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**CAN BRAND IDENTITY PREDICT BRAND EXTENSIONS SUCCESS OR
FAILURE?**

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CAN BRAND IDENTITY PREDICT BRAND EXTENSIONS' SUCCESS OR FAILURE?

Abstract

Purpose - Brand extension strategies have become widespread since the early 80's. However, a large proportion of brand extensions still fail, suggesting the need for methodologies that produce better predictions of success or failure of new products launched with a well-known brand name. Although the symbolic fit between established brand names and brand extensions is considered as one of the most important determinants of brand extension success or failure, managers need more accurate tools to determine, from a symbolic point of view, which brand extensions are consistent with their brand. We propose to use Kapferer's brand identity prism to define more acceptable brand extensions.

Design - Two studies were conducted. A first study aimed at developing a brand identity inventory (BII). In a second study, the BII's ability to predict brand extensions' success or failure was tested.

Findings - The second order structure of Kapferer's brand identity prism is confirmed. We then demonstrated that brand identity is useful to better predict acceptance of brand extensions.

Research implication/limitation - In prior research, perceived fit was estimated by mono-item measures or by few brand associations. Brand identity provides a more accurate estimation of the fit that can rely on attributes related to brand personality and brand values – the personal dimension of brand identity – or associations related to relationships and users' image – the social dimension of brand identity.

Practical implication - Our findings can help managers to determine more consistent brand extensions when brands are already stretched.

Keywords Brand identity, brand image, brand extension, brand personality, brand management

Paper type Research paper

About the author

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Introduction

Brand extension is the use of an established brand name to enter a new product category (Aaker and Keller, 1990). Since the early 80's, an increasing number of firms are following this strategy, extending their brands into different product categories. Brand extensions were attractive to firms because they were supposed to reduce high new-product failure rates and because they provided a way to take advantage of brand name awareness and image (Aaker and Keller, 1990; Keller, 2003; Batra *et al.*, 2010). More recently, brand extensions were considered as an effective way to leverage brand equity. However, the success of brand extensions is uncertain. Failure rates are approximately 80 % (Völkner and Sattler, 2006), suggesting the need for methodologies that allow better predictions of success or failure of new products launched with a well-known brand name. Marketing researchers were thus encouraged to explore the determinants of brand extensions' success or failure. In previous literature, two main determinants were identified: the first is the similarity between product categories and the second is a more symbolic fit between the new product and the parent brand. However, this symbolic fit, sometimes called "the brand concept" (Park *et al.* 1991) remains vague. Although the fit between the extended brand and the brand extension is now considered as one of the most important determinants of brand extensions' success or failure (Volckner and Sattler, 2006), managers need methodologies that make this symbolic fit more useful to them.

Our research aims at providing a theoretical foundation to this symbolic fit derived from Kapferer's brand identity prism (Kapferer, 1997). In this model, brand identity results from several dimensions including brand personality, brand values, relationships and user image (Kapferer, 1997). Some of these facets could be useful to managers in defining brand extensions.

The brand extension literature and the brand identity concept are first developed: they form the theoretical background of this research. A conceptual model of brand extensions evaluation, based on Kapferer's brand identity prism, and research hypothesis are then presented. In a first study, the structure of Kapferer's brand identity prism is confirmed. A second study using Kapferer's brand identity prism to estimate perceived fit between the extended brand and an extension product is then developed. Finally, limitations, theoretical and managerial implications are discussed.

1. Theoretical background

1.1. Determinants of brand extension success

Brand extensions – that is, use of established brand names to launch new products – represent one of the most frequently-used branding strategies. Consumer acceptance for brand extensions is greater compared to a new product launched under a new brand name because brand attitude and brand associations are supposed to be transferred to the new product. This transfer relies on different psychological mechanisms such as semantic generalization (Fry 1967; Kerby 1967; Osgood 1962), halo effect (Thorndike 1920), assimilation-contrast theory (Fry 1967; Sherif 1963), categorization theory (Collins and Loftus 1973; Rosch and Mervis 1975) and conceptual coherence (Murphy and Medin 1985). Based on these psychological mechanisms, several explanatory models were tested. They emphasized the role of perceived similarity between existing product categories and new products (Boush *et al.* 1987; Fry 1967), perceived fit between existing products and new products (Aaker and Keller 1990) or perceived fit between the extended brand and the new product (MacInnis and Nakamoto 1990; Park *et al.* 1991; Tauber 1981). The concept of similarity between categories of products is as clearly defined and measured as the more symbolic fit concept between the parent brand and the new product remains vague and difficult to measure, despite a growing

number of studies devoted to this topic. An existing brand name fits a new product category if there appears to be a match at the level of concrete attributes or based on abstract imagery or personality attributes (Batra *et al.*, 1993; Batra *et al.*, 2010; John and Loken 1993; Park *et al.*, 1991). The fit consists in a product's ability to accommodate the brand concept (Park *et al.*, 1991; Broniarczyk and Alba, 1994). Park *et al.* (1991) limited the brand concept consistency to a single attribute (functional *vs.* prestige) while Broniarczyk and Alba (1994) used few associations. Only Batra *et al.* (2010) proposed to use a more complete set of brand associations: the 15 facets of the brand personality scale (Aaker, 1997). But the more frequently-used method to measure fit is simply a direct rating scale such as: "how well does the proposed extension fit with the parent brand?". We consider that the brand concept evoked in prior research could be enlarged to the wider brand identity concept. Brand identity could provide a relevant conceptual framework for improving our knowledge of perceived fit. Moreover, brand identity is a multi-dimensional concept. As a consequence, it could provide a more accurate estimation of fit than mono-item measures, often used in previous research.

