

# **The Impact of Fit Measures on the Consumer Evaluation of New Co-Branded Products<sup>†</sup>**

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# **The Impact of Fit Measures on the Consumer Evaluation of New Co-Branded Products**

## **Abstract**

A popular strategy currently employed for new product introductions is co-branding. Such a strategy allows a brand to innovate with the support of a partner brand. The present study investigates how consumers perceive a new product with two brands. Previous research focused on the logic of a brand combination by investigating the impact of the fit between both existing product categories (i.e., product-product-fit) and the fit between both brand images (i.e., brand-brand-fit) on the evaluation of a new co-branded product (Park et al. 1996; Simonin and Ruth 1998). However, no study has yet focused on the relationships between both brands and their existing product categories, and the specific new product that has been developed. The present article aims to improve the understanding of the potential benefits of co-branding by taking the role of the new product into account. The empirical study discussed in this article replicates and extends the model of Simonin and Ruth (1998) by adding two new measures to their model. These measures are related to the fit of both existing product categories with the new product (i.e., new-product-product-fit) and the fit of both brand images with the new product (i.e., new-product-brand-fit). The results from this empirical study with 210 consumers in The Netherlands show that product-product-fit, brand-brand-fit and new-product-brand-fit have a significant positive impact on the evaluation of a new co-branded product. New-product-product-fit was not significantly related to consumer evaluations. In addition, the results show that consumers prefer a new co-branded product that can be clearly associated with one of the brands in the partnership so that it can be categorized unambiguously. This article discusses these findings and provides implications for research and managerial practice in the important and growing field of brand-driven innovation.

# The Impact of Fit Measures on the Consumer Evaluation of New Co-Branded Products

## Introduction

Every consumer product company dreams of developing a new product that becomes so successful that almost every household owns the product. This is what happened in 2001 in The Netherlands with the introduction of a new product by Philips and Douwe Egberts (a subsidiary of Sara Lee). These two companies introduced a new coffee machine, the Senseo, which created a new product category: fast single-serve cups of coffee that taste like Italian espresso without the hassle of an expensive and complicated espresso machine. The introduction of this new product on the European market was accompanied by a television campaign that explained how both companies contributed to the creation of this new product. Four years later they sold over ten million units (Elsevier 2005) and the two companies also introduced their product on the American and Australian markets. Another example of a new product that Philips developed in cooperation with a partner brand (beer brewer Inbev) is a draught beer system for home use, the PerfectDraft. This new product makes it possible for beer-lovers to taste their favorite drafted beer at home. It creates a new beer drinking experience just like the Senseo did for drinking coffee. It is no coincidence that Philips developed both products with a partner brand as alliances are a fundamental part of Philips' strategy (Philips 2006). The company has launched an electric razor together with Nivea, a telephone for wireless internet chatting and calling with MSN, and it is currently developing a new application for mobile payment transactions with Visa.

In all these cases Philips has chosen *co-branding* as its product development and marketing strategy, which can be defined as “a form of co-operation between two or more brands with significant customer recognition, in which all the participants' brand names are retained” (Blackett and Russell 1999) and “a single, unique product is created” (Leuthesser et al. 2003). Co-branding is considered a suitable strategy for combining the competences and reputations of two brands to innovate and create new products (Faems et al. 2005; Kapferer 2001; Knudsen 2007; Park et al. 1996; Prince and Davies 2002). The Senseo and Perfect Draft are examples of such co-branded products, just like a special driving shoe created by Mini Cooper and Puma, a pick-up truck by Ford and Harley-Davidson, and an upright hand vacuum cleaner developed by Dirt Devil and Swiffer.

The growing attention to co-branding in practice has been accompanied by a number of publications in the product development and marketing literatures. Some of these studies have focused on the strategic advantages and disadvantages of co-branding, often in terms of organizing and sustaining such a partnership between two brands (Bidault and Cummings 1994; Prince and Davies 2002; Rao and Ruekert 1994). For instance, Bucklin and Sengupta (1993) discussed how an unbalanced relationship within an alliance often leads to unsuccessful outcomes. Other studies focused on the consumer evaluation process of new co-branded products (Park et al. 1996; Rao et al. 1999; Shocker 1995; Simonin and Ruth 1998). These studies investigated the extent to which both brands need to be a logical combination in the eyes of consumers. For example, Simonin and Ruth (1998) studied how the evaluation of a new co-branded product depends on the fit between both brands in the partnership. They showed that a high fit between the two brands, both at the product category and at the brand image level, has a positive influence on consumer evaluations of new co-branded products.

It is often claimed that co-branding exists to persuade consumers of the advantages of a new product (Rao and Ruekert 1994). If this is true, then it is likely that consumers will not only consider the connection between both brands and their existing product categories, but also the role of the new product itself in the brand partnership. To investigate this matter, this article proposes a conceptual model that replicates and extends the model of Simonin and Ruth (1998) by adding two new measures. These two new measures are related to the fit of the newly developed product with the images of the two parent brands (i.e., new-product-brand-fit), and the fit of the new product with the existing product categories of both brands (i.e., new-product-product-fit). The need for this extension is illustrated by Tide Buzz, an ultrasonic stain removal device introduced on the American market by Black and Decker and Tide in 2005. Amazon customer reviews (2005) showed that consumers who bought this new product were intrigued by a product by Black and Decker and Tide. At the same time, their (often negative) evaluations of Tide Buzz were heavily influenced by the role of the new product in the brand partnership. They were concerned that the new product did not offer the same quality level as the existing products of the parent brands (especially of Black and Decker).

This article aims to contribute to the literature in several ways. First, co-branding has often been described as a strategy that allows brands to innovate with the support of a partner brand (Kapferer 2001; Park et al. 1996; Prince and Davies 2002). As a potential catalyst for innovation, it is surprising that the relationships between the newly developed product, and the parent brands and their existing product categories have not received more research attention. The present article aims to improve the understanding of the potential benefits of co-branding by explicitly taking the role of the new product into account. This article adds two new fit measures to the extant literature (new-product-product-fit and new-product-brand-fit), and examines their impact on consumer evaluations. Second, this article investigates the impact of the difference in fit between both brands and the new product on consumer evaluations. In doing so, this study will be able to analyze the effect of asymmetry in the relation of each brand with the new product on consumer evaluations. Previous research suggests that partnerships are most easily organized and sustained when they are based on a symmetrical relationship (Prince and Davies 2002; Rao and Ruekert 1994). However, from a consumer perspective, symmetrical relationships may lead to ambiguity about the category to which the new co-branded product belongs. The literature on categorization suggests that consumers prefer products that can be clearly associated with one of the two brands in the partnership because consumers prefer easy categorization of a new product (Fiske 1982; Meyers-Levy and Tybout 1989). However, this issue has not yet been investigated in a co-branding context. The present study will explore this important issue that may have major consequences for the choice of a partner in developing co-branded products.

