Store brand types as a moderating factor of the relationship between SB loyalty and SB share

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Abstract

Previous research on the relationship between store brands (SB) and store loyalty (SL) has seldom taken into account differences among store brands. We consider one source of differences among store brands, attachment to the store name, and investigate its moderating effect on the relationship between store brand loyalty and store brand share. We show that their relationship is positive when the store brands are clearly attached to the store name, but negative if store brands are not perceived as related to the store. Our findings have strong implications for store brand management because they will allow retailers to develop store brands that can increase market share and enhance customers' loyalty.

Introduction

In recent years store brands have experimented a major growth in most first world countries. According to PLMA (2011), SB's reach, in fact, a volume market share of around 30% in Europe. SBs are growing in western economies (UK, France, Portugal, Spain and Switzerland) with SBs volume shares of around 40%, as well as in emerging economies (Poland, Czech Republic, Slovakia and Hungary), with SBs volume shares between 25 and 30% (PLMA 2011). At the same time, SBs have evolved from being essentially brands competing on price to becoming brands that offer different value proposals for diverse market segments. For instance, some retailers have developed sophisticated SB's that add real value to consumers, and are using them as a tool to improve their SB share and store loyalty (Kumar and Steenkamp 2007). Also, many retailers sell different types of SBs. Finally, retailers use different strategies to brand them.

One of the dimensions used for SB branding is the focus of the present work: differential level of attachment of the SB to the store name. Historically, three arguments have been given to support retailers selling SBs: 1) SBs yield higher retail margins, 2) SBs increase negotiating leverage with suppliers, and 3) SBs lead to greater customer store loyalty. While the first two have been widely discussed and contrasted in the academic literature (Hoch and Banerji 1993, Narasimhan and Wilcox 1998, Park and Srinivasan 1994, Ailawadi and Keller 2004), the third one has not become fully established. Some authors find a positive relationship between the purchase of SB and store loyalty (Cunningham 1961, Steenkamp and Dekimpe 1997; Ailawadi, Neslin et al. 2001; Corstjens and Lal 2000; Sudhir and Talukdar 2004; Bonfrer and Chintagunta 2004, Ailawadi, Pauwels et al. 2008), whereas others report the relationship to be negative, as heavy purchasers of SBs tend to be more price sensitive and therefore less loyal to a particular retailer, buying in different retailers (Hansen

and Singh 2008), or are simply loyal to the SBs in general and not to a particular retailer (Rao 1969, Paul 1997).

We hypothesize that previous conflicting results are due to differential levels of SB attachment to the store names. To contrast this hypothesis we investigate whether the level of SB attachment to the store name moderates the relationship between SB share and store loyalty across different categories of products, across different customer segments, and at different points in time.

Research Method

The data used in this research comes from the AC Nielsen Spain household panel which involves 2,900 families. Daily shopping information for 2006 and 2007 was available for three product categories: cereals, juices and detergents. To simplify the study, we have focused on the 9 major food chains in Spain: Ahorramás, Alcampo, Caprabo, Dia, El Corte Inglés & Hipercor, Grupo Carrefour, Grupo Eroski, Lidl and Mercadona. These chains have account for more than 65% of total purchases of consumer products and employ different SB branding strategies. We classify each of their SBs in three types, depending on whether the SB is (1) equal to the store name (retail name SB), (2) different but closely linked to it through communication actions (linked SB), or (3) different and unrelated to the name and image of the retailer (independent SB). This typology is the focus on the present study as it is tested for moderating effects on the relationship between SB share and store loyalty.

For each household, food category, chain and year, we measured store loyalty as the household's share of items purchased in the store (units bought in the store / total units bought). Similarly, we computed SB share (SBS) in units (SB units bought at the store / total units bought at the store). These are standard measures widely employed in the literature [1] (Richardson, Dick et al. 1994, Hughes 1996, Berger and Nasr 1998; Ailawadi, Neslin et al. 2001; Mägi 2003, Sudhir and Talukdar 2004; Kumar and Steenkamp 2007).

