European Journal of Business and Management www.iiste.org
ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)
Vol.10, No.11, 2018

Are All Strategies of Product Differentiation and Positioning Effective Through Consumer Pricing? The Case of Packaged Ice Cream in Mexico: 2017

Eric Israel Rios Nequis*
International Trade and Customs program at Universidad Politécnica Metropolitana de Hidalgo
Boulevard Acceso a Tolcayuca # 1009, Ex Hacienda de San Javier, Postal Code 43860 Tolcayuca, Hgo, México
*Emails for the corresponding author: erios@upmh.edu.mx and; eric_rios_nequis@hotmail.com

Eva Conraud Koellner
Economic and Managerial Sciences Division, Guanajuato University
Address: s/n, El Establo, Marfil, 36000 Guanajuato, Gto, México

Daniela Edith Carbajal Cansino
Student in International Trade and Customs Program at Universidad Politécnica Metropolitana de Hidalgo

Abstract
The research shows that not all product differentiation strategies have positive effects on prices, some of them are positively associated in the mind of consumers and do not manifest directly in the first mentioned path. Especially the cobranding strategy, which has negative effects on prices, assuming that it is not the ideal option to obtain higher revenues through high prices. In the packaged ice cream market, the development of a premium brand with a satisfactory quality requirements from the consumers perspective, partially justifies the price increases compared to other brands that are leaders by volume sold (market power).
Keywords: Leader; brand; positioning; prices; cobranding; quality.

1. Introduction

The basic literature of marketing mentions that brands must have brand equity or capital, which is termed as the positive differential effect of knowing the name of the brand in the customer's response to the product or service (Kotler and Amstrong, 2008; 290p). According to the same author, a measure of brand equity is the degree to which customers are willing to pay more for it (price).

On the other hand, the function of brands is that the customer has a high degree of satisfaction and thereby generate loyalty to them. The latter translates into the consumer's willingness to pay a higher price (Kotler and Keller 2012; 242p.).

The value of the brand is fundamental for its analysis because it involves implicit elements of productivity, such as quality and advertising, which are responsible for generating a favorable, memorable and uniform image (Stanton, Etzel and Walker 2007; 284p.). According to the same authors, one of the advantages granted by the value of the brand are its extensions, both of the product line and of the same. For authors such as Stanton et al, (2007) the value of the brand offers a differential advantage, while for others it is a competitive advantage (Kotler and Amstrong 2008), and it is usually more durable than the competitive advantage based on costs (Lamb, Hair and Mc Daniel, 2011).

The task of strengthening brands is complex and contains many tools to be able to position them in the market, among them cobranding, where supposedly when two brands with value join, they should be reflected in products with higher quality and higher prices. This strategy and extensions to both the product line and the brand result in additional presentations to the companies' portfolios.

The ice cream industry packaged in Mexico is an example where two brands are used (internal cobranding) to manufacture a product with greater value for the customer, thus promoting brand loyalty (Nestlé and Holland). It is also an additional alternative to product improvements, which in theory should allow them to set higher prices, compared to their own traditional product lines and their competitors because two brands support a product.

The research aims to establish if there is an association between competitive positioning or dominance and price leadership. In particular, it will be analyzed if the strategies of brand differentiation and product development (additional presentations) encourage price increases. Especially the cobranding strategy (two linked brands).

On the other hand, it is intended to explore the concepts, ideas and attitudes that reflect the different brands of packaged ice cream in Mexico, and if these are accompanied by high or expensive prices.

The current work pretends to prove that leading or dominant brands (Nestlé and Holland) for their market share in monetary sales do not necessarily have to be price leaders. Also, product diversification strategies (presentations) should not have positive effects on price either, especially the cobranding strategy. Although,

brands have qualitative elements of positive positioning (feelings and attitudes) they do not necessarily have to be associated quantitatively in the mentioned way (prices). Contrarily, premium brands are able to explain to some extent the price variations, accentuating the quality and prestige perceived by consumers as central, quantitative, qualitative and associative elements in competitiveness and overpricing in this market.

2. Theory framework

As it is known by marketing theorists, the marketing mix is a set of tools that serve to market a product in the market, to position it and obtain a competitive advantage over rivals. Another function of marketing mix activities is to create and sustain the value of a brand. The latest term is better known as brand equity which is analyzed from many perspectives that is going to be presented in next paragraphs.

The value of the brand

Brands for theoretical analysts like Michael Porter are an element of strategy that can generate competitive advantage. For Kotler, the brand is a name, term or logo or other symbol or a combination between them, which aims to identify a product or service of a vendor or producer and differentiate it from the competition (Kotler and Armstrong, 2008). It also adds that a brand is essentially the promise of a selling party to consistently provide buyers with a specific set of characteristics, benefits and services.

One of the most important terms is the brand equity, where that element is an indicator of value in consumers. It is also related to sales because the latter is a consequence of brand equity or brand equity (Reza, Khazaei and Soleimani, 2016).

The brand concept can be divided into three different levels: The first level, the simple brand, which can be any product. In second place are the groups of products that belong to the same company, these clearly share attributes when belonging to the same conglomerate. Finally at the third level are the corporate brands, those distinctive brands that characterize the company.

Batey (2013) incorporates the importance of the consumer, noting that the brand is not created only from the stimulus promoted by a marketing specialist but depends on the reading and reaction of the consumer, meaning that the future of a brand depends on the consumer and its reading. It raises that as consumers we create a network of associations to a brand. When the brand is considered as a group of meanings it is understood that these must be renewed and polished due to the constant change presented by the consumer. The brand must accompany it and ensure that they place confidence in it, making it a stable pillar in times of transition and vulnerability.

The change in consumer behavior has brought different dynamics in the markets. Today more than ever, it is necessary to understand the meaning of the brand, understand what it wants to represent and what it represents for consumers. Currently trying to market something without a brand is extremely complex. If the identity of the product is not visible to the consumer, it is like trying to sell a product that lacks features, without personality. The new approach to marketing generates profound changes in marketing strategies and their conceptions.

Semprini (1995) argues that currently a brand can´t be maintained only with its presence and attributes. It needs to be nourished by an identity that transforms it into something attractive and striking to survive in a new business world. He adds that when communicating brands, the focus is mostly on the immaterial aspects of the product. This means that the aspects that are evoked in an imaginary field, the symbologies and the subjectively perceived are exalted. The material characteristics take second place importance implicit values.

These dimensions are clearly intimately related because the stronger and more settled the image of a brand, the more easily it will be recognized. Not only brands and companies benefit from having brand equity, but it also provides value to both parties. The consumer gets more information when making a purchase decision increasing their confidence and security while organizations increase their efficiency and profits, build brand loyalty and differentiate from the competition. It can also be extremely important in expanding the market internationally by facilitating the presence and visibility of a brand (Tuominen, 1999). As for how to preserve this attribute since it is a multidimensional concept that is reached with different strategies, and considering that there is no single way to create brand equity, the last author states that work must be done in four aspects:

- Brand loyalty: represents a positive attitude on the part of the consumer, achieving consistency in the choice of the brand and generating a link with it.
- Brand Consciousness: brand awareness results from the consumer's ability to recognize it as part of a product segment. This recognition implies that consumers must have seen or heard about it and also remember it.
- Perceived quality: it is defined as the customer's perception of quality, or superiority, over other products. This perception of quality leads to the possibility of price fluctuations and that a brand extension can also be successfully generated.
- Brand associations: this is any mental association that the consumer can make, such as attributes that give it, uses, relationship with a certain type of life, etc. These associations are powerful and important because they can affect how information is processed, the reasons for purchase, points of differentiation and, above all, create a positive image that extrapolates to a possible extension of that brand.

