	1.10	.010

Table 2. Linear multiple regression parameters of market share as a function of *MKQ* and average brand price for each product in Study 2.

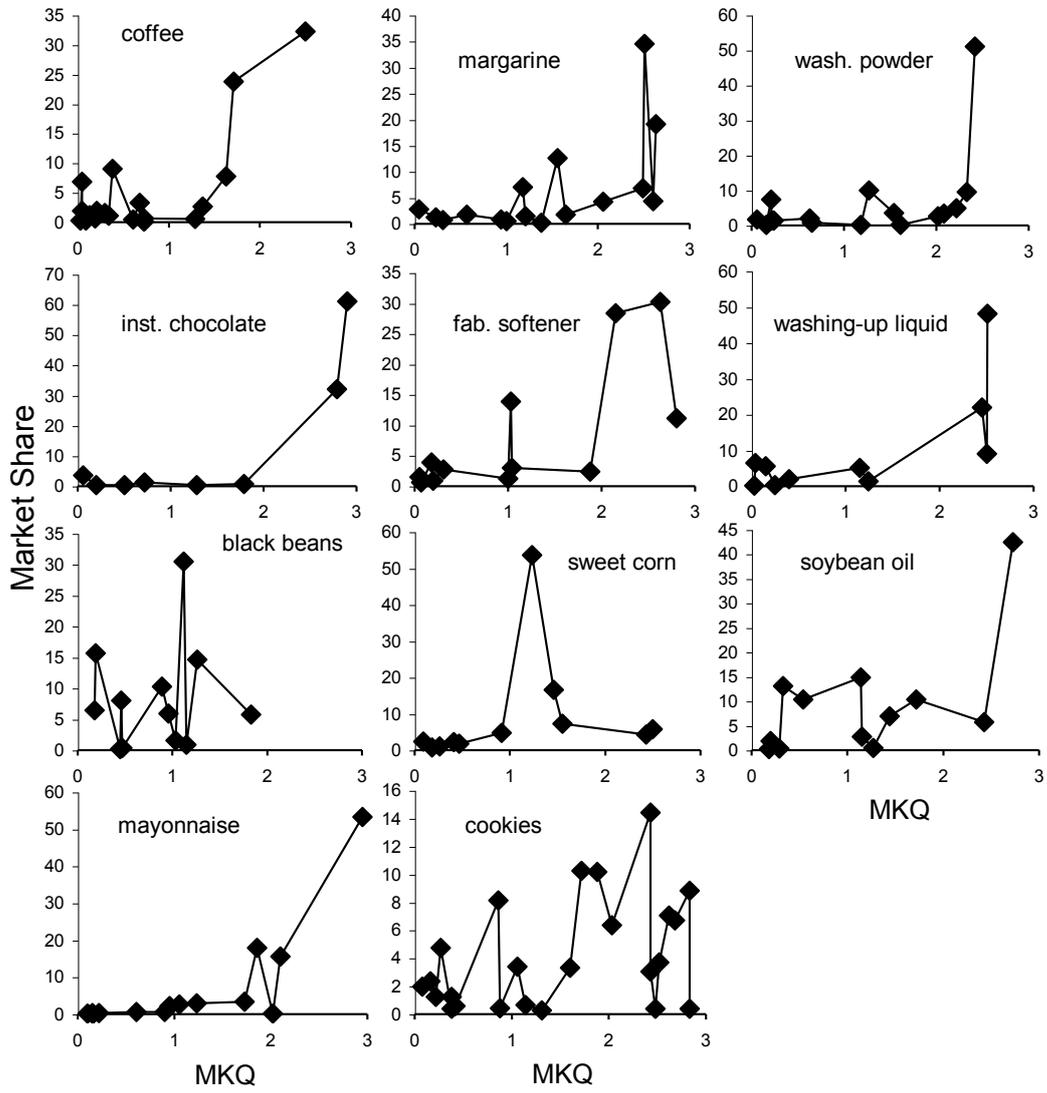| Product	R^2	a	b_{MKQ}	S.E.	p	b_{price}	S.E.	p
Baked beans	.397	-1.31	4.73	1.02	< .000	-6.42	21.32	.765
Cookies	.211	.01	.72	.08	< .000	-.22	1.34	.110
Fruit juice	.196	.21	1.60	.35	< .000	-1.56	1.44	.282
Yellow fats	.379	-.15	2.32	.32	< .000	-1.74	1.34	.199

