

NATIONAL VS. STORE BRANDS COMPETITION: ENTRY TIMING AND SCALE EFFECTS ON NEW PRODUCT PERFORMANCE

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ABSTRACT

Given the increasing power of store brands in the CPG (consumer packaged good) sector, the authors question the actual relevance of the so-called first-mover advantage, thus bringing together two important strands of literature: the research on NPD and entry timing and the research on the competition between national and store brands. A market share attraction model that incorporates order, as well as marketing efforts concerning price gap, distribution, advertising expenditures and sales on promotion, is specified and will be tested so as to evaluate whether order-of-entry effects still exists and how the market response to marketing efforts vary depending on entry timing and the power of store brands in the product category. Retail scanner data from the Spanish market covering a period of seven years across 12 CPG subcategories pertaining to 5 different product categories will be analyzed to empirically test our propositions.

Keywords:

New product performance, entry timing, entry scale, marketing efforts, store brands.

1. Introduction and theoretical background

Store brands are constantly gaining market share from the established national brands (Nielsen, 2009). Globally, store brands have already achieved in 2008 a market share between 25% and 50% in most European markets and 20% in the U.S. (PLMA, 2009). Some reasons driving this growth are the increasing concentration among retailers, the improvement in the quality perception of store brands among consumers, and a rising social acceptance of store brand consumption (Ipsos Mori, 2006). The current economic downturn has further boosted the appeal of private labels. Many retailers see store brands as key in their effort to create consumer loyalty (Ailawadi et al., 2008) and to differentiate themselves from the competition (Sudhir & Debabrata, 2004). This may explain retailers' intensifying involvement in NPD, which further fuels the market share growth of store brands. According to a recent U.S. study by Mintel (2009), store brands made up 25% of all food product launches in 2008, whereas in 2005 they only represented 13% of all product introductions.

Among the possible reactions to face the challenges posed by store brands, research shows that national brand manufacturers have mainly focused on increasing the distance from private labels through innovation and advertising in order to provide a superior value to the consumers compared to private labels (Verhoef et al., 2002). Product innovations help to sustain a national brand's competitive advantage and provide a basis for a sustainable price premium over store brands. Research also shows that the introduction of new products by CPG manufacturers has a positive impact on their brand equity (Sriram et al., 2007), which makes them less vulnerable to the entry of store brands (Pawels & Srinivasan, 2004).

These findings are consistent with the empirical research on first-mover advantage (Kerin et al., 1992; Lieberman & Montgomery, 1988). Several cognitive, attitudinal, and behavioral aspects of consumers (Alpert & Kamins, 1994; Carpenter & Nakamoto, 1989; Kardes & Kalyanaram, 1992) and of retail buyers (Alpert et al., 2001) result in switching costs that favor pioneer brands or products. There is consistent evidence suggesting market-share rewards to pioneers over late entrants (Kalyanaram et al., 1995; Urban et al., 1986), a reward which is particularly prominent in case the pioneer creates an entirely new product category (Kerin et al., 1996). The longer the lead-time, the greater the market share advantage enjoyed by the pioneer (Brown and Lattin, 1994; Huff and Robinson, 1994). Bowman and Gatignon (1996) find however that the main effects of order of entry are minimal, although late entrants are disadvantaged compared to early entrants because of a lower effectiveness of marketing mix efforts. Recent research also shows that the effect of an early-entry strategy on new product success is partially mediated by product's positioning and market scope (Rodríguez et al., 2008).

