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Product and Marketing Actions in a Competitive Scenario

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ABSTRACT

We analyze product and marketing actions and their consequences on firm competitive outcomes. These actions are investigates in relative terms compared to a firm's direct competitors. Our results shed new light on how a firm's choices regarding product portfolio and marketing postures affect its performance, while accounting for competitive conditions in the external environment. The theory is tested using data from the US apparel industry.

Keywords: Product and Marketing Strategic actions; Competitive Interaction; Performance.

JEL Classification Numbers: M10, M31.

INTRODUCTION

As they play in the competitive landscape, firms may challenge their rivals through aggressive actions or focus on their own expansion, without directly harming competitors' position. To capture how these processes influence firm performance, research has been recently fuelled by perspectives on market size and market share dynamics (Fosfuri & Giarratana, 2009; Mahajan, Sharma, & Buzzel, 1993; Nguyen & Shi, 2006). While market size dynamics involve the creation of value with low competitive aggressiveness, market share dynamics are more targeted to direct competition, as firms expand their boundaries by stealing part of their rivals' business (Lumpkin & Dess, 1996; Miller, 1993). In this context, the strategic interactions between a firm and its competitors play a crucial role for firm performance (Ferrier, 2001; McGahan & Silverman, 2006) so that firms' actions do not happen in a vacuum. Rather, they are designed having in mind competitors' moves and resource profile, and often entail the rivals' reactions.

While some strategic actions are aimed mainly at increasing market share to the detriment of competitors, such as aggressive pricing (Vilcassim, Kadiyali, & Pradeep, 1999), others - such as generic advertising (Friedman & Friedman, 1976; Krishnamurthy, 2000) - are concerned to strengthen a firm's market size with scarce effects on rival positions. However, some interrelationships may exist. In particular, actions implemented to pursue market size objectives may harm a firm market share, and vice versa. This means that trade-offs are likely to appear between market share and market size dynamics. In order to manage such trade-offs, firms have to confront with the complex task of fine-tuning their strategic tools (Mizik & Jacobson, 2003).

Given the importance of disentangling strategic moves associated with market share and market size effects, a recent stream of research has started to explore these issues (Fosfuri & Giarratana, 2009; Eaton, Kortum, & Kramarz, 2011; Cennamo & Santaló, 2013). Our study

goes in this direction. In doing so, we focus on product and brand strategies, which reflect firms' choices on two important areas of investment, i.e. R&D and marketing.

In particular, we study the impact of firms' product and brand strategies on performance in the US apparel industry. With regard to product strategies, we analyze product specialization (intra-industry diversification), intended as the extent to which a firm focuses or not on narrow product categories that target specific sets of customers (Park, Jaworski, & MacInnis, 1986). Concerning brand strategies, we focus on the level of brand breadth, which denotes the extent to which single brands are used to cover and market a variety of product types compared to multiple brands attached to particular products (Boush & Loken, 1991; Scheinin & Schmitt, 1994). Given the existence of trade-offs between market share and market size dynamics, it can be argued that these strategies may affect market share and market size differently. In order to account for the strategic interactions among firms, we explicitly account for focal firms' actions relative to competitors.

Our empirical results show that higher product specialization and brand breadth have a negative impact on firm market share and market size, meaning that firms increase performance by augmenting diversification in different product categories and by using a series of different specialized-product specific brands. However, their combined effect on market share and market size differs: it augments the negative effect of the two strategies on firm market share, while it softens their negative effect on firm market size, turning positive for very high levels of product specialization and brand breadth.

Our study thus contributes to research on strategic moves in a competitive landscape (Ferrier, 2001; McGahan & Silverman, 2006; Peteraf & Bergen, 2003; Priem, 2007) by analyzing, simultaneously, the impact of market share versus market size dynamics on firm performance. Few studies has accomplished this task; notable exceptions are Fosfuri & Giarratana (2009), who investigate the relationship between rivals' product introductions and

number of new advertising campaigns in a duopoly case and Eaton et al. (2011) who analyze how firms' domestic sales and market share relate to their international market activity. We add evidence from a more competitive sector with several firms that show heterogeneity in their product portfolio composition and advertising postures and we focus on an unexplored combination between product specialization and brand breadth. Although they represent the outcomes of the two strategic investments such as R&D and marketing, the emphasis on their combined effect on firm performance has not been exhaustive. Our paper tries to fill this gap, and shows that the combined use of product specialization and brand breadth could have a different impact on market share and market size objectives, thus confirming the existence of trade-offs between market share and market size dynamics.

