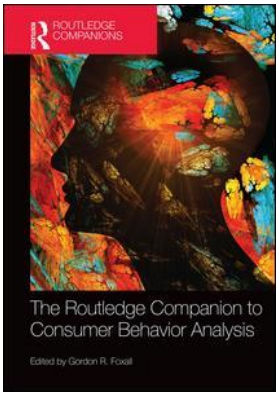

The Routledge Companion to Consumer Behavior Analysis

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Consumer purchase and brand performance

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Consumer purchase and brand performance

The basis of brand market structure

Rafael Barreiros Porto and Jorge M. Oliveira-Castro

Introduction

As an aggregated indicator of brand performance, market share lacks an explanation of why it occurs and how it is built in everyday sales. In a broad outlook, some brands have a high market share while others do not (Ehrenberg et al., 2004; Habel & Lockshin, 2013; Uncles et al., 1995). However, in a day-by-day analysis, the behavior of market share is far more dynamic.

Retail stores usually sell and stimulate many brands of the same product, but not all of them have major efforts all of the time. This can lead to different daily sales per brand. Consequently, even smaller brands can have a high market share depending on what occurs in everyday sales in the store. The daily market share predictors are still unknown, but have a lot in common with consumer purchases (Baumgartner, 2013), predictors of consumer purchase (Foxall, 2005; Gabaix et al., 2006; Rao, 1973), brand equity (Agarwal & Rao, 1996; Netemeyer et al., 2004; Washburn & Plank, 2002) and marketing strategies (Ataman et al., 2010) to stimulate brand sales. Testing in what circumstances this phenomenon can be estimated, taking a behavioral economic approach to explain the relations, is the main objective of this chapter.

Consumers usually buy brands that offer greater utilitarian and informational reinforcements (Foxall & James, 2003; Foxall et al., 2010). This can lead to different levels of consequences: (1) consumers may meliorate or maximize their own purchase performance, gaining benefits attached to "richer" brands and (2) brands, which attract more consumers, are the best market performers – most sold (Ehrenberg et al., 2004). These consequences allow for the supposition that there are some antecedents in common between the consumer level of analysis and the brand level of analysis.

Study 1 empirically tested the first level of analysis; that is, what kinds of manageable and unmanageable antecedents of purchase are predictors of consumer purchase, taking into consideration the utilitarian and informational consequences attached to brands. Study 2 tested the second level of analysis and proposed to determine if brand past attractiveness (aggregated data of consumers' learning history) and brand manageability (aggregated data of marketing activities) predict the daily market share of brands at classes of reinforcements magnitudes. These classes are dimensions of brand market structure, a term originated in economics to represent the concentration of markets on a firm or industrial level (Shaked & Sutton, 1990) and adjusted to a brand level of analysis in this chapter.

In general, Study 1 and 2 examined: (1) how a behavioral model can explain the consequences of brand purchases; (2) how these consequences may be used to describe (or analyze) brand market structure; and (3) what are the forecasters of daily market share for brands that offer a similar magnitude of reinforcements. By doing this, an empirical model able to bridge individual levels of analysis (consumer purchase) and brand-level analysis (brand performance) could explain the influence of brand attractiveness (Barnett, 1976; Bell et al., 1975) and marketing activities (Stewart, 2009; Hanssens & Dekimpe, 2012) in market structures (Shaked & Sutton, 1990; Urban et al., 1984).

The fundamental basis of market share: consumer brand purchases

Modeling market share has been a traditional area of research in marketing (Bell et al., 1975; Buzzell, 1964; Naert & Bultez, 1973; Weiss, 1968). This has been studied on an industry level (Sutton, 2007) and product/service level (Ehrenberg et al., 2004) and has implications about brand performance (Keller & Lehmann, 2006). As one of the indicators of marketing efforts (Cooper & Nakanishi, 1988; Fok et al., 2014), market share ignites the debate about whether it can be linearly normalized (Barnett, 1976), empirically tested (Chatfield, 1976), if it has a long-term effect (Golder, 2000), and if a disaggregate approach can be used to estimate segment response (DeSarbo et al., 2002). Specifically, segment responses depend on defining the correct competitive structure within which a brand competes (Urban et al., 1984). This means that brands may compete with those that are close competitors, but defining these competitors has been difficult. One possible way to answer this question is to have a comprehensive empirical model able to bridge the level of purchase antecedents/consequences and, at the same time, take these variables to a higher level (competitive structure of brands).

A major problem in aggregate-level models is that sample heterogeneity masks the real effect of marketing efforts (DeSarbo et al., 2002). For example, in one segment, price is a sign of quality, which increases its market share; in another segment, it is the lower price that increases market share. This appears to be partially disentangled when this market is broken down into sub-markets (e.g., attributes, use-situations or user characteristics) and different price strategies are investigated (e.g., promotional price, premium price and so on). However, this method does not consider how purchasers are benefiting from buying that particular brand (Foxall, 2005); that is to say, it does not take into consideration the real dimensions of brand market structure that are based on consumer brand response and its consequences programmed to be delivered by brands.

Identifying increases in market share for smaller brands is another subject of concern in the marketing literature and a somewhat difficult issue, since there are few brands of the same product that have a high market share (Ehrenberg et al., 2004). One way to work with this is by discovering the origins of market share (Ivanova, 2007), at a consumer level. Marketing activities (and other consumer variables) should greatly influence the purchase of some brands (though less so for others) in a store. This purchase can concomitantly lead to a rise in daily brand share. If this occurs, even small brands can have a high market share on a certain day, because their forecasters may have been stronger and attract more consumers while those of the leading brand have been weaker, keeping away potential buyers. Then, the first step should be to uncover consumer purchases.

Brand reinforcements as consequences of purchases

The learning literature suggests that purchases in a store can be explained from a behavioral perspective (Nord & Peter, 1980). The Behavioral Perspective Model (BPM) (Foxall, 2004, 2005)

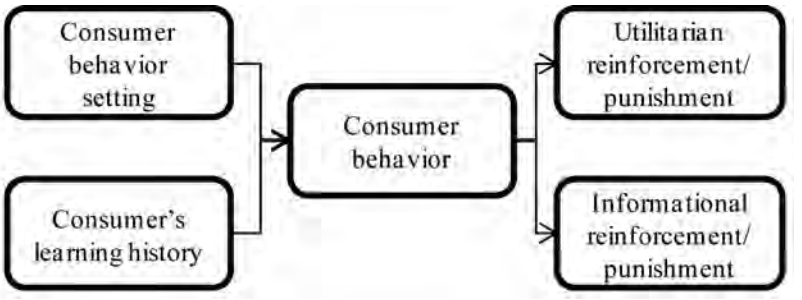

Figure 11.1 Behavioral Perspective Model (Foxall, 2004)

has been supported by empirical evidence (Foxall & Greenley, 2000; Oliveira-Castro et al., 2005; Oliveira-Castro et al., 2006; Oliveira-Castro et al., 2008) and is a good way of explaining the consequences of brand choices (Foxall et al., 2007; Cavalcanti et al., 2013). According to the BPM (Figure 11.1), consumer purchase has antecedents (consumers' learning histories and consumer behavior settings) and consequences (utilitarian and informational reinforcements/ punishments).

The consumer's learning history is the experience a consumer has before encountering the current behavior setting (Foxall, 2004). These experiences enable consumers to predict the likely consequences of a person's behavior in a certain situation. Consumer behavior setting is the social, temporal, regulatory and physical environments in which the consumer is exposed, signaling a choice situation (Foxall, 2004). In the case of brand choice, the consumer setting signals which brand has the greatest probability of delivering certain combinations of consequences at each moment of choice.

Brand utilitarian reinforcement refers to the direct and functional benefits that the purchase or consumption of a product (or service) delivers (Foxall et al., 2007). These are benefits mediated by a product or service. In brand choices, these reinforcers are contingencies programmed by the manufacturer, such as the main functions of a given brand attribute (e.g., cleaning white clothes). They have been measured by an enforced ranking system (Foxall et al., 2004), which takes into account added attributes in the formulation of a product (e.g., baked beans with or without sausage) or a more sophisticated formulation of a product (e.g., plain sweet cookies *vs.* chocolate-chip cookies) (see the method section in Study 1).