For literature, brand equity offers a series of business benefits for companies that have their own brands because that element has a positive relationship with brand loyalty, that is, if the brand equity increases, the chances of purchase and selection walk in the same direction, leading to brand loyalty (Pitta and Katsanis, 1995).

One of the most important benefits of brand equity is that it offers the possibility of creating strategies such as brand extensions, which is defined as the use or implementation of brand use in new product categories (Aaker and Keller, 1990). The aforementioned strategy, when correctly applied or successful, can have higher sales and lower advertising expenses than the new brands launched on the market (Smith and Park, 1992). On the contrary, if companies have poor extensions to the product line, there will be no strong brand value (Loken and John, 1993).

Currently, brand extensions are a common strategy for new products since it reduces the risk of rejection by consumers and marketing and promotion expenses (Chang, 2001). For Keller (2003) the above is the fundamental reason for the adoption of this strategy. From the perspective of Kotler et al (2005), if you increase the brand capital of the business, marketing costs or expenses decrease, through knowledge or awareness of the brand, generating loyalty to it.

Brand extensions contribute to a higher brand equity in the original or pioneer brand (Keller and Aaker 1992, Dancin and Smith, 1994). In fact, Davis (2002) points out that a high brand equity causes the increase of new clients to the company However, unsuccessful brand extensions reduce the brand equity in the brand that supported the strategy (Aaker, 1993, Loken and John, 1993).

On the other hand, brand equity increases expectations i) to pay a high or premium price for the products, ii) generate a brand licensing, iii) improve efficiency in marketing communication, iv) encourage expectations in support activities and distribution in stores, v) generate elasticity in consumer demand in the face of price changes (Barwise, 1993, Farquhar et al, 1991, Keller, 1993, Keller, 1998, Pitta and Katsanis, 1995, Simon and Sullivan, 1993 , Smith and Park, 1992; Yoo et al, 2000). It can be said that brand equity represents a competitive advantage resource (Bharadwaj et al, 1993).

The brand equity concept is complex in terms of establishing a specific definition. However, Feldwick (1996) states that brand equity is composed of three elements, such as financial. For the mentioned author, the value of the brand is the total value of the brand, as an intangible asset. The second component is the strength of the brand, which is explained by the degree of loyalty or commitment that the client has with the brand from a behavioral perspective, and the third component is brand description, which indicates the associations, beliefs and feelings involved in a brand, from a cognitive perspective.

Given that the value of the brand is analyzed from different points of view, it is important to mention that few works have studied the effects exerted by each of the elements of the marketing mix (Price, Product, Place and Promotion) in the brand equity, except for the works of Yooj (2000) and Rahj, (2005), which find that there is a positive correlation between the price variable and the value of the brand (brand equity).

In the first work of the last mentioned, it is found that the value of the brand or brand equity is associated with quality, and from the perspective of the theoretical model of work, the price variable is an external indicator because customers perceive that a product high quality has high prices (Yoo, et al, 2000). The last cited study confirms the postulates because the promotional pricing strategies have a negative impact on the value of the brand (Rajh, 2005; Yoo et al, 2000).

The associative support between quality and value of the brand is elementary to evaluate the second mentioned element (Aaker, 1996). According to Aaker (1991) the perceived quality is based on the perception of consumers about the brilliance and quality of the product or service, with respect to the competition. Erenkul and Duygun (2010) point out that the stage or facet of quality that the product has is different from the perceived quality of the consumer because the latter is a subjective evaluation. However, Zeithaml (1988) states that the quality perceived by the consumer is essential because it determines their purchase choices and preferences. Hence, the concept of perceived quality as a central concept to create brand strength and justify overpricing is rescued.

The cobranding strategy

Cobranding is a strategy that is frequently applied in consumer products. As we will see later this strategy serves to prolong the life of the products and reduces the risks of launching new brands, taking advantage of the positioning of at least one of them to strengthen the two brands that are experiencing this phenomenon.

The first writings on the concept of cobranding are attributed to Norris (1992) who studied this concept as the construction of a new brand with several "ingredient brands" and evidenced the possible benefits provided that the original brands that make up the alliance project have a high perceived quality of departure. That is, brands with moderate perceived quality, if they make an alliance, do not always manage to raise their perception of quality in cobranding (MCCarthy and Norris, 1999).

The concept of cobranding is quite flexible. It is based on the strategic association of several brands but their communication can present different degrees of symbiosis. The maximum degree of alliance would be the creation of a new brand or product based on the merger of two recognizable brands (Bouten, Snelders, and Hultink, 2006). It also identifies brands that coexist in the same space but preserving their own individual identity or brands that

align in a hierarchical way, where one brand has a greater role than the other with which it is associated. Park et al. (1996) conceive it as a form of last cooperation between two companies that allows a relationship with high visibility and that implies the risk of the reputation of both in the valuation that the consumer makes of the final result.

The effectiveness of these strategies has been contrasted with empirical research since the early 90s. Some authors identify cobranding as one of the most lucrative trends in the future of comprehensive brand management (Fenger and Carl, 2010). The advertisers themselves recognize its potential as a profitable synergy, generating added value (Hill, Lederer, and Keller, 2001).

Maiksteniene (2009) mentions that cobranding exists between the brands of different companies and the internal portfolios of the same company. The author's proposal is to classify them as external for the first case and internal for the second. For Keller (2008) internal and external cobranding serve to strengthen the portfolios of companies, improve brand equity, provide the opportunity to enter new product categories and reach new market segments.

The theoretical construction around cobranding is extensive because theoretical principles of asymmetric and imperfect information are assumed (Voss and Gammoh, 2004), information integration (Simonin and Ruth, 1998), combination of concepts (Levin and Levin, 2000), learning associative and memory learning network models to explain the essence of the aforementioned strategy.

For the purposes of current research, the theory of asymmetric information is taken into account (Spence, 1974), because it is assumed that both the bidder and the consumer have different information before and during the transaction. In this sense, a brand with high recognition and reputation helps to mitigate the difference of information in the transaction, through quality signals (Rao and Ruekert, 1994). In this sense, the brand acts as an indicator to reduce the probability of acquiring a product of poor quality (Montgomery and Wernefetl, 1992) because companies know that introducing products with low quality, causes as a consequence a monetary and reputation loss in the brand.

