Determinants of consumer evaluations of brand extensions in Chile and comparison against global evidence


Abstract

Brand extensions are a common marketing practice, not just in the North American and European markets, but also in the Latin American business world. In this article, we perform an empirical test of the determinants of brand extensions’ evaluations in a developing country such as Chile. In particular, we examine in an exploratory way the role the parent brand may play in the evaluation of the brand extension, and also the importance of “fit” between the parent brand product category and the extension category. These relationships are then tested empirically through a regression model replicating the original Aaker and Keller study (1990), and the results are compared against the world evidence.

Key words:

JEL Code: M31 - Marketing.

Sergio Olavarrieta
University of Diego Portales
Felipe Alarcón / Ingrid Graf / Pablo Furche
University of Chile
Introduction
Different practices associated with the creation, management and the exploitation of brands have become very common and very important in the business World, and also for academic examination. Brands are valuable due to its image and its notoriety, which made them popular or famous (Alameda, Olarte Pascual, Reinares y Saco 2006). Brands are so important that even powerful retailer companies have launched their own private labels in order to fight the power of famous national and international brands (Galván 2007). The use of well known or “notorious” brands in other product categories, i.e. “brand extensions”, have become popular not only in developed markets but also in developing nations in Latin America, such as Chile, Argentina, Brazil (for example; Sahne Nuss Ice Cream –chocolates-, Colgate toothbrush – dental paste-; etc.). Groundwork in the brand extensions field is the Aaker and Keller (1990) paper (A&K), which has generated several replication studies in the US and other countries. However, most of this work has been done under the context of developed nations, and mainly Anglo cultures. This paper has as its main objective, the examination of brand extension evaluations in Chile, replicating the original A&K study.

In the next section we provide a succinct review of the literature on brand extensions, from which we derived the hypotheses of the study. In further sections we examine the results of three studies performed in Chile, one exploratory, the second testing the A&K hypotheses, and the third a replication study of study 2, to test main effects of independent variables. Results are then compared with global evidence provided by Bottomley and Holden (2001). In the last section we discuss the results and its implications.

Conceptual framework: Brand extensions and its evaluation
Brands are strategic assets and sources of competitive advantage, which are usually exploited in new product categories. Keller (1993), for example, in his classic article on brand equity, establishes that one of the mayor ways to use or exploit that intangible asset is to extend the brand to other categories. This, is particularly so, given the increasing costs of building brand new
brands. Then, a natural question is, to answer which variables are the ones that influence consumer evaluations of brand extensions, and which are the consequences that brand extensions may carry to parent brands.

**Variables Influencing Brand Extension Evaluations**

Starting with the initial Aaker y Keller study (1990), the marketing literature has accumulated some knowledge and evidence regarding variables affecting the evaluation of brand extensions and its success in the new product category. In previous work, (Holden and Bottomley 2001; Olavarrieta 1998), the literature has been synthesized, including four variable types affecting the evaluation of brand extensions:

1. **Extension Characteristics**, including the fit or similarity between the extension and the original parent brand category, the perceived difficulties to produce the extensions by the firm, and the age of the extension (or time since the introduction), among others.
2. **Parent Brand Characteristics**, including its strength (i.e.: perceived quality, notoriety, age, general attitude, market share) and its existing specific associations.
3. **Brand Portfolio Characteristics**, including the quality variance of the portfolio of products linked to the brand, and the number and success of previous extensions.
4. **Market and Extension Category Consumers’ Characteristics**, including the number of established competitors, the stage in the lifecycle of the category, the knowledge of consumers about the product category, and its proclivity to innovate or to adopt consumption trends. This last variable, may favor the evaluation of extensions of low perceived fit.