Brand informational reinforcements are symbolic benefits offered by products and services, such as social status, exclusivity, and self-esteem. These consequences are mediated by other people and function as feedback for the consumer, showing how well he or she is performing (Oliveira-Castro et al., 2008). It can be measured in multiple ways, but Oliveira-Castro et al. (2008) used a questionnaire, with brand ratings for every category of product. This contains a listing of all the brands found in the supermarkets investigated during the period of the research. For each brand listed, consumers were asked the following two questions: (1) is the brand well known? (0 – not known at all; 1 – known very little; 2 – quite well known; 3 – very well known); and (2) what is the quality magnitude of the brand? (1 – low quality; 2 – medium quality; 3 – high quality). To obtain a score for each brand, the authors calculated the mean score for knowledge and quality (MKQ) for each brand.

Brand utilitarian punishments are aversive functional consequences, such as spending time and money. Brand informational punishment occurs when third parties do not approve or are critical of what the consumer has purchased, which can function as negative feedback (Foxall,

2005; Oliveira-Castro et al., 2008). As these last two consequences are not the focus of the present research, they are only briefly explained.

All products or services vary in the degree of utilitarian/informational reinforcement/punishment from one product to another and from one situation to another (Foxall, 2004). According to the model, whenever a consumer buys a specific brand, it delivers a certain magnitude of utilitarian and informational reinforcements. Therefore, if several consumers buy a specific brand, this will deliver the same benefits to each one of them. Such brand purchases may bring together persons from very diverse backgrounds, who are all responsive to that particular brand's stimuli, irrespective of its characteristics or where it was purchased. Thus, it seems reasonable to compare the performance of brands that offer the same kind of reinforcement to consumers, which are associated with increases in their purchases.

Taking the antecedents and the consequences of brand purchases to a higher level

Measuring brand reinforcements makes it possible to rise from one level (consumer brand purchase) to another (brand performance). A brand may reinforce a behavior, delivering a social and a functional benefit, and, at the same time, all brands offering similar magnitude of consequences are competitors. Thus, a brand market structure can be empirically tested by examining, at the individual level, whether consumers purchase brands that have similar/different reinforcements and, at the brand level, whether these brands compete to generate more sales. This is operationalized by revealing if what influences brand purchase (Baumgartner, 2013) also influences brand performance – brand market share (Cooper & Nakanishi, 1988). If this is so, the antecedents of consumer purchases should be similar to the ones of brand market share.

Unfortunately, this relation is not yet well established. At the individual level, some studies serve as the building blocks. Generic purchase tendencies such as the product purchase frequency, time elapsed since last purchase occasion, and making a shopping list have been used as independent variables in some studies to predict subsequent purchase (Ehrenberg & Goodhardt, 1970; Ehrenberg et al., 2004; Kim & Rossi, 1994; Rao, 1973; Thomas & Garlant, 2004; Vilcassim & Jain, 1991). Other studies have investigated aspects of consumers' history with certain brands, such as the tendency to buy the same brand constantly (habit), and consumers' prior experiences with a brand (Bridges et al., 2006; Foxall, 2005; Neal et al., 2006). Moreover, intention and last brand purchased are also topics very well documented in the literature as predictors of subsequent brand purchase (Kahn & Louie, 1990; Morwitz et al., 2007; Warshaw, 1980).

All these predictors might be classified as being traditional because there are many studies in consumer behavior that have already tested their impact on consumer purchase. If these are good predictors of purchase, it means that consumer buying behavior may be related to the store situation (brand marketing activities prepared by the retailer), to generic tendencies of buying behavior (product purchase frequency, time elapsed since last purchase occasion, and doing a shopping list of products), and to their personal history with the brand (habit of buying the same brand, being a first-time buyer, having an intention to buy a specific brand and so on).

However, such antecedents have been studied without considering previous reinforcements of buying a brand (Foxall et al., 2010), which have usually been omitted in the equations of brand purchase. This has blocked the knowledge coming from behavioral consequences in empirical models and precluded highlighting possible causes derived from them. Study 1 of the present chapter overcomes these problems, showing the impact of manageable predictors (brand marketing activities) and unmanageable predictors (generic purchase tendencies,

consumer brand history, and behavioral tendencies towards brands with different magnitude of reinforcements) on the purchase of brands which lead to different utilitarian and informational reinforcements.

If consumers benefit from purchasing brands, at the brand performance level of analysis, those that offer the same types of reinforcements are close substitutes. The same reinforcers have the common function of reinforcing the brand purchase of a class to which the brand pertains (Foxall et al., 2010). Cuvo (2000) argues that the concept of "consequence class" provides a means to integrate data and theory from behavioral economics, discussing functional similarities and dissimilarities among products. Products are substitutes if they share common consequences to consumers. Two of the main dimensions that affect the number of substitutes a good has and its demand elasticity are the degree of specificity of the definition of goods, such as beverages (functionally equivalent members) or juices (subclass of functionally equivalent members), and the degree to which a good is a necessity (primary reinforcer) or a luxury (secondary reinforcer).

The first dimension is concerned with a general/restricted set of properties and the transfer functions among the members of a class (Cuvo, 2000). All beverages could quench thirst (general consequence property) and only specific types of beverage (restricted consequences properties) are the best to hydrate (e.g., plain drinkable water). By contrast, the transfer of functions occurs when the consequences spread to other members of the same class that are not recipients of the purchase operations. Thus, perfect substitutes, such as two brands of drinkable water, have many transfers of functions while imperfect substitutes, such as one brand of sparkling water and another of orange juice, have fewer. The specificity of a good generally is concerned with the utilitarian reinforcements, but can plausibly be applied to informational reinforcements. Nevertheless, it is more difficult to transfer socially mediated consequences for they deal with feedback performance to the consumer, which is usually less controllable by managers and manufacturers.

The second dimension regards the effectiveness of the relations between purchase/reinforcement and the dependency of the reinforcers (Cuvo, 2000). When this effectiveness is independent of another reinforcer, such as drinking water, which is a reinforcer to everyone as it meets biological needs, it is a primary reinforcer. When the effectiveness depends on another reinforcer, besides the primary reinforcer, such as drinking bottled water, which has branding attributes (Foxall, 2004; Alhadeff, 1982), it is a secondary reinforcer. Therefore, the specificity of the goods and their degree of primary or secondary reinforcers could disentangle the problems of classifying the brands and pave the way to uncover the brand market structure.

Beneath the same consequence class, the predictors affect brands' shares. These could be from two types, one manageable (stimulus control – Vella & Foxall, 2011) and the other unmanageable (consumer's learning history – Foxall, 2004). Since market share indicators deal with aggregate data of quantity purchased (Nair et al., 2005), the aggregated purchases predictors should also be derived from the brand-level performance to explain why some brands, occasionally, achieve more market share than others on a daily basis. The aggregation from consumer level means that these individual variables must be transformed to represent brand level. Usually, they are aggregated by averaging or summing up the original variable (Bolger et al., 2003). Thus, the aggregation reduces individual differences, but disentangles problems of a confounding level of analysis (Lincoln & Zeitz, 1980).

As this technique mischaracterizes the original variables, they should be named differently. For instance, what managers do about brands (stimulus control) could be named brand manageability, since brands are managed in ways that could be effective or not in generating purchases (Foxall, 1999). What consumers have experienced or have tendencies to do in relation to brands could be named brand past attractiveness, considering that brands that have histories with consumers have attracted them someday and somehow (Foxall, 1999).

Taking a standpoint of economic business (Villas-Boas, 2007), brands belong to manufacturers and are retailed to consumers. In a product category, usually, one is a pioneer in the market (Lieberman & Montgomery, 2012), some are first followers and others are later followers (Shankar & Carpenter, 2012). Therefore, the success of what managers do to a brand depends on investments and activities that modify consumer purchases over time (Stewart, 2009). For example, some brands are not able to have "everyday lowest price" or "everyday advertising" or even "everyday highest exposure" because they require, simultaneously, high resource investment and profitability. However, other brands have these abilities for long periods. So, brand manageability is expanded by some organizational conditions (Ambrosini & Bowman, 2009; Zollo & Winter, 2002) which encourage managers to implement dynamic marketing activities (Hanssens & Dekimpe, 2012) by learning mechanisms. A challenge facing firms is how to configure their offerings to deliver superior brand performance output (Cui et al., 2014). Revealing how brand manageability is a driver of brand performance may help identify the basis of brand market structure.

Brand past attractiveness may stem from inclination, tendency, inducement or seduction that a brand has already achieved through time. A brand may appear very attractive if there are many consumers frequently buying it. The attraction of many consumers (Chatterjee et al., 2011; Spiteri & Johnson, 2011) may turn out to be a strong social sign that some people are getting something (informational reinforcement – Foxall, 2004) in buying/having the products. It could generate, under some circumstances, general behaviors like "I want it too" at the individual level of analysis or "herd behavior" at the aggregate level of analysis (Hanson & Putler, 1996; Rook, 2006). However, because it has the propensity to generate "crowds", this could also be aversive in some sense (Foxall, 2004), inhibiting or restraining future attractiveness. Study 2 focuses on brand-level analysis and shows how brand manageability and brand past attractiveness influence market share, using a behavioral economic approach by grouping brands that offer a similar magnitude of reinforcements, which is a way of describing market structure (Urban et al., 1984).