Two models were considered. In Model 1, SB type moderates the regression of store loyalty on SB share. A year dummy variable and product category (cereals, juices, detergents) are included as additional moderators. In addition, the following control variables are used: household size (1, 2, 3, 4, $\geq$ 5), social class (low, medium, high), age of household head ($\leq$ 35, between 35 and 54, $\geq$ 54), and a dummy to indicate presence or absence of children under 12. A random intercept is used to account for clustering effects due to household. More specifically, for each household i, the following two level model was used.

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[1] Analyses using SB share and store loyalty in value, rather than in units, lead to analogous substantive conclusions and are available from the authors.

$$\text{store loyalty}_i = \beta_{0i} + \beta_1 \text{ SB share} + \overbrace{\beta_2 \text{ SB share } \times \text{ 2006 dummy}}^{\text{SB share} \times \text{ year effect}} +$$

$$+ \overbrace{\beta_3 \text{ SB share } \times \text{ retail name SB} + \beta_4 \text{SB share } \times \text{ linked SB}}^{\text{SB share} \times \text{ SB type effect}} + \qquad (1)$$

$$+ \overbrace{\beta_5 \text{ SB share } \times \text{ detergent} + \beta_6 \text{ SB share } \times \text{ juice}}^{\text{SB share} \times \text{ product category effect}} + \varepsilon_i$$

$$\beta_{0i} = \gamma_0 + \overbrace{\gamma_1 \text{ retail name SB} + \gamma_2 \text{ linked SB}}^{\text{SB type effect}} + \overbrace{\gamma_3 \text{detergent} + \gamma_4 \text{ juice}}^{\text{product category effect}} +$$

$$+ \overbrace{\gamma_5 \text{ size 1} + \gamma_6 \text{ size 2} + \gamma_7 \text{ size 3} + \gamma_8 \text{ size 4}}^{\text{household size effect}} + \gamma_9 \text{ 2006 dummy} +$$

$$+ \overbrace{\gamma_{10} \text{ low} + \gamma_{11} \text{ medium 2}}^{\text{social class effect}} + \overbrace{\gamma_{12} \text{ age 1} + \gamma_{13} \text{ age 2}}^{\text{household head age effect}} + \gamma_{14} \text{ children} + \qquad (2)$$

$$+ \overbrace{\gamma_{15} \text{ retail name SB } \times \text{ 2006 dummy} + \gamma_{16} \text{ linked SB } \times \text{ 2006 dummy}}^{\text{SB type} \times \text{ year effect}} +$$

$$+ \overbrace{\gamma_{17} \text{ retail name SB } \times \text{ detergent} + \cdots + \gamma_{20} \text{ linked SB } \times \text{ juice}}^{\text{SB type} \times \text{product category effect}} +$$

$$+ \overbrace{\gamma_{21} \text{ detergent } \times \text{ 2006 dummy} + \gamma_{22} \text{ juice } \times \text{ 2006 dummy}}^{\text{product category} \times \text{ year effect}} + \varsigma_i$$

The model further assumes that the random intercept and errors are independent, with zero means, and homocedasticity across households.

In Model 2, the roles of store loyalty on SB share are reversed. Thus, SB share is regressed on store loyalty; SB type, year, and product category are used as moderators, and household size, social class, household head age, and children as controls.
Model estimation was performed using restricted maximum likelihood.

Results

Model 1: Effect of SB share on store loyalty

For this model, the intraclass correlation, that is, the percentage of variance accounted for by household differences is 31.1%.

Fixed effect results as shown in Table 1, where we see that the only significant interaction occurs between SB type and SB share. In other words, the type of SB moderates the impact of SB share on the store loyalty, keeping all other predictors constant, regardless of year, or product category.

Table 1: Random intercept regression model of SB share on store loyalty. Fixed effects results.