Second, building on recent strategy literature (De Figueiredo & Kyle, 2006; Hui, 2004; Sinitsyn, 2012; Barroso & Giarratana, 2013), our paper integrates the role of marketing actions in the literature on firm's performance. While in the past, strategy scholars have focused mainly on other types of competitive moves, such as product launches, product retirements and R&D investments, recent research has demonstrated the importance of accounting for firms' marketing strategies as they can complement our understanding of the drivers of firm performance in a competitive landscape. By including simultaneously in our analysis firms' extent of product portfolio and brand breadth, we add to this literature by showing how the patterns of product and brand strategies firms choose to implement impact on their performance.

THEORY

Assumptions and Background

We expect our theoretical mechanisms to apply to industries presenting a set of characteristics, among which low entry barriers and hence high rivalry, salience of product innovations and brands, high customers' heterogeneity and segmentation, both vertical and horizontal, in different submarket niches.

Channels of Market Share and Market Size Dynamics

Managers need to understand how product and brand strategies may help them to increase the demand for their products. Likewise, they need to choose how to allocate resources to market share and market size objectives. Market share and market size dynamics are influenced by different channels.

There are mainly three channels through which firms can stimulate their market size. First, firms can induce greater per capita consumption of their products within their existing customer base (Chaudhuri & Holbrook, 2001; Fosfuri & Giarratana, 2009). This may happen by encouraging the purchase of greater quantities of their products or through the creation of new usage occasions that increase consumption frequency. Second, a firm can stimulate its customers' willingness to pay. As in the first case, this channel focuses mainly on a firm's existing customers. However, instead of boosting the quantity of purchase, firms pursuing this strategy exploit the price leverage. Firms can stimulate consumers' willingness to pay in several ways. For instance, they can expand their set of product and/or service characteristics in order to enhance customers' consumption experience or develop features that increase the value of their offering for specific customer segments (Priem, 2007). Finally, a firm can expand its market size by attracting new customers who try the product for the first time

(Lancaster, 1984). This is not an easy task, as firms need to convince inexperienced individuals to use this particular product to satisfy their needs.

As far as market share dynamics are concerned, assuming that the total demand of an industry is given, firms can only gain a higher portion of the market by stealing customers from competitors (Kekre & Srinivasan, 1991; Fosfuri & Giarratana, 2009). To this aim, firms may use aggressive pricing, advertising competition (Vilcassim, Kadiyali, & Pradeep, 1999), differentiation (Caves & Ghemawat, 1992), or a broad combination of these and other actions (Ferrier, Smith, & Grimm, 1999), thus assuming the risk of competitive retaliation (Arora, Allenby, & Ginter, 1998).

HYPOTHESES

Product Strategies: Diversification vs. Specialization

One critical choice companies take when designing their product strategies is whether to specialize or diversify. This dimension of a firm strategy can potentially be a relevant source of competitive advantage (Chatain & Zemsky, 2007). Firms pursuing a product specialization strategy focus on narrow product categories that address specific customers' needs. Conversely, firms undertaking a product diversification strategy operate in a variety of product categories that span different customer groups.

In presence of high scope economies from supply, product diversification enables to exploit synergies in production, distribution and management (Paine & Anderson, 1983) that allow firms to cut costs (Panzar & Willig, 1981). Cost savings in turn help companies to lower their prices on the marketplace, thus stimulating the demand for their products. Cost savings also generate slack resources that firms can use to increase their investment in product and marketing activities (Greenley & Oktemjil, 1998; O'Brien, 2003; Thomson, 1967), thus enhancing their ability to meet consumers' needs.

In order to analyze here the impact of product specialization strategies on market performance, consider first the channels for market size dynamics that have been recalled above. Compared to more diversified firms, companies operating with a high degree of product specialization will have fewer opportunities to save costs. Although literature has suggested the existence of focus-related benefits due to organizational trade-offs (Porter, 1996; Siggelkow, 2002), firms undertaking a specialized product strategy are unable to exploit operational synergies, thus being excluded from the potential advantages from cost savings. Under this condition, it is less likely that they will manage to lower their prices on the marketplace. This reduces their chances to boost their existing customers' per capita consumption. Similarly, as long as new customers decide to try a given product for the first time, it is very unlikely that they will choose a more expensive purchase solution. New customers with very little experience in a specific product category are often unable to make accurate distinctions among different offerings (Moorthy, Ratchford, & Tulakdar, 1997), and may therefore prefer to invest less money in the first purchase in order to reduce the loss in case of dissatisfaction (Blattberg, Eppen, Lieberman, 1981). This implies that product specialists will be less likely to acquire new customers than diversified firms. In sum, product specialization strategies are likely to have a negative impact on a firm's market size, other things being equal.