Overall, the current state of the research suggests that links can be made across measures belonging to different levels of analysis, examining consumer purchase and brand performance simultaneously by testing possible forecasters of purchase and daily market shares. To do this, an in-store experiment was conducted, in which all these variables were measured, with the perspective of searching for antecedent-behavior-consequence relations.

Study 1: Effect of manageable and unmanageable antecedents on consumer purchase that lead to a different magnitude of brand reinforcements

Study 1 (Figure 11.2) aims to investigate the impact of manageable (consumer behavior setting) and unmanageable (consumer's learning history) antecedents on purchases that lead to different magnitude of brand reinforcements. Foxall (2005) suggests that the consumer's learning history (past exposure to contingencies of reinforcements) could mean any variable that shows the consumer's behavioral tendencies in subsequent situations. If they are good predictors of purchase, it means that consumers are responsive to long and/or recent learning histories provided by the brand and category. If, alternatively, manageable activities are good predictors, this means that the management of the consumer setting is central to generate brand purchases.

Since consumers could purchase any brand within a given product category, these were classified according to the magnitude of their programmed reinforcements. Thus, consumers that buy brands with a different magnitude of reinforcements have different behavioral patterns.

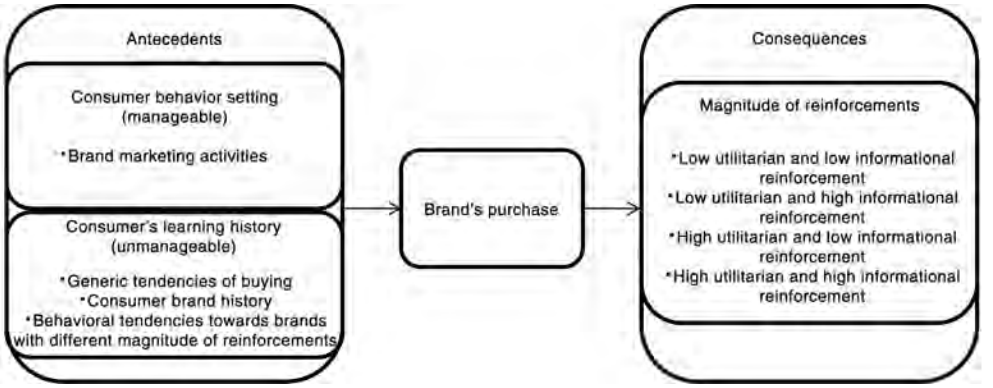

Figure 11.2 Empirical model of antecedents and consequences of brand purchase

Foxall (2010) shows these patterns are operant classes of consumer behavior such as: accomplishment (high utilitarian and high informational reinforcements), hedonism (high utilitarian and low informational reinforcements), accumulation (low utilitarian and high informational reinforcements) and maintenance (low utilitarian and low informational reinforcements). Following the same reasoning, consumers who buy at the same magnitude of reinforcement have a similar pattern. This study tries to test these possibilities when consumers purchase brands.

As the samples of this research are made up of cosmetics and treats, those with higher levels of programmed reinforcement are better suited to delivering a variety of aesthetic pleasure, delicious taste, body enhancement and sensations of wellbeing (utilitarian reinforcements). They also allow the sharing of the purchases with friends and family, with a strong possibility of receiving compliments for the brand acquired (informational reinforcements).

Method

This study was designed experimentally and used a mixed method of retail auditing, survey and purchase observation over a nine-week period in a large discount store in Brazil. This store was chosen because of its very high number of consumers and because it changes the brand's marketing activities almost daily.

Retail auditing allowed us to map the marketing activities for each brand as elaborated by the retailer, which included the day-to-day prices for all brands within a range of four products (hair dyes, body moisturizers, cereal bars, and boxes of chocolate); the presence (or absence) of brand advertising in a fortnightly promotional leaflet; shelf space for each brand and the location of each shelf; the use of promotional gifts associated with each brand and each brand's attributes – used to classify the programmed utilitarian reinforcements, according to the method used by Foxall et al. (2004). Brands were classified into two programmed utilitarian reinforcement magnitudes: (1) low utilitarian benefit magnitude, which are basic versions of the products, without differentials or with few attributes; and (2) high utilitarian benefit magnitude, which are more sophisticated versions of the products – those with differentials or with several attributes.

The following procedure was used to collect consumer data: (1) research assistants approached the consumers at the entrance of the store; (2) they applied Survey 1 appraising consumer learning history; (3) consumers were given a token code after completing the questionnaire so that the researchers could later observe their purchases; (4) the consumers entered the store and made

their purchases; (5) research assistants collected the token that had been given to consumers and asked to see the product, the brand, and the number of items purchased; and (6) research assistants applied Survey 2 to other consumers assessing the measure of knowledge and quality (MKQ) of each brand purchased.

Survey 1 encompassed the four products investigated and was applied to consumers at the entrance of the store. It assessed the last brand purchased, the intention to buy brands, the consumer's habit, product purchase frequency, time elapsed since last purchase, and if consumers had brought a shopping list.

Observations of the purchases were operationalized by requesting the purchase receipt from each consumer that held a token code. Researchers took note of the product type, the brand name, the brand version and the quantity purchased.

To map the programmed informational reinforcements, Survey 2 was applied to 100 consumers not included in the purchasing section of the research, during the same period that the consumer data occurred. This was based on a four-point scale appraisal of the magnitude of brand familiarity as well as a further three-point scale used to appraise the perceived magnitude of brand quality, a procedure adapted from Oliveira-Castro et al. (2008). A statistical test was conducted to verify the brand ratings at two informational magnitudes: (1) low informational benefit magnitude, with lesser-known brands and those perceived as being of low quality, and (2) a high informational benefit magnitude, with well-known brands and those perceived as being of high quality. An analysis of variance (brands as the independent variable and MKQ as the dependent variable) showed a significant effect ($p < .01$), demonstrating that the two brand groups were perceived to be different from one another in each product category.

To avoid possible spurious results, another simultaneous experiment was conducted to investigate whether the application of the questionnaire (Survey 1) could have influenced the purchase of brands at different reinforcement magnitudes. The tests were two vs. four factorials, with 102 in the experimental and 102 in the control group. The contingency coefficient based on chi square showed that there was no effect (CC = .16; $p > .05$). Thus, the relation between the variables is probably due to chance. That is, full implementation of the questionnaire did not influence the consumer to change his or her brand choice.

The sampling of 364 consumers made it possible to achieve a total power of 98.9% (with an error probability equal to 5%) using the logistic regression test. In addition, we alternated the order of products researched in Survey 1, representing a random sampling. Thus, the internal and external validity of the experiment could be attained with reasonable certainty.

The authors used a hierarchical multinomial logit regression in Study 1, with the dependent variable representing purchases leading to four programmed reinforcement categories: low informational and low utilitarian consequence, high informational and low utilitarian consequence, low informational and high utilitarian consequence and high informational and high utilitarian consequence. All metrics of the variables, their means and standard deviation or percentages are shown in Table 11.1. Variables one to five represent the brand marketing activities, variables six to eight represent the generic tendencies of buying, variables nine to ten represent the consumer brand history, variables eleven to fourteen represent the behavioral tendencies towards brands with different magnitudes of reinforcement, and variables fifteen to sixteen represent the dependent variables.