Figure 1. Schematic representation of the Behavioral Perspective Model (BPM).
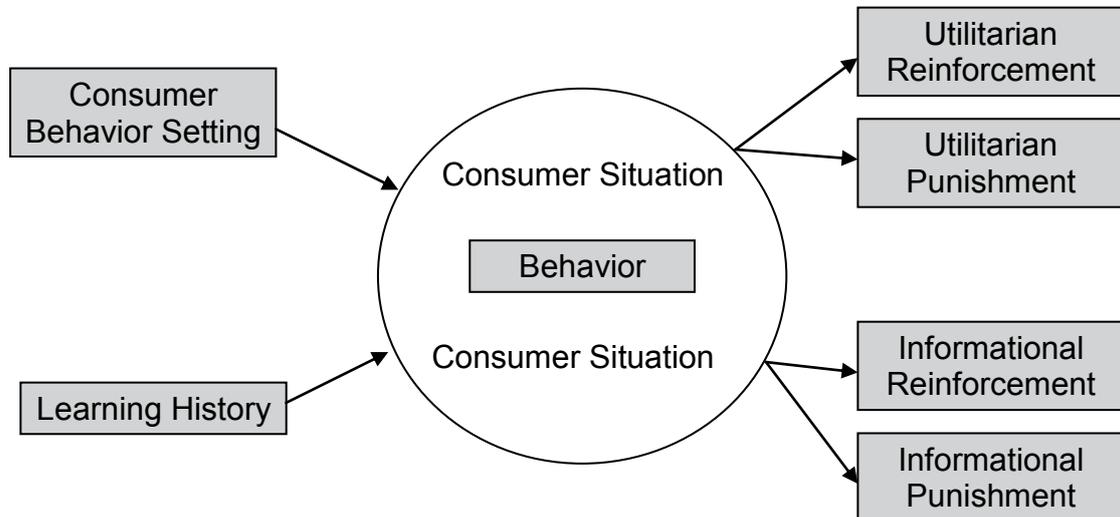