Rao and Ruekert (1994) mention that the alliance between two brands provides signs of confidence in the markets where the product will be launched. Even though, one of them is not known, because the second has prestige and is recognized, therefore, consumers assume that the quality of the product in general is recognized since the previous quality of the recognized brand supports the weakness of its counterpart. The approach has support in two empirical works because the cobranding has better performance than a single brand in the perceptions of consumers

From the perspective of the Theory of the perception of congruence as a former of attitudes (Osgood and Tannenbaum, 1955), the final assessment made by the consumer on the coherence of the alliances will determine their degree of adherence to the proposal and determine their purchasing behavior. The consumer will develop a positive attitude if he considers that the brand association is coherent and that each one of them can bring quality and experience to the new product. It helps to perceive that both brands, separately, have a similar image, share attributes and personality. On the contrary, if the consumer does not perceive coherence between the brands, his attitude will be negative.

In all cases it seems essential to find the right partner. When alliances occur between brands from different countries, we must be especially cautious. Consumers in a country have very different degrees of familiarity with foreign brands. When one of the brands that make up the alliance is unknown to the consumer, consumers often use their perceptions of the country of origin as a parameter of selective decision. In this way, brands inherit the heritage of the image of the country and this image becomes determinant for the success of the alliance (Fenger and Carl, 2010).

James (2003) classifies alliances between brands (cobranding), the author distinguishes symbolic from physical. The former stand out for the image that the two brands can project through symbols and images. While the second contains and covers the physical issues of the product, applying strategies such as extensions of brands (Park, Jun and Schocker, 1996), additional ingredients to the product (Rao, Qu and Ruekert, 1999), product combinations and packaging (Simonin and Ruth, 1998).

Literature classifies the cobranding phenomenon in detail because it is a complex practice and is analyzed from a physical and a symbolic alliance (Rao and Rueker, 1994). The first case of strategic alliance is the branding for ingredients, where various ingredients of prestigious brands can be used in a new product for a final brand (Rao and Ruekert, 1994, Uggla and Filipsson, 2008). The second case is the extension of a composite brand, where a brand extension is generated by the union of two brands (Park, Jun and Schoker, 1996). The third example consists of a cobranding based on packaging, where cobranding is manifested in this way with two individual brands of the same portfolio, such is the case of cereals (Simonin and Ruth, 1998). The product combinations, where two brands sold separately are mixed to generate a new one, such as alcoholic beverages (Simonin and Ruth, 1998), that is, it is not necessarily a line extension.

For the symbolic alliances, the joint promotional campaigns are located, which are offered by more than one company and / or by more than one brand of the same company (Varadarajan, 1986, Sonal and Preeta, 2012). The

second case consists of joint advertising campaigns, where two or more branded products are promoted together, often in a typical situation of use (Samu, Krishnan and Smith, 1999). Finally, this activity is manifested through the support of celebrities or celebrities, where an association of the product brand is linked to a personal brand of a famous person in a joint promotional activity (Keller, 2008).

A marketing model applied to the value of the brand

The literature presents two structural models of marketing elements and their associations to the value of the brand. One is elaborated by Yoo et al, (2000) and the other by Rajh, (2005), where it assumes that commercial strategies of price, place and promotion are exogenous and will have an effect on endogenous ones, such as image and brand awareness which in turn will impact on the value of the brand, who is the affected variable and object of study.

The endogenous variables are denominated as mediators of the dimensions of brand equity or brand value (Yoo et al, 2000, Rajh, 2005). The aforementioned explanation is expressed in figure 1. Quality works as a mediating or endogenous variable, therefore the one from Yoo et al, (2000) is chosen and the one from Rajh (2005) is discarded.

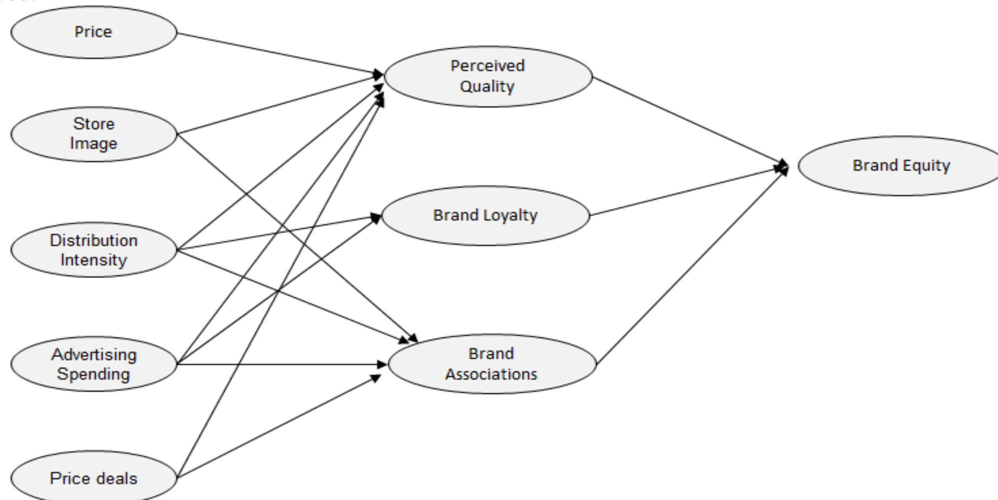

Figure 1 Structural model about marketing elements and brand value (brand equity).
Source: Yoo et al (2000)

The aforementioned model assumes the perceived quality as an associative element to the price, rescuing the latter as an associated element in the brand's value or capital, indirectly impacting the last mentioned variable (Figure 1). This same argues that the image of the store is associated with quality, highlighting that there are intrinsic elements of segmentation, intensity of distribution and advertising associated with quality. For illustrative purposes of the work it is necessary to mention that the assumption is confirmed that the marketing mix variables (4p's) affect the brand value or capital. Assuming that the synergy between all the elements involved affects positively or negatively the value or capital of the brand.

The variables approached in the theoretical framework explain to a certain extent the variability of prices, image and brand value. In fact, it is understood that a premium brand or with high brand value has a high price, as a consequence it has a market skimming strategy, that is, a premium brand will hardly be a market leader due to its sales quantities and monetary values. One explanation for the phenomenon is the segmentation of markets, where niches with high purchasing power are lower, compared to their peers with more limited budgetary capacities. However, there are qualitative issues that can complement the position. In fact, the model rescues the perceived quality, that is to say, the perception of the consumers in the aforementioned concept and its indirect relation with the price is evaluated, which helps to construct the methodology to respond to the hypothesis proposed.

The traditional textbooks in the marketing area suggest that within the strategies of individual brands and product lines, they are located to the product modifications, where the quality of this can be modified to decrease or increase prices (Lamb, Hair and Mc Daniel, 2011: 340p.). In this way, it is how the link between quality and price closes.

Before the contributions of the theoretical models, in the article the following function is proposed:

$$P = f(D_p, M_p, C_P, C_o) \qquad (1)$$

Where, D_p is product development, M_p brand of the product, C_p product characteristics and C_o degree of competition as we have mentioned in previous paragraphs, the analysis route is brand value, quality and price, which will explain the behavior of one of the income indicators that is the final price of the product. These elements explain that competition and differentiation strategies can affect the variability of prices positively, taking into

account that the literature has not analyzed the effects that cobranding can generate in prices. However, it will be analyzed in the following sections of the current research.