1.2 Brand identity

"A strong brand should have a rich, clear brand identity – a set of associations the brand strategist seeks to create or maintain [...] In contrast to brand image, brand identity represents what the organization wants the brand to stand for" (Aaker and Joachimsthaler, 2009, p 40). According to de Chernatony (2001, p192), a highly useful conceptualisation of brand identity is provided by Kapferer (1997). His model, called "identity prism", helps explain the paramount differences between competing brands. The identity prism is a combination of six dimensions: brand personality, brand culture, brand–consumer relationships, reflection, physique and self image. **Brand personality** reflects "the set of human characteristics associated with a brand" (Aaker, 1997). Each brand comes from a unique **culture** characterized by values. Thus, brands can be regarded as a cluster of values. Values are

“fundamental principles that regulate brand behavior” (Kapferer, 1997). “The brand is treated as an active, contributing partner in the dyadic **relationship** that exists between the person and the brand” (Fournier, 1998). Brands thrive through the relationships they form with customers (de Chernatony, 2001). **User image** is defined as “the set of human characteristics associated with the typical user of a brand” (Plummer, 1984). A brand provides a basis for the customer to reflect externally something about themselves to their peers through owning the brand (de Chernatony, 2001). **Brand physique** relates to the tactile features of the brand that are recognised by our senses: Toblerone and its pyramid shape, for example (de Chernatony, 2001). **Self-image** relates to the way a brand enables the user to make a private statement back to him or herself.

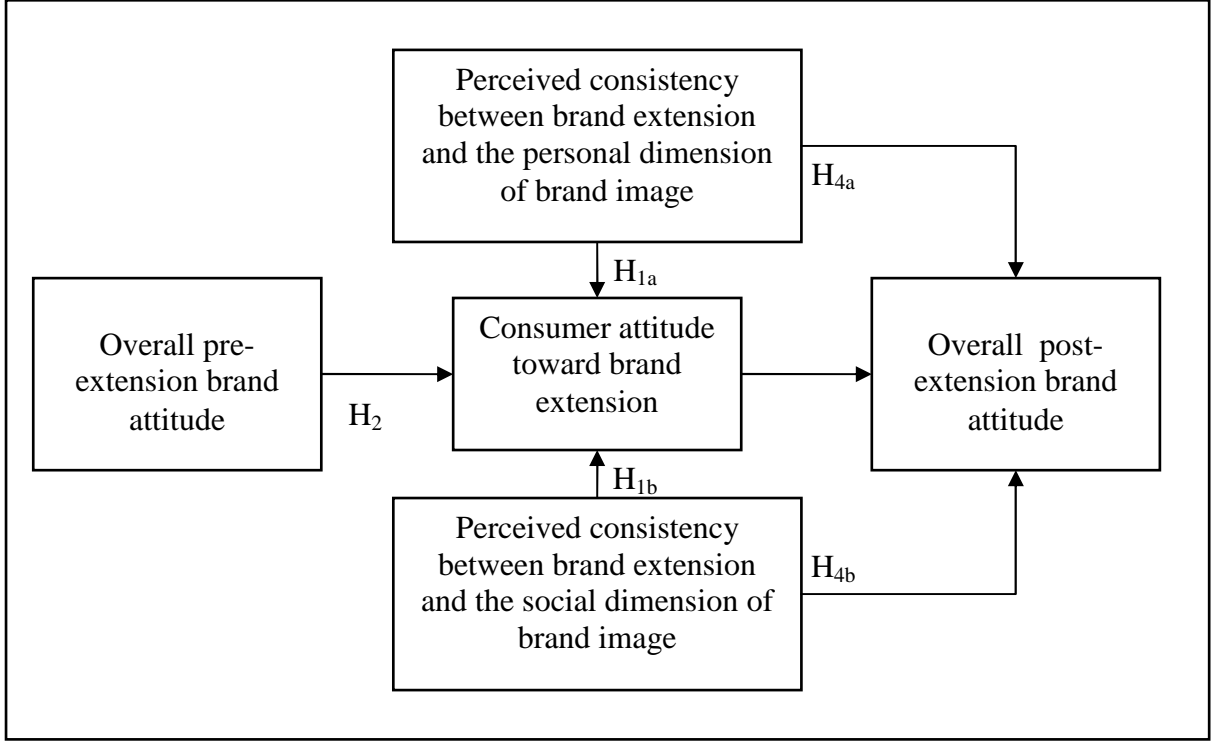
Kapferer’s identity prism is not the only model in the marketing literature. Aaker and Joachimsthaler (2000, 2009) and de Chernatony (2001) proposed alternative models of brand identity. But among these different approaches, four facets emerge which are more consensual. Brand personality, brand culture and relationships are three facets shared by Kapferer (1997), Aaker and Joachimsthaler (2000, 2009) and by de Chernatony (2001). The user image is part of the model of Kapferer (1997) and de Chernatony (2001). Brand physique and self-image are more specific to Kapferer’s identity prism. In consequence, only four dimensions of brand identity were selected for the empirical study: personality, culture, relationships and user image.