Concerning market share dynamics, firms pursuing a product specialization strategy are less likely to face direct competition from companies that focus on the narrow offerings from other niches (Park et al., 1986). However, they are exposed to the competitive threats arising from more diversified rivals, which are able to intercept an average demand across all markets and to offer much lower prices (Carroll, 1985). These arguments suggest that, in presence of high production scope economies, product specialization is likely to decrease a firm's market share, other things being equal. We therefore hypothesize the following:

Hypothesis 1a. Higher product specialization compared to competitors decreases firm market size.

Hypothesis 1b. Higher product specialization compared to competitors decreases firm market share.

Brand Strategies: Brand Breadth

Brand breadth captures the extent to which firms use similar brands to cover and market a variety of product types (Boush & Loken, 1991; Scheinin & Schmitt, 1994). Brands can show high breadth when they could be or are associated with several product categories. Conversely, brands with narrow breadth could be only used in connection with a limited array of products with similar attributes.

Given the sunk investments needed (Aaker & Keller, 1990), firms often seek to capitalize on established brands to launch new products and expand their business (Tauber, 1988). As a brand investment can be spread among several products, brands with high breadth allow firms to save marketing costs (Park et al., 1986). Moreover, high brand breadth may positively impact on brand awareness (Buday, 1989). Since they are general and not specific to certain product categories, high breadth brands may be more acceptable, easier to recognize and remember by a variety of customers.

On the flip side, high breadth brands are less likely to show direct clues to specific product attributes and categories. This implies that this type of brands tends to show weaker and diffuse associations (Boush & Loken, 1991; Keller & Aaker, 1992; Loken & John, 1993; Scheinen & Schmitt, 1994).

To analyze the impact of brand breadth on firms' market size, consider first the "new customers' acquisition" channel. When individuals are not familiar with a given product, they

do not have the ability to evaluate different brands (Moorthy et al., 1997). Under this condition, new customers should be attracted by high breadth brands given that they accrue higher awareness, reducing information asymmetries. In sum, broad brands may provide firms' with an opportunity to increase their market size by acquiring first-time customers.

However, brand breadth has a different effect on the other two channels of market size dynamics. Research has demonstrated that products that share some relevant common features tend to be perceived as similar by consumers (Kim & Chhajed, 2000, 2001; Krishnan & Gupta 2001; Wanke, Bless, &Schwarz, 1998). This is especially true for products under the same brand (Hui, 2004). It follows that firms using high breadth brands expose their products to the risk of cannibalization, thus reducing the frequency of existing customers' purchase and hence their overall per capita consumption.

Finally, using similar brands may create confusion in consumers' perceptions, especially when customers have strong preferences for some product characteristics (Aaker & Keller, 1990; Park et al., 1986; Tauber, 1981) and hamper firms' ability to implement effective product positioning strategies, as well as to meet consumers' needs. Under this condition, customers will hardly pay a higher price, which reduces the firm's market size. Based on these mechanisms, we expect that - despite the potential attraction of new customers - the overall effect of brand breadth on a firm's market size will be negative.

Concerning the effect of brand breadth on market share, we have already mentioned that when a firm uses similar brands to cover a variety of product categories, it runs the risk of creating weak associations (Boush & Loken, 1991; Keller & Aaker, 1992; Loken & John, 1993; Scheinen & Schmitt, 1994). Marketing literature demonstrates that solid and consistent associations tend to be more easily and quickly retrieved than diffuse and weak associations (Anderson & Spellman, 1995; Osgood, 1946, 1948). Hence, it can be argued that the degree of association between a brand and a product category is likely to influence customers'

purchase decision among different brands. This suggests that firms with high breadth brands will be highly exposed to the competition from specific brands with better clues to product attributes. Narrow and product specific brands increase firm ability to meet the needs of specific market segments, and enable to steal customers to firms with an unfocused positioning. Based on these arguments, we expect that brand breadth will have a negative effect on a firm's market share.

Whereas in markets characterized by demand synergies firms offering a variety of products under similar brands would benefit from "one-stop shopping" effects, thus capturing more customers with higher willingness to pay (Fosfuri & Giarratana, 2007; Siggelkow, 2003; Ye, Priem, & Alshwer, 2012), in the context of this research - where scope economies from demand are irrelevant - we can hypothesize the following:

Hypothesis 2a. Higher brand breadth compared to competitors decreases firm market size.