Against this background, a growing body of studies questions this pioneer advantage (Boulding & Christen, 2003; Golder & Tellis, 1993; Schnaars, 1994). Furthermore, aforementioned factors such as the intensifying involvement of retailers in NPD and the enhanced quality perception of store brands raise doubts about how easy it is for national brands to sustain the competitive advantage derived from innovation and market pioneering nowadays (Ailawadi & Keller, 2004). Store brands are more likely to respond quickly to feature innovation by national brands (Sinapuelas & Robinson, 2009). Many retailers now take a more active role in NPD and have shifted from a "me too" to an "added value" strategy, thus developing increasingly sophisticated product and brand portfolios. Some of these retailers have even created their own premium brands, which in some cases are leading innovation in their respective product categories (Huang & Huddleston, 2009). In addition, the so-called *free rider* effects should not be disregarded. It has been shown that market followers can easily overcome the pioneer advantage if they dispose of superior marketing resources that allow them to use a large-scale entry strategy in the introduction of new products (Golder & Tellis, 1993; Kalish et al., 1995; Narismhan & Zhang, 2000; Schnaars, 1994). This could be the case of large retail chains, whose brands are in a privileged position because these retailers control distribution, point of sale activity and price setting (Sayman et al., 2002). Thus, considering store brands provides a new dimension to the research on entry timing. However, to the best of our knowledge there is no research study which has investigated the extent of the pioneer advantage in new product commercialization in the growing presence of retail brands.

2. Research objectives

This study brings together two important strands of literature: the research on NPD and entry timing, on the one hand, and the research on the competition between national and store brands, on the other. The aim of this study is to gain insights into the determinants of performance of new product introductions in the CPG sector and to ascertain whether manufacturer brands can still enjoy first-mover market share advantages even when they compete against more sophisticated retail brands.

More specifically, we attempt to answer the following questions: Does the increased store brand competition affect the rewards of market pioneering? Do the effects of order of entry in a product subcategory vary depending on whether the entrant faces a high or a low market share of retail brands in the product category? Does the market response to a firm's marketing efforts differ between earlier and late entrants and between national and store brands?

3. Method and data

To address these questions, we specify a market share attraction model where the attraction of a particular brand is a function of its marketing effort. The market share of a particular brand is then simply the ratio of the attraction of this brand to the sum of the attraction of all the competitors in the industry:

$$MS_i = \frac{A_i}{\sum_{j=1}^I A_j}$$

We aim to examine the competitive dynamics of pioneers creating a new product subcategory and follower brands, including store brands. We hypothesize that, for a particular brand, the effectiveness of each of its marketing mix variables is influenced by its order of entry into the market and the market share of retail brands. Thus, in the model specification, we account for asymmetries in market response to competitors' marketing efforts concerning price gap, distribution, as well as advertising expenditures and sales on promotion. Elasticities for these variables may vary according to the order of entry (also the time in market) and to the relative power of store brands in the product category.

The above discussion leads to the process function that includes the order-of-entry term and a term to capture the effect of the retail brand market share:

$$\beta_k(it) = \alpha_{k0} + \alpha_{k1}O_i + \alpha_{k2}MS_t$$

The process function leads to the following model to be estimated:

$$\begin{aligned} \ln MS_{it} = & \beta_0 + \alpha_{10} \ln P_{it} + \alpha_{11} O_i \ln P_{it} + \alpha_{12} MR_t \ln P_{it} + \\ & \alpha_{20} \ln A_{it} + \alpha_{21} O_i \ln A_{it} + \alpha_{22} MR_t \ln A_{it} + \\ & \alpha_{30} \ln PO_{it} + \alpha_{31} O_i \ln PO_{it} + \alpha_{32} MR_t \ln PO_{it} + \\ & \alpha_{40} \ln D_{it} + \alpha_{41} O_i \ln D_{it} + \alpha_{42} MR_t \ln D_{it} + \mu_{it} \end{aligned}$$

Consistent with Urban et al. (1986) and Bowman and Gatignon (1996), our model is a single equation.

We shall test this model using both cross-sectional and time series data from various product categories and multiple brands. For our study, we use data from IRI which detail the different new product launches in the period from 2003 to 2009 for 12 CPG subcategories pertaining to 5 different product categories (milk, fermented milk, beer, antitransfer and toilet paper). We have selected subcategories in which product innovations have been imitated, that is, in which the introduction of the pioneering product in the subcategory has been followed by the launch of one or more competing products. Table 1 lists the 12 subcategories along with the name of the pioneer, the introduction date, and the number of followers. The sample consists of 12 pioneer brands and 89 followers.