**Reciprocal Effects of Extensions on the Parent Brand**

Likewise, the use of brand extensions may also affect the parent brand (Aaker 1991, Keller y Aaker 1992, Loken and Roedder John 1993; Park, Jun and Shocker 1996). These consequences may be positive, in terms of a more favorable attitude toward the brand, or a stronger and richer ser of
associations. Also, it may be negative (Dacin y Smith 1994). For example, brand extensions, may generate new associations with the original brand name, which may change the cognitive structure of the brand and its meaning. This might be negative because it can add “wrong” or “bad” associations, and may dilute the brand equity (Loken y Roedder-John 1993), for example, when “low quality” associations are linked to the brand (Dacin y Smith 1994).

Another effect, in extreme cases, is that consumers may even change the reference category for a brand (Keller y Aaker 1992), such as when consumers perceived IBM more like a computers brand than a writing machine brand. In general, it has been considered that the effects of brand extensions on the parent brand tend to be symmetric (Keller y Aaker 1992), i.e. if the extension is positively affected by the parent brand, the same will happen with the feedback effect on the parent brand, and vice versa.

**Model and hypothesis**

As it has been mentioned, Aaker y Keller (1990; A&K) started a stream of research which has been accumulated over time an important set of knowledge and evidence regarding the determinants of brand extensions’ evaluations. A&K main propositions were that brand extensions’ evaluations would be affected by:

- Perceived quality of the parent brand in its original product category (positive effect)
- The “fit” or similarity between the original product category and the extension category (positive effect)
- The interaction between the perceived quality and “fit” variables.
- The perceived difficulty to design and manufacture the product category of the extension.

*Brand Strength and Perceived Quality:* Brand strength has been suggested by the literature as a strong determinant of brand extension evaluations (Aaker y Keller 1990, Keller y Aaker 1992, Dacin y Smith 1994). Brand strength has been normally operationalized as the general perceived quality
of a brand by consumers (Aaker y Keller 1990, Smith y Park 1992) or the attitude toward the brand (Consumer Behavior Seminar 1987), or like a combined measure of age, market share and share of voice off the brand (Reddy, Holak, y Bhat 1994). Other authors have emphasized brand notoriety as a key measure of brand strength (Alameda et al 2006). The choice of a particular way to measure brand strength is difficult since many different variables need to be taken into account, as has been recognized by Lozano and Fuentes (2005). These authors identify five different approaches to measure brand value: historic cost, actual or reposition costs, future profitability, economic valuation and market positioning valuation. In addition, they propose a new method, applying fuzzy logic methodologies to measure brand image and strength. From a behavioral point of view – consistent with the market positioning approach- it has been argued that when consumers think about a brand name, they first “activate” more general associations such as perceived quality or brand attitudes. For this reason, a brand with better perceived quality will transfer general and specific associations to the brand extension, thus promoting positive brand extension evaluations.

**Fit or Similarity**: The idea that brand extensions which are closer or more similar to the original product category of the parent brand, do have better evaluations, has been strongly argued and supported (Consumer Behavior Seminar 1987; Aaker y Keller 1990, Boush y Loken 1991; Park, Milberg, y Lawson 1992; Tauber 1993, Sunde y Brodie 1993; Broniarczyk y Alba 1994). It has been said that consumers may easily transfer parent brand associations to brand extensions, the closer or similar they are.1

**Perceived Quality and Fit Interaction**: Aaker and Keller (1990), among other authors, have suggested that the perceived quality effect is moderated by the degree of fit between the extension and original brand product category. This means that the larger the fit, the larger the effect of perceived quality and vice versa.

**Difficulty to manufacture the Extension Product**: Contrary to what would be expected, A&K found that consumers penalize manufacturers that extend their brands to products that are perceived to be easy to manufacture (i.e. trivial or obvious extensions). In a sense, consumers will be penalizing the “abuse” in the use of a brand by manufacturers.

---

1 However, despite this general trend, there have been some contradictory results (Keller and Aaker 1992; Smith and Park 1992). Probable, different operationalizations of “fit” and context differences may explain the inconsistency of results.
Hypotheses to be Tested in Chile
Since 1990, several studies have replicated the original A&K paper (Sunde and Brodie 1993; Jijssen and Harman 1994; Holden and Barwise 1995; Bottomley and Doyle 1996; among others). All these studies (publicly available) have been performed in developed and mostly English speaking nations. Also, existing results are not necessarily consistent, which may raise certain doubts regarding the generalizability of these results to Latina and developing nations.