1.1. Market structure and acquisitions in the packaged ice cream industry in Mexico

The following section analyzes the market structure of the refrigerator industry, and like any oligopoly, it presents an interesting behavior, a strong inclination towards the differentiation of products through brands, presentations and flavors, as well as the application of the cobranding strategy. On the other hand, there are interesting movements, such as acquisitions of companies and brands to increase or maintain their competitive positioning, where two companies dominate sales.

Joseph Steindl (1952) classified market structures in the face of scenarios of commercial openness in competitive industries, competitive oligopolies, differentiated oligopolies, concentrated and differentiated oligopolies and concentrated oligopolies.

In the Mexican ice cream industry, there are two major competitors, one is the Holland brand and the other is Nestlé, which reported a market share of 51 and 29 percent each, with respect to total sales in 2012 (El Horizonte, 2014). More up-to-date data confirm the approach because the Unilever brand (Ice cream Holland) obtained 40 percent (1851 million pesos) of total sales in 2014, followed by Nestlé Ice cream with 25% (1156 million pesos). In lower positions, the Santa Clara and Nutrisa ice cream sales were located with 8 and 5 percent respectively (Table 1).

Table 1. Sales and market concentration

Company	Sales	Market Share %
Holanda	1851.08	40
Nestlé	1156.93	25
Santa Clara	370.22	8
Nutrisa	231.39	5
Otros	1018.09	22
Total	4627.70	100
Cr 4	3609.61	78
Holanda Nestlé	3008.01	65
*** Expressed figures in million pesos**		

Source: Own elaboration with economic census data (2014) and “El financiero” (2015).

On the other hand, the differentiation is a remarkable pattern in this industry because according to information from the economic census and the comparison, with respect to five sub-branches with greater advertising expenditure within the food sector. The industrial sub-branch of ice-creams and popsicles has a coefficient (advertising expense / sales) of 40% less than that obtained by its counterpart dedicated to the production of edible vegetable oils and fats, according to information from the year 2014, version for the one with the last statistic (Table 2). The coefficient for the ice cream industry indicates that for every 100 pesos sold, 2.98 pesos are expensed to advertising in the mentioned period. The coefficient is higher at 17.79, 10.37, 3.83 and 50.51 percent than the sub-branches of malt processing, chocolates, fruit and vegetable preserves other than refrigeration and tea preparation.

Table2. Ratio (Advertising expenses/sales for top food sub-ranches in economic census) 2014

Classification	Sub-ranches	Coef.	Comparing %
311215	Malta Elaboration	2.53	17.79
311222	Preparation of edible vegetable oils and fats	5.00	-40.40
311350	Production of Chocolate and chocolate products	2.70	10.37
311422	Conservation of fruits and vegetables other than freezing	2.87	3.83
311520	Preparation of ice cream and ice pops	2.98	
311924	Preparation and packaging of tea	1.98	50.51

Source: Own elaboration with economic census data INEGI (2014).

Finally another element to consider, is the high level of competitiveness that exists between the dominant companies because there are three those that concentrate an important quota sales in the national refrigerator industry. One is Unilever of foreign capital, which owns the leading brand (Holland) and owner of Ben & Jerry`s, which stands out for its high prices and differentiated quality.

The company in question (Unilever) has two strong brands for its sales quota. One of them is the Magnum brand that has represented 25 percent of the total sales of the Unilever company (Holland), followed by the Cornetto brand with 17.85 percent in the 2004 period (Del Ángel, 2005). More up-to-date information indicates that Mexico is the eighth world market for Magnum chocolate lollipops, being the first consumers in England and the United States. Its main market segments are people between 25 and 35 years old (Directo al paladar, 2016).

According to the Dutch ice cream marketing manager, the sales scheme in the aforementioned company is

very diversified and balanced, since more ice cream cans are sold in shopping centers and pallets in stores (El Horizonte, 2014).

On the other hand, Femsa Group, in 2012 acquires the company Santa Clara, which stands out for its dairy products, among them its ice cream portfolio (Santa Rita, 2014). However, certain products are distributed through franchises, therefore, the brand does not have the same intensity, compared to its rivals (Ben & Jerry's and Häagen-Dazs).

Another player, no less important, is the company Hérdez, which acquired the second most important ice cream brand for its market share, which in turn it had in its portfolio to the Danish brand. In 1988 Nestlé acquired its Mexican counterpart Danish, which is now owned by Hérdez, where its transaction was for one billion pesos (Espinosa, 2016 and Nava 2016).

For its part, the company Hérdez acquired its counterpart Nutrisa for two thousand nine hundred and seventy-one million pesos in 2013 (Forbes, 2013). As a result of the purchase of Nestlé and Nutrisa, sales in the first quarter (2016) of the company increased 16.4 percent (Forbes, 2016). With the recent acquisition of the company Nestlé, sales of the company's frozen division grew 127.5% in 2014. The final result was a 23.5 percent growth in the company's profits for the last year mentioned (Expansión, 2015). Currently, Hérdez distributes six flavors in presentations of liter cans in the self-service stores and in more than 14,000 stores under the Oxxo brand. In 2017, the company plans to enter convenience stores, with 50,000 refrigerators for the sale of pallets, cones and cups of different flavor mixtures (Expansión, 2017).

According to the last source cited, ice cream sales during the past year (2016), were driven by freezers strategically placed in small independent stores and convenience stores, which accounted for 46% of the value sales of this category, according to with a report from the consultancy Euromonitor. Finally, there is a third competitor (General Mills) of smaller scale and size in Mexico, which obtained 4.6 percent of sales in 2016 and manages the Häagen-Dazs brand.

As a result of the mentioned strategic movements, two large companies (Hérdez and Unilever) are located, which fight for a competitive position in the market. Although, the Mexican market is not the largest for its sales when compared to its counterparts (United States, New Zealand, Sweden and Norway), it has no negligible amounts because it has bordered companies that traditionally stand out for marketing canned and refrigerated category to debut in this market. The consequence of the mentioned thing is the increase of income in the company Hérdez.

3. Methodology, analysis of the research sample and results

The research methodology is quantitative. It has three data analysis tools, a cross-section econometric model, difference of means for small samples (t-test) and semantic networks to answer the hypotheses raised in the article. The scope of the research is exploratory in the part of consumer analysis and correlation in what concerns the analysis of competition patterns and their effect on prices.

Table 3. Sample characteristics

Company	Frequency	Accumulated	Accumulated in %
Holanda	21	21	11.11
Nestlé	15	36	19.04
Ben&Jerrys	13	49	25.92
Nutrisa	15	64	33.86
Haagen Dazs	20	84	44.44
Sta. Clara	17	101	53.43
Cobranding	16	117	61.90
Otros	72	189	100
Total	189		

Source: Own elaboration with Stata Software and Supermarket online stores (Walmart, Soriana and Chedrahui)

The sample consists of 186 presentations distributed and marketed in self-service chains in its online portals (virtual stores) and in two Santa Clara franchise stores located in Pachuca Hidalgo (Table 3). The premium brands represent 26.45 (50 presentations) percent of the total sample, the rest is covered by other brands (71.43). The brand that has more presentations is Holland, followed by Häagen Dazs and Santa Clara.