Figure 1 presents a conceptual model. “Product-product-fit” and “brand-brand-fit” as represented by ‘A’ and ‘B’ have previously been studied by Park, Jun and Shocker (1996) and Simonin and Ruth (1998). The two new measures as represented by ‘C’ and ‘D’ are “new-product-product-fit” (i.e., the fit between the existing product categories of each brand and the new product) and “new-product-brand-fit” (i.e., the fit between the brand images of each brand and the new product). Below, this article will first review the literature on consumer evaluations of new co-branded products, and discuss the hypotheses. Then, this article will describe an empirical study that investigates the impact of the fit measures on consumer evaluations. The article will conclude with a discussion of the findings and provide implications of the present study for research and managerial practice.

<<Insert Figure 1 about here>>

### **Consumer evaluations of new co-branded products**

One of the most relevant aspects of a co-branded product is that the combination between the brands makes sense to the consumer (Park et al. 1996). Simonin and Ruth (1998) investigated this ‘logic of a combination’ at two levels: the compatibility between the product categories of each brand, and the compatibility between the images of each brand. Simonin and Ruth (1998) used the Information Integration Theory of Anderson (1981) as the foundation for their study. According to the Information Integration Theory “virtually all thought and behavior is multiply caused, the resultant of numerous co-acting factors” (Anderson 1981). This theory implies that all information pertaining to a co-branded product is combined into an integration function to produce a response to the new product. The present study specifies this integration of information by investigating the four fit measures presented in Figure 1, and their respective impact on the evaluation of a new co-branded product.

The first measure is called “product-product-fit”, which is defined as “the extent to which consumers perceive the product categories of both brands to be compatible at the functional product level”. The better this fit, the easier it will be for consumers to combine their favorable attitudes regarding the current products of both brands, and transfer these positive attitudes to the new co-branded product. Consistent with this reasoning, Simonin and Ruth (1998) found that a high product-product-fit was positively related to consumer evaluations of new co-branded products. Thus:

*H1: Product-product-fit has a positive impact on the evaluation of a new co-branded product.*

Besides the potential fit between the product categories of two brands, there may also be complementarities between the brand-unique associations that consumers have with both brands. Brand-unique associations are defined as those associations that differentiate the brand from other brands in the same category (Broniarczyk and Alba 1994). Park, Milberg and Lawson (1991) illustrate this concept with the brands Seiko and Rolex. Both brands make watches and thus share multiple attributes related to the watch-category (e.g., reliability, accuracy). However, Rolex is associated with luxury and high status while Seiko is not. Thus, brands have brand-unique associations that are partly derived from the product’s features (e.g., high price, expensive looking design) and partly from the efforts of the brand owner to provide these features with additional meaning (e.g., “worth a second glance, even when you know the time,” slogan used in an advertisement by Rolex).

According to Simonin and Ruth (1998), consumers evaluate co-branded products in the context of such brand meanings. Consumers retrieve certain associations about the brands that are stored in memory and that form the brand image (Keller 1993). If the associations of both brands complement to some extent, consumers see a connection between the brands at the image level, leading to a higher “brand-brand-fit.” Simonin and Ruth (1998) discuss how a high brand-brand-fit helps consumers to combine their brand attitudes and transfer those attitudes more easily to the new co-branded product. In line with this reasoning, they found that brand-brand-fit was positively related to consumer evaluations of a new co-branded product.

*H2: Brand-brand-fit has a positive impact on the evaluation of a new co-branded product.*

A logical combination of brands may not be enough for a new co-branded product to become successful, because the fit between the new product, and the two brands and their existing

product categories may also have an influence on evaluation (Park et al. 1996). While the co-branding literature is rather silent on these relationships, the brand extension literature has addressed the relationships between a brand and its current portfolio, and the new product that has been developed (Leuthesser et al. 2003). The brand extension literature suggests two additional hypotheses that focus on the relationships between each brand and their existing products, and the newly developed product.

Several brand extension studies (Aaker and Keller 1990; Bottomley and Holden 2001; Boush and Loken 1991; Klink and Smith 2001; Park et al. 1991) have shown that a new product that fits the current products of a brand will be evaluated more positively. These findings are based on the attitude-transfer model. This model states that a good fit will lead to a transfer of the consumer's attitude toward the brand to the attitude toward the extension product (Aaker and Keller 1990; Mao and Krishnan 2006). This fit is determined via a categorization process in which the consumer assesses the extent to which the new product exemplifies a general concept by comparing features of existing products with those of the new product (Aaker and Keller 1990; Park et al. 1991). A lack of fit between the existing products of a brand and the new product can lead consumers to the conclusion that the extension is meaningless. An example of high fit is Starbucks liquor, which was voted as one of the best brand extensions of 2005 by 449 branding and marketing professionals in the USA. The reason for its success was thought to be that liquor and coffee are frequently consumed in combination after supper (Sprung and Tipping 2005). This fit between the current product category of a brand and the new product will be called "new-product-product-fit." The present article extends the findings of the brand extension literature to co-branding, and hypothesizes that there is a positive relationship between new-product-product-fit and the evaluation of a new co-branded product by consumers. Thus:

*H3: New-product-product-fit has a positive impact on the evaluation of a new co-branded product.*

Brand extensions that do not fit the current product category of a brand can still become a success when the extended product fits the brand-unique associations of the brand. For example, the extension of Jeep, an automotive company, into a line of baby gear was regarded as a successful brand extension by 208 branding and marketing professionals in the USA (Makula et al. 2004). Baby gear has little in common with automobiles so it is hard to attribute this success to a high new-product-product fit. However, there can still be a brand-logic to this extension. Jeep assured that its line of baby gear communicated its brand image by the look and feel of its extension. On Jeep's website, the sturdiness of the baby gear is stressed, and the suggestion is made that "the baby will love tagging along on your adventures."