This article has as its main goal the test of A&K original hypotheses in Chile:

H1: High parent brand perceived quality is associated with a more favorable attitude toward the extension

H2: The transfer of perceived quality to the extension is stronger when a higher level of fit exists. When fit is weak, the transfer is inhibited.

H3: The “fit” between two product classes has a positive effect on the brand extension attitude.

H4: There is a positive relationship between the difficulty of manufacturing the extension product and the attitude toward the extension.

We follow A & K methodology performing three studies. In a first study, consumers provide general associations and evaluations of brands and brand extensions. In a second study, a regression model was estimated to test the hypotheses. In the third study we examine the associations’ transfer process from the parent brand to the extension.

Study 1: Exploratory analysis of the effect of the parent brand on brand extension evaluations
For this study 10 parent brands and 30 brand extensions were selected. Parent brands included were selected in a previous study considering four criteria: a) above average perceived quality, b) c) with no previous brand extensions, and d) product categories similar to the original A&K study. Brand extensions included had to be reasonable categories, and to some extent equivalent to the original A&K brand extensions’ categories. (see TABLE 1).
Table 1. Parents brands, brand extensions and associations

<table>
<thead>
<tr>
<th>Parent Band (Perceived quality)</th>
<th>Parent Brand Associations</th>
<th>Extension Categories</th>
<th>Brand Extension Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRISTAL beer (5,03)</td>
<td>advertising</td>
<td>Pisco (liquor)</td>
<td>Bad, no liquor, rare, soft</td>
</tr>
<tr>
<td></td>
<td>refreshing</td>
<td>Sofá drinks</td>
<td>rare, bad, cheap, good flavor</td>
</tr>
<tr>
<td></td>
<td>tasty</td>
<td>Cigarettes</td>
<td>Cheap, youthful, no cigarettes, soft watered down</td>
</tr>
<tr>
<td>LE SANCY soap (5,23)</td>
<td>Low quality</td>
<td>Shampoo</td>
<td>Cheap, like soap. Dry, different container</td>
</tr>
<tr>
<td></td>
<td>Does not soften</td>
<td>Dish detergent</td>
<td>Dry, ineffective with grease, bad</td>
</tr>
<tr>
<td></td>
<td>Dries skin</td>
<td>Paper handkerchiefs</td>
<td>soft, &quot;no soft&quot;, aromatic, bad aroma</td>
</tr>
<tr>
<td>MCDONALDS fast food (4,50)</td>
<td>tasty</td>
<td>Amusement park</td>
<td>childish, fun, good, yankee (&quot;gringo&quot;), clown</td>
</tr>
<tr>
<td></td>
<td>junk, bad</td>
<td>Frozen food</td>
<td>bad, expensive, good, burgers</td>
</tr>
<tr>
<td></td>
<td>cheap, advertising</td>
<td>Toys</td>
<td>Child, clown, colors, disposable, fun</td>
</tr>
<tr>
<td>MIRAFLORES oil (4,98)</td>
<td>healthy</td>
<td>Mayonnaise</td>
<td>Good, oily, bad</td>
</tr>
<tr>
<td></td>
<td>good</td>
<td>Ketchup</td>
<td>Bad, oily, good</td>
</tr>
<tr>
<td></td>
<td>Cheap, cholesterol</td>
<td>Margarina</td>
<td>Good, oily, cheap, healthy</td>
</tr>
<tr>
<td>NIKE sport apparel (6,18)</td>
<td>good quality</td>
<td>Jeans</td>