As a whole, the brands purchased were priced at a slightly lower level, had a premium price, occupied more shelf space, had slight advertising exposure and had an associated gift offer. Most purchasers stated that they usually buy the product only once a month, go into the store every four weeks, rarely bring a shopping list, are usually in the habit of buying a brand and they had already tried the purchased brand. The consumer usually intends to buy brands that offer high

Table 11.1 Descriptive data of brand purchase with different brand reinforcements and its antecedents

N.	*Variables*	*Metric*	*Mean*	*S.D.*	*%*
1	Promotional price	Daily price of the brand bought relative to its average price during all days	0.97	0.30	
2	Premium price	Average price of the brand bought relative to the average price of the product during all days	1.09	0.45	
3	Shelf space	Daily shelf space of the brand bought relative to its average shelf space during all days	1.64	1.64	
4	Advertising	Presence – or absence – of advertising in fortnightly promotional leaflets for brand purchased			18.2
5	Promotional gift	Presence – or absence – of promotional gifts associated with the brand purchased			21.7
6	Product purchase frequency	How many times the consumer bought the product per month	1.06	1.64	
7	Time elapsed since last purchase	Time elapsed in weeks since last purchase occasion in the store	4.04	6.05	
8	Shopping list	Whether a consumer brings a shopping list to the store			2.9
9	Consumer's habit	If the consumer is in the habit – or otherwise – of buying the same brand before entering the store			81.5
10	First-time purchaser	First-time (versus experienced) brand purchaser			10.2
11	Intention to buy brands with high infor. reinfor.	Intention to buy the brand which offers different magnitude (high vs. low) of informational reinforcements			62.9
12	Intention to buy brands with high utilit. reinfor.	Intention to buy the brand which offers different magnitude (high vs. low) of utilitarian reinforcements			57.6
13	Last brand purchased with high infor. reinfor.	Last brand purchased which offers a different magnitude (high vs. low) of informational reinforcements			61.5
14	Last brand purchased with high utilit. reinfor.	Last brand purchased which offers a different magnitude (high vs. low) of utilitarian reinforcements			54.9
15	Purchase that leads to high infor. reinfor.	Purchasing the brand which offers different magnitude (high vs. low) of informational reinforcements			59.4
16	Purchase that leads to high utilit. reinfor.	Purchasing the brand which offers different magnitude (high vs. low) of utilitarian reinforcements			57.3

informational and utilitarian reinforcements and had previously bought brands that also offered high informational and utilitarian reinforcements. In this research, he or she usually bought brands that led to high informational and utilitarian reinforcements.

A Kruskal-Wallis test (Figure 11.3) shows that there were differences in the amount purchased among the combinations of utilitarian and informational reinforcements ($\chi^2 = 19.5$; $p \leq 0.01$). More purchases led to low utilitarian and high informational reinforcers and to high utilitarian and high informational reinforcers than to the other consequences.

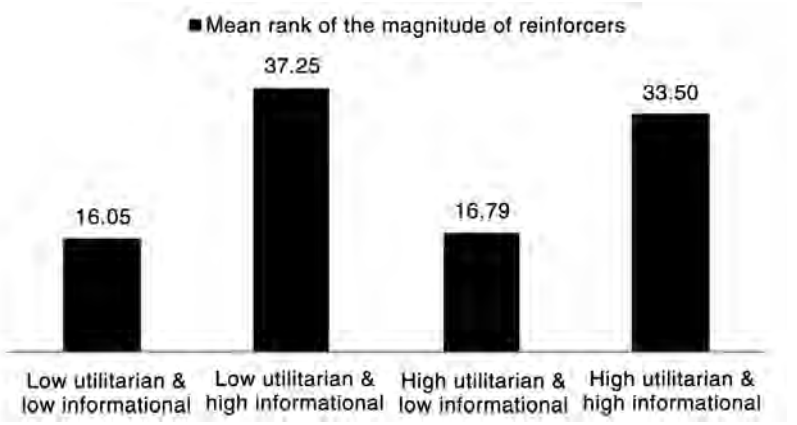

Figure 11.3 Purchases that lead to different magnitude of consequences

Results

The analysis (Table 11.2) shows that the statistic model had a good fit (-2 log likelihood = 225.31; $p < .01$) and a high R^2 Nagelkerke of 89.9%.

Compared to purchases that led to low informational and low utilitarian reinforcements, brand marketing activities and behavioral tendencies towards brands with different magnitudes of reinforcements were good predictors of purchases that led to higher magnitudes of informational reinforcements or utilitarian reinforcements or both. Applying a partial formula of the logistic probability [Probability of purchase = $1/1+ e^{-(\Sigma\beta X)}$], brand marketing activities comprising advertisement, extra gift, average shelf space, average promotional price, and an

Table 11.2 Predictors of purchases that lead to different magnitudes of reinforcements

Magnitude of consequences	*Type of antecedents*	*Predictors*	*Estimates*	*Std. Error*
High Info. and Low Util.[a]	Brand marketing activities	Intercept	–2.52	1.81
		Promotional price	.21	1.71
		Premium price	–1.37	1.52
		Advertising	2.56**	1.64
		Promotional gift	1.03	1.39
		Shelf space	–.29***	.16
	Generic tendencies of buying	Shopping list	18.35***	2.76
		Product purchase frequency	.14	.20
		Time elapsed since last purchase	.15	.13
	Consumer brand history	First-time purchaser	–1.08*	1.68
		Consumer's habit	.76	.79
	Behavioral tendencies towards brands with different magnitudes of reinfor.	Intention to buy brands with high info. reinfor.	3.79***	.84
		Intention to buy brands with high util. reinfor.	–2.28*	1.36
		Last brand purchased with high info. reinfor.	1.07	.73
		Last brand purchased with high util. reinfor.	–1.07	1.16

		Intercept	–34.12	2.22
	Brand marketing activities	Promotional price	–1.88	1.43
		Premium price	.66	1.09
		Advertising	1.64***	1.37
		Promotional gift	.43*	1.59
		Shelf space	–.58***	.31
Low Info. and High Util.[a]	Generic tendencies of buying	Shopping list	16.6***	1.38
		Product purchase frequency	–.13	.30
		Time elapsed since last purchase	.27	.24
	Consumer brand history	First-time purchaser	–2.75**	1.30
		Consumer's habit	1.15**	.97
	Behavioral tendencies towards brands with different magnitudes of reinf.	Intention to buy brands with high info. reinfor.	.75	1.20
		Intention to buy brands with high util. reinfor.	3.44***	1.36
		Last brand purchased with high info. reinfor.	–3.41***	1.25
		Last brand purchased with high util. reinfor.	2.93***	1.17
High Info. and High Util.[a]		Intercept	–1.93	1.56
	Brand marketing activities	Promotional price	–4.01***	1.34
		Premium price	2.36***	.79
		Advertising	2.41**	1.31
		Promotional gift	1.00***	1.52
		Shelf space	–.34	.23
	Generic tendencies of buying	Shopping list	.43	1.65
		Product purchase frequency	.10	.25
		Time elapsed since last purchase	.36	.25
	Consumer brand history	First-time purchaser	–1.77	1.10
		Consumer's habit	1.33	.86
	Behavioral tendencies towards brands with different magnitudes of reinfor.	Intention to buy brands with high info. reinfor.	2.43***	.99
		Intention to buy brands with high util. reinfor.	4.70***	1.26
		Last brand purchased with high info. reinfor.	–.36	.98
		Last brand purchased with high util. reinfor.	1.43	1.11
R^2 Nagelkerke			89.9%	
Total % corrected predicted			85.0%	
–2 Log likelihood %			225.3**	

[a] The reference category is: Low informational and utilitarian magnitude level (Low Info and Low Util)

*$p < .1$, **$p < .05$, ***$p < .01$

average premium price raised the probability to nearly 90.60% of buying brands with a high magnitude of informational reinforcements associated with a low magnitude of utilitarian reinforcement.

Nevertheless, if a consumer arrived at the store with the intention of buying brands with high informational reinforcements and low utilitarian reinforcements, it raised the probability to nearly 95.00% of their buying brands with these programmed benefits. If he or she arrived intending to buy brands that led to high utilitarian reinforcements and had previously bought brands with high utilitarian and informational reinforcements, it raised the chances of buying brands of high utilitarian reinforcements and low informational reinforcements to

about 99.74%. If he or she arrived intending to buy brands which led to high utilitarian and informational reinforcements, it raised the chances of buying brands with these consequences to 99.99%.

Generic tendencies of buying and consumer brand history were also good predictors of purchasing brands but only the ones that led to either high informational reinforcements or high utilitarian reinforcements – not for both. If a consumer brought a shopping list to the store, it raised the likelihood of buying brands that led to high informational reinforcements or high utilitarian reinforcements to 99.99%. Nevertheless, if a consumer purchased the brand for the very first time, the probability of buying brands which led to high informational and low utilitarian reinforcements was 25.35%. Otherwise, if he or she had experience with the brand and was in the habit of buying it, it raised the chance of buying brands that led to high utilitarian and low informational reinforcements to 75.98%.

Discussion

Overall, the results of Study 1 show that consumers' learning history and consumer behavior setting (Foxall, 2004) can greatly alter the probability of purchasing a brand that leads to a different magnitude of programmed reinforcements. That is, by planning events that may stimulate purchases of consumers through marketing activities and considering their experiences, a manager would be able to predict the likelihood of choosing brands in real retail situations.