Broniarczyk and Alba (1994) and Park et al. (1991) discuss how the fit of a new product with an existing brand may also be determined through other processes than comparing features of existing products with those of the new product. Consumers can categorize a new product based on a shared concept formed by brand-unique associations. These associations may be supported by a certain style of communications or by a product design that carries brand relevant meaning. This type of fit between the image of a brand and the new product will be called "new-product-brand-fit". Like before, this article extends the findings from the brand extension literature to co-branding, and hypothesizes:

*H4: New-product-brand-fit has a positive impact on the evaluation of a new co-branded product.*

The assessment of fit between a new co-branded product and the two parent brands creates the possibility to explore if consumers prefer equal partnerships in a co-branding alliance. When consumers evaluate a new product they will first try to categorize the product based on contextual cues (Herr et al. 1983; Pavelchak 1989). The brand image and existing products of a brand provide such cues. If a new product and a brand are complementary through a high new-product-product-fit and/or a high new-product-brand-fit, then that product is likely to be assimilated into the category of that specific brand. However, categorization ambiguity may arise when conflicting cues are present (Gregan-Paxton et al. 2005). In the case of a new co-branded product, contextual cues stemming from two brands are present, and both may fit with the new product in varying degrees. When there is a difference in fit between the new product and the two brands, consumers have no trouble categorizing the new product as it will be associated with the brand with the highest fit. However, categorization may be difficult when consumers feel that both brands fit equally well with the new product, resulting in categorization ambiguity. Previous studies have found that people do not like categorization ambiguity, and that they evaluate an object more critically when it is unclear to which category a product belongs (Fiske 1982; Meyers-Levy and Tybout 1989). These findings suggest that consumers prefer co-branded products that differ in fit with the two parent brands. Thus:

*H5: The difference in new-product-product-fit between two brands has a positive impact on the evaluation of a new co-branded product.*

*H6: The difference in new-product-brand-fit between two brands has a positive impact on the evaluation of a new co-branded product.*

## **Method**

### *Procedure*

The present study used a questionnaire in which respondents were asked to answer questions about a new product that was introduced by two brands. Two new products were conceived for this purpose, and each new product was introduced by two different sets of parent brands (see stimulus development). Using a two by two between subjects design, four different versions of the questionnaire were created with varying degrees of “product-product-fit” and “brand-brand-fit”. This procedure was chosen to secure that there is sufficient variance in the two fit measures that have already proven themselves in previous studies to influence the evaluation of a co-branded product (Park et al. 1996; Simonin and Ruth 1998). An alternative procedure was considered, namely asking respondents to think of a known case of co-branding. But since too many respondents would think of two particular recent successes of co-branding on the local market, this was deemed inappropriate because it would limit the amount of variation in the fit measures.

The questionnaire started with an introduction to the study followed by the items measuring the control variables (see below). Next, respondents read a brief description of the new product and its two parent brands followed by the items measuring the four fit variables and the evaluation of the new product. As this questionnaire measures the independent and dependent variables simultaneously, there is a potential risk of common method bias (Lindell and Whitney 2001; Podsakoff et al. 2003). To assess this potential bias, a control questionnaire was created that only measured the dependent variable (and not the independent variables). This procedure assessed whether the evaluation of the co-branded product in the main questionnaire was affected by the preceding task of rating the fit measures.

### *Sample*

Respondents were members of a consumer panel in a medium sized Dutch city. From this panel, 360 members were selected in such a way that the sample reflects the distribution of age and gender in the population between 20 and 70. The main questionnaire was sent to 280 people, and the control questionnaire to 80 people. From each of the age and gender strata in the sample, an equal number of respondents were randomly assigned to one of the four different versions of the questionnaire. For their participation, respondents received a small compensation in the form of a set of postal stamps or a contribution to a charity of choice. From the 280 questionnaires sent, 210 completed questionnaires (75%) were returned. From the 80 control questionnaires, 63 (79%) were returned.

### *Stimulus development*

Three pre-tests helped to identify suitable products and brands with enough variance in the product-product-fit and brand-brand-fit measures. Figure 2 provides a summary of the three pre-tests. In the first pre-test, a sample of 29 Dutch non-student consumers were confronted with a set of 40 non-food brands, taken from a list of well-known brands in the Netherlands (Superbrands 2005). Respondents were asked if they were familiar with the brands, and if so, to state which product(s) they thought that the brand sold. To ensure that consumers will elicit associations with the brands in the main study, this study only focused on highly familiar brands. Consumers have to know the brand in order to be able to form an opinion on the presence of brand-brand-fit and new-product-brand-fit (Broniarczyk and Alba 1994; Simonin and Ruth 1998). In addition, following Aaker and Keller (1990) and Park et al. (1991), this study only focused on single product brands (i.e., brands connected to a single product category by consumers) to eliminate the potentially confounding effect of portfolio breadth on fit and the evaluation of new products (Dacin and Smith 1994). A brand was accepted as a familiar, single product brand when more than 75% of the respondents were familiar with the brand and named the same single product category in connection to the brand. Based on these criteria, 25 highly familiar, single product brands were selected for the second and third pretest.

<<Insert Figure 2 here>>

In the second pretest, the current product categories related to the 25 selected brands were brought together to form 16 possible combinations of two product categories. 20 Dutch non-student consumers were then asked to state on a nine-point scale (“absolutely does not fit” – “fits perfectly”) whether they thought a connection between the two product categories was plausible (no brand name was mentioned here). This single item served as a proxy for the multi-item scale of product-product-fit used in the main study. The results showed that there was a sufficient amount of variation in the fit between product categories (average fit ranged between 1.4 and 8.9). Five combinations of product categories with a high product-product-fit and six combinations of product categories with a low product-product-fit proved suitable for further use. In the third pre-test, eighteen combinations of single product brand names from the first pre-test were tested for their fit with each other. Another set of 42 Dutch non-student consumers stated whether they thought the combination of the brands fitted each other on a 9-point scale (“absolutely does not fit” – “fits perfectly”). This item served as a proxy for brand-brand-fit as measured in the main study. The results showed that there was also high variation in the fit between brands (average fit ranged between 2.8 and 6.8). Three combinations of brands with a

high brand-brand-fit and nine combinations of brands with a low brand-brand-fit proved suitable for further use.