<td>sporty, quality, comfortable, expensive, cool</td>
</tr>
<tr>
<td></td>
<td>nice designs</td>
<td>Bycicles</td>
<td>Goods, complement, comfortable, cool, sporty</td>
</tr>
<tr>
<td></td>
<td>players</td>
<td>Watches</td>
<td>Sporty, good, colors, taste, design</td>
</tr>
<tr>
<td>ODOTINE toothpaste (4,88)</td>
<td>Fresh</td>
<td>Chewing gum</td>
<td>Fresh, protects teeth, good, tastes like toothpaste</td>
</tr>
<tr>
<td></td>
<td>cleanliness</td>
<td>Soap</td>
<td>Toothpaste, hygiene, fresh</td>
</tr>
<tr>
<td></td>
<td>traditional</td>
<td>Shaving foam</td>
<td>foamy, sofá, fresh, toothpaste</td>
</tr>
<tr>
<td>SAVORY ice cream (6,38)</td>
<td>tasty</td>
<td>Cookies</td>
<td>complement, tasty, quality</td>
</tr>
<tr>
<td></td>
<td>good quality</td>
<td>Candies</td>
<td>Quality, tasty, assorted, colors</td>
</tr>
<tr>
<td></td>
<td>assorted flavors</td>
<td>Popcorn</td>
<td>No, sweet, assorted flavors and colors</td>
</tr>
<tr>
<td>SOPROLE dairy products (6,28)</td>
<td>sanos</td>
<td>Sausages</td>
<td>Do not relate, healthy, milk taste</td>
</tr>
<tr>
<td></td>
<td>Assorted flavors</td>
<td>Cereals</td>
<td>good, complement, healthy</td>
</tr>
<tr>
<td></td>
<td>Tasty</td>
<td>Mineral water</td>
<td>Do not relate, fresh, bad, healthy</td>
</tr>
<tr>
<td>SUPREMO tea (4,53)</td>
<td>Economic</td>
<td>Coffee</td>
<td>Cheap, not concentrated, bad, good, familiar</td>
</tr>
<tr>
<td></td>
<td>Familiar tradition</td>
<td>Chocolates</td>
<td>Bad, cheap, bitter, common, general</td>
</tr>
<tr>
<td></td>
<td>Tasty, cheap</td>
<td>Rice</td>
<td>Cheap, common, general</td>
</tr>
<tr>
<td>SWATCH watches (5,12)</td>
<td>Good quality</td>
<td>Skies</td>
<td>Colors, good, &quot;cool&quot;, youthful, sporty</td>
</tr>
<tr>
<td></td>
<td>Original designs</td>
<td>Electronic agendas</td>
<td>Quality, colorful, youthful, functional</td>
</tr>
<tr>
<td></td>
<td>assorted, &quot;cool&quot;</td>
<td>Cel phone</td>
<td>youthful, disposable, colorful, innovative, designs, modern</td>
</tr>
</tbody>
</table>
In this qualitative study 60 university students of both genders were asked to freely elicit ideas and associations regarding the parent brands and extensions mentioned above (like A&K). They also had to evaluate perceived qualities of parent brands and extensions.

In general, the results provide support for propositions found in the branding literature regarding brand extensions, and those of A&K in particular. A link between parent brand evaluation and extensions’ evaluations, and specific associations’ transfer mechanisms from the parent brand to the extensions, can be observed.

Parent Brand Perceived Quality and Extension Evaluation
A positive association between the perceived quality of the parent brand and the extensions is observed. High quality brands generate good evaluations about extensions having the same brand names. Brands with a lower evaluation, tend to generate lower evaluations of the extensions. Brands like ODONTINE (toothpaste) or SUPREMO (tea), evaluated in the acceptable or regular quality range, have the lowest assessed extensions, i.e.: SUPREMO chocolates (2,6), SUPREMO rice (3,275).