The results show in general that there are antecedents that stimulate the purchasing of brands associated with higher reinforcement levels, such as advertising, promotional gifts, bringing a shopping list to the store, promotional price, premium price, consumers' habit, experience with brands in the category, intention to buy a brand or having previously bought a brand. But all of these depend upon the contingencies related to the specific choice, especially those concerning brand reinforcement levels.

Thus, consumers face complex chains of programmed reinforcements and new stimuli contexts, but usually obtain higher magnitudes of brand reinforcements (the more rewarding ones – Foxall et al., 2010). This is no coincidence. Retail managers usually create a favorable scenario for some brands but not for others (some brands may even acquire some aversive functions). Besides, the experiences of consumers are not similar among brands (Bridges et al., 2006; Neal et al., 2006). They usually have positive experiences with the ones that offer higher reinforcements, which are the top-selling brands and are widespread (Ehrenberg et al., 2004). In this research, brands with higher reinforcements were better able to deliver a variety of aesthetic pleasures, delicious tastes, body enhancement and sensations of wellbeing, in addition to the possibility of social compliments derived from brand choice. Therefore, there is a context of supply and demand (Vella & Foxall, 2011) favorable for some brands (with higher reinforcements) and unfavorable for others (with lower reinforcements).

The allocation of different magnitudes of reinforcers is a consequence of brand managerial tactics of each firm, who have different resources to build brands and use different brand equity strategies (Agarwal & Rao, 1996; Netemeyer et al., 2004; Washburn & Plank, 2002). Some brands are managed in a business environment that gives all the support needed to modify or add differentials or even enhance the favorable perceptions of consumers by introducing better materials and images and meeting new demands. Others are managed in small businesses and are not so well supported (Berthon et al., 2008). So, reinforcers' programs by brands are not and could not be equal among brands in real situations. This suggests that some brands are better built than others due to managers' efforts from each firm, directly, by offering the higher benefits and, indirectly, through consumer experiences.

This condition explains the purchase patterns of consumers (Cavalcanti et al., 2013) showing the sources of those patterns. The stability of the purchase patterns seems to be due both to individual consumers' experiences and to marketing activities, varying according to the combination of the magnitude of reinforcements. For instance, the results indicated that bringing a shopping list to the store is the most powerful predictor of purchasing a brand with a higher utilitarian benefit or a brand with a higher informational benefit. Similarly, the behavioral tendencies towards brands with different magnitudes of reinforcements are predictors of purchasing a brand whether it leads to higher utilitarian benefit, higher informational benefit or both.

Analysis of brand marketing activities shows that they are also predictors that depend upon the combination of reinforcement levels, especially when the brand that leads to higher informational and utilitarian reinforcements is purchased. It seems that there is an interacting web of influence, which complements findings from Cavalcanti et al. (2013): consumers have some purchase tendencies due to their previous consumptions, on the basis of which they have learned what and how to buy, a finding from that previous research. However, when they arrive at the store, and encounter brand marketing stimuli, these reinforce their tendencies towards certain brands (which are usually the ones that they have already learned how to buy) and at the same time signal the most advantageous one at the purchase occasion. For example, a consumer that has tendencies to buy a specific brand with higher reinforcement arrives at the store, which has planned marketing activities for that particular brand. Together, the experience and marketing activities of that brand strengthen its purchase probability. Thus, there is a context favoring the purchase of some brands and discouraging the purchase of others.

Study 1 highlighted that models of brand purchase (Foxall, 2005) should include brand marketing activities, generic buying tendencies, consumers' brand history and the behavioral tendencies towards brands with different magnitudes of reinforcements. The predictive power gains strength by adding some of the variables in each of these antecedents and allows for checking of consumer performance among brand choice on each purchase occasion.

Study 2: Substitutability in the brand market structure

The relation between purchase and market share is obvious, for the latter is the aggregated data (per brand) of the first (Cooper & Nakanishi, 1988). As the predictors of buying behavior vary from time to time and sometimes they are modified inconsistently, purchases are dynamic by nature. If these predictors are also antecedents of daily market share, they bring an instability to it. This means that the supply of, and the demand for, brands will vary a great deal, signaling that the drivers of brand performance (Ehrenberg et al., 2004) may have changed.

However, all these changes take place in a market context. Sometimes they encourage the fluctuation of market share between close substitute brands in a category and sometimes they discourage these fluctuations (Shaked & Sutton, 1990; Urban et al., 1984). In a dynamic perspective, even if brands do not modify their consequences to consumers, their shares vary considerably among them. For example, it is very difficult to detect how low-equity brands (or those with basic attributes) can take shares from high-equity brands (or those with sophisticated attributes) and vice-versa. Nevertheless, it is very common to see a high-equity brand (or ones that have sophisticated attributes) taking shares from an equally high-equity brand (or the sophisticated ones). This situation calls for an analysis of the brand market structure, which has not yet been explained.

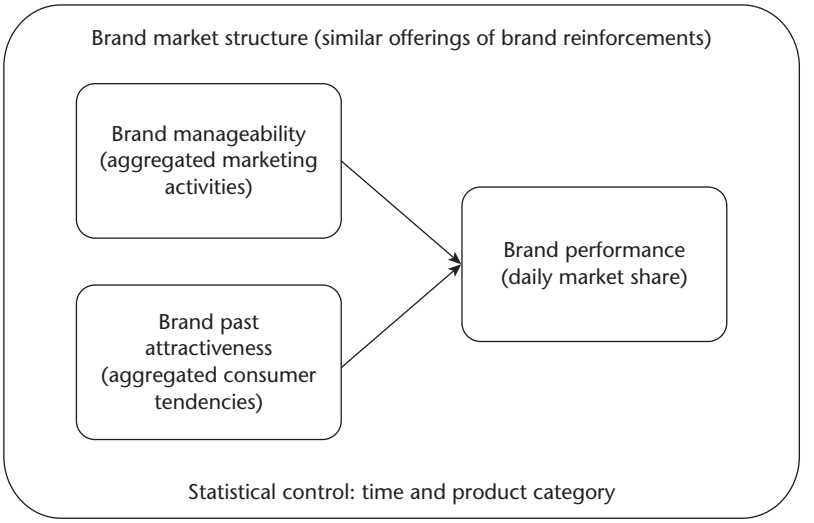

Figure 11.4 Empirical model of variables in brand market structure

One possible way to clarify the role of the market context in brand substitutability is by testing the fluctuations in market share among brands when they offer the same magnitude of reinforcements. Study 2 sheds light on this phenomenon, by analyzing which predictors of purchase can be used to forecast daily market share for groups of brands that offer similar levels of reinforcement.

In Figure 11.4, an empirical model suggests the relations among the variables involved. All the antecedents of Study 1 were aggregated by brand and day, but here we propose that the brands have abilities and have attracted consumers. The brand performance metric is operationalized through the daily market share and all the variables are under the same brand market structure, after controlling for the effects of time and product categories.

Method

The daily market share of the four products analyzed in Study 1 were calculated by aggregating the amount purchased per brand relative to the total amount purchased in the category in each day. To compare increases or decreases in daily market share of a given brand, market share was divided by the average daily product share. Therefore, if it equals one, it means that the market share of a particular brand is at the average of its category in that day. A value smaller than one indicates that the market share was below the average of its category in that particular day. This was the dependent variable for Study 2.

The descriptive data of daily market share are shown in Table 11.3. Some brands have a high average daily market share, even though their overall market share is low. Some brands also have a high standard deviation, while others do not. This shows that daily market share varies depending on some daily factors.

For 26 days of brand sales, data and all the antecedents contained in Study 1 were recorded. These were aggregated in Study 2. Daily records of all the quantitative variables contained in Study 1 were kept and all the qualitative variables were counted by brand and by day. Table 11.4 shows the metric of each one and the descriptive statistics. All together, these variables represent the attractiveness and the manageability of a brand to induce more sales.