The prices were averaged according to the variations of each distributor and homogenized in price on the basis of 100 milliliters to be able to compare with all the presentations available in the market. The dependent variable to analyze was price (numerical and transformed to logarithm for the econometric model). On the other hand, the number of competitors and presentations are of numerical order (discontinuous and transformed in logarithm). Finally, the other variables were qualitative (dummy) to discriminate the products if they belonged to one brand or another, and to catalog light products, without lactose and reduced in fat of those who do not meet

this condition. In this sense, the products that had two brands (co-branding)[1] of those that do not[2].

As it is cited in previous paragraph, cobranding strategies are internal and external so a means difference analysis was applied because we consider that each cobranding strategy executed by Nestlé and Holland pursued different objectives inside their product brands portfolios. In results section the evidence is going to be presented. Finally, an analysis of semantic networks is presented in order to evaluate the distances between the concepts or ideas generated in consumer´s minds. The main idea is to present associations between constructs and brands in ice cream market.

Results

The specification of the econometric model is as follows:

$$L_n price=\beta0+\beta1Leader+\beta2Follower+\beta3Premium\ Brands+\beta4Nutrisa\ Brand+\beta5Presentations +\beta6competitors+\beta7cobranding+\varepsilon \quad (2)$$

Table 4. Econometric Model (Results)

Obs.	**186**		**R squared**	**0.5295**
Price	Coefficient	T	p>t	Effects %
Presentations	-.4131238	-4.40	0.000	-41.31
Competitors	-.0104932	-0.50	0.960	-
Premium Brands	1.482544	8.24	0.000	340.41
Leader (Holland)	.0836282	0.42	0.672	-
Follower (Nestlé)	-.3041406	-1.46	0.145	-
Nutrisa Brand	.3060962	1.45	0.148	-
Cobranding	-.628161	-2.71	0.007	-46.64
Light, Without lactose and fat reduced	-.1967081	-0.92	0.357	-

Source: Own elaboration with Stata 12 software

The regression indicates that three variables were significant at 95% confidence (premium brands, presentations and cobranding). The coefficient of determination is .5295. It means that the variables presented in the model explain a 52.95 percent of the price variability in the packaged ice cream industry. The competing variables, leader (Holland and second follower (Nestlé) are not statistically significant, also happened with the Nutrisa brand, which means that the price variation does not depend on the competition and the market power that a company can have. The results are confirmed in Rios, Contreras and Mohedano for the dairy market and in Rios, López and Garzón (2017) in the soft drink industry because not necessarily the market leader must be more expensive in the entire product line. Although they contrast results for other industries, such as pharmaceuticals where the company experiencing patent expiration (leader) preserves prices higher than the competition (Grabowsky and Vernon, 1992, Frank and Salkever, 1992 and 1997, Reagan, 2008).

The results of the econometric model indicates that prices of Häagen Dazs, Ben and Jerry's and Santa Clara are 340.41 percent higher than their counterparts (brands that do not meet this condition). Regarding the development or extension to the product line, it is found that by increasing by one percent the number of presentations in the market, prices will be reduced by 41.31 percent on average, this is confirmed in Locken and John (1993), where there are negative effects of brand and product extensions. The first results are confirmed in Grabowsky and Vernon (1992) and Rios, Olvera and García (2016) where follower brands by their sales (market share) can have a positive effect on prices in markets such as dairy products and pharmaceuticals. Likewise, the results are consistent with Rahj (2005) and Yoo et al (2000) because the value of the brand is associated with prices and there are intrinsic perceptions in the mediating variable (brand image) that support this association.

The products with two brands in the market (cobranding) have a negative effect on their prices because there are 46.64 percent lower than the brands not exposed to this strategy. Finally, the products that are introduced to the market with new ingredients or variations (reduced in fat, light and without lactose) should not necessarily be more expensive because the p-value is not significant.

When the cobranding is evaluated from an internal portfolio approach of the company, it is found that the products with the aforementioned (cobranding) condition have statistically different averages compared to the prices of the brands that are not experiencing this strategy in the Nestlé portfolio. The result indicates that prices are 73.80 percent higher, although in the case of Holland´s products, this strategy is not statistically different it means that cobranding strategy doses not have effects in an internal perspective (Review difference of means and test t in Annex).

Finally, in the exploratory part semantic networks were developed to two samples. The first was applied to a youth population with a low age range (18-20 years) in a public university (Universidad Politécnica Metropolitana

[1] It should be noted that the cobranding cases are internal for the case of the Netherlands and Nestlé, that is, they are extensions to the line to strengthen an internal brand (Keller, 2008 and Maiksteniene, 2009). Check out page number 5.

[2] Review annex to visualize the calculation of the percentage effects of the dummy variables.

de Hidalgo), the number was 50 observations. The second semantic network was applied to 30 observations with a wider age range (24-50 years) to professionals and with current employment. The second sample was applied to administrative personnel of the Polytechnic University of Hidalgo Metropolitan and students of the postgraduate course in Administration of the University of the Americas Mexico City. The two networks were applied in the March-June 2017 period. The reason for this classification was to find differences between the association of concepts between a sample with mature age and its youngest counterpart, since it is assumed that there may be differences by cycle of life of consumers (professionals who are currently working and students).

In this research, a semantic network was executed for the Nestlé and Holland brands (leaders), a second for the Nutrisa brand because it is an ice cream made from yogurt with a different proposal in terms of ingredients and a third for premium brands (Santa-Clara, Ben & Jerry's and Häagen Dazs). The justification lies in analyzing by blocks the competitive positioning, its effect on prices and the association of concepts. Likewise, when applying the networks, it was sought not to tire the objects of study with the writing of concepts derived from the large number of brands, assuming that interesting concepts associated with an individual brand analysis can be lost.

The results of the first semantic network indicate that the first ten concepts associated with the Nestlé and Holland brands are chocolate, creamy, milk, ice cream, rich, variety, cold, ice pops, accessible and delicious. Meanwhile, for the Nutrisa brand there were definitions such as protein, fruit, fruit, nutrition, cookies, light, chocolate, calories, brand and health. Finally, premium brands (Santa Clara, Ben & Jerry's and Häagen Dazs) are related to concepts such as quality, expensive, delicious, rich, variety, creamy, prestige, flavors and good taste (Review Annex). The results are consistent with the model presented by Yoo et el (2000) because the quality perceived by the consumer and high prices are elements associated with the capital of the brand, especially for premium brands.

The findings for the second semantic network show that the first ten concepts associated with the Nestlé and Holland brands are chocolate, flavor, cold, ice cream, accessible, quality, economic, creamy, traditional and calories. For the Nutrisa brand they were natural, healthy, quality, expensive, health, variety, yogurt, bee, dairy and nutrition. Finally for the premium brands they were expensive, quality, taste, variety, rich, milk, exclusive, creaminess, exotic and price.