TABLE 1
Data overview

Subcategory	Pioneer	Launch date	# followers
Product category Milk			
1. Lactose Free	Kaiku	2006	5
2. Enriched for growth	Puleva	2005	9
Product category Beer			
3. Beer with citrics	Shandy	2005	11
4. Beer 0 alcohol	San Miguel	2004	10
Product category Fermented Milk			
5. Soya	Naturactiva	2003	9
6. Cholesterol Free	Kaiku	2003	8
7. Hyper tension	Kaiku	2005	5
Product category Antitransfer			
8. Towels	Woolite	2005	8
9. Powder	Norit	2006	1
10. Liquid	Norit	2006	8
11. Stains	Kalia	2006	3
Product category Toilet paper			
12. Double Roll	Private label	2006	12

IRI scanner data was obtained on product-brand introduction dates, subcategory and brand sales and market shares, weighted distribution, average price, and sales in promotion from the inception of the subcategory until 2009. This information was complemented with data on advertising investment facilitated by Zenit Optimedia Agency. Table 2 provides the variable definitions and data sources.

TABLE 2
Variable definition

Variable	Definition	Data source
Subcategory dollar sales	Log of the combined euro sales of all brands commercializing the product subcategory.	IRI
Introduction date	Date when the brand entered the product subcategory.	IRI
Order of entry	Relative position in which the brand entered the product subcategory (1=pioneer, 2=second entrant...).	
Brand market share	A brand's market share in the subcategory.	IRI
Store brand	1 if a store brand, 0 otherwise.	IRI
Store brand power	Store brands share in the category where the subcategory pertains.	IRI
Price premium in the category	Ratio of the product price and the average category price.	IRI
Price premium in the subcategory	Ratio of the product price and the average category price of the subcategory.	IRI
Percent of category sales	Share of category euro sales of all brands in the subcategory.	IRI
Weighted distribution	Percentage of subcategory sales accounted by stores where the product is distributed.	IRI
Scale of entry	Brand's weighted distribution achieved in the first year.	IRI
Advertising investment	Advertising investment in euros of each brand in the subcategory.	Zenit Optimedia
Percentage of sales on promotion	Percentage of the brand sold on promotion in the subcategory.	IRI
Milk	1 for milk category, 0 otherwise.	IRI
Fermented milk	1 for fermented milk category, 0 otherwise.	IRI
Beer	1 for beer category, 0 otherwise.	IRI
Toilet Paper	1 for toilet paper category, 0 otherwise.	IRI

A store brand dummy equals 1 for store brands and zero otherwise. Store brand power refers to the market share in the launch year of private labels in the category to which the subcategory pertains. The

price premium charged for the new product equals the percentage difference vs. the subcategory average, where the subcategory average equals the average price of all stock keeping units (SKU) weighted by unit sales. Weighted distribution is the percentage of subcategory sales accounted by stores where the product is distributed and scale of entry is the weighted distribution achieved by each brand in the first year it entered the market. Advertising investment refers to the euro investment made by each brand of the subcategory, and the percentage of sales on promotion refers to the percentage of the subcategory sales that the brand does on promotion.

The subcategory's percentage of total category sales is also included in the analysis. Kuester et al. (1999) show that reactions are stronger to new product introductions that have significant consequences on reacting firms. One measure of the threat that a new product subcategory represents for incumbents is its share of total category sales. If a product innovation captures a large proportion of category sales, incumbents are pressured to quickly introduce their own me too brand (Sinapuelas and Robinson, 2009). In addition, to control for differences across categories dummy variables are defined for each of the following categories: Milk (M), Beer (B), Toilet Paper (T), Fermented Milk (F), and Antitransfer is the excluded category.

4. Managerial implications

In terms of managerial implications, the findings of this research provide suggestions to manufacturers of national brands about what the most suitable product innovation marketing strategies are and how they should face the challenge posed by store brands. Given the increasing power of store brands, the answer to our research questions will serve to determine whether pioneering advantages are still relevant in CPG new product development and launch, and under which circumstances. This research will also offer insights into how both pioneers and followers should compete to enhance their product's commercial success.

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