2. Conceptual model and research hypothesis

When managers plan to extend their brand to a new category far from the flagship product, the fit between the parent brand and the new product is, by definition, symbolic and cannot rely on product feature similarity. Brand identity can provide a foundation to this fit. Considering that brand personality, brand values, relationships and user image are considered,

in previous literature, as the most salient facets of brand identity and considering that brand personality and brand values form the personal dimension of brand identity while relationships and user image represent the social dimension of brand identity (Kapferer, 1997), we propose to use this brand identity conception to estimate the fit between the established brand and the new product. A new product, belonging to a very different category compared with products usually sold under a well-known brand name, can be congruent either with the personal dimension (i.e. brand personality and brand values) or with the social dimension (i.e. relationships and user image) of brand identity.

Figure 1. Brand extension model and hypotheses



2.1. Effect of perceived coherence between brand identity and brand extension

Brand extension success depends heavily on extension fit (Volckner and Sattler, 2006). Among 10 drivers of brand extension success, these authors find that the fit between the parent brand and an extension product is the most important factor. Consumers tend to respond more favorably to extensions that fit with their perceptions of the parent brand. Many

studies have shown that the perceived coherence between brand and brand extension influences consumers' attitude toward brand extension (Broniarczyk and Alba, 1994; Buil *et al.*, 2009; MacInnis and Nakamoto 1990; Park *et al.* 1991). The higher the perceived coherence, the higher the brand extension evaluation. But this perceived fit was often considered as an overall judgment. We suggest breaking down this fit into two dimensions. Coherence between the parent brand and the new product can be considered separately either for the personal or for the social level of brand identity.

H1_a: Perceived coherence between the new product and the personal dimension of brand identity is positively related to brand extension evaluation.

H1_b: Perceived coherence between the new product and the social dimension of brand identity is positively related to brand extension evaluation.

2.2. Transfer of attitude between the extended brand and the brand extension

Evaluations of brand extensions are likely to be more favourable when associations toward the parent brand are positive. The more favourable the brand attitude before stretching, the greater the acceptance of brand extension. This transfer of attitude between the parent brand and the new product is confirmed in several studies (Boush, 1987; de Ruyter and Wetzels, 2000). We therefore postulate H2:

H2: The pre-extension consumer's attitude toward the extended brand is positively related to the consumer's attitude toward the extension.

2.3. Reciprocity effects

In the last twenty years, building strong brands has become the objective of many organizations. Brand extension strategies are often considered as an effective way to improve brand equity through brand awareness – the brand name appears on several products -, brand

associations – new product attributes can be transferred to the parent brand – and brand loyalty – consumers who already buy a given brand are supposed to be attracted by new products sold under this brand name -. But this relationship between brand extension and brand equity appeared to be two-sided because either brand extension success or failure can impact the parent brand, enhancing or damaging brand equity. Thus, if the consumer's attitude toward the brand extension is favourable, this attitude will positively impact the parent brand equity. By contrast, if the consumer's evaluation of the brand extension is negative, it could damage the extended brand. Moreover, perceived fit between the brand extension and one of the two dimensions of brand identity would probably act as a moderator in the attitude transfer between the brand extension and the parent brand. An extension perceived as coherent would be more likely to result in a positive change in brand attitude whereas an incoherent extension would lead to a negative change. As far as we know, this indirect effect was not empirically tested in prior research, while the direct positive relationship between attitude toward the brand extension and the post-extension attitude toward the parent brand was validated in numerous empirical studies (Buil *et al.*, 2009; Chang, 2002; Loken and John, 1993; Martinez *et al.*, 2008; Park *et al.*, 1993). Thus, we postulate the third hypothesis as following:

H3_a: Perceived consistency between the brand extension and the personal or social dimension of brand identity leads to a positive change in brand attitude.

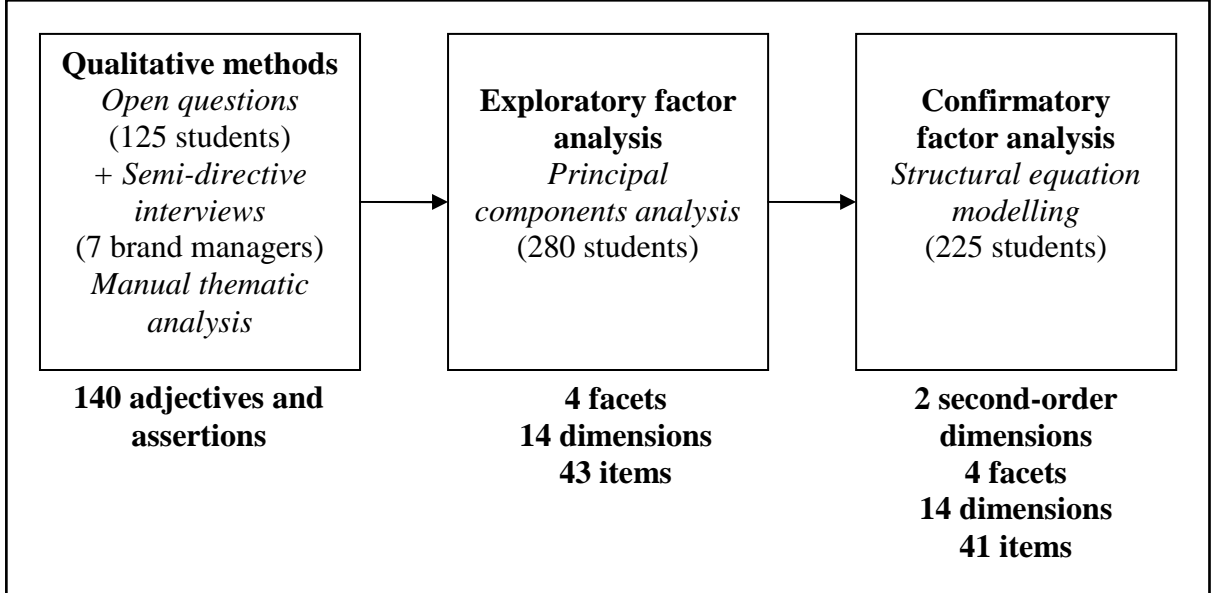
H3_b: Perceived inconsistency between brand extension and the personal or the social dimension of brand identity leads to a negative change in brand attitude.