Table 11.3 Descriptive data of market share and reinforcements classifications

Brand's name (1)	*Overall market share %*	*Average of daily market share*	*Std. deviation of daily market share*	*Informational reinforcer*	*Utilitarian reinforcer*
Body moisturizer					
Paixão	3.5	.30	.34	Low	High
Elle Ella	1.0	.23	.14	Low	High
Phytoderm	0.8	.26	.01	Low	High
Hidramais	10.1	.37	.12	Low	Low
Nutritive	8.8	.30	.06	Low	High
Corpo a Corpo	1.5	.15	.07	Low	High
Leite de Aveia	0.9	.09	.03	Low	Low
Vasenol	3.0	.16	.05	Low	High
Monange	8.1	.19	.13	Low	High
Nivea	26.7	.34	.18	High	High
Dove	2.5	.27	.17	High	High
Johnson & Johnson	33.3	.30	.14	High	High
Hair dye					
Aney	0.2	.20	.01	Low	Low
Beauty Color	1.9	.20	.08	Low	High
Preference	.9	.50	.01	Low	High
Wellaton	1.5	.13	.01	Low	High
Surya	1.9	.33	.01	Low	Low
Natucor	0.7	.12	.05	Low	Low
Nutrisse	2.6	.61	.35	Low	High
SoftColor	4.0	.25	.17	Low	High
Cor e Ton	9.6	.36	.32	Low	High
L'Óreal Casting	2.5	.42	.35	Low	High
Maxton	18.3	.42	.28	Low	High
Biocolor	7.9	.25	.20	High	High
Koleston	23.6	.31	.24	High	High
L'Óreal Imedia	24.4	.36	.18	High	High
Box of chocolates					
Garoto Sortidos	33.0	.37	.18	High	Low
Garoto Mix	9.7	.18	.08	Low	Low
MonteVergine	0.5	.05	.01	Low	High
Nestlé Especialidades	30.0	.32	.20	High	Low
Lacta Grandes Sucessos	24.3	.19	.09	High	Low
Ferrero Rocher	2.7	.08	.06	High	High
Cereal bars					
Corpo e Sabor	13.9	.26	.18	Low	Low
Forma e Sabor	3.4	.23	.14	Low	Low
Troop	1.3	.15	.08	Low	Low
Sollys	0.6	.17	.11	Low	Low
Ritter	15.7	.21	.12	Low	High
Supino	5.1	.24	.19	Low	Low
Hershey's	1.5	.14	.13	Low	High
Quaker	1.0	.40	.09	Low	Low
Neston	1.8	.22	.25	High	Low
Nutry	24.5	.26	.22	High	High
Trio	31.2	.34	.20	High	High

Table 11.4 Metric, mean and standard deviation of the independent variables in Study 2

Types of antecedents	*Index*	*Metric*	*Mean*	*Std. deviation*
Brand manageability	Promotional price	Price of each offered brand in day X divided by its average price during all days	1.00	0.23
	Shelf space	Shelf space in cm of each offered brand in day X divided by its average shelf space during all days	1.00	0.94
	Premium price	Average of the price of the brand offered divided by the average of the price of the product	1.00	0.48
	Proportional promotional gift	Sum of the quantity of gifts by brand on each day divided by the total volume of gift in product on each day	0.06	0.13
	Proportional promotional advertising	Sum of the quantity of advertisement on the fortnightly leaflet by brand divided by the total volume of advertisement in product at the same period	0.07	0.17
Brand past attractiveness	Rate of time since last purchase	Average rate of time elapsed since last purchase for each brand	3.30	3.59
	Rate of product purchase	Average monthly rate of product frequency purchase for each brand	1.09	1.45
	Rate of appearance on shopping lists	Average daily rate of bringing a shopping list to the store for each brand	0.01	0.04
	Relative number of habitual buyers	Daily quantity of consumers who buy the same brand divided by the daily average of consumers of the product	1.00	0.90
	Relative number of first-time buyers	Daily sum of consumers who buy the brand for the very first time divided by the daily average of consumers of the product	1.00	2.88
	Relative number of previous time brand purchasers	Daily sum of consumers who bought one particular brand with a reinforcement on the last occasion divided by the daily average of consumers of the product	1.00	0.63
	Relative number of planned brand purchasers	Daily sum of consumers who intend to buy one particular brand with a reinforcement at the store entrance divided by the daily average of consumers of the product	1.00	0.66

Based on the combination of the magnitude of utilitarian and informational reinforcers in Study 1 (differentiation, familiarity and quality perception), brand market structure was built. Each combination of brands' reinforcements (Low Informational and Low Utilitarian group – LILU, Low Informational and High Utilitarian group – LIHU, High Informational and Low Utilitarian group – HILU and High Informational and High Utilitarian group – HIHU) represents this structure.

For instance, in LILU, brands have no differentiation and are almost unbranded, shown by the low level of consumers' perception towards them. These brands act like commodities with

homogeneous brand features. They have a name and the basic characteristics to be commercialized (Gordon et al., 1999). Brands belonging to small businesses or local brands usually start in this dimension of the market structure and achieve the basic requirements to perform in the category (Berthon et al., 2008).

In LIHU, brands have technical differentiations, but they are not perceived as outstanding or very famous by consumers. This competitive dimension embraces "to the masses" image brands (Danziger, 2005), the ones with a generic image (Park et al., 1986) or a niche image brand (Parrish et al., 2006). These images are visual or verbal signs (Zaichkowsky, 2010) of utilitarian or informational reinforcements obtained if the brand is bought. Their manufacturers promote them loosely or promote them to a specific small segment, but do not concentrate on promoting them widely. Thereby, they lack a strong brand leader or premium image appeal.

In HILU, brands are famous and sometimes global (Johansson, 2011; Sullivan, 1992), but they lack an innovation appeal in the category. This is a market structure dimension for prestigious brands; they are usually followers in technology of a pioneering brand (Lieberman & Montgomery, 2012) in a category but sometimes sale leaders (Johansson, 2011). They belong to big enterprises that use brand extension strategies (Sullivan, 1992) or are imitative of successful strategies. The brands in this dimension rely strongly on their names. Therefore, managers build a brand with a leader image and disseminate it anywhere possible including around the pioneering brand.

Finally, in HIHU, brands are outstanding and/or innovative (Ambler, 1997). Consumers recognize the premium image of these brands and production efforts are constantly deployed (Beverland et al., 2010). This is a market structure for large, specialized and rich brands; large because they are in every possible commercial place for the category in any time, specialized because they deploy extra attributes pushing the limits of functionality, and rich because although they demand a high enterprise structure to justify the high costs of the innovations, they usually exceed the boundary of profitability. Some of them are pioneering in the category and use images of exclusivity, stylishness or refinement.

Based on the dimensions of the brand market structure, a daily panel equation was built. The dependent variable, relative daily market share and the independent variables, brand past attractiveness and brand manageability, are represented in Equation 1. Temporal and product categories dummies, as control variables, were added to show the intercept for each day and product:

$$Y_{igd} = \beta_1 X_{1igd} + \beta_2 X_{2igd} + \beta_d D_{dummy} + \beta_d P_{dummy} + \in_{igd}, \quad (1)$$

where Y_{gd} refers to relative daily market share for brand i in group g at day d, X_{1igd} represents each variable related to brand past attractiveness for brand i in group g at day d, X_{2igd} refers to each variable related to brand manageability for brand i in group g at day d, D_{dummy} stands for the day of the data registry, taking the last day of registry as the reference, P_{dummy} represents the product data registry, taking another product as the reference, $\beta_{1,2,d}$ are regression coefficients, and $\in_{igd}$ is the error terms for brand i in group g at day d.

Generalized Estimating Equations proved to be suitable for this analysis. The multicollinearity test presented no problem ($VIF < 2$) and the data showed no heteroscedasticity (White test $p > 0.05$), but the dependent variable had a positive asymmetry and the Durbin-Watson showed a serial autocorrelation. Therefore, the daily market share was transformed by a gamma log link and an interchangeable work correlation matrix proved to be a reasonable way to overcome the serial autocorrelation.

Results

The statistic model fitted the data reasonably well. The corrected quasi-likelihood under independence model criterion – QICC – for the whole model was equal to 55.87 against QICC = 112.36 for the null model. In other words, the full model with the predictors decreased 61% of the information lost and simultaneously reduced the complexity of the model. The overall linear prediction was high ($R^2 = 83.4\%$). Table 11.5 shows the significant forecasters of the daily market share in brand market structure. The controlled variables (time in days and categories) are not shown as they are not part of the main result.