Parent Brands Associations and its Transfer to the Extension
In the case of strong and high quality brands, associations’ transfer is very direct and normally positive. For example, SOPROLE cereal has a favorable evaluation (5,68), and also receives many favorable associations from the parent brand such as: healthy, trusty, good quality, tasty, which are also positive in the extension category. However, a brand with “strong” associations can also generate negative effects on the extensions, given the transfer of strong specific associations which are not positive or relevant in the extension category (suggesting an interaction effect between parent brand strength and “fit”). The worst evaluated extension was CRISTAL cigarettes with 2,45, while the parent Brand was in the middle quality range (5,03). This can be explained by the transfer of “strong specific associations” of CRISTAL beer to the extension, which are negative in the cigarettes product category such as: watered down and weak, both key associations of the most popular beer
in Chile (and highest market share). Other positive specific associations were also transferred such as: youthful, Chilean, and social meetings, but they were no enough to mitigate the negative influence of the other associations. Low perceived quality brands (sometimes associated with lower knowledge of the brand) are not effective to transfer specific associations, given their weaker knowledge structures (Keller 2003).

**Study 2: Regression model estimation and hypotheses test in Chile**

**Measurement and Model Estimation**

In the second part of the study, sixty subjects (both men and women) had to evaluate different characteristics of the parent brand and brand extensions. Given subjects evaluated each of the parent brands plus 10 brand extensions, the number of total observations to estimate the model were 600. Measurement scales were taken from A&K and then were back translated.

The independent variables were: 1) *parent brand perceived quality* in the original product category (CALIDAD - 1:Inferior-7:Superior), 2) three *FIT variables* between both parent brand and extension product categories: degree of *transferability* of skills (TRANSFER 1:Low-7:High), product category *complementarity* (COMPLEMENTO 1:Low-7:High) and the degree of *substitution* (SUSTITUTO 1:Low-7:High); 3) the *difficulty to design and manufacture* goods in the extension category by the firm (DIFICULTAD 1:Easy-7:Difficult). For purposes of the regression analysis, the dependent variable *attitude toward the extension* (ACTITUD ) was operationalized as the average between extension perceived quality (CALIDA-DEXT 1:Inferior-7:Superior) and purchase intention (COMPRA 1:Never-7:Always). All these constructs were measured using 7-point semantic differential scales.

Additionally, the model includes three interaction terms between the perceived quality of the parent brand and the three fit variables, in particular: CATRANS (parent brand quality x transferability), CASUS (parent brand quality x substitution), y CACOM (parent brand quality x complementarity). The regression estimation results are presented in Table 2.
The model is correctly specified, and the results obtained seem to be robust, given there is no heteroscedasticity or autocorrelation detected. Regression results were corrected using the White Test for heteroscedasticity. The Durbin Watson test (1.71) is close to 2 and the $R^2$ obtained (0.395) is reasonable given this type of analysis, with survey data being used. Given the presence of interaction variables in the model, the net effect of single independent variables cannot be determined just by observing each variable’s beta coefficient. The net effect estimation must consider both the direct effect and the indirect effect of every independent variable through the interaction terms. The LINCOM procedure (STATA 5.0) was used, providing the size, sign and significance of the parameters (see Table 2).

### Table 2. Regression estimates study 2

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLES</th>
<th>Normal Regression Model</th>
<th>Net effects including interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficients</td>
<td>t</td>
</tr>
<tr>
<td>Constant</td>
<td>1.700</td>
<td>3.2690*</td>
</tr>
<tr>
<td>QUALITY</td>
<td>0.2334</td>
<td>2.4888*</td>
</tr>
<tr>
<td>TRANSFER</td>
<td>-0.2335</td>
<td>-1.9602*</td>
</tr>
<tr>
<td>COMPLEMENT</td>
<td>0.4273</td>
<td>4.3632*</td>
</tr>
<tr>
<td>SUBSTITUTE</td>
<td>-0.0968</td>
<td>-0.7851</td>
</tr>
<tr>
<td>CATRANS</td>
<td>0.0693</td>
<td>3.2101*</td>
</tr>
<tr>
<td>CACOM</td>
<td>-0.0404</td>
<td>-2.2818*</td>
</tr>
<tr>
<td>CASUS</td>
<td>0.0291</td>
<td>1.3305</td>
</tr>
<tr>
<td>DIFFICULTY</td>
<td>-0.0742</td>
<td>-2.3650*</td>
</tr>
</tbody>
</table>

N (observations)      | 600         |
$R^2$                  | 0.3955      |
Adjusted $R^2$         | 0.3874      |
Durbin Watson          | 1.713835    |

*p < 0.05
Regression Results Analysis

Parent Brand Perceived Quality: according to the regression, the beta coefficient of CALIDAD, is statistically significative with a value of 0.2334 (t-test 5.009), thus supporting H1. Then, there is evidence for a positive association between parent brand perceived quality and brand extensions’ evaluations.