3. Methodology

We conducted two studies: The first study collected data on brand identity perceptions (Brand Identity Inventory or BII), and the second study validated extension concepts that we derived

from the first study on a second sample of participants. This procedure was already used by Batra *et al.*, (2010) who proposed to use brand personality to help managers to define brand extensions. In the first study, in order to develop the BII and to confirm Kapferer’s prism of identity structure, the Churchill paradigm was respected with three stages: a qualitative study, an exploratory quantitative study and finally a confirmatory quantitative study (Churchill, 1979). Ten well-known brands in France, with brand awareness above 90 percent, were selected: Adidas, Champion USA, Decathlon, Fila, Lafuma, Nike, Quiksilver, Reebok, Rossignol and Salomon. They were all related to sport activities.

Figure 2. Methodology to develop the BII



The purpose of the second study was to test the proposed model and hypothesis H1 to H3. Data was collected on a convenience sample (n = 200). A preliminary cluster analysis was carried out to identify different styles of brand identity. Then, a factorial design with covariance analysis (ANCOVA) was conducted to test hypothesis.

For the different studies, respondents were asked to complete a questionnaire during regular class time. They personally participated in only one study. They were undergraduate students from a French university, aged between 18 and 25 years (49 % men and 51 % women

consistent with the French population). The use of students' samples is justified given the nature of the brands (they are all related to sport activities) and given the product category.

4. Study 1 – The Brand Identity Inventory

4.1. Items generation

A qualitative method was first conducted in order to generate items for each BII facet. A free associations task was carried out with 125 students. They were asked open questions like: “what comes to your mind when you think of Brand X”, “Can you describe Brand X as if it was a character?”, “Can you describe the typical user of Brand X?”... In parallel, seven semi-directed interviews were conducted with Brand Managers (they were all in charge of sport brands). The corpus was then subjected to a manual thematic analysis. 140 adjectives or assertions were thus generated and assigned to one of the four dimensions of brand identity (personality, values, relationships and user imagery). They were compared with the corresponding literature and published scales or inventory: the brand personality scale (Aaker, 1997), user image inventory (Malhotra, 1981 and 1988), consumer-brand relationships (Fournier, 1998) and brand values inventory (Aurier *et al.*, 2001).

The 140 adjectives and assertions were then turned into questions. Data was gathered from a students' sample (n = 280). Each respondent evaluated only two brands among 10, because of the length of the questionnaire, on a scale from 1 (totally disagree) to 6 (totally agree). Four principal components analyses (PCA) were carried out (one per scale). The KMO and Bartlett tests confirmed the relevance of PCA. Items with an inter-item correlation and with a saturation index lower than 0.50 were removed from the analysis. All dimensions provided satisfactory internal reliability (Appendix 1). In total, the BII contains 43 items and 14 factors¹.

¹ Details of the final scales are presented in table 1.

Confirmatory factor analyses were then performed scale by scale. The same questionnaire was administered to a new sample of 225 students. Each respondent evaluated five brands. This decision was motivated by the fact that, after the PCA, only 43 items remain in the BII. 211 questionnaires were correctly completed and were then used to confirm the structure and test the validity and the reliability of the BII with structural equation modelling (SEM) methods. Coefficients were estimated by the Maximum Likelihood method. Analyses confirmed the structure of each scale and only two items of the brand values scale had to be discarded (Table 1). Scales reliability was established by the Joreskog method (Joreskog, 1971). Except for two factors (utility and emotional stability) reflected by only two items, the Joereskog coefficients were all above 0.73 (Table 1). Evidence for convergent validity was established in accordance with the Fornell and Larcker procedure (1981). The average extracted variance for each factor was above 0.5 (Appendix 2). Besides, loadings were all statistically significant ($p < .05$). To establish discriminant validity, we followed the method suggested by Anderson and Gerbing (1988). According to this procedure, the performance of fit indexes of the tested model is compared to the performance of fit indexes of a constraint model. In this constraint model, correlations between latent variables are restricted to one. Tested models always fit better than constraint models (Appendix 2).