4. Conclusions

The price variations are associated to a certain extent by the segmentation of markets, since companies have evaluated the different purchasing capacities (levels if income) that consumers have, their tastes and preferences. The findings of the work indicate that not all product differentiation strategies generate increases in prices, that is some of them are aimed at creating or maintaining value and loyalty to the brand, repeated purchases and a profitable stage in the cycle of product life (growth or maturity), therefore companies seek to develop market and product extensions to the product line either by changes in variations of flavors or ingredients, such as internal cobranding where it can be questioned its effectiveness through final consumers price taking as a reference the competition (rivals) and internal portfolios (case company Holland). This is confirmed by the results of the variable named as presentations because they have a negative effect on prices and products that have characteristics different from the traditional versions, such as low fat, delaminated and light are not necessarily more expensive. Contrary to the packaged milk industry, where product innovation is explosive in prices (Rios, Contreras and Mohedano, 2016, Rios, Olvera and González, 2016). In other words, no all differentiation strategies could be evaluated to consumers pricing because they could be focused in develop bigger market share in volume terms or in qualitative aspects such as brand perceptions, image or top of mind evaluations but some of them can be evaluated through pricing and could drive to better incomes trough pricing without need of big increases in purchasing repetition or frequency in the same consumers.

The premium brand concept explains the positive variations in prices in which the value or brand capital they have, there are inside of them qualitative aspects and distinctive elements to mention such as quality perceived by the user, prestige, exclusive, exotic, which in turn are related to the higher prices or expensive concept in its positioning, these characteristics are not found in other brands and they can be explanatory agents to be able to establish a product skimming strategy in the packaged ice cream market. In this way, it is how the price variation in the aforementioned industry is explained, that is, positioning is fundamental to generate an expectation in the consumer's perceptions. The findings show that there is a close relationship between quality and expensive premium brands because they were the two most important concepts in the psyche of consumers. Contrary to the other brands that did not have such an association, in addition to the quality is far from the first concepts or associations, compared to what was found in premium brands. However, this does not indicate absence of quality in the products, it may be less perceived by consumers because it is assumed that in imperfect markets such as oligopolies the imperfect information could be present as economical phenomenon.

Finally, we can see that market dominance is not associated with price leadership, that is a leading brand for its sales is not more expensive than the others (Holland case), confirming the hypothesis raised because the structure of the industry analyzed is not an oligopoly where the price leadership is correlated with market power

or competitive positioning rather the dominance is derived from the quantity of product displaced in distribution channels with an offer integrated by products with a certain level of quality and prices adjusted to be purchased by many segments with plural levels of income, preferences, etc. and differentiation is a crucial element where followers can apply their price strategies (skimming pricing) trough market segmentation and products with more quality perceived by consumers. Although it is not traditional behavior in industrial organization and business strategies, ice cream quality seems to be central element with qualitative aspects in consumers positioning what seems to explain the association between brand, price and quality perceived which conforms a pattern of industrial behavior in the business sector mentioned.

The limitations of the work are located in the time factor, it is prudent to evaluate in the future the value of the brand through consumer price from a longitudinal perspective to visualize the impact of the differentiation by brand in whole analyzed products. Another limitation of the work is related to quality analysis. Although, it contributes to the debate around the positive association between quality and price, it is necessary to note that the quality perceived by the user is the object of debate because it is a subjective construct. Although, it is also a crucial element because in this way brand loyalty and frequent purchases are generated, which are vital for companies because they have to generate competitive constructs around branding but it is not enough to recover information that explains a metric evaluation between levels of quality and levels of pricing.

5. References

Aaker D. & Keller K. (1990) “Consumer Evaluations of Brand Extensions”. *Journal of Marketing*. 54 (1), 27-41. doi: 10.2307/1252171, https://doi.org/10.2307/1252171

Aaker, D. (1991). Managing brand equity: capitalizing on the value of the brand name. New York: The Free Press.

Aaker, D, (1996), Building Strong Brands, New York: The Free Press.

Aaker D. (1996). “Measuring Brand Equity Across Products and Markets. California” *Management Review* 38 (Spring): 102-120.

Bouten, L., Snelders, D., y Hultink, E. (2006). A chip off two old blocks: the influence of fit on evaluation of a cobranded product. Actas del 35° congreso European Marketing Academy Conference (EMAC). Atenas.

Bharadwaj, S, Varadarajan R & Fahy J, (1993), “Sustainable Competitive Advantage in Service In6dustries: A Conceptual Model and Research Proposition”, *Journal of Marketing*, 57(4), 83-99.

Barwise, P., 1993, Brand Equity: Snark or Boojum?, International *Journal of Research in Marketing*, 10(1), 93-104. doi: 10.1016/0167-8116 (93)90036-X, https://doi.org/10.1016/0167-8116 (93)90036-X

Batey, M. (2013). El significado de la marca (1ª ed). Buenos Aires: Granica.

Censo Económico INEGI (2014) Sistema Automatizado de Información Censal (SAIC). [On line] Available in http://www.beta.inegi.org.mx/app/saic/ (15 March and 11 September 2017).

Chang, J. (2001). “The Determination Role of Category and Attribute Factors on the Reciprocal Effects of Brand Extensions”. *European Advances in Consumer Research*, 5, (2) 24-29.

Dancin, P & Smith D, (1994), “The Effect of Brand Portfolio Characteristics on Consumer Evaluations of Brand Extensions”, *Journal of Marketing Research,* 31(2), 229-242. doi: 10.2307/3152196. https://doi.org/10.2307/3152196.

Davis S, (2002). “Brand Asset Management: how businesses can profit from the power of brand”, *Journal of Consumer Marketing* 19(4), 351-358, doi: 10.1108/07363760210433654. https://doi.org/10.1108/07363760210433654.

Del Angel R. (2005) Apuesta Holanda por la variedad. El Universal. [On line] Available in http://archivo.eluniversal.com.mx/finanzas/46921.html. (18 October 2017).

Directo al paladar (2016) [On line] Available in https://www.directoalpaladar.com.mx/ingredientes-y-alimentos/paletas-heladas-magnum-hechas-con-chocolate-sustentable (12 September 2017).

El Horizonte (2014), Acuerda Herdez compra de helados de Nestlé en México. [On line] Available in http://www.elhorizonte.mx/finanzas/acuerda-herdez-compra-de-helados-de-nestle-en-mexico/813484 (5 November 2017).

El Financiero (2014), Ven alto potencial de crecimiento de industria del helado, [On line] Availablein http://www.elfinanciero.com.mx/economia/ven-alto-potencial-de-crecimiento-de-industria-del-helado.html (13 November 2017).

Erenkol, H., & Duygun, A. (2010). “Customers perceived brand equity and research on the customers of Bellona which is a Turkish Furniture brand”. *The Journal of American Academy of Business*, 16(1), 93-110.

Espinosa E. (2016). Una emblemática marca de los 80 regresa, ahora de helados. Dinero en Imagen. [On line] Available in http://www.dineroenimagen.com/2016-03-30/70806 (20 October 2017).