Hypothesis 2b. Higher brand breadth compared to competitors decreases firm market share.

Product and brand strategies

The simultaneous presence of product specialization and high brand breadth depicts a firm using a very general brand to market a narrow product offering. To understand what is the impact of such a situation on firms' market size, it is useful to recall some insights from niche width theory (Carroll, 1985; Freeman & Hannan, 1983; Hannan & Freeman, 1977), which suggests that organizations tend to evolve either as specialists or as generalists.

According to niche width theorists (Hannan & Freeman, 1977), there is a relationship between niche specialization and organizations' identity. Firms specializing in a focused product niche target the needs of a particular set of customers by means of a consistent customization of their offering. By doing so, firms increase their perceived identity among the

submarket niche customers (Hannan & Freeman, 1977). High specialization also implies a close association between a firm/brand and a particular submarket niche (Hsu, 2006), such that the greater the concentration of a brand's activities in a specific product category, the stronger the association between that brand and the related niche (Meyvis & Janiszewski, 2004).

Overall, this reasoning suggests that firms pursuing an extreme product specialization strategy will enjoy strong identity clues and association with their particular submarket niche, regardless their brand approach. Therefore, although high brand breadth tends to encompass low product-level associations and confusion among customers due to inconsistent positioning, high product specialization can offset these conditions (Zuckerman, 1999). In other words, firms with a combination of high broad brand and product specialization are not affected by the absence of product-level clues, as a focused product positioning convey visible associations to customers. Under this condition, firms may use broad brands to develop and communicate some symbolic and emotional values that reflect niche customers' socially established expectations (Hannan et al., 2007; Hsu, 2006; Hsu et al., 2009). This will foster a firm's ability to meet niche customers' needs and increase their satisfaction with the firm offering. As a result, existing customers' willingness to pay will be higher.

Moreover, in the light of their strong identification with the firm's offering, we can expect existing customers to increase their per capita consumption of the firm's product.

Just like high specialization and brand identification with a narrow product niche is key to increase the size of a firm's sales among existing customers, we can anticipate that new customers will not probably be attracted by such a specialized offering. Due to their limited degree of knowledge of and familiarity with the specific product category, new customers will likely search for a more general and accessible offering, with value propositions easier to understand for inexperienced consumers. Despite such negative effect on new customers'

acquisition, the predicted positive impact of product specialization and brand breadth combination on both existing customers' per capita consumption and willingness to pay let use believe that its overall effect on a firm market size will show a tendency to become positive, as the levels of product specialization and brand breadth increase.

Conversely, we expect the combined effect of product specialization and brand breadth on firms' market share to be negative. First, the highly focused product positioning will attract only customers with specific needs and tastes. Second, firms pursuing this strategy will simultaneously experience competition both from diversified firms, able to offer lower price products to larger market niche customers, and from brand specialists. We therefore expect that:

Hypothesis 3a. Simultaneous higher product specialization and brand breadth soften the negative impact of the two strategies on firm market size (positive moderation).

Hypothesis 3b. Simultaneous higher product specialization and brand breadth accentuate the negative impact of the two strategies on firm market share (negative moderation).

EMPIRICS

Data Description

We test our hypotheses on the US branded apparel industry. This industry is an ideal test-bed since it mostly reflects our assumptions. To test our hypotheses, we collected information on the whole sample of 70 brands operating in the US apparel industry. This sample was obtained from the dataset Passport, created by Euromonitor International. Passport is a global market research database providing statistics, analysis, and reports on industries, countries and consumers worldwide that has been already used especially in marketing research (e.g. Chandrasekaran & Tellis, 2008; Tellis, Stremersch & Yin, 2003). For

this sample of brands, we employ yearly panel data from 2006 to 2011. The level of analysis of our empirical study is therefore the brand-year. For each of these brands, we reconstructed their trademarks portfolio up to year 2011, by using the USPTO on-line TESS database. The TESS database allows searching for trademarks based on several searchable fields, and retrieve trademarks documents for download. The USPTO defines a trademark as "*a word, phrase, symbol or design, or a combination thereof, that identifies and distinguishes the source of the goods of one party from those of others*" (http://www.uspto.gov/).