Table 1. Confirmatory factor analysis of the Brand Identity Inventory²

The brand identity inventory	Factorial weights	Joreskog coefficient	Average extracted variance
BRAND PERSONALITY			
1. Pride		.87	.69
Show-off	.878		
Proud	.938		
Showy	.649		
2. Competence		.84	.56
Dynamic	.707		
Effective	.865		
Sporty	.692		

² Note: The BII was translated from French to English, for the needs of this paper, by a bilingual English native linguist.

Technically-minded	.731		
3. Friendliness		.84	.63
Friendly	.796		
Pleasant	.760		
Nice	.820		
BRAND VALUES			
1. Usefulness		0,64	0,58
Safety	.817		
Quality	.690		
2. Social orientation		0,78	0,65
Environmentally friendly	.721		
Generosity	.723		
Respect for others	.759		
3. Hedonism		.77	.53
Freedom	.741		
Pleasure	.691		
Open to new experiences	.750		
4. Ethics		.82	.63
Honesty	.817		
Fairness	.780		
Commitment	.784		
RELATIONSHIPS			
1. Stimulating		.74	.61
Brand X enables the consumer to improve his performance.	.890		
Brand X allows you to excel.	.621		
2. Educational		.77	.58
Brand X likes to explain things to the consumer.	.626		
Brand X likes to share its know-how with the consumer.	.764		
Brand X gives good advices.	.781		
3. Domination		.82	.59
Brands X tries to hard to impose its style on the consumer.	.810		
Brand X features too much on products.	.700		
Brand X tends to think “he/she” is a star.	.832		
USER IMAGE			
1. Leadership		.81	.60
Leader	.713		
Switched-on	.797		
Modern	.802		
2. Dynamism		.85	.59
Active	.702		
Dynamic	.813		
Fit	.769		
Sporty	.782		
3. Social orientation		.77	.56
Friendly	.764		
Warm	.782		
Trusting	.692		

4. Emotional stability	.685	.70	.59
Rational	.779		
Realistic			

We finally verified that the BII respected the second-order structure proposed by Kapferer (1997). For this purpose, a second-order factor analysis, including the four scales, was carried out. Two models were tested. In the first one, the four dimensions of brand identity were related to a second-order variable called Brand Identity, while in the second model, brand personality and brand values were related to a second-order variable representing the personal dimension of brand identity and relationships and user image to another second-order latent variable representing the social dimension of brand identity. In this alternative model, the personal and the social dimensions of brand identity were correlated. The two-factor model fitted better (RMSEA = 0.046). Moreover, the differences between the one-factor model (chi-square = 2501, df = 765) and the two-factor model (chi-square 2375, df = 764) were statistically significant ($p < .05$). This analysis confirms the two-second-order structure of brand identity.

5.1. Study 2 – Test of hypotheses

5.1. Pre-tests

Prior to the final experiment, two pilot studies were carried out in order to identify different styles of brand identity, select brands for the following stage and generate and select brand extension scenarios.

Identification of different styles of brand identity and selection of four brands

The purpose of the first pre-test was to identify brands with different styles of identity. A cluster analysis was carried out with the same 10 sport brands. The cluster analysis was based upon the mean score of the 41 items of the BII for each brand. First, a graphic analysis

(hierarchical classification) was carried out to determine the number of clusters. The measure used was the square of the Euclidian distance with Ward's aggregation method. The dendrogram displays the existence of two distinct groups. In the second stage, a dynamic cluster analysis (Diday, 1973) was carried out in order to specify the profile of the groups and assign observations to clusters. Dynamic cluster analysis is equivalent to the K-means method used by Homburg *et al.* (2008). Two styles of brand identity emerged from the cluster analysis. In the first group, brands are fashionable and self-oriented (Fila, Nike and Reebok, for example) while in the second group, brands are more social-oriented and more ethical (Decathlon, Lafuma, Rossignol and Salomon, for example). Among the 10 brands, two brands were selected in each cluster for the following stage. Nike and Reebok, on the one hand, and Lafuma and Salomon, on the other hand, were chosen because they were the most contrasting brands (Table 2). If Nike and Reebok are well-known brands all around the world, Lafuma is a more typically French brand with different categories of products like camping furniture, tents, hiking equipment, apparel, shoes and back-packs. Salomon is leader in sports involving sliding (ski, snowboard and in-line skating).

Table 2. Style of brand identity

Second order brand identity dimensions	Brand identity facets	Dimensions	Nike Reebok	Lafuma Salomon
Personal dimension of brand image	Brand personality	Pride	+	-
		Friendliness	-	+
		Competence	+	+
	Brand values	Social orientation	-	+
		Hedonism	-	+
		Ethics	-	+
		Usefulness	+	+
Social dimension of brand image	Users image	Leadership	+	-
		Social orientation	-	+
		Emotional stability	-	+
		Dynamism	+	+
	Relationships	Domination	+	-
		Educational	-	+
		Stimulating	+	+