Fixed Effect	Numerator df	Denominator df	F	p-value
Intercept	1	5374.244	4154.321	<.001
Store brand type (SBT)	2	26973.911	28.244	<.001
Year	1	25244.656	.085	.770
Household size	4	2559.685	12.868	<.001
Social class	2	2525.335	2.372	.094
Household head age	2	2455.715	7.550	.001
Product category (PC)	2	25242.011	235.653	<.001
Store brand share (SBS)	1	27338.771	46.741	<.001
Children under 12	1	2367.180	4.012	.045
SBT × SBS	2	26669.114	48.108	<.001
Year × SBS	1	25403.187	1.776	.183
PC × SBS	2	25399.974	.066	.936
SBT × Year	2	24973.538	.385	.680
SBT × PC	4	24787.469	1.806	.125
Year × PC	2	24543.226	.016	.984

To interpret this moderating effect, we used a conditional effect plot. As can be seen in Figure 1, store loyalty increases as store brand share increases for store brands linked to the store (retail name SB and linked SB). In contrast, for store brands perceived as unrelated to the store name (independent SB), store loyalty decreases as SB share increases.

Figure 1: Estimated marginal means for Model 1.
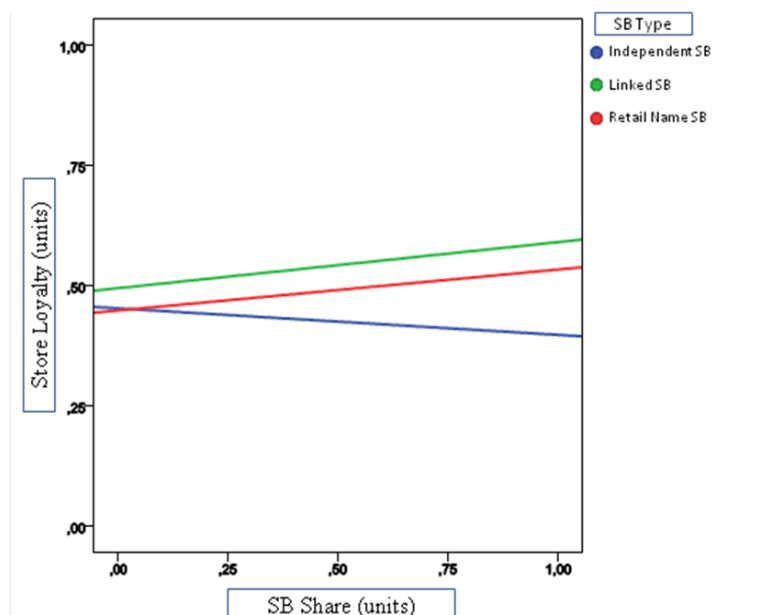
Model 2: Effect of store loyalty on SB share. Fixed effects results.

For this model, the intraclass correlation is 35.2%. This is the percentage of variance accounted for by household differences. Table 2 reports the fixed effects for this model. As can be seen in this table, the only significant interactions are between store loyalty and SB

type, and between SB type and product category. Although statistically significant, the latter can be substantively ignored, as differences in slopes across product categories are negligible. Hence, the conditional effect plot in Figure 2 only displays the store loyalty and SB type interaction[2].

Table 2: Random intercept regression model of store loyalty on SB share. Fixed effects results.

Fixed Effect	Numerator df	Denominator df	F	p-value
Intercept	1	4872.166	2859.582	<.001
Store brand type (SBT)	2	26377.357	401.278	<.001
Year	1	25439.925	.439	.508
Household size	4	2824.497	2.328	.054
Social class	2	2788.667	10.190	<.001
Household head age	2	2720.065	1.718	.180
Product category (PC)	2	25380.411	9.326	<.001
Store Loyalty (SL)	1	27364.620	33.261	<.001
Children under 12	1	2631.765	.605	.437
SBT × SL	2	27114.810	34.708	<.001
Year × SL	1	25426.603	.686	.407
PC × SL	2	25290.559	.688	.503
SBT × Year	2	25106.576	.105	.901
SBT × PC	4	24944.125	6.211	<.001
Year × PC	2	24746.110	.903	.405