Variables

Our two dependent variables are market size and market share. We measure "*market size*" as brand *i*'s sales growth. More specifically, since:

$$\log(\text{sales } t / \text{sales } t\text{-}1) = \log \text{sales } t - \log \text{sales } t\text{-}1$$

we used the log of brand *i*'s sales in year *t* as our dependent variable and included the log of brand *i*'s sales in year *t-1* among our controls.

"*Market share*" is calculated as the ratio of brand *i*'s sales volume in year *t* in the US apparel industry over total industry sales. Data source for both variables is Passport.

Both our independent variables, i.e. product specialization and brand breath, were built using trademark data from the USPTO on-line TESS database. We downloaded all trademarks associated with our sample brands, using the brand name as a search criterion in all the search fields of the TESS database, and aggregated them to reconstruct a brand's trademarks portfolio in year *t*. In order to ensure that our brands' trademark portfolios reflect the actual configuration of a brand's activity in the US market, we accounted for trademarks that were abandoned, cancelled or that expired in year *t*, by excluding them from our brands' trademark portfolio in year *t*. The American law establishes that trademarks rights are conferred only if trademarks are used on or in connections with goods and services (Graham,

Hancock, Marco, & Mayers, 2013). Hence, when applying for a trademark, applicants are required to accurately and clearly indicate the goods and services on or in connection to which they use or intend to use the mark. This requirement serves the objective of informing third parties regarding the scope of an applicant's rights. Goods and services description can be very specific or more general (Graham et al., 2013), and it is used to assign a proper classification to marks based on their goods and services categories. There are two types of classifications. The first is the International Classification of Goods and Services under the NICE agreement (hereafter, IC classification), which is being used since September 1973 and includes 45 classes (34 for goods and 11 for services). The IC Classification is considered as the primary classification. The second is the U.S. classification, which was used prior to 1973 and is still maintained by the USPTO as a secondary system. The U.S. classification includes 60 classes (52 for goods and 8 for services). Empirically, there are differences in the way IC and US classifications are used. While the majority of trademarks are assigned only one IC class, a mark's US classes are usually manifold. According to a recently published study on US trademarks (Graham et al., 2013), single IC class registrations and applications represent the 86.5% of the overall trademarks serial numbers. Conversely, when looking at trademarks US classes attribution, it is possible to observe a high variance. Consider, as an example, the IC and US classification of two of the trademarks included in our brands' trademark portfolios. The first trademark (serial number 73766707) is owned by Adidas, and protects the name "Adidas Torsion". This mark is used to market a particular product line of Adidas' offer, characterized by a specific sport shoes outsole component that allows the forefoot and rearfoot to move independently thus adapting to running surfaces. The goods and services description provided by the applicant regarding the mark declares "*shoes*", and the trademark is classified under a single IC class (025, Clothing) and a single US class (039, Clothing). Products associated with this mark are therefore very specific to a particular category.

Moreover, they share a distinctive product attribute that is recalled by the brand name through the word "torsion", which acts as a product clue. The second trademark (serial number 79103350) is owned by Inditex S.A., and protects the name "Zara Basic". In this case, the goods and services description is very broad, and spans from "*clothing, namely, tops, bottoms, underwear, shorts, jeans, leggings, jeggings and blouses; footwear*, [...], *clothing of leather, namely, leather pants, leather jackets, leather boots,* […]*"* to "*bleaching preparations and other substances, namely, detergents and fabric softeners for laundry use; cleaning, polishing, and abrasive preparations;* […], *shampoos; hair dyes; cosmetic preparations for eyelashes;* […], *cakes of toilet soap; perfumes; false nails and eyelashes; pumice stones for personal use; make-up powder;* […]*"*. The trademark is classified under 2 IC classes (025, Clothing and 003, Cosmetics and Cleaning Preparations), while it has 8 US classes (022, Games, Toys and Sporting Good; 039, Clothing; 001, Raw or Partly Prepared Materials; 004, Abrasives and Polishing Materials; 006, Chemicals and Chemical Compositions; 050, Merchandise Not Otherwise Classified; 051, Cosmetics and Toilet Preparations; 052, Detergents and Soaps). The information provided by the trademark document depicts in this case a much more general brand, that is used in connections with 2 different IC primary classes defining the actual scope of the products in connection to which the applicant will use the mark, while simultaneously being associated with a very broad set of heterogeneous product categories, represented by the 8 US classes.