Selection of brand extension scenarios

The second pre-test aims at generating brand extension scenarios for the four brands. 61 subjects aged between 18 to 25 years were asked to propose new products or services for each brand. A list of 48 extensions was obtained. Then, 10 experts were asked to judge the similarity with prior products of each brand for the 48 extensions scenarios. Extensions perceived as similar by more than two experts were discarded from the list. After this task, a reduced list of 20 extensions was obtained. Then, experts evaluated, for each brand and for each extension, the degree of coherence with brand identity. First, experts evaluated the degree of coherence with the personal dimension of brand identity on a six-point scale (from 1 - not at all coherent, to 6 - very coherent). They were given the mean score obtained, in study 1, by each brand on the personality and values items. To limit memorisation effects, the degree of coherence with the social dimension of brand identity was evaluated, two weeks later, by the same experts and in the same conditions. Four scenarios of brand extension emerged from this pilot study: deodorant, sport clubs like fitness and weight-training rooms, paragliding equipment and first aid kit for outdoor sports. Extensions highly coherent with Nike and Reebok (deodorant and sport clubs) were perceived by experts as not coherent with Lafuma and Salomon and, mutually, coherent extensions with Lafuma and Salomon (paragliding equipment and first aid kit for outdoor sport) were perceived as not coherent with Nike and Reebok. It can be underlined that extensions rated as congruent with Nike and Reebok, were self-oriented and fashionable while products congruent with Lafuma and Salomon were more social-, ethical- and outdoor- oriented.

5.2. Sample and procedure

Our prediction on brand identity effect and on brand extension attitude was examined using a 2 x 2 x 4 factorial design. The first factor was the degree of coherence between the extension

and the parent brand (high vs. low) and the second factor was the brand identity dimension (personal vs. social). These two factors were between subjects. The third factor was the brand name (Nike, Reebok, Lafuma, Salomon) as a within-subject factor. 200 subjects were randomly assigned to one of the four between subjects' conditions. They were asked to complete a questionnaire. In the first part of the questionnaire, subjects indicated their attitude toward each brand on a six-point scale, before being exposed to the stimuli (pre-extension brand attitude). In order to reduce memorization effects, other brands were added as well as some questions about sport in general. Then, in the second part of the questionnaire, a scenario of brand extension – including a short description – was presented to respondents who evaluated the product. Each respondent evaluated the same extension (either deodorant, or sport club, or paragliding equipment, or first aid kit) for the four brands (Nike, Reebok, Lafuma and Salomon). Finally, in the third part, subjects were asked to give their general opinion on the brand (post –extension brand attitude). For each condition, brands were presented in a different order. 175 questionnaires were correctly completed and analysed.

Attitude toward brand extension was measured by a six-point scale from 1 “not at all agree” to 6 “totally agree”. This measure included cognitive, affective and behavioural components of attitude (Appendix 3). Pre- and post- extension attitudes toward the parent brand were measured by a similar six-point scale. Pre- extension brand attitude was considered as a covariant.

5.3. Results of study 2

Manipulation check

Extensions rated as coherent during pre-tests were also considered as consistent in the final experiment. Subjects evaluated extension consistency with brand identity on the same six-point scale (1 = not at all coherent; 6 = very coherent). Deodorant was coherent with Nike (M

= 3.5) and Reebok ($M = 3.14$) while incoherent with Lafuma ($M = 2$) and Salomon ($M = 2.04$). Sport clubs were coherent with Nike ($M = 4.02$) and Reebok ($M = 4.04$) whereas they were incoherent with Lafuma ($M = 1.87$) and Salomon ($M = 2.08$). Paragliding equipment was coherent with Lafuma ($M = 4$) and Salomon ($M = 4.05$) and incoherent with Nike ($M = 2.48$) and Reebok ($M = 2.59$). First aid kit for outdoor sport was coherent with Lafuma ($M = 4.11$) and Salomon ($M = 4.23$) but incoherent with Nike ($M = 2.18$) and Reebok ($M = 2.08$). A multiple comparisons of means *post hoc* test (Scheffé, 1953) showed that means differences were not statistically significant when comparing the same level of coherence and that they were statistically significant when comparing high versus low coherence conditions.

Extraneous variables

A covariance analysis revealed no significant effect of gender ($F = .769, p < .6$), familiarity with product category measured by the number of regular sport activities ($F = .213, p < .98$) and order of brands ($F = 1.817, p < .07$) on brand extension evaluation but a significant effect of pre-extension brand attitude.

Test of hypotheses

H1_a and H1_b concerned the expected effect of coherence between brand identity and brand extension. A 2 (high vs. low coherence) x 2 (personal vs. social brand identity dimension) x 4 (brand name: Nike, Reebok, Lafuma, Salomon) analysis of covariance, with pre-extension brand attitude as covariant, was performed in order to investigate these hypotheses. Results showed that the coherence between one of the dimensions of brand identity and the brand extension had a significant main effect on consumer attitude toward brand extension ($F = 40.31, p < .001$). This factor explained 42 % of variance. Brand extensions are better accepted when they are congruent either with the personal or with the social dimension of brand identity (Table 3).

Table 3. Attitudes toward brand extensions

	Coherence			
	High		Low	
	Personal dimension of BI	Social dimension of BI	Personal dimension of BI	Social dimension of BI
	Deodorant	Sporting clubs	Paragliding equipment	First aid kit for outdoor sports
Nike	3.16* (1.38)**	3.44 (1.37)	2.24 (1.02)	2.62 (1.02)
Reebok	3.05 (1.24)	3.31 (1.27)	2.15 (0.90)	2.52 (0.91)
	Paragliding equipment	First aid kit for outdoor sports	Deodorant	Sporting clubs
Lafuma	3.39 (0.98)	3.79 (1.12)	2.14 (0.85)	2.21 (0.95)
Salomon	3.43 (0.94)	3.94 (1.02)	2.04 (0.76)	2.32 (0.96)

* means

** standard deviations

A multiple comparisons of means *post hoc* test (Scheffé, 1953), showed that means differences were not statistically significant when comparing the same level of coherence while they were statistically significant when comparing high versus low coherence conditions (Appendix 4).