Expansión (2015). Helados Nestlé endulza las ventas de Grupo Hérdez. [On line] Available in http://expansion.mx/negocios/2015/07/23/helados-nestle-endulza-las-ventas-de-grupo-herdez (23, September 2017).

Expansión (2017), Herdez quiere duplicar la venta de sus helados con Danesa 33. [On line] Available in

http://expansion.mx/empresas/2017/04/07/herdez-quiere-duplicar-la-venta-de-sus-helados-con-danesa-33 (17 september 2017).

Farquhar, P.H., J.Y. Han and Y. Ijiri, (1991), "Recognizing and Measuring Brand Assets, Report" No. 91-119, Cambridge, MA: Marketing Science Institute.

Feldwick, P., 1996, "Do We Really Need Brand Equity?" *Journal of Brand Management*, 4(1), 9-2. doi: 10.1057/bm.1996.23. https://doi.org/10.1057/bm.1996.23.

Fenger, L., y Carl, S. (2010). The future of co-branding. A study of cross-border brand alliances. Master Dissertation. Copenhagen: Copenhagen Business School.

Forbes (2013), Grupo Herdez adquiere el 100% de Nutrisa [On line] Available in https://www.forbes.com.mx/grupo-herdez-adquiere-el-control-de-nutrisa/ (8 March, 2017).

Forbes (2016), Ventas de Herdez suben 16% por Helados Nestlé y Nutrisa. [On line] Available in https://www.forbes.com.mx/ventas-herdez-suben-16-helados-nestle-nutrisa/ (23 March 2017).

Frank, R. y Salkever, D. (1992), "Pricing, patent loss and the market of pharmaceuticals". *Southern Economic Journal*, October 165-179.

Frank, R. y Salkever, D. (1997), "Generic Entry and the Pricing of Pharmaceuticals". Journal of Economics & Management Strategy, 6 (1): 75–90.

Grabowsky H & Vernon J (1992). "Brand Loyalty, Entry, and Price Competition in Pharmaceuticals after the 1984 Drug Act". *Journal of Law and Economics* 35 (2), 331-50

Hill, S., Lederer, C., y Keller, K. (2001). The infinite asset: managing brands to build new value. (1ed) Harvard Business School Press. Boston M.A.

James D. (2005), Guilty through association: brand association transfer to brand alliances, *Journal of Consumer Marketing*, 22(1), 14-24. https://doi.org/10.1108/07363760510576518

Keller, K. & Aaker D, (1992), "The Effects of Sequential Introduction of Brand Extensions, *Journal of Marketing Research"*, 29(1), 35-50. doi: doi.org/10.2307/3172491https://doi.org/10.2307/3172491.

Keller, K. (1993), "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity", *Journal of Marketing*, 57(1), 1-22. doi: 10.2307/1252054https://doi.org/10.2307/1252054.

Keller, K. (1998), Strategic Brand Management: Building, Measuring, and Managing Brand Equity, New Jersey: Prentice Hall.

Keller, K. (2003). "Brand synthesis: The multidimensionality of brand knowledge". *Journal of consumer Research* 29(4): 595-600. doi: 10.1086/346254. https://doi.org/10.1086/346254.

Keller K. (2008) Branding: Administración Estratégica de la marca (3ª ed). México: Prentice Hall.

Kotler P, Wong V, Saunders J & Amstrong G (2005) Principles of Marketing (4ª ed). England: Essex.

Kotler P y Keller K. (2012) Marketing Management (14ª ed). New Jersey: Prentice-Hall.

Kotler P y Amstrong G. (2013) Fundamentos de marketing (8ª ed). México: Pearson.

Lamb C, Hair J. & McDaniel C. (2011). Marketing (11ª ed). Ohio: Southwestern-Cengage.

Levin, I. y Levin, A. (2000). "Modeling the role of brand alliances in the assimilation of product evaluations. Journal of Consumer Psychology", 9 (1), 43-52.

Loken, B. y John D, (1993), "Diluting Brand Beliefs: When Do Brand Extensions Have a Negative Impact", *Journal of Marketing*, 57(3), 71-84. doi: 10.2307/1251855. https://doi.org/10.2307/1251855.

Maiksteniene K. (2009) "Modeling Brand Alliance Effects in Professional Services". *World Academy of Science, Engineering and Technology*. 6(3), pp. 1197-1205.

MCCarthy, M., y Norris, D. (1999). "Improving competitive position using branded ingredients". Journal of Product & Brand Management, 8 (4) 267-283. doi: 10.1108/10610429910284210 https://doi.org/10.1108/10610429910284210.

Montgomery C y Wernerfelt B (1992) "Risk Reduction and Umbrella Branding", The Journal of Business, 65 (1), 31-50.

Nava I. (2016) ¿Qué hay detrás de Danesa 33? Merca 2.0. [On line] Available in https://www.merca20.com/detras-danesa-33/ (3 Septiember 2017).

Norris, D. (1992). "Ingredient Branding: a strategy option with multiple beneficiaries". *Journal of Consumer Marketing*, 3(19), 19-31. doi: 10.1108/07363769210035206 https://doi.org/10.1108/07363769210035206

Osgood, E., y Tannenbaum, H. (1955). "The principle of congruity in the prediction of attitude change". *Psychological Review*, 62 (1), 42-55.

Pitta D, Katsanis L, (1995) "Understanding brand equity for successful brand extension", *Journal of Consumer Marketing*, 12(4), 51-64. Doi: 10.1108/07363769510095306. https://doi.org/10.1108/07363769510095306.

Park, C., Jun, S. Y., & Shocker, A. (1996). "Composite branding alliances: an investigation of extension and feedback effects". *Journal of Marketing Research* 33(4), 453-466. doi: 10.2307/3152216 https://doi.org/10.2307/3152216

Rajh E (2005) "The Effects of Marketing Mix Elements on Brand Equity". *Economic Trends and Economic Policy* 102 (2), 30-59.