Based on this logic, we used the information provided by IC and US classes to capture respectively product specialization and brand breadth. Since IC classes indicate the product categories where an applicant has an offer to bring to the market, product specialization is measured as the Herfindhal index of IC classes associated with a brand *i*'s trademark portfolio in year *t*. This measure was also standardized by the average level of specialization of competitors at time *t.* Precisely, we opt for two specifications: the first one is by dividing the

firm value by the average of the same index calculated for the brand's competitors in year *t* ("*specialization_r*"); the second is calculated by subtracting the competitors' average ("*specialization_d*"). Therefore, this variable measures the concentration of a brand's offering across product categories, and comparing it to competitors' averages, it captures the interaction of a firm's product moves against competitors' position. Similarly, as US interclass registration reflects an applicant's potential association of a brand with several product categories, we measure brand breadth as the average number of US classes associated with a brand *i*'s trademark portfolio in year *t*. As for product specialization, this measure was standardized by competitors' averages, by both dividing ("*breadth_r*") and subtracting ("*breadth_d*") to it the average number of competitors US classes in year *t*. We therefore assume that the higher the number of US classes associated with a brand, the higher the brand awareness (as the brand may appeal to a higher number of customer segments), but the lower the brand association (as the brand identity is more diffused across a variety of product categories, and hence is less linked to attributes that are specific to individual product types).

Several controls were applied to our analysis. First, we controlled for the trademark "*portfolio size*", calculated the log of the average number of trademarks (+ 1 to avoid log(0)) included in a brand *i*'s portfolio in year *t*. The registration of a high number of trademarks can be a proxy for a firm's investment in advertisement and branding effort. Established brands may be easier to recognize and might drive a firm's market performance. Equally, very old marks could reduce a company's market value (Gonzalez-Pedraz & Mayordomo, 2012). To control for these effects, we included a measure of trademark "*portfolio age*", calculated as the log of the average age in years (+ 1) of trademarks included in a brand *i*'s portfolio in year *t*. Since different brand names could belong to the same parent company, we included a set of dummy variables that take the value 1 when different brands are part of the same group and zero otherwise. As anticipated above, we also controlled for a brand's lagged "*sales*" in year

t-1, by including a variable measured as the log of a brand *i*'s sales volumes (+ 1) in year *t-1*. Moreover, we wanted to clean our market performance effects from the influence of a firm's cost structure. We therefore collected data on the costs of goods sold associated with a brand included in our sample using the database Osiris[1]. We built a measure of "*costs*" calculated as the log of a brand *i*'s costs of goods sold (+ 1) in year *t-1*. Unfortunately, we reported about 30% of missing costs variables. To avoid dropping observations for which we do not have costs data in the regressions, we follow this statistical procedure (cfr. Giuri & Mariani, 2013): when missing, we set the costs variable to be equal to the sample average costs in year *t*, and created a corresponding "*missing costs dummy*" variable, which takes the value of 1 when costs are missing and their value are imputed.

Results

Table 1 reports descriptive statistics for our sample. Data on market share confirms what anticipated in the industry description, i.e. a very competitive and fragmented sector with no player owning more than 4.0% of the market. Market Share and Sales Growth are correlated at the 0.392, showing that a relevant part of firms' growth in this sector tends to be explained by market share dynamics.

Insert TABLE 1 about here

To estimate our models, we performed robust linear regressions with fixed effects (brands and time)[2]. In Models (1) and (2), we tested our hypotheses 1a, 1b, 2a and 2b by regressing respectively our market share and market size variables onto product specialization and brand

[1] When brand-level data were not available, we used costs at the firm level.

[2] Of the 70 brands included in our sample, we had to delete 1 brand due to missing trademarks data.

breadth (calculated as the *difference* between the value of the focal brand's product specialization/brand breadth indices and the average value for competitors).

Insert TABLE 2 about here

As predicted in our theoretical model, the negative and highly significant *($p < 0.01$)* coefficients of both variables confirm that product specialization and brand breadth have a negative effect on a firm's market share and market size dynamics. The R-squared is also sufficiently high, confirming that the models' ability to explain a high degree of variance.

In Models (3) and (4), we test hypotheses 3a and 3b by including the interaction between product specialization and brand breadth. The direct effects of the two main covariates are stable, and both models explain a high degree of variance, as showed by the values of the R-squared. Moreover, while in the market share model their interaction coefficient is negative and significant *($p < 0.05$)*, in the market size model the sign becomes positive, yet significant *($p < 0.05$)*, thus confirming our expectations that the simultaneous presence of product specialization and brand breadth softens the negative impact of the two variables on market size.