By combining the results from the second and third pre-test, two new co-branded products with variation in the degree of fit between product categories and between brands were created. The two new products were a) a bicycle seat for small children, developed by a producer of bicycles and a producer of child car seats, and b) a battery operated hand vacuum cleaner with a mouthpiece, on which cloths can be placed that are designed to pick up small dirt particles, static dust and hairs, and that is made by a producer of dry cloth brooms and a producer of batteries (see Appendix A for both product descriptions). Based on the second pretest, bicycles and child car seats fitted well together, while dry cloth brooms and batteries did not ( $t(19) = 16.6, p < .001$ ). Each product was depicted together with two sets of parent brands. For the bicycle seat for children, these were a) Batavus, an innovative and family-oriented Dutch bicycle brand, with Maxi Cosi, an innovative producer of child car seats, and b) Sparta, a Dutch bicycle brand with a sporty image, again with Maxi Cosi. Based on the third pretest, the first brand combination had a higher fit between brands than the second combination ( $t(40) = 2.38; p < .05$ ). For the hand vacuum cleaner with replaceable cloths the two brand combinations were a) Sorbo, a traditional brand for dry cleaning cloths with an image of a thorough cleaning expert, with Duracell, an established battery brand that portrays its products as never getting tired, and b) Swiffer, a newer brand of dry cloths that portrays cleaning as light work, with again Duracell. Data from the third pre-test showed that Sorbo and Duracell had a higher fit than Swiffer and Duracell ( $t(41) = 3.22; p < .01$ ). Table 1 presents the four resulting co-branded combinations.

<<Insert Table 1 here>>

### *Measures*

This study used multi-item scales predominantly drawn from prior (co-)branding studies. All items were measured on nine-point rating scales (1 = “don’t agree at all” and 9 = “totally agree”) and they were translated from English into Dutch in two rounds of translating and back-translating by persons with a thorough knowledge of both languages.

*Main variables* The dependent measure, “evaluation of the new co-branded product”, consisted of six items that were previously used by Grossman and Till (1998), Samu, Krishnan and Smith (1999) and Simonin and Ruth (1998), and that assessed the degree to which the new product was seen as good, pleasant, interesting, nice, and whether the respondent felt positive or favorable toward the new product. “Product-product-fit” was measured with five items (i.e., the products are complements, substitutes, consistent, fit each other, and are similar) based on Aaker and Keller (1990), Bhat and Reddy (2001), Park, Milberg and Lawson (1991), Samu, Krishnan and Smith (1999), and Simonin and Ruth (1998). Three items were used to measure “brand-brand-fit” (brands are consistent, are complementary, and fit each other), derived from Bhat and Reddy (2001), Park, Milberg and Lawson (1991), and Simonin and Ruth (1998). “New-product-product-fit” consisted of five items that were asked separately for the two parent product categories (i.e., the new product and the product category of the parent brand are complements, substitutes, consistent, fit, and are similar). These items were based on brand extension studies by Aaker and Keller (1990), Bhat and Reddy (2001), Broniarczyk and Alba (1994), and Park, Milberg and Lawson (1991). New-product-product-fit referred to the original product category of the brand without naming the brand to clearly differentiate this construct from the new-product-brand-fit construct (Bhat and Reddy 2001). “New-product-brand-fit” consisted of six items based

on Bhat and Reddy (2001; brand fits product), Bridges, Keller and Sood (2000; this is a very appropriate product for this brand), and Simonin and Ruth (1998; brand and product are complements, brand and product are consistent). Two new items were added and asked whether respondents thought that the new product added something to the brand and vice versa.

*Control variables* Simonin and Ruth (1998) investigated the influence of fit between the brands and between the product categories of each brand on new product evaluation. In addition, they examined the direct influence of prior attitude toward each brand and the moderating influence of familiarity on new product evaluation. They found that if a consumer already has a positive attitude towards the brands, then it is likely that a new co-branded product will share some of the qualities of the two parent brands, and will therefore be evaluated more positively. Thus, the evaluation of a new product with an existing brand will partly arise from the transfer of prior affect to the new product. In addition, familiarity with the brands can moderate the effect of prior attitude toward the product on new product evaluation. As the present study intends to extend the model of Simonin and Ruth (1998), the questionnaire also included these two variables as control variables. Other studies on co-branding have also controlled for familiarity and attitude toward the brands by choosing only highly familiar and well liked brands (e.g., Park et al. 1996). “Familiarity with the brand” was measured with three items used by Simonin and Ruth (1998; I am familiar with this brand, I recognize the brand, I have heard of this brand before). “Prior affect toward the brand” was measured with six items similar to the ones used to measure the evaluation of the new co-branded product.

### *Measure Validation*

Separate exploratory factor analyses were conducted on the items for each scale. All items loaded on a single dimension, except for the items measuring product-product-fit and for the items measuring new-product-product-fit. The items related to these two constructs dispersed over two dimensions. Two items were retained that are related to the complementarity between products, because they are most in line with the strategic aim of co-branding (Kapferer 2001; Park et al. 1996; Prince and Davies 2002) and these two items are closest to the ones used by Simonin and Ruth (1998). The items that were maintained for product-product-fit were “[the current products of brand A and brand B] complement each other” and “[the current products of brand A and brand B] fit each other”. Similar items were maintained for the new-product-product-fit construct, again leaving two items to measure the construct.

Next, a series of confirmatory factor analyses were conducted for each construct separately (Bagozzi and Yi 1988; Jöreskog and Sörbom 2005). After this procedure 16 items were retained and six discarded (see Appendix B). Two items were dropped from the new-product-brand-fit construct and one item from the brand-brand-fit construct. In addition, three items of the prior affect scale were dropped because they had high positive residuals ( $>2.58$ ) with familiarity, suggesting that these items are related to familiarity as well as to prior affect. Finally, a full confirmatory factor analysis using maximum likelihood estimation was conducted with the remaining items of all constructs. The overall chi-square statistic for the model was significant ( $\chi^2$  (df = 188) = 454.8,  $p < .001$ ), but this can be attributed to the sensitivity of this statistic to sample size (Bagozzi and Yi 1988). The other fit indices (normed fit index [NFI] = .966; non-normed fit index [NNFI] = .973; comparative fit index [CFI] = .978) indicated good fit.

The reliability and validity of the scales were assessed in several ways. First, the Cronbach alpha of each construct was above .70. In addition, the ratio between the true variance and observed variance in the items measuring the latent constructs were all above .77, which means

that there was a satisfactory level of composite reliability (Bagozzi and Yi 1988; Fornell and Larcker 1981). Further, the average variances extracted were all above .50, indicating a sufficient level of internal consistency for the constructs (Bagozzi et al. 1991). Convergent validity was present because all factor loadings were significant at the  $p < .05$  level (Anderson and Gerbing 1988) and all standardized item loadings were above the cut off level of .50. Discriminant validity between the constructs was assessed through pair-wise comparisons (cf. Peter et al. 1993). Between any pair of constructs, a chi-square difference test was performed between a constrained and an unconstrained model. In the constrained model the correlation between the two constructs was set to 1.0; in the unconstrained model this correlation was freed. A significantly lower value of the chi-square of the unconstrained model in comparison to the constrained model indicated that the constructs have less than perfect correlation. With a critical value of 10.83 at the  $p < .001$ -percent level, all pair-wise comparisons showed discriminant validity. In addition, the confidence interval around the correlation estimates between any two factors was determined. None of these intervals included 1.0, again indicating discriminant validity (Anderson and Gerbing, 1998). Finally, the average variance extracted (AVE) estimate for each construct was compared with the squared correlation between that construct and any other. All squared correlations were lower than the respective AVE estimates, thus forming a final indication of discriminant validity between the constructs.