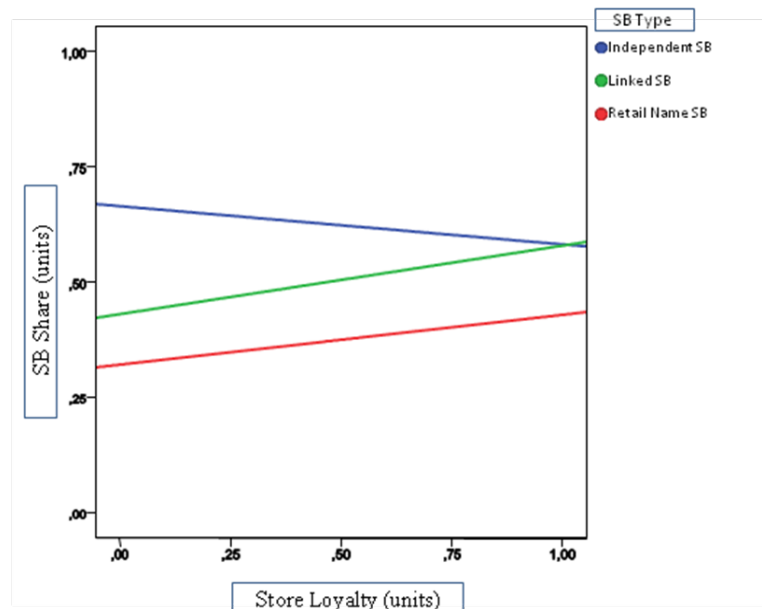*Figure 2: Estimated marginal means for Model 2.*

Figure 2 shows how SB share increases as store loyalty increases, only for SBs associated to the chain (retail name SB and linked SB), either because the SB equals the store

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[2] A conditional effect plots displaying expected means for the nine SB type x product categories combinations – and hence displaying both interactions simultaneously- is available from the authors.

name, or because of the perceived association. But for independent SBs, we find the opposite result: as SB share increases, store loyalty decreases.

Discussion and managerial implications

SBs play a major role in retailers' current strategy. Thus, to reach diverse market segments, and to compete with manufacturers' brands, retailers are offering a broader portfolio of SBs with different brand strategies, different prices, different range of products, different communication strategies and positioning of products. Furthermore, some retailers are using SBs as a way to connect with their customers. Some SBs have rational and emotional values which are relevant to customers, and those values could come from the brand personality of SBs, or the link they have with the values of the store name that could, in turn, reinforce the perceived value of SBs.

We have shown that the level of SB attachment to the store brand determines the sign of the effect of SB share on store loyalty. More specifically, we have found that across different categories of products, across different customer segments, and at different points in time for SBs with their own "personality", but linked to the store name, SB share has a positive effect on loyalty. This effect occurs as well for SBs with the same name as the store brand. However, for SBs that are not perceived as linked to the store brand, this effect is negative (increased SB share is associated to decreased store loyalty).

These findings have clear implications for a number of industry agents: retailers, brand manufacturers and consumers. Thus, it helps *retailers* to develop SBs portfolios to improve customer loyalty and sales. Understanding the effect that the association of the SBs with the chain has on SB share and on store loyalty would also help them to develop communication strategies that reinforce this link, even if the SB has a name different to the name of the store. Our results are relevant for *brand manufacturers as* well, as they lead to a better understanding of their SB competitors, and how to dimension the risk that some SBs pose to their brands. Moreover, understanding of the dynamics between consumers and brands at the point of sale may help brand manufacturers to develop strategies that reinforce their position or, at least, minimizes the effects of retailers' actions. For *consumers*, these findings may lead a broader and better-fitting portfolio of SBs to fulfill their needs.

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