As a robustness check, we have replicated the models using alternative measures of product specialization and brand breadth, i.e. those calculated as the *ratio* between the value of the focal brand's product specialization/brand breadth indices and the average value for competitors. As shown in Models (5), (6), (7) and (8), the signs and significance levels of our variables of interest remain consistent.

Moreover, since missing costs data lead us to replace about 30% of our "*costs*" variable with the sample average costs, we have tried to perform our models without the costs

variable (and the corresponding missing costs dummies), and the results are broadly the same (available on request).

We have plotted the results for the interaction effects in Figure 1.

Insert FIGURE 1 about here

Figure 1 shows that, for very high levels of product specialization and brand breadth (values included in the last quartile of both variables), the interaction effect on firm's market size become positive. Firms that combine a very narrow product specialization with a high-breadth brand are unable to steal customers from their rivals, but they could be highly successful in their specific market niche, thanks to strong identification with niche customers expectations and a highly appealing brand. In line with our reasoning, this should drive their consumers to buy more of their products, and for higher prices.

CONCLUSIONS

To investigate the relationships between product and brand strategies and market share vs. market size dynamics, this paper draws on data of the US apparel industry between 2006 and 2011. Our findings reveal that, while the direct effect of product specialization and brand breadth on market share and sales growth is negative, the joint combination of the two affects market share and market size differently, and more in particular it increases the reduction of market share, but it softens the reduction of market size, turning positive for very high levels of the two variables.

Our study complements research on strategic moves in a competitive landscape (Ferrier, 2001; McGahan & Silverman, 2006; Peteraf & Bergen, 2003; Priem, 2007) by

analyzing, simultaneously, the impact of market share versus market size dynamics on firm performance. Compared to previous studies that have undertaken this task (Fosfuri & Giarratana, 2009; Eaton et al., 2011), we add insights from a more competitive environment in which companies' product portfolio composition and brand postures are very heterogeneous, thus offering a more complex comprehensive picture of the possible effects of product and brand strategies on firms' market performance. In doing so, we also integrate marketing perspectives in strategy literature analyzing firm performance, thus answering to the recent call for a more explicit account of the role of marketing actions in the study of firms' strategic interactions in a competitive landscape (De Figueiredo & Kyle, 2006; Hui, 2004; Sinitsyn, 2012; Barroso & Giarratana, 2013).

This article shows the existence of two possible roads for managing product and brand strategies in sectors with low entry barriers, high heterogeneous and segmented customers and economies of scale from production: (1) a mainstream strategy of product diversification with specialized brands that tend to generate associations directly with products (as in the case of Gap Inc. with brands like Gap, Banana Republic, Old Navy); (2) a very focused product strategy with a broad brand that appeals to a very general and emotional meaning (even if not used as a brand extension), providing the firm with high legitimization and hence high willingness to buy and to pay from customers in a small market niche (as in the case of UGG Australia).

This granted, our article offers several relevant management implications. First, managers willing to succeed in these industries should overall lower their level of product specialization and brand breadth. One way to do this is to move cost saving from diversified production to marketing expenditures, thus avoiding too stretched brand extensions. Of course, this might not be an easy task, as the coordination of the organizational divisions involved in this process should be taken into account. For example, product division

managers could create some resistance to allocate their slack resources to another organizational unit. Possible solutions could be either the implementation of a hierarchical structure, in which either the marketing division or the product division is on a higher level with stronger decisional power, or the creation of an autonomous third division that decides on the flow of resources across units.

On a second stance, managers should be well aware on the level of competitiveness of their strategic actions. Our study demonstrates that the product and brand moves allow firms to grow while simultaneously stealing market share to competitors. On the one hand, this implies a high degree of aggressiveness as well as the threat of competitive retaliation from rivals. On the other hand, it suggests the importance for companies operating in sectors similar to that of this study to continuously monitor competitors, because their actions can affect their relative position and performance.

For managers willing to isolate from aggressive confrontation with rivals, our study also suggests the existence of a very specific strategy. This strategy entails the focus on very narrow product niches, in which the company benefits from strong legitimations by niche consumers who recognize a high convergence between their product expectations and the company imagine. Firms pursuing this strategy may therefore grow by relying solely on their established and specialized market segment, without stealing market share to competitors.

This paper leaves also open new avenues for strategy research. One interesting line of work should better disentangle product and marketing strategies, as they are fundamental to understand firm competitive advantage in several sectors. Endogeneity between a company's product and brand decisions remains a major concern; in our analysis, we have dealt with this issue by performing brand, group and time fixed effects. However, strategy research would greatly benefit from a deeper understanding of how these two strategic choices could be better identified from an econometric point of view.