#### *Assessing common method bias*

Common method bias was assessed by comparing the ratings on the dependent variable between the control questionnaire without preceding fit measures and the main questionnaire. The evaluation of each product in the control questionnaire did not differ significantly from the main questionnaire where the fit measures preceded the measurement of product evaluation (bicycle seat for children:  $t(162) = 0.64, p > .50$ ; hand vacuum cleaner:  $t(165) = 0.92, p > .30$ ). This was also the case when subdividing the sample for each brand combination. Thus, asking respondents about fit in the main questionnaire did not influence subsequent evaluations of the new co-branded product. These findings indicate that common method bias may not be a major problem in this study.

#### *Measurement summary*

Table 2 provides an overview of the used constructs and summary statistics. The scales were formed by taking the average score of all the items that were part of a construct. Most entries are based on a 9-point scale ('1' = completely disagree and '9' = completely agree). Four entries are based on the summed items, creating a range between '2' and '18'. These are new-product-product-fit, new-product-brand-fit, prior affect towards the brands, and familiarity with the brands. The items were summed to generalize the results over both brands as this is more relevant to examine than the individual influence of fit between each brand and the new product. Finally, there are two entries that are based on the absolute difference between the scores related to each brand, creating a range between '0' and '8': i.e., difference score in new-product-product-fit and difference score in new-product-brand-fit.

<<Insert Table 2 here>>

According to Peter, Churchill and Brown (1994) there are some potential dangers in using difference-scores. One such danger (spurious correlation between the two components of the

difference score) is seen as particular to “before-after scores”, when respondents can be driven by a motive to appear consistent in their answers. This was not the case here because the questions pertained to two different brands measured at different places in the questionnaire. However, three dangers remain for the difference scores that were used in this study: 1) a lower reliability of the difference score than the reliability of its components, 2) restriction in the variance of the difference score variable when one of the components scores is consistently higher than the other, and 3) problems with discriminant validity when the difference score is strongly correlated with the underlying variables. The reliability of the difference score of new-product-brand-fit was acceptable ( $r = 0.84$ ) and there were no problems with a restriction of variance and discriminant validity. However, the difference score of new-product-product-fit was unreliable ( $r = 0.41$ ) and also had low discriminant validity. For this reason, the difference score for new-product-product-fit was dropped from further analyses. Unfortunately, this means that H5 could not be tested.

## Results

Regression analysis was used to test the effect of the fit and control measures on the evaluation of a new co-branded product. Three different models were examined. The first model included the original measures of Simonin and Ruth (1998), being product-product-fit (H1), and brand-brand-fit (H2), and the effect of prior affect and familiarity. The second model extended the first model with new-product-product-fit (H3) and new-product-brand-fit (H4). The third model extended the second model with the difference score of new-product-brand-fit (H6).

The first model explained 65% of the variance in the evaluation of a new co-branded product ( $R^2_{adj} = 0.65$ ;  $F(4, 199) = 94.68$ ;  $p < .001$ ). Variance Inflation Factor (VIF) values were computed, and ranged from 1.16 to 1.98. Since these values are well below the threshold value of 10 (Stevens 2002) multicollinearity was not a major reason for concern. The regression analysis showed that product-product-fit ( $\beta = 0.39$ ;  $p < .001$ ), brand-brand-fit ( $\beta = 0.41$ ;  $p < .001$ ), and prior affect toward the brands ( $\beta = 0.18$ ;  $p < .01$ ) had a significant positive impact on the evaluation of a co-branded product, supporting H1 and H2. Familiarity was not significantly related to the evaluations of consumers.

The second model explained 69% of the variance in the evaluation of a new co-branded product ( $R^2_{adj} = 0.69$ ;  $F(6, 197) = 75.41$ ;  $p < .001$ ), a significant improvement compared to the first model ( $F_{change}(2, 197) = 13.36$ ,  $p < .001$ ). VIF values were computed again, and ranged from 1.19 to 3.60. The regression analysis showed that product-product-fit ( $\beta = 0.22$ ;  $p < .001$ ) and brand-brand-fit ( $\beta = 0.25$ ;  $p < .001$ ) still had a significant positive impact on the evaluation of a co-branded product. New-product-product-fit was not significantly related to consumer evaluations of new co-branded products, rejecting H3. New-product-brand-fit ( $\beta = 0.35$ ;  $p < .001$ ) was strongly and positively related to consumer evaluations, supporting H4. Finally, prior affect toward the brands ( $\beta = 0.15$ ;  $p < .01$ ) had a significant effect while familiarity had no effect on consumer evaluations.

The third model was used to test the effect of the difference in fit between the brands on the evaluation of a co-branded product (H6). The model explained 70% of the variance in the evaluation of the product ( $R^2_{adj} = 0.70$ ;  $F(7, 197) = 70.47$ ;  $p < .001$ ). This was a significant improvement compared to the second model ( $F_{change}(1, 197) = 8.59$ ,  $p < .01$ ). VIF values were computed, and ranged from 1.22 to 3.84. The regression analysis showed again that product-product-fit ( $\beta = 0.23$ ;  $p < .001$ ), brand-brand-fit ( $\beta = 0.28$ ;  $p < .001$ ), new-product-brand-fit ( $\beta = 0.39$ ;  $p < .001$ ), and prior affect ( $\beta = 0.16$ ;  $p < .01$ ) had a significant effect on the evaluation of a

co-branded product. Familiarity was negatively related to consumer evaluations ( $\beta = -0.10$ ;  $p < .05$ ), but this unexpected result is most likely due to the sole use of highly familiar brands in this study. The intended use of highly familiar brands in this study made the variation in familiarity small and skewed towards high familiarity. If the distribution of familiarity was made normal by applying cubic transformation, then the effect of familiarity on the evaluation of the co-branded product disappeared while the other reported effects remained the same. Like before, new-product-product-fit was not significantly related to consumer evaluations. The difference score of new-product-brand-fit between both brands was significantly related to the evaluation of the new co-branded product ( $\beta = 0.13$ ;  $p < .01$ ), thereby supporting H6. Table 3 presents the results of the regression analyses.