Findings of this second study revealed that consumers prefer extensions which are coherent either with the personal dimension or with the social dimension of brand identity. Thus H1_a and H1_b are supported.

H2 concerned attitude transfer between the extended brand and the brand extension. Brand attitude before extension had a significant effect on brand extension evaluation for the four brands (Nike, $F = 3.776$, $p < .02$; Reebok, $F = 6,305$, $p < .001$; Lafuma, $F = 5,627$, $p < .001$ and Salomon, $F = 4.237$, $p < .01$). Thus, H2 is supported.

The test of H3 was based upon the change in subjects' attitude. We first calculated the difference between the pre- and the post- extension attitude toward the parent brand. A second analysis of variance was then conducted with the same factorial design: 2 (high vs. low coherence) x 2 (personal vs. social brand identity dimension) x 4 (brand name: Nike, Reebok, Lafuma, Salomon) but the dependent variable was the change in brand attitude instead of attitude toward brand extension. Changes in brand attitude before and after extension were significant ($F = 8.970, p < .001$) while the interaction effect of coherence was not significant ($F = .589, p < .2$). To refine these results, a t-test was conducted to determine if means differences were statistically different to zero. Since all differences were negative or equal to zero, a unilateral test was carried out. The null hypothesis was always rejected for Nike and Reebok, denoting a dilution in low and, more surprising, in high coherence conditions (Table 4).

Table 4. Reciprocity effects

Brand	Extension	Means difference	Standard deviation	Sample size	Critical T value	T value $P = .05$	ω^2 (Hays, 1963)
Nike	Deodorant	-.51	.62	42	5.33	2.019	.39
	Sporting club	-.35	.63	47	3.81	2.013	.19
	Paragliding eq.	-.31	.61	46	3.45	2.014	.19
	First aid kit	-.41	.89	40	2.91	1.684	.16
Reebok	Deodorant	-.31	.78	42	2.58	2.019	.12
	Sporting club	-.62	.84	47	4.98	2.013	.34
	Paragliding eq.	-.43	.78	46	3.74	2.014	.21
	First aid kit	-.44	.86	40	3.24	1.684	.19
Lafuma	Deodorant	-.21	.87	42	1.56	2.019	ns
	Sporting club	-.40	.85	47	3.23	2.013	.17
	Paragliding eq.	-.20	.82	46	1.65	2.014	ns
	First aid kit	-.20	.77	40	1.64	1.684	ns
Salomon	Deodorant	.00	.84	42	0.00	2.019	ns
	Sporting club	-.07	.67	47	0.72	2.013	ns
	Paragliding eq.	-.26	.91	46	1.94	2.014	ns
	First aid kit	-.20	.68	40	1.86	1.684	.06

Results were more mitigated for Lafuma and Salomon. For Lafuma, only sport clubs (incoherent with the social dimension of brand identity) had a negative impact on the parent brand while, for Salomon, only first aid kit (coherent with the social dimension of brand identity) conveyed to a dilution effect. Thus, H3_a and H3_b are not supported.

5. Discussion

We investigated the relevance of brand identity to better understand brand extensions' acceptance by consumers. Our findings provide a number of precise contributions on either brand identity measure or consumers' evaluation of brand extensions. More precisely, we offer a more structured conception of perceived fit based upon brand identity that allows a better understanding of brand extension success or failure. Theoretical and managerial implications and limitations of these findings are now discussed.

5.1. Theoretical implications

The main theoretical contribution concerns the perceived fit between the parent brand and the brand extension. First of all, we showed that brand identity, a multi-dimensional construct, is relevant to estimate coherence between the extended brand and the brand extension. In prior research, perceived fit was estimated by mono-item measures (McInnis and Nakamoto 1990; Park *et al.*, 1991) or by few brand associations (Broniarczyk and Alba, 1994). More recently, Batra *et al.* (2010) proposed to use brand personality associations. We offer a more complete conception of perceived fit based upon brand identity. Brand identity provides a more accurate estimation of the fit that can be based upon attributes related to brand personality and brand values – the personal dimension of brand identity – or associations related to relationships and users image – the social dimension of brand identity. We then demonstrated that brand identity is useful to better predict acceptance of brand extensions: indeed,

consumers prefer brand extensions that are coherent with either the personal or the social dimension of brand identity.

In prior literature, the emphasis was on products rather than services (de Ruyter and Wetzels, 2000). Little is known of extensions from tangible products to intangible services. In the final experiment, sport clubs were service extensions and it seems that our conception of perceived fit is also helpful to launch new services.

Our findings also showed that pre-extension brand attitude impacts consumer attitude toward the brand extension but independently from the degree of coherence. Affect transfer occurs in all conditions (high and low coherence with the personal or with the social dimension of brand identity).