For the LILU group, all types of aggregated purchase antecedents (brand marketing activities, generic tendencies of buying, consumer brand history, and the behavioral tendencies towards brands with different magnitude of reinforcements), but not all variables, were significantly related to daily market share. Past attractiveness of these brands raised brand performance in this market structure, especially by increasing the rate of appearance on shopping lists. Increases in

Table 11.5 Predictors of daily market share under the brand market structure

Brand market structure	*Daily predictors*	*Estimates*	*Std. error*
LILU group	Promotional price	–0.80*	0.09
	Proportional promotional advertising	–1.77*	0.06
	Relative number of planned brand purchasers	0.25*	0.09
	Relative number of previous time brand purchasers	0.32*	0.05
	Rate of appearance on shopping lists	17.03*	4.62
	Relative number of habitual buyers	0.31*	0.10
HILU group	Shelf space	0.93*	0.03
	Premium price	3.45*	0.04
	Promotional price	–0.61*	0.13
	Proportional promotional advertising	12.08*	0.86
	Proportional promotional gift	1.90*	0.84
	Relative number of planned brand purchasers	0.70*	0.03
	Relative number of previous time brand purchasers	0.93*	0.02
	Rate of appearance on shopping lists	41.19*	3.44
	Rate of time since last purchase	0.15*	0.04
	Rate of product purchase	0.52**	0.26
	Relative number of first-time buyers	–0.13*	0.00
	Relative number of habitual buyers	0.45*	0.13
LIHU group	Shelf space	–0.63*	0.07
	Premium price	3.22*	0.33
	Promotional price	–1.09*	0.30
	Relative number of planned brand purchasers	–0.30*	0.03
	Relative number of previous time brand purchasers	–0.36*	0.03
HIHU group	Proportional promotional advertising	2.16*	0.84
	Relative number of planned brand purchasers	0.11*	0.04
	Relative number of previous time brand purchasers	0.14*	0.03
	Rate of appearance on shopping lists	14.25*	3.43
	Rate of product purchase	–0.62*	0.12
	Relative number of habitual buyers	0.18*	0.06

*$p \leq 0.01$; **$p \leq 0.05$

three other variables were also noticeable: the relative number of previous time brand purchasers of low informational and utilitarian reinforcements, the relative number of habitual buyers, and the relative number of planned brand purchasers of low informational and utilitarian reinforcements.

For the HILU group, all variables and aggregated purchase antecedents (brand marketing activities, generic tendencies of buying, consumer brand history and the behavioral tendencies towards brands with different magnitude of reinforcements) were significantly related to daily market share. Past attractiveness of these brands raised brand performance in this market structure, especially the rate of appearance on shopping lists. Increases in five other variables were also noticeable: the relative number of previous time brand purchasers of exclusively high informational reinforcements, the relative number of planned brand purchasers of exclusively high informational reinforcements, the rate of product purchase, the relative number of habitual buyers and the rate of time since last purchase. The relative number of first-time buyers decreased the daily market share.

For the LIHU group, only some brand marketing activities and the behavioral tendencies towards brands with different magnitude of reinforcements were forecasters of daily market share. Past attractiveness of these brands raised brand performance in this market structure, especially by decreasing the relative number of previous time brand purchasers of exclusively high informational reinforcements and by decreasing the relative number of planned brand purchasers of exclusively high informational reinforcements.

For the HIHU group, all types of purchase antecedents (brand marketing activities, generic tendencies of buying, consumer brand history and the behavioral tendencies towards brands with different magnitude of reinforcements) were related to the daily market share, but not all variables. Past attractiveness of these brands raised brand performance in this market structure, especially by increasing the rate of appearance on shopping lists. Increases in four other variables were also noticeable: the relative number of habitual buyers, the relative number of previous time brand purchasers of high informational and utilitarian reinforcements, and the relative number of planned brand purchasers of high informational and utilitarian reinforcements.

Figure 11.5 shows all the regression lines with the standardized predicted values of the set of the antecedent variables for the four dimensions of the market structures. They demonstrate that the variables were good forecasters of daily market share (R^2 varied from 78.5% to 95.5%). Overall, Study 2 corroborates that brand past attractiveness and brand manageability forecast brand performance in brand market structure. When aggregated, predictors of consumer choice also predict brand performance, but some variables are better in each dimension of the market structure based on the magnitude of the estimates shown in Table 11.5. Therefore, the reinforcements offered to consumers may be used to interpret brand market structure.

Discussion

In the present chapter, brand market structure was interpreted on the basis of programmed reinforcement level offered by groups of brands. Low and high levels of utilitarian and informational reinforcement, offered by brands, were used to describe a two-by-two market structure. The results showed that the proposed antecedent variables, included in the model, predict brand performance at each level of brand market structure with good reliability. The aggregated variables of consumer purchase also predict the daily market share. Moreover, the consequences consumers achieve by purchasing each group of brands form the brand competition setting, since the brands in each group offer similar levels of utilitarian and informational reinforcement and are, consequently, highly substitutable within each group.

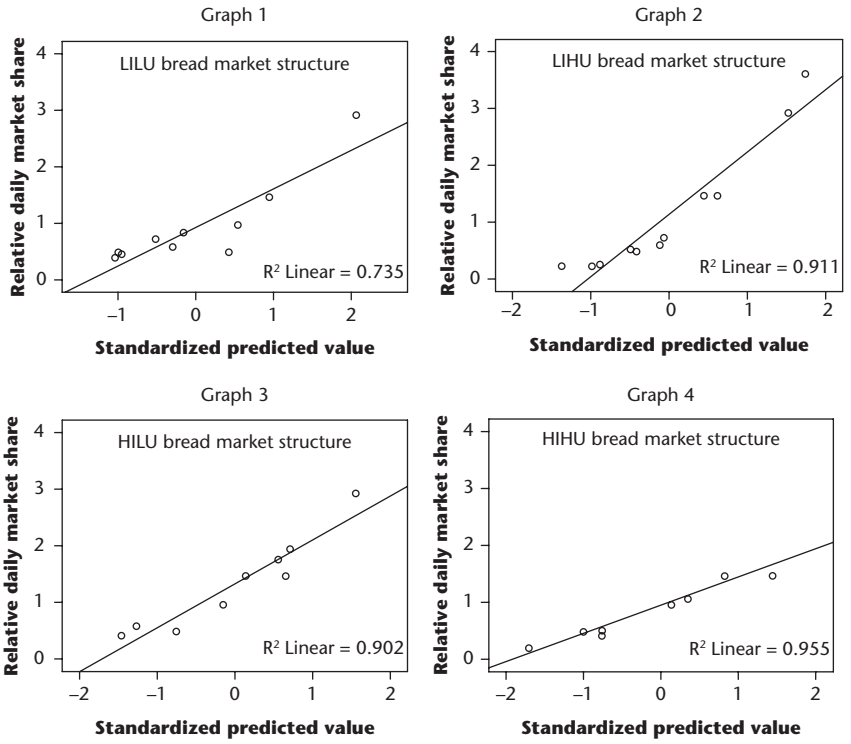

Figure 11.5 Linear influence of the set of antecedents on the brand performance in brand market structure

All the variables represented by the brand past attractiveness (Bridges et al., 2006; Chatterjee et al., 2011; Kahn & Louie, 1990; Kim & Rossi, 1994; Morwitz et al., 2007; Neal et al., 2006; Thomas & Garlant, 2004; Vilcassim & Jain, 1991; Warshaw, 1980) and brand manageability (Ambrosini & Bowman, 2009; Cui et al., 2014; Stewart, 2009; Zollo & Winter, 2002) predicted the daily market share, but some of them only in some dimensions of the brand market structure. Others vary in strength among the dimensions.

For instance, in LILU, the brands in this dimension could successfully use promotional price (decreasing it) to leverage daily market share. However, they could not successfully use increases in shelf space as it did not have any significant impact and their advertisements generated reductions in market share, highlighting their weak images. In HILU, the brands in this dimension could successfully use proportional promotional advertising, premium price, proportional promotional gifts, exposure on shelf space and promotional price (decreasing it) to leverage daily market share. In LIHU, the brands in this dimension could successfully use premium price and promotional price (decreasing it) as they leveraged the brand performance. Nevertheless, managers should expose them in an exclusive shelf space to increase the daily market share. Finally, in HIHU, the rate of product purchase decreased daily market share. The brands in this dimension could successfully use proportional promotional advertising, as it increased the daily market share.

Increases in price reductions generate better brand performance when brands have technical differentiations, but are not outstanding (LIHU group). Famous global brands (Johansson, 2011;

Sullivan, 1992) and the unbranded ones (Berthon et al., 2008) could also use this strategy, but it might not be as effective as it would be for brands in the LIHU group (Danziger, 2005; Park et al., 1986; Parrish et al., 2006). Therefore, brands that will most benefit from promotional prices are those that embrace a mass appeal image, those with a niche image or those with a generic image. Increase in price reduction is a discriminative stimulus (Foxall, 1987) that signals that consumers could retain more money. On the other hand, increases in premium price (Foxall et al., 2007) have a good effect for prestigious brands and for niche ones (HILU and LIHU groups, respectively). This kind of strategy signals superior quality or tailored brands that can be reasonably overpriced.