<<Insert Table 3 here>>

Since this study had stimulated between-subjects variation in the fit measures by using two different co-branded products, regression analyses were also conducted for each co-branded product separately. These analyses produced very similar results. A chow-test was conducted to investigate whether the regression equations for both products differed significantly (Hardy 1994). No significant differences were found between the regression equations of both products.

## **Discussion and implications**

### *Summary of the findings*

The present study replicated the findings of Simonin and Ruth (1998) that the evaluation of a new co-branded product is influenced by the fit between the parent brands and their products. A high fit between the current products of both brands and a high fit between both brand images will lead to a more positive evaluation of a co-branded product. The present study simultaneously expands on the study of Simonin and Ruth (1998) by investigating the role of the new product itself in a co-branding alliance. The main finding here is that the new co-branded product is evaluated more positively when it fits with the brand image of the parent brands. Another finding is that consumers evaluate a new co-branded product higher when one parent brand fits the new product better than the other at the brand image level. Thus, consumers prefer an asymmetric contribution of brands in terms of new-product-brand-fit over a more balanced contribution. These effects of the new product were only found at the brand level as new-product-product-fit did not have a significant impact on the evaluation of co-branded products. This finding is in agreement with previous studies on brand extensions, where it was found that the effect of new-product-product-fit on evaluation tends to become smaller (Bhat and Reddy 2001), or disappears (Dacin and Smith 1994) when new-product-brand fit is included. Thus, consumers approve of a new co-branded product provided that at least one of the parent brands has some image based connection to the new product.

### *Limitations and directions for future research*

The focus of this article on the role of the new product in co-branding led to the decision to only select single product brands for the study. This procedure reduced unwanted variance in the measurement of new-product-product-fit and new-product-brand-fit because respondents could compare the new product to the product category that each brand was best known for, as well as to the image of the brand in that specific category. At the same time, this may have decreased the generalizability of the findings. Brands vary in their portfolio width, and single product brands

may be more an exception than the rule. It is possible that single product brands cannot as easily develop products in new product categories because consumers have a fixed idea of the product that the brand stands for (DeVecchio 2000; Meyvis and Janiszewski 2004; Völckner and Sattler 2006). However, this is unlikely as new-product-product-fit did not affect the evaluation of the new product in the present study. Thus, even for single product brands it was not a problem if the new product did not fit with the product categories of the parent brands.

The finding that consumers evaluate a new co-branded product more positively when there is a difference in fit with the parent brands at the brand image level suggests that brand relations in co-branding need not be symmetrical. Contrary to recent suggestions in the strategic marketing literature that equal partnerships in co-branding are more easily organized and sustained (Prince and Davies 2002; Rao and Ruekert 1994), from a consumer perspective a dominant contribution of one of the brand images to the new product is preferred. Dominance issues are likely to play a role when companies choose a co-branding partner. Therefore, it would be interesting to study these dominance issues in terms of how consumers react to asymmetry in the co-branding relation. For example, it could be interesting to investigate how a symmetric vs. an asymmetric co-branding relation influences the consumer's post-exposure attitude toward each of the brands. Asymmetry in the co-branding relation may well have a moderating effect, in that an asymmetric combination may lead to a bigger influence of the consumer's evaluation of the co-branded product on the post-exposure attitude toward the dominant brand. For instance, if the product fails, asymmetry in the co-branding relation may lead to the attribution of failure of the product to only one of the two brands in the partnership. Unfortunately, no conclusions can be drawn about the effect of a difference in new-product-product-fit between the brands on new product evaluation. The reason for this is a lack of reliability in the measurement of this difference score. Therefore, future research may benefit from the inclusion of direct estimates of the difference in fit to the new co-branded product between the two brands (e.g., do you think the product fits better with brand X or with brand Y?). A last limitation may lie in the cross-sectional design that was used here, which implies that the various measures of fit and product evaluation were assessed in the same questionnaire. A danger of this method lies in the possibility that the evaluation of the proposed co-branded product is biased by the preceding measurement of fit. The present study assessed this effect with a control group where the fit measures were excluded, and found no significant differences. This check is valuable as common method bias is potentially the most imminent danger in a cross-sectional study. As such, the control questionnaire has proven to be a valuable addition to this study, recommendable to other studies of this kind.

### *Managerial implications*

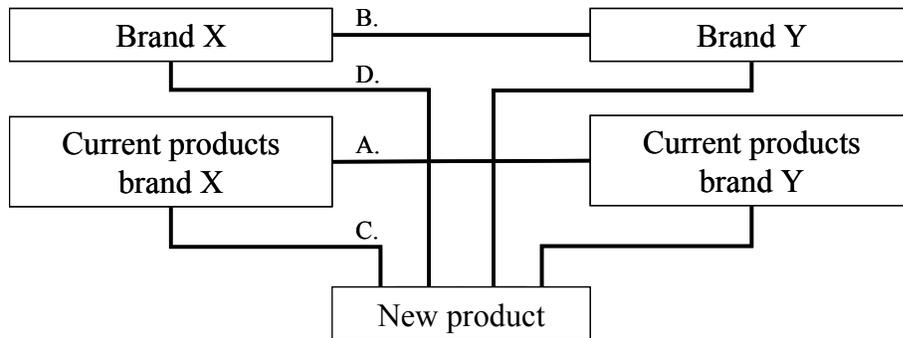
The present study provides an overview of the aspects related to fit that a consumer takes into account when evaluating a new co-branded product and each of these fit measures may be important for management to consider. How important fit actually is in relation to other aspects of a product launch is shown by Völckner and Sattler (2006) who found that fit was the most important determinant of brand extension success.

For a company there may be two possible routes to follow in co-branding. First, the starting point for a company may be a new product idea that it wants to develop. In that case the company should consider the fit between its brand image and the new product from the consumer's point of view. If consumers do not find that there is a sufficient level of fit to provide the conditions for a successful brand extension, the company could consider co-branding and

look out for a partner whose brand image provides additional support for the new product. In this case the company can secure that it is seen as the dominant contributor to the new product by creating a higher degree of fit on the brand image level. As illustrated by the introduction of Jeep's extension into baby gear, a good fit on the brand level between the new product and the dominant partner brand may be more a matter of adapting marketing communications and styling of the product than of deciding which type of new product to develop. Second, the starting point for the company may be a brand alliance, and then the question becomes one of choosing a partner that fits well at both the brand and product level. New product development can be seen as a consequence of this choice of partner brands, and could be based on a high degree of fit on the image based level of the new product with the two brands. Previous literature suggested that brand alliances are best organized and sustained in an equal partnership (Prince and Davies 2002; Rao and Ruekert 1994). However, the present model suggests that consumers prefer new co-branded products when one of the brands has a dominant contribution on the brand image level. A solution in this case could be that the partner brands evaluate for each new product which of the brands should dominate the brand image, and which company could best play the role of the 'helper' brand. The brand alliance could then be sustained by the principle that 'scratching each other's back' is most effective when both partners take their turn.