“Fit” variables. The regression shows significant beta coefficients for the fit variables: COMPLEMENTO (0.4273) and TRANSFERENCIA (-0.2335). Performing the estimation of net effects, including direct and indirect effects, it can be seen that all variables of fit have significant effects, all positive, supporting H3, and the importance of fit in the transfer of affect and evaluations to the extensions.

Model Interactions. The beta estimates for two of the interaction variables CATRANS y CACOM are statistically significant, with values of 0.0693 and -0.0404 respectively. The positive effect of CATRANS indicates that perceived quality effects on the extension, are strengthen if the possibility of skills transfer to the extensions are perceived as higher. One example is SWATCH skies, that although coming from a high quality brand (SWATCH), is poorly evaluated by its lower level of transferability (2,3). This supports hypothesis H2.

CACOM is negative and significant (not supporting H2). This indicates that perceived quality effects on the extension are not reinforced by higher levels of complementarity. In fact, higher complementarity can reduce the effect of perceived quality. This is a troublesome result. One explanation might be, that consumers are somewhat hesitant of buying several complementary goods from the same manufacturer or brand. This might be considered as privileging or accepting some monopolic power from that brand. The inverse effect, however, is more consistent with previous knowledge. When parent brand perceived quality is low, the presence of a higher degree of complementarity between the product categories of the parent brand and the extension, can be taken in a positive way by consumers, and the “monopolic” effect is watered down, thus favoring a more positive evaluation of the extension. This might happen because lower quality brand names are not associated
with power or strength, like the more prestigious ones, and purchase decisions maybe attributed more to convenience or price than brand power.

The beta coefficient for the interaction CALIDADxSUSTITUTO, CASUS, was not significant, but with a positive sign, consistent with H3.

Complementing the analysis of the regression results, by looking at the previous qualitative study, the presence of an interaction effect between perceived quality and fit variables can be reaffirmed. In cases that the consumers notice greater “fit”, they tend to evaluate the extension in a better way, and vice versa. For example, Bicycles “Nike”, is considered a good complement of the brand - higher “fit”- favoring the evaluation of the extension, that reaches an attitude of 5,38. The reinforcement effect of having higher fit, is then important, because in addition, specific associations are also transferred: good, sport, modern y innovation (as explained in the previous section). This is not the case in the inverse situation, with a brand of lower perceived quality and high degree of fit. For example, LE SANCY shampoo or McDONALDs fast food are perceived as medium to “high-fit” extensions, but their extensions are evaluated from regular to low. This provides important support to the hypothesis that the relationship perceived quality-extension is the one moderated by “FIT” and not the other way around. In any case, these results only partially replicate those found by A&K, suggesting the need of further analysis of interaction effects.

Difficulty to manufacture the extension: The beta coefficient for DIFICULTAD is -0,0742 and significant (t= -2,365). This result does not support H4. In Chile, consumers may prefer that manufacturers are knowledgeable of making a product, reducing their perceived risk. This may suggest the need to include risk related variables in the literature on brand extensions (Conchar et al. 2004). This can be particularly important when different cultures and markets are examined. It might be the case that Chilean consumers are more “risk averse” or the Chilean market might have a higher variance in terms of product quality, thus changing the value of the cue Difficulty to Manufacture.
Study 3: Second replication in Chile
In order to examine if Study 2 results are stable and not sample dependent, and to examine in further detail the direct effects of fit variables, a third study was performed. The new sample, 80 subjects (both genders), did evaluate four parent brands and four brand extensions. These extensions were selected among the those having the higher and lower evaluations in Study 2. Difficulty to manufacture (DIFICULTAD) was not measured, and interaction effects were not estimated. Two extra parent brands and extensions were included as filler brands. This study included 320 observations, which were used to estimate the regression model. As can be seen in Table 3, the results are consistent with A&K H1 and H3 hypotheses, confirming Study 2 results. In general, a positive relation was found between perceived quality of the parent brand and the extension evaluation. And the same can be observed for the three fit variables.