Prior research showed that brand can be damaged by incoherent extensions. Our findings suggest that, under certain conditions, a negative reciprocity effect may occur even if brand extensions are coherent with brand identity. This may be explained by the fact that new extensions for brands such as Nike and Reebok – which are already widely stretched – are probably much further from original categories than new extensions for Lafuma and Salomon brands which are less extended. Another explanation is that consumers may reach a saturation point with brands which are already widely stretched. Nike and Reebok offer a wider range of products compared with Salomon and Lafuma. For example, Reebok offers apparel (classic and sport), swimming suits, shoes (golf, soccer, football, running, tennis, classic, basketball etc.), bags, sunglasses, DVDs, yoga gear, heart-rate monitors, weight benchers, exercise bikes, treadmills, wrist weights, steppers, resistance balls, soccer balls, gloves, mineral water etc., whereas Lafuma's products are limited to sport apparel, back-packs, hiking shoes, tents, garden furniture and sleeping bags.

5.2. Managerial implications

Our findings can help managers to determine more consistent brand extensions when brands are already stretched. They can extend brands using personal or social attributes and choose extensions coherent with brand personality, brand values, relationships or user image.

For managers, it may prove more difficult to find new extensions when brands are already widely stretched, but our findings show that brand identity can help managers to take up this challenge.

Finally, our findings could be helpful for managers envisaging service extensions. Indeed, it is quite difficult for managers to estimate the similarity between products' features and services' features while brand identity may prove to be more relevant to determine the degree of coherence between the parent brand and the service extension managers are thinking of.

5.3. Limitations and further research

Although our study offers several important findings, it should be noted that the conditions of the experiment involve some limitations. First, extensions were presented by a short description of products, without pictures. Because of this lack of information, the importance of perceived fit between the parent brand and the brand extension may be overestimated. It has been shown that the impact of fit on extension evaluation diminishes when product-related information increases (Klink and Smith, 2001). This lack of information may also increase the affect transfer. This limitation was counterbalanced by the fact that subjects were assigned to only one condition of coherence. We thus limited the risk of overestimation of coherence that can occur when the same respondent evaluates coherent and incoherent brand extensions.

Another limitation is due to the nature of samples. It has been shown that students' responses are more homogeneous (Peterson, 2001). Moreover, generally speaking, young people are

more greatly involved when considering sport and sports goods' brands compared with older people. This study needs to be replicated in different product categories and with more representative samples with high- and low-involvement consumers to gain in external validity.

Our estimation of perceived fit, based upon brand identity, can also be helpful in co-branding strategies. Indeed, the BII can be used in further researches to identify complementary brands.

Appendix

Appendix 1. Exploratory factor analyses (Principal Component Analyses)

Facets of Brand Identity Inventory	Cronbach	Number of items
Brand personality		
Pride	.91	3
Competence	.87	4
Friendliness	.90	3
Brand values		
Usefulness	.84	3
Social orientation	.84	3
Hedonism	.68	3
Ethics	.87	4
Relationships		
Stimulating	.71	3
Educational	.55	2
Domination	.72	3
User image		
Leadership	.76	3
Dynamism	.90	4
Social orientation	.79	3
Emotional stability	.74	2

Appendix 2. Discriminant validity

BII dimensions	Chi square	Degrees of freedom	RMSEA	TLI
Values				
Tested model	204.25	36	.069	.949
Constraint model	353.52	42	.087	.920
Personality				
Tested model	209.01	33	.073	.951
Constraint model	663.98	35	.135	.834
User Image				
Tested model	212.48	48	.059	.954
Constraint model	380.76	54	.078	.919
Relationships				
Tested model	30.83	17	.029	.991
Constraint model	602.24	20	.172	.693

Appendix 3. Extension attitude and brand attitude scales

Variable	Items	Saturations	Cronbach
Attitude toward brand extension	Product “X” under brand “A” is a good product.	.887	.87
	I like product “X” under brand “A”.	.945	
	I will probably buy this product.	.844	
Pre- and post-extension brand attitude	Brand “A” is a good brand.	.811	.80
	I like brand “A”.	.903	
	I will probably buy brand “A”.	.845	

Appendix 4. Sheffé test of multiple comparisons of means

Table A1. Multiple comparisons of means (Scheffé test)

(I) Condition	(J) Condition	Means differences	Standard error	Significance
1 – High coherence with personal dimension	2	- 0.3646	.1522	.129
	3	1.1165	.1530	.000
	4	0.8351	.1583	.000
2 – High coherence with social dimension	1	0.3646	.1522	.129
	3	1.4811	.1486	.000
	4	1.1997	.1542	.000
3 – Low coherence with personal dimension	1	- 1.1165	.1530	.000
	2	- 1.4811	.1486	.000
	4	0.2813	.1549	.351
4 – Low coherence with social dimension	1	- 0.8351	.1583	.000
	2	-1.1997	.1542	.000
	3	0.2813	.1549	.351

While conditions 1 and 2 formed a first homogeneous group, conditions 3 and 4 formed a second homogeneous group (Table A2).

Table A2. Means for each group

Coherence condition	Sample size	Groups	
		1	2
Low coherence with:			
- personal dimension	46	2.14	
- social dimension	40	2.42	
High coherence with:			
- personal dimension	42		3.26
- social dimension	47		3.63

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