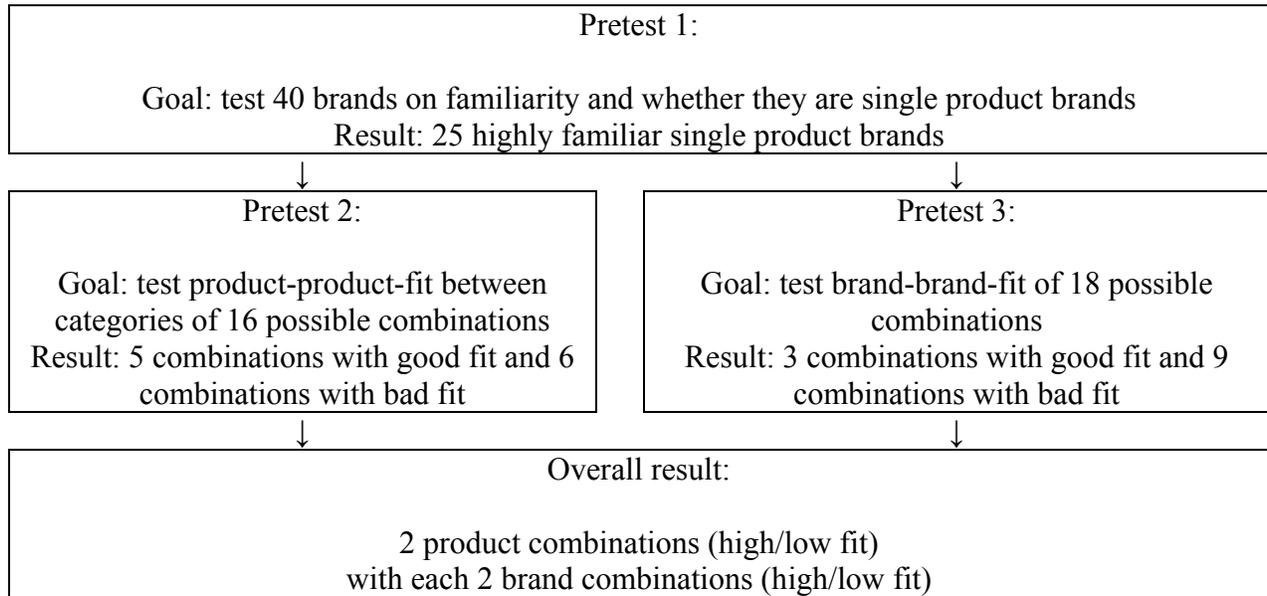
Both of the above routes suggest that co-branding has the potential to create extra room for innovation. This is because it is only required for the new product to fit with the parent brands on the brand image level. Given that the brands provide an image based logic to the new product, the actual product category of the new product does not seem to matter that much. To conclude, this research contributed to the co-branding literature in an important way by delineating the relevance of fit between each brand and the new product itself. It showed that the product should best fit the image of one of the brands to be accepted by the consumer. This focus is also useful for new product practitioners as they can now better predict the acceptance of the new product by consumers as well as better select the co-branding partner. Hopefully, this may help in generating a successful stream of new co-branded products.

**FIGURE 1:**  
**An extended model of fit measures that influence the evaluation of a co-branded product**



- A. *Product-product-fit*
- B. *Brand-brand-fit*
- C. *New-product-product-fit*
- D. *New-product-brand-fit*

**FIGURE 2:**  
**Overview of pretests**



**TABLE 1:**  
**Stimuli**

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<b>New product:</b>	<b>Product-product-fit:</b>	<b>Brand combinations:</b>	<b>Brand-brand-fit:</b>
Bicycle seat for children	High (bicycles and child car seats)	Batavus and Maxi Cosi Sparta and Maxi Cosi	High Low
Hand vacuum cleaner with replaceable cloths	Low (dry cloth brooms and batteries)	Swiffer and Duracell Sorbo and Duracell	Low High

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**TABLE 2:  
Constructs and descriptives**

# <sup>a</sup>	Construct	# of items <sup>c</sup>	Mean	S.D.	Dep.	A	B	C	D	ΔNPPF	ΔNPBF	P.AFF	FAM	AVE	CR
Dep.	Evaluation of co-branded product <sup>b</sup>	6	5.70	2.05	<i>0.97</i>									0.87	0.98
A	Product-product-fit <sup>b</sup>	2	5.39	2.40	<b>0.72</b>	<i>0.87</i>								0.80	0.89
B	Brand-brand-fit <sup>b</sup>	2	5.53	1.96	<b>0.74</b>	<b>0.67</b>	<i>0.88</i>							0.79	0.88
C	New-product-product-fit <sup>c</sup>	2	11.38	3.28	<b>0.64</b>	<b>0.71</b>	<b>0.61</b>	<i>0.85</i>						0.75	0.86
D	New-product-brand-fit <sup>c</sup>	4	12.15	3.13	<b>0.78</b>	<b>0.75</b>	<b>0.76</b>	<b>0.73</b>	<i>0.95</i>					0.82	0.95
ΔNPPF	Difference score new-product-product-fit <sup>d</sup>	2	2.06	1.69	<b>-0.17</b>	<b>-0.29</b>	<b>-0.32</b>	<b>-0.38</b>	<b>-0.21</b>	<i>0.41</i>				0.65	0.64
ΔNPBF	Difference score new-product-brand-fit <sup>d</sup>	4	1.26	1.18	<b>-0.21</b>	<b>-0.27</b>	<b>-0.38</b>	-0.08	<b>-0.34</b>	<b>0.31</b>	<i>0.84</i>			0.72	0.84
P.AFF	Prior affect towards brands <sup>c</sup>	3	12.14	2.49	<b>0.43</b>	<b>0.29</b>	<b>0.39</b>	<b>0.32</b>	<b>0.41</b>	-0.09	<b>-0.17</b>	<i>0.90</i>		0.77	0.91
FAM	Familiarity with brands <sup>c</sup>	3	15.22	2.33	0.05	0.04	0.05	<b>0.18</b>	0.14	0.11	0.11	<b>0.35</b>	<i>0.75</i>	0.58	0.77

<sup>a</sup> Letters refer to relations in Figure 1

<sup>b</sup> Entries are based on a 9-point scale with '1' = completely disagree and '9' = completely agree

<sup>c</sup> Entries are based on the summed items, creating a range between '2' and '18'.