Comparison with international evidence
Recently, Bottomley y Holden (2001), have attempted to extract certain generalizations from previous studies derived from A&K original paper. Bottomley y Holden got databases from eight different studies following the original

Table 3. Regression analysis Study 3. Four extensions, among the best and worst evaluated in Study 2

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Coefficient</th>
<th>t Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constante</td>
<td>-0.162</td>
<td></td>
</tr>
<tr>
<td>QUALITY</td>
<td>0.375</td>
<td>8.11*</td>
</tr>
<tr>
<td>TRANSFER</td>
<td>0.425</td>
<td>10.17*</td>
</tr>
<tr>
<td>COMPLEMENT</td>
<td>0.087</td>
<td>2.53*</td>
</tr>
<tr>
<td>SUBSTITUTE</td>
<td>0.078</td>
<td>1.88*</td>
</tr>
<tr>
<td>N</td>
<td>320</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>0.425</td>
<td></td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.418</td>
<td></td>
</tr>
<tr>
<td>Durbin Watson</td>
<td>1.828</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05
DETERMINANTS OF CONSUMER EVALUATIONS OF BRAND EXTENSIONS IN CHILE AND COMPARISON AGAINST GLOBAL EVIDENCE

A&K methodology, and reanalyze them using a similar statistical procedure. Studies analyzed, included Aaker and Keller (1990), Sunde and Brodie (1993), Alexandre-Bourhis (1994), Nijssen and Hartmann (1994), Holden and Barwise (1995, with three data sets, 1) London Business School (LBS), 2) ESSEC in France, and 3) from the University of Illinois), and Bottomley and Doyle (1996). The particular procedure used to analyze these data sets was centered residual regression, in order to control for multicolinearity and interaction effects, problems that can be present in this type of data. Examining these results presented in Table 4, a general degree of consistency can be observed among these different studies, but some differences can also be observed.

Table 4. International evidence. Beta Coefficients estimated by Bottomley y Holden (2001)

| Variable | N&H | B&D (Australia) | S&D | LBS | Illinois (US) | Essec (Francia) | A-B | A&K (US) | Chile a
|----------|-----|----------------|-----|-----|---------------|-----------------|-----|----------|--------
| Parent Brand Quality | .25** | .22** | .25** | .39** | .21** | .46** | .09** | .22** | .23*
| Transference | .60** | .31** | .27** | .14** | .07** | .19** | .27** | .26** | .13*
| Complement | .00 | .31** | .30** | .09** | .10** | .19** | .29** | .17** | .21**
| Substitute | .07* | .18** | .18** | .18** | .22** | .15** | .29** | .07** | .05*
| Cal x Transf (resid) | .08** | .08** | .06** | .06** | .03 | .05* | .03 | .03 | .07*
| Cal x Compl (resid) | -0.02 | .05* | .05* | .05* | -.02 | .02 | .02 | .06** | -.04*
| Cal x Subst (resid) | -.07* | .03 | -.01 | .03 | -.01 | .02 | .02 | .05* | .03
| Difficulty | - | .1 | .03 | .12** | -.10** | -.07** | .02 | .11** | -.07*
| R2 | .49 | .49 | .44 | .28 | .17 | .36 | .38 | .25 | .40
| Simple Size | 693 | 1358 | 1559 | 2204 | 1086 | 1793 | 1151 | 2101 | 600

* p 0.05, ** p 0.01.

a Regresión results in Chile are obtained using a simple OLS regression model that incluyes direct and interaction effects.
In general, the international evidence is strong towards a positive effect of parent brand perceived quality on the extension evaluation. Likewise, the fit variables, present positive and significant effects in most studies, although transferability and complementarity tend to have stronger effects than substitution, which is normally a small effect and sometimes non significant.