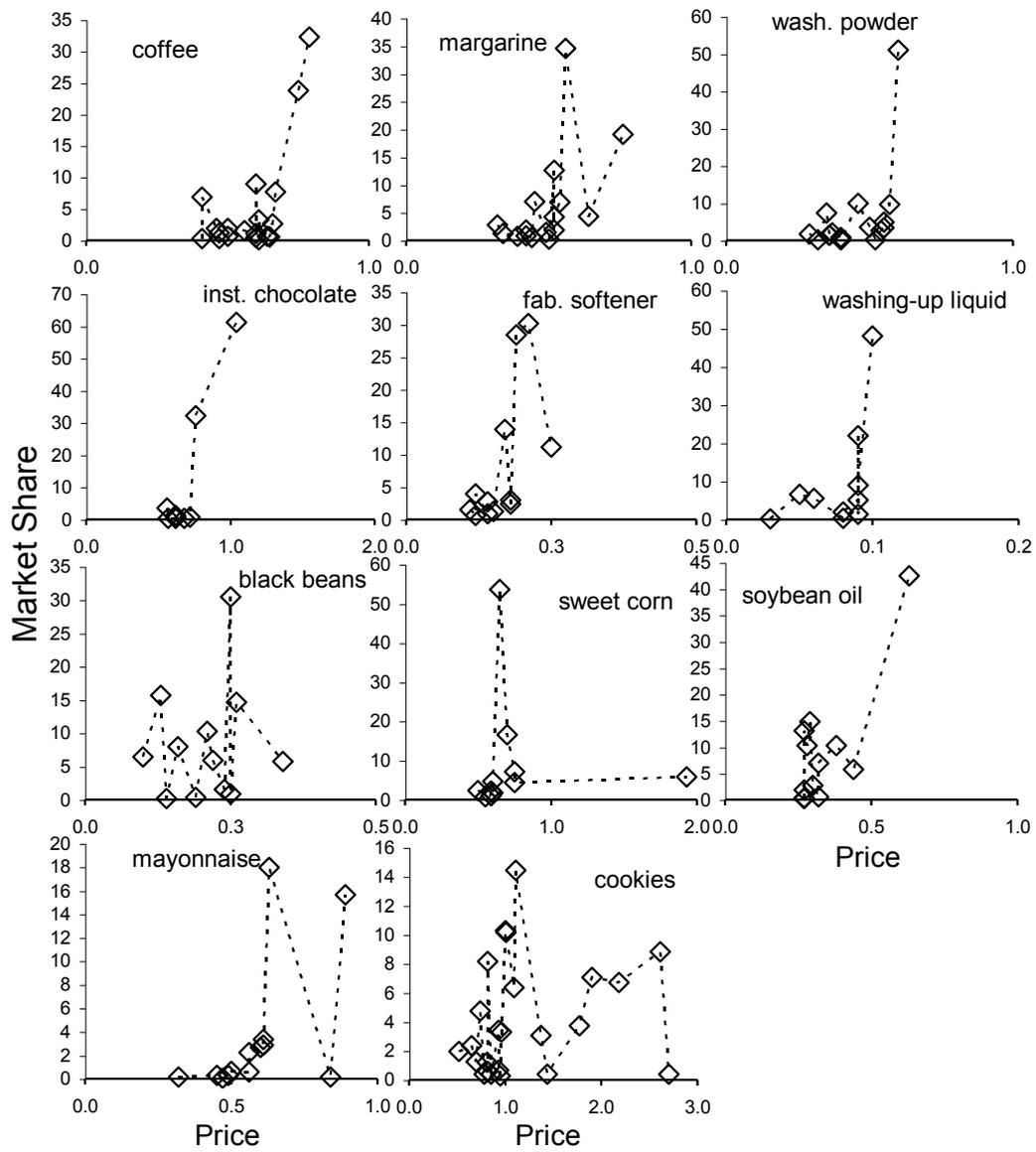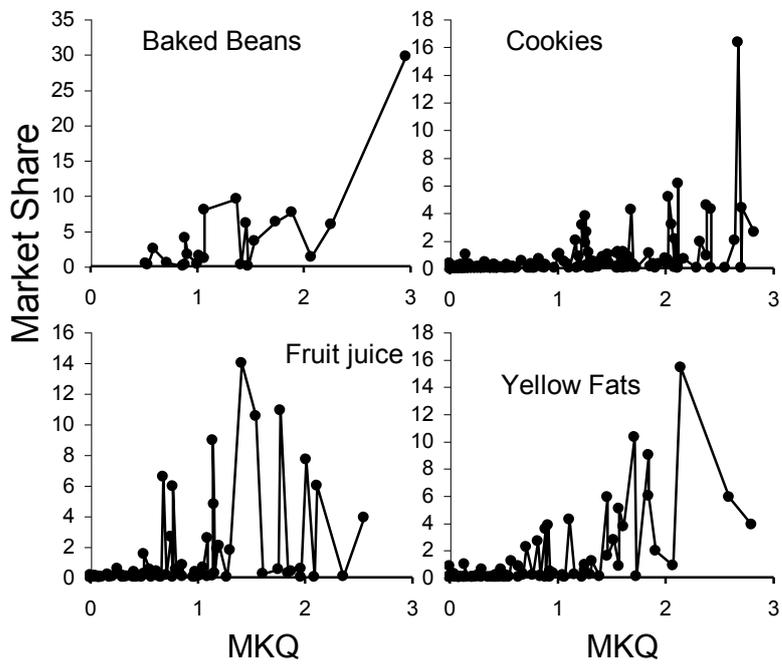
Figure 2

Figure 3

Figure 4

Figure 5