<sup>d</sup> Entries are based on the difference between the scores related to each brand, creating a range between '0' and '8'.

<sup>e</sup> Number of items after purification.

Reliability coefficients are shown in italics on the diagonal. Significant correlations ( $p < .05$ ) are presented in bold.

For the 3-item scales, two of the loadings were specified to be equal to enable testing of the CFA models; this is because a one-factor, three indicator CFA model is just-identified and has zero degrees of freedom.

AVE: Average variance extracted; CR: Composite reliability

**TABLE 3:**  
**Impact of fit measures on the evaluation of a new co-branded product**

		Dependent: Evaluation of co-branded product					
# <sup>a</sup>		Model 1		Model 2		Model 3	
		β-values		β-values		β-values	
A	Product-product-fit	0.39	***	0.22	***	0.23	***
B	Brand-brand-fit	0.41	***	0.25	***	0.28	***
C	New-product-product-fit	-		0.04		0.03	
D	New-product-brand-fit	-		0.35	***	0.39	***
ΔNPPF	Difference score new-product-product-fit	-		-		-	
ΔNPBF	Difference score new-product-brand-fit	-		-		0.13	**
P.AFF	Prior affect towards brands	0.18	***	0.15	**	0.16	**
FAM	Familiarity with brands	-0.05		-0.08		-0.10	*
	R <sup>2</sup> -value	0.66		0.70		0.71	
	Adjusted R <sup>2</sup>	0.65		0.69		0.70	
	F-value	94.68		75.41		70.47	
	Change in F-value	-		13.36	***	8.59	**

<sup>a</sup> Letters refer to relations in Figure 1

\* *p*-value < .05  
 \*\* *p*-value < .01  
 \*\*\* *p*-value < .001

## **APPENDIX A:**

### **Translated product descriptions as used in the questionnaire**

#### **Bicycle seat for children:**

The expertise of car seats for young children of [seat brand] and the experience of [bicycle brand] with respect to bicycles are combined in a new and easy to use bicycle seat for children. The bicycle seat for children provides the child with exactly what it needs. Comfort, safety and the right position to enjoy everything around him/her. Children up to 15 kilograms enjoy a maximum of comfort and optimal safety in this bicycle seat for children with a modern design. The bicycle seat can be attached on the luggage carrier of any bicycle and is easy to detach through its innovative design. The seat is available in various modern colors.

#### **Hand vacuum cleaner with replaceable cloths:**

The experience of [dry cloth brooms brand] in cleaning and the expertise in battery-technology of [battery brand] is combined in a new and easy to use hand vacuum cleaner with replaceable cloths. The hand vacuum cleaner is light and easy to maneuver due to its flexible and rotating mouthpiece that reaches even the most difficult areas. On this mouthpiece, cloths can be placed that are especially designed to pick up small dirt, static dust and hairs. When it encounters large pieces of dirt, you can activate the battery-operated vacuum cleaner with a single push on the button. This way no dirt stays behind!

## **APPENDIX B:**

### **Measures used**

#### **Dependent variable: evaluation of the new co-branded product**

1. I think this is a good new product (based on Samu, Krishnan, and Smith 1999; Simonin and Ruth 1998)
2. I think this is a pleasant new product (based on Samu, Krishnan, and Smith 1999)
3. I think this is an interesting new product (Grossman and Till 1998)
4. I am positive toward this new product (based on Grossman and Till 1998; Simonin and Ruth 1998)
5. I think this new product is nice
6. I am favorable toward this new product (based on Samu, Krishnan, and Smith 1999; Simonin and Ruth 1998)

#### **Product-product-fit:**

7. I think the products complement each other (based on Aaker and Keller 1990; Simonin and Ruth 1998; adapted from Samu, Krishnan, and Smith 1999)
8. I think the products substitute each other (based on Aaker and Keller 1990)\*
9. I think these products are consistent (based on Simonin and Ruth 1998)\*
10. I think the products fit each other (based on Bhat and Reddy 2001)
11. I think the products are similar to each other (based on Park, Milberg, and Lawson 1991)\*

#### **Brand-brand-fit:**

12. I think these brands are consistent (adapted from Simonin and Ruth 1998)\*
13. I think these brands are complementary (adapted from Park, Jun, and Shocker 1996; Simonin and Ruth 1998)
14. I think the brands fit each other (based on Bhat and Reddy 2001)

#### **New-product-product-fit:**

15. I think the new product complements the current products (adapted from Aaker and Keller 1990)
16. I think the new product is a substitute of the current products (adapted from Aaker and Keller 1990)\*
17. I think the new product is consistent with the current products (based on Broniarczyk and Alba 1991)\*
18. I think the new product fits the current products (based on Bhat and Reddy 2001)
19. I think the new product is similar to the current products (adapted from Park, Milberg, and Lawson 1991)\*

**New-product-brand-fit:**

20. I think the brand and the new product complement each other (based on Simonin and Ruth's 1998 measure for brand-brand-fit)
21. I think the brand and the new product are consistent (based on Simonin and Ruth's 1998 measure for brand-brand-fit)\*
22. I think the brand fits the product (adapted from Bhat and Reddy 2001)
23. I think the new product adds to the brand
24. I think the brand adds to the new product\*
25. I think this is a very appropriate product for this brand

**Familiarity (all items adapted from Simonin and Ruth 1998)**

26. I am familiar with this brand
27. I recognize this brand
28. I have heard of this brand before

**Prior affect**

29. I think this is a good brand (based on Samu, Krishnan, and Smith 1999; Simonin and Ruth 1998)\*
30. I think this is a pleasant brand (based on Samu, Krishnan, and Smith 1999)
31. I think this is an interesting brand (Grossman and Till 1998)
32. I am positive toward this brand (based on Grossman and Till 1998; Simonin and Ruth 1998)\*
33. I think this is a nice brand
34. I am favorable toward this brand (based on Simonin and Ruth 1998; Samu, Krishnan, and Smith 1999)\*

Note: A \* indicates that the item was dropped during scale purification

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