The role of interactions, is confirmed, in terms that in most case some interactions are significant. However, its interpretation and stability is not consistent, and it seems to be dependent upon contexts, culture, product types and markets. The results reported in this paper confirm that fit and perceived quality interactions need to be further studied.

Finally, the independent variable Difficulty of Manufacturing (DIFFICULT) has, in most of the studies, an inverse effect to that hypothesized by A&K, likewise the Chilean results. Consumers tend to favor extensions that are perceived easy to manufacture by the firm.

Discussion and implications
This article has examined the generalizability of Aaker and Keller (1990) propositions related to the determinants of brand extensions success. We then have compared these results with internacional evidence.

Although some differences are found, general relations are confirmed. Brand strength translated in high quality perceptions, and the degree of fit between the parent brand and extension category are key determinants of brand extensions’ evaluations.

Also, interaction effects between fit and perceived quality have been found, suggesting that the association of parent brand perceived quality and the extension of evaluation is moderated by fit variables. Certain differences, however have been determined, in this and other replication studies. Some of these differences, may be explained by methodological reasons (i.e. different extension product categories, different parent brands, sample characteristics, etc.). However, some of these differences can be also explained by context (cultural and market) differences, which need to be taken into account. In the Chilean study, for example, the idea that consumers may penalize extensions that are perceived to be easy to manufacture by the firm, is not supported, and an inverse relationship is discove-
Determ inants of Consumer Evaluations of Brand Extensions
In Chile and Comparison Against Global Evidence

red. Chilean consumers, may be less confident, more risk averse, expecting higher degrees of variance in product quality, or more conservative, do prefer extensions that are perceived to be easier to manufacture by the firm. More difficult-to-make extensions are seen with distrust, and with a lower chance to capture specific parent brand associations.

Previous studies have generally examined the evaluation of extensions by the whole market. However, the qualitative evidence in A&K and also in this Chilean study, suggests that extensions are evaluated rather differently, in a segmented pattern. General trends can be observed, but the specific evaluation of an extension and the transfer of specific associations may differ depending upon the consumer segment.

As you may expect, SWATCH skis will be positively evaluated by a loyal consumer of SWATCH watches, who thinks their watches are of excellent quality. However, a loyal consumer of “fancy”, “colorful”, and “disposable” SWATCH watches, may have a more negative evaluation of SWATCH skis, in terms of its technology and overall quality. Differences may also happen if you considered different consumer segments. Loyal SWATCH consumers, who are also pro skiers, will probably evaluate SWATCH skis as “amateur” or “beginners”, and will not intend to buy this extension.

This article confirms the need to validate theories in more real and closer settings, before they can be taught as “truths” in our Business Schools. Replication studies do have an important role here.

Further Research
There is a clear need to expand the amount of replication studies to test and verify the brand extension literature propositions, beyond A&K study (as suggested by Aaker y Keller 1993, Barwise 1993, Klink and Smith 2001).

The use of real brands, and different samples can be main “suggestions” to be included in the method of further research on this topic. Additionally, the combination of methods, can be another important contribution in new studies. Most studies, have used survey based data or scanner data, but integration possibilities among them and other qualitative methods is possible and probably needed (Ben-Akiva et al 1994).
Also, there is a need to test a larger amount of propositions in a single study, in order to see how these different explanations hold together. This combined test may allow for the examination of several operationalizations of brand strength, like notoriety (Alameda et al 2006) or brand image measured through fuzzy logic procedures (Lozano y Fuentes 2005). Additionally, this test might be very important to check the robustness of the brand strength-extension success relationship or to identify managerial priorities (top of mind vs. imagen) in the different brand building and management stages. The general conceptual framework including 4 types of variables presented here, can be an interesting guide to test these effects simultaneously.

References