Further research should also test our results under different industry conditions. For instance, while our arguments hold under relevant scope economies from supply, management scholars could offer an interpretation of the role of product and brand strategies when economies of scope exist from the demand side. How would consumers react to product specialization and brand breadth under demand synergies? What would the consequences be for market share and market size dynamics?

As shown by our analysis, established and mainstream strategies may be accompanied by more focused strategies that adapt better to the specific needs of some customers. New works should therefore address that there might be a wide array of different successful strategies within a single sector, whose exploration deserves more research (Cool & Dierickx, 1993; Smith, Grimm, Young & Wally, 1997).

Finally, we believe that strategy studies should confront more deeply on brand effects. We treat brands as homogeneous, but it is arguable that they could be different under several dimensions. Such heterogeneity should be analyzed further, as well as companies' investment in a brand. These are elements that could strongly enrich our analysis and we therefore hope further research will explore the complexity behind brands.

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TABLE 1

Descriptive Statistics

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Market Share	1									
2. Market Size	0.5063	1								
3. Breadth_d	0.0356	0.0152	1							
4. Breadth_r	0.0359	0.0149	0.9997	1						
5. Specialization_d	-0.1272	-0.0475	-0.6445	-0.6429	1					
6. Specialization_r	-0.1274	-0.0492	-0.6431	-0.6413	0.9998	1				
7. Portfolio Age	-0.0827	-0.0966	-0.5624	-0.5618	0.1105	0.1102	1			
8. Portfolio Size	0.31	0.219	0.1845	0.1808	-0.1346	-0.1353	-0.3365	1		
9. Costs (t-1)	-0.0664	-0.0119	-0.0627	-0.0622	0.1428	0.1433	0.0162	-0.0462	1	
10. Missing Costs Dummy	0.0334	0.0098	-0.0806	-0.0811	-0.0021	-0.0014	0.0964	0.1124	-0.0027	1
Obs	414.000	408.000	483.000	483.000	483.000	483.000	483.000	483.000	476.000	484.000
Mean	0.430	-0.482	0.000	1.002	0.000	1.005	2.269	3.684	14.411	0.300
Std. Dev.	0.541	10.872	1.155	0.394	0.239	0.589	0.563	1.234	0.960	0.459
Min	0.000	-13.677	-3.050	0.000	-0.342	0.198	0.288	0.693	10.707	16.204
Max	4.000	14.139	2.501	1.904	0.608	2.549	3.450	6.098	0.000	1.000

TABLE 2

Robust Estimation of Linear Regressions with Fixed Effects

Variables	(1) Market Size	(2) Market Share	(3) Market Size	(4) Market Share	(5) Market Size	(6) Market Share	(7) Market Size	(8) Market Share
Breadth_d	-2.983***	-0.198***	-2.590***	-0.205***				
Specialization_d	-15.17***	-0.887***	-11.34***	-0.953***				
Breadth_d*Specialization_d			1.695**	-0.103**				
Portfolio Age	-14.14***	-0.308***	-16.17***	-0.281**	-15.47***	-0.337***	-16.19***	-0.288**
Portfolio Size	-11.45***	-0.520***	-10.91***	-0.524***	-11.13***	-0.514***	-10.97***	-0.525***
Portfolio Age*Portfolio Age	1.827*	0.0138	2.360**	0.00479	2.149**	0.0214	2.366**	0.0067
Portfolio Size*Portfolio Size	1.761***	0.0870***	1.734***	0.0882***	1.762***	0.0868***	1.740***	0.0883***
Sales (t-1)	-2.595***	0.00966**	-2.352***	0.0128**	-2.357***	0.0133***	-2.351***	0.0129**
Costs (t-1)			-3.001***	-0.0446***	-3.001***	-0.0444***	-2.999***	-0.0446***
Missing cost dummy			-0.994	-0.0316	-1.205	-0.0166	-0.989	-0.0313
Breadth_r					-8.142***	-0.565***	-9.580***	-0.468***
Specialization_r					-5.269***	-0.341***	-6.560***	-0.254***
Breadth_r*Specialization_r							1.934**	-0.131**
Constant	54.93***	1.432***	89.15***	1.910***	102.3***	2.844***	103.5***	2.767***
Observations	408	408	408	408	408	408	408	408
R-squared	0.394	0.481	0.448	0.487	0.448	0.485	0.449	0.487

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

FIGURE 1

Simulations of interaction effect of product specialization and brand breadth on firm market size.