Rao, A and Ruekert R. (1994), "Brand Alliances as Signals of Product Quality", *Sloan Management Review*, 36 (1), 87-97.
Rao, A, Qu, L., y Ruekert, R. (1999). "Signaling unobservable product quality through a brand ally. Journal of Marketing Research", 36 (2), 258-268. doi: 10.2307/3152097 https://doi.org/10.2307/3152097.
Reza S, Khazaei J & Soleimani S, (2016) "Brand personality, brand equity and revisit intention: an empirical study of a tourist destination in Iran", *Tourism Review*, 59 (3), 205-218, doi: 10.1108/TR-02-2016-0005. https://doi.org/10.1108/TR-02-2016-0005.
Rios E. (2015) Patrones de competencia entre las empresas farmacéuticas en el mercado de patente expirada: El caso de los antibióticos (2010-2012), Doctoral Dissertation, Facultad de Economía, UNAM, Ciudad de México.
Rios, E, Contreras I. y Mohedano N (2016). Patrones de Competencia en las empresas de lácteos en México y su variabilidad en los precios: El caso de la empacada a escala nacional (2015). En López Hernández I. y Contreras Álvarez I. (Coords.) En Los nuevos retos del comercio internacional.
Rios E., López P. y Garzón G. (2016), El problema del líder en un juego Stackelberg con productos diferenciados y su efecto sobre los precios en México: El caso de Coca-Cola Femsa (2015). Tiempo Económico, 32 (1) 23-42.
Santa-Rita I. (2014), Nuevo competidor para Coca y Pepsi [On line] Available in http://expansion.mx/negocios/2014/10/21/sodastream-competira-contra-coca-y-pepsi-en-mexico (29 march 2017).
Sonal K. Preeta V. (2004) "Joint Sales Promotion: Prospects and Issues". IIMB *Management Review* 16(3) 1-25.
Samu S, Krishnan S. & Smith R (1999). "Using advertising alliances for new product introduction: interactions between product complementarity and promotional strategies". *Journal of Marketing*, 63(1), 57-54. doi: 10.2307/1252001, https://doi.org/10.2307/1252001.
Semprini, A. (1995). Marketing de la marca: Una aproximación semiótica (1ª ed). Barcelona: Paidós.
Simon, C. y Sullivan M, (1993), "The Measurement and Determinants of Brand Equity: A Financial Approach", *Marketing Science*, 12(1), 28-52.
Simonin, B. & Ruth, A. (1998). "Is a company known by the company it keeps? Assessing the spillover effects of brand alliances on consumer brand attitudes". *Journal of Marketing Research*, 35(1), 30-42. doi: 10.2307/3151928 https://doi.org/10.2307/3151928
Smith, D. y Park C, (1992), "The Effects of Brand Extensions on Market Share and Advertising Efficiency", *Journal of Marketing Research*, 29(3), 296-313. doi: 10.2307/3172741 https://doi.org/10.2307/3172741.
Spence M. (1974), Market Signaling, Boston: Harvard University Press.
Stanton W, Etzel M. & Walker B (2007) Fundamentos de Marketing (13ª ed). México Mc Graw Hill.
Steindl J. (1952), Maturity and Stagnation by mean of commodities, Oxford, Basil Blackwell, New York.
Tuominen, P. (1999). Managing Brand Equity. *Turku School of Economics and Business Administration*, 1 (99), 65-100.
Uggla, H y Filipsson, D. (2008). "Ingredient branding: strategic guidelines. ICFA". *Journal of Brand Management*, 5 (2), 16-30.
Varadarajan, R. (1986). "Horizontal cooperative sales promotion: a framework for classification and additional perspectives". *Journal of Marketing*, 50 (2), 61-73. doi: 10.2307/1251600. https://doi.org/10.2307/1251600
Voss, K y Gammoh B. (2004) "Building brands through brand alliances: Does a second ally help?" *Marketing Letters*, 15 (2), 147-159. doi: 10.1023/B:MARK.0000047390.01552.a2 https://doi.org/10.1023/B:MARK.0000047390.01552.a2
Yoo B, Donthu N & Lee S, (2000). "An Examination of Selected Marketing Mix Elements and Brand Equity", *Journal of the Academy of Marketing Science*, 28(2), 195-211. Doi: 10.1177/0092070300282002 https://doi.org/10.1177/0092070300282002.
Zeithaml V (1988) "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence", *Journal of Marketing* 52 (3) (Jul., 1988), 2-22. Doi: 10.2307/1251446 https://doi.org./10.2307/1251446

ANNEX

Calculation of the percentage effects of the dummy variables.

According to Greene (2012), a model with logarithmic dependent variable and dummy regressors is represented as follows:

$$\ln Y = \beta 1 + \beta 2x + \beta 3d + \varepsilon$$

The coefficient of the dummy variable, d indicates a multiplicative change of the function. The percentage change in en $E[y|x, d = 1]$ associated with a change in d is:

$$\% \left(\frac{\Delta E[y|x, d]}{\Delta d} \right) = 100\% \left\{ \frac{E[y|x, d = 1] - E[y|x, d = 0]}{E[y|x, d = 0]} \right\}$$

$$= 100\% \left\{ \frac{\exp(\beta 1 + \beta 2x + \beta 3\, E[\exp(\varepsilon)] - \exp(\beta 1 + \beta 2x)\, E[\exp(\varepsilon)]}{\exp(\beta 1 + \beta 2x)\, E[\exp(\varepsilon)]} \right\}$$

$$= 100\% [\exp(\beta 3) - 1]$$

TESTS of Econometric Model (Validation in statistic terms.

Homocedasticity

Breusch-Pagan

Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of lprecio
chi2(1) = 1.38
Prob > chi2 = 0.2405

Collinearity

Vif

Variable	VIF	1/VIF
Premium	3.33	0.300514
Presentations	3.25	0.307839
Competitors	2.10	0.475338
Leader	1.98	0.505155
Follower	1.69	0.590734
Nutrisa	1.64	0.608709
Cobranding	1.20	0.835472
Mean VIF	2.84	

Specification TEST (linktest)

Obs 186 Rsquared 0.5240

Precio	Coeficiente	t	p>t
_hat	1.146251	1.56	0.120
_hatsq	-0.0313883	-0.2	0.841
_cons	-0.158659	-0.2	0.845

Normality Test (Shapiro-Wilk)

variable	obs	W	v	z	prob>z
R	186	0.94187	8.142	4.807	0.00000

T-test for small samples (cobrandin internal analysis)

Variable	Average	Std.Dev	Result	T test	Effects in %
Cobranding	7.28	4.19			
Leader (Holland)	7.00	8.06	0.1906	1.86	
Follower (Nestlé)	4.19	1.04	8.41	1.86	73.80

SEMANTIC NETWORKS (First and second sample)

Defining	Distance	Leaders	Defining	Distance	Nutrisa	Defining	Distance	Premium
Chocolate	0.00		Protein	0.00		Quality	0.00	
Creamy	11.25		Fruits	11.76		Expensive	16.74	
Milk	26.88		Frut	44.61		Delicious	39.75	
Ice cream	28.75		Nutrition	53.43		Great flavor	57.32	
Great taste	35.63		Cookies	58.82		Variety	59.83	
Variety	39.38		Light	72.55		Creamy	66.95	
Frozen	42.50		Chocolate	73.04		Prestige	71.55	
Ice pops	49.38		Calories	73.04		Flavors	77.41	
Accesible	50.63		Brand	74.02		Good Taste	77.82	
Delicious	52.50		Health	76.47		Flavor	78.24	

Defining	Distance	Leader	Defining	Distance	Nutrisa	Defining	Distance	Premium
chocolate	0.00		Natural	0.00		expensive	0.00	
Flavor	12.07		Healthy	53.39		quality	14.06	
Frozen	29.31		Quality	57.63		Flavor	38.28	
Ice cream	29.31		Flavor	61.86		variety	56.25	
Accesible	37.93		expensive	73.73		Great taste	68.75	
Quality	46.55		Health	76.27		milk	74.22	
economic	48.28		Variety	76.27		Exclusive	75.00	
creamy	50.00		Yogurt	80.51		creamy	81.25	
traditional	51.72		Bee	83.05		Exotic	86.72	
calories	55.17		dairy	84.75		price	88.28	