Increases in proportional promotional advertising (Blattberg et al., 1995) generate better brand performance when brands are already famous, even if they lack an innovation appeal in the category (HILU group). These advertisements are informational statements (suggestions, prompts, promises) in favor of the owner (Foxall, 1987) and they signal the availability of reinforcement if a brand is purchased. The outstanding brands – HIHU group – (Beverland et al., 2010; Danziger, 2005) could also use this strategy effectively, but managers should not expect greater influence as in the HILU group. The unbranded options (Berthon et al., 2008) should not use this strategy for it signals low reinforcements to consumers and reduces market share.

Increases in proportional promotional gift (Liao et al., 2009) and shelf space (Eisend, 2013) are only good strategies when brands compete in a HILU market structure. That means that these strategies are worth using when a brand is already well known. They are, respectively, extrinsic reinforcers (Scott Jr. et al., 1988) and arrangement of stimuli (Foxall, 2004) that the manager controls. It is likely the brands in the LIHU group do not offer many opportunities for reinforcement to managers (Vella & Foxall, 2011), which could perhaps explain why there was a negative relation between shelf space and daily market share.

Increases in the rate of product purchase (Ehrenberg & Goodhardt, 1970; Rao, 1973), the rate of time since last purchase (Vilcassim & Jain, 1991), the relative number of habitual buyers (Ehrenberg et al., 2004) and the relative number of experienced buyers (Ehrenberg et al., 2004) are tendencies that stimulate brand performance in the HILU context. In other words, the options that previously have attracted consumers with a huge repertoire of brands in the category (experienced) are resistant to change (habitual ones), have a high response rate in the category (product purchase), and the ones who are in higher product deprivation (establishing operations – Fagerstrøm et al., 2010) will perform better in this brand market structure of higher informational reinforcement. This is why these brands are sometimes also sale leaders. They have already established how good consumers are at buying these brands and generate "herd behavior" (Hanson & Putler, 1996; Rook, 2006), but have the propensity to generate crowding if managers do not control the speed of supply in response to demand.

The higher the rate of appearance on a shopping list (Thomas & Garlant, 2004), the higher will be the brand market performance, especially in HILU, LILU and HIHU groups. Although its incidence is low, when the rate increases, it seems to be the best variable to forecast brand performance in these competitive contexts. Usually a shopping list covering brands indicates specific brands rather than just any one, which may signal a small subset in the category that had already reinforced consumer purchases (Foxall et al., 2007). It is also a personal brand choice pattern, which deliberately avoids the influence of retailers' strategies. When aggregated, the rate indicates that these consumers that use a shopping list want the same reinforcers or the same magnitude of reinforcement and should not buy any other. It seems to be a very robust personal strategy to become impervious to subsequent contingencies programmed by the retailer.

Increasing the relative number of planned brand purchasers forecasts daily market share in every competitive context. This situation strengthens the claim that what consumers intend to

buy (Morwitz et al., 2007; Warshaw, 1980) predicts well, at the aggregate level, the subsequent brand purchase when brand reinforcement levels are taken into account (Porto et al., 2011). The more purchase planners a brand has, the more managers can expect to sell in each market structure.

However, increasing the relative number of previous time brand purchasers is more relevant in all brand groups. When they plan to buy brands, they do not consider point-of-sale contingencies and the brands already bought take precedence in subsequent choices under uncertain reinforcement conditions. If this is so, the main information that is relevant to consumers in subsequent purchases is the level of reinforcers delivered by each brand (the last purchased brand – Kahn & Louie, 1990). This may increase insensitivity to current contingencies programmed by the retailer (Foxall, 2004).

General discussion

The analysis of consumer brand choice needs to consider the level of informational and utilitarian reinforcement programmed by different brands. The higher the magnitude of utilitarian and/or informational reinforcements (Foxall et al., 2007), the higher the probability of that particular brand being chosen. Study 1 analyzed this phenomenon by showing systematic relations among antecedents, purchase behavior, and the magnitude of reinforcements. The antecedents cover consumer behavior setting (manageable variables) and consumers' learning history (unmanageable variables). Together, they increase the probability of choosing a brand with higher levels of reinforcement, which shows that there are programmed reinforcement contingencies that influence consumers in the direction of obtaining higher benefits attached to brands.

This occurrence is consistent with those studies that showed maximization of reinforcement in consumer brand choice (Foxall et al., 2004; Foxall et al., 2010). Thus, if the brand bought can provide more reinforcements (more aesthetic and sensory satisfaction, body enhancement, a feeling of wellbeing or the satisfaction of sharing with friends and family), the consumer will be more inclined to buy it again. Therefore, the brand previously chosen that led to a higher level of reinforcement increases the tendency of buying similar brands, which might explain the small brand repertoire (Ehrenberg et al., 2004). Nevertheless, occasionally, consumers buy another brand offering a different magnitude of reinforcement, possibly due to variations in consumer settings (Foxall, 2005) – marketing stimuli. This broadens their experiences and may change the previous subset of low brand reinforcement to another subset of brands, usually choosing the ones that bring higher reinforcement or lower levels of punishment (e.g., spending less money and time). This means that consumers occasionally change their repertoire of brands to the ones of higher reinforcements and then maintain their purchase behavior with some "famous" or "outstanding" brands. If no other brand is launched in the market, this pattern may bring stability to the market share for all brands during an extended period of time (Golder, 2000).

This phenomenon helps explain brand performance at the level of market structure (Shaked & Sutton, 1990), which was examined in Study 2. The brands that have more purchases are the best market performers (highest market share) on a daily basis. However, some sales peaks are observed occasionally in a non-overall leader brand. This is because the brand attracted more purchases on that day, due to past attraction and its manageability implemented by the retailer on that particular day. As these manageable brand features depend upon the marketing efforts of manufacturers, some brands are better able to offer competitive strategies (enhance substitutability).

However, brand managers need not program the best strategy in the category, but should rather emphasize the brand strategy towards its close substitutes (Foxall et al., 2010). The

ones that bring the same class of consequences to consumers are the closest substitutes. They provide them with similar levels of utilitarian and informational magnitude of reinforcement. Even if they have similar consequences, sometimes one will have a higher market share than others. This may be due to the brand manageability and past brand attractiveness on a day-by-day basis.

Within a category, brands are part of a market structure (Shaked & Sutton, 1990). First, there are unbranded goods, offered by small or local enterprises (low magnitude of utilitarian and informational reinforcement). Second, there are those directed towards a niche, or to the mass market or with a generic image, usually offered by medium enterprises (combination of high utilitarian and low informational). Third, there are well-known and superior image brands offered by big enterprises not innovative in the category (combination of low utilitarian and high informational). Finally, there are outstanding or premium ones (combination of high utilitarian and high informational), offered by specialized or innovative big enterprises.

Each dimension of this structure is a context of brand performance that shows which are the closest substitute brands. If brands are in the same category, they already have a general set of properties (Cuvo, 2000), offering primary reinforcers (e.g., aesthetic pleasure, body enhancement, and such like), some have the same specific attributes, so they also share a restricted set of properties (e.g., body moisturizer with sun block). However, as the brands also offer secondary reinforcers (Alhadeff, 1982), these dimensions of the market structure highlight their many transferable functions (e.g., stylishness, refinement and so on), for they share the same magnitude of utilitarian and informational consequences for consumers.

Conclusion

Researchers have not emphasized the relations of everyday purchases and daily market share. The present work proposes to build the necessary bridge to interpret and explain such phenomena. Based upon a behavioral economic explanation, the model adopted here dynamically links brand performances to consumer brand choice that takes place in-store. On an individual level, the model encompasses the influence of both the consumer behavior setting (manageable stimuli) and the consumer's learning history (unmanageable stimuli) influencing each purchase. At the brand level, it encompasses the influence of brand past attractiveness and brand manageability, resulting in reasonable predictions of daily market share.

The combinations of the consequences of brand purchases constitute the basic dimensions of the brand market structure. They provide the contexts of the substitutability of brands. The members of the same brand market structure deliver similar consequences and the antecedents – brand past attractiveness/brand manageability – form the mechanisms that give rise to market share. More research is expected to be done to verify if the dimensions found here are stable and applicable to other non-routine markets.

As this was a natural experiment, the results should be replicable in similar in-store situations involving the purchase of routine products. Nevertheless, the present research was carried out only in one store and research in other types of retail environment might well reveal other predictors and verify if both consumer and brand levels of analysis are sustainable. Furthermore, tests could clarify if other brand metric performances (e.g., profit margin) would be better forecast when brand utilitarian and informational reinforcement levels are considered in characterizing brand market structure. Another way of generalizing these results is to check the same antecedent-behavior-consequence relations with different brands, which have irregular purchasing frequency. They could provide other sets of properties and transferable functions among brands.

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