Consumer Perceptions of Co-Branding Alliances: Organizational Dissimilarity Signals and Brand Fit

Abstract

This study explores how consumers evaluate co-branding alliances between dissimilar partner firms. Customers are well aware that different firms are behind a co-branded product and observe the partner firms' characteristics. Drawing on signaling theory, we assert that consumers use organizational characteristics as signals in their assessment of brand fit and for their purchasing decisions. Some organizational signals are beyond the control of the co-branding partners or at least they cannot alter them on short notice. We use a quasi-experimental design and test how co-branding partner dissimilarity affects brand fit perception. The results show that co-branding partner dissimilarity in terms of firm size, industry scope, and country-of-origin image negatively affects brand fit perception. Firm age dissimilarity does not exert significant influence. Because brand fit generally fosters a benevolent consumer attitude towards a co-branding alliance, the findings suggest that high partner dissimilarity may reduce overall co-branding alliance performance.

Keywords: co-branding alliances, brand fit, consumer attitude, signaling theory, consumer perceptions, quasi-experiment

1. Introduction

Co-branding alliances, which are a 'strategy of presenting two or more independent brands jointly on the same product or service' (Erevelles *et al*, 2008, p. 940), have become increasingly popular in recent decades (Ahn and Sung, 2012; Baxter and Ilicic, 2015; Besharat and Langan, 2014; Helmig *et al*, 2008). Prior research has mainly been concerned with the drivers of customer evaluations of co-branding alliances (Gammoh and Voss, 2011), such as perceived partner brand fit (Park *et al*, 1996; Simonin and Ruth, 1998; Van der Lans *et al*, 2014). Both customer perception and strategic motives drive co-branding alliance formation (O'Dwyer *et al*, 2011), which may result in partnerships of dissimilar firms. Organizational dissimilarities refer to considerable and perceivable differences in the dimensions of the organizations' company profiles, such as date of establishment, country-of-origin, size, and industry. These visible dissimilarities serve as signals (Connelly *et al*, 2011), which affect consumers' brand fit perceptions (Ahn and Sung, 2012) and their attitudes towards co-branding alliances (Ashton and Scott, 2011; Simonin and Ruth, 1998). Although the understanding of organizational dissimilarity signals on consumer perception is vital to ensure co-branding alliance performance, our knowledge on this topic is limited. Using a quasi-experimental approach, we examine *how co-branding alliances involving dissimilar partners affect consumer brand fit perceptions*.

In this study, a co-branding alliance means that, first, two or more independent partner firms form the alliance. Second, all brands involved receive significant customer recognition and remain independent throughout the medium to long-term partnership. Third, its net value does not suffice to justify the formation of a joint venture or the establishment of a new brand. Fourth, both brand names appear on the common physical product (Blackett and Russell, 1999; Sénéchal *et al*, 2014).

Our study makes two contributions: First, we add to the understanding of co-branding alliance formation, consumer evaluation and performance by identifying organizational antecedents of perceived brand fit, which have not yet been addressed in past customer perspective research. From a firm's perspective, these organizational characteristics reflect strategic motives for the formation of co-branding alliances and partner selection (Oeppen and Jamal, 2014), such as the access to complementary resources (Chung *et al*, 2000; Wernerfelt, 1984), the development of new customer segments (Harrigan and Newman, 1990; O'Dwyer *et al*, 2011), and the entry into new geographical markets (Glaister and Buckley, 1996; Reuer *et al*, 2011). As many studies use signaling theory 'to explain the effectiveness of brand alliances with respect to consumers (…), it seems logical to investigate the sender side of the signaling phenomenon' (Gammoh and Voss, 2011, p. 83). We examine the co-branding partners' combined organizational characteristics and their impact on consumers' assessments. Second, our study provides new insights into how the partner firms convey both intended and unintended signals to the customers. The interplay of their organizational characteristics and the importance of these characteristics to their customers affect individual perceptions of brand fit and attitudes towards the alliance.

The remainder of this study is organized as follows: first, we review previous research on co-branding alliances. Second, drawing on signaling theory, we outline five hypotheses. Third, we elaborate on the chosen methods and present our results. Finally, we discuss our findings and outline implications for future research and management.

2. Prior Research

Co-branding alliances have primarily been studied from a marketing and brand management perspective (Bengtsson and Servais, 2005; Besharat and Langan, 2014; Gammoh and Voss, 2011). This perspective explores the effects of consumer perceptions of co-branding alliance partners, such as brand and product fit, brand awareness, quality perception, brand attitude, brand equity, and brand credibility on performance (Aghdaie *et al*, 2012; Levin *et al*, 1996; Park *et al*, 1996; Sénéchal *et al*, 2014; Simonin and Ruth, 1998; Swaminathan *et al*, 2015; Washburn *et al*, 2004). Findings illustrate that, first, perceived brand and product category fit between alliance partners (for example, Baumgarth, 2004; Simonin and Ruth, 1998) and fit between the co-brands and product categories with the new product (for example, Bouten *et al*, 2011) are highly important. Second, consumer attributes, such as self-complexity (Monga and Lau-Gesk, 2007), brand loyalty (Swaminathan *et al*, 2012), involvement (Samuelson *et al*, 2014; Walchli, 2007), consumer-brand identification (Xiao and Lee, 2013), gender (Lau and Phau, 2010), age (Charry and Demoulin, 2014) as well as brand attributes, such as complementarity and similarity (Swaminathan *et al*, 2015), moderate the relationship between a co-branded offering and co-branding alliance performance. Third, spillover effects are especially likely in co-branding alliances with high brand and product fit and asymmetric brand equity distributions (Simonin and Ruth, 1998; Swaminathan *et al*, 2012). Finally, co-branding alliances effectively enhance consumer evaluations of co-brand quality and credibility (Rao *et al*, 1999; Voss and Tansuhaj, 1999). They have a positive signaling effect (Aghdaie *et al*, 2012).

While ‘customer perspective’-research places the customer as the receiver of signals at center-stage, studies adopting a ‘firm perspective’ focus on the sender’s side. Consistent with research on the formation of strategic alliances, they explore, for instance, key motives (Al Khattab, 2012; O’Dwyer *et al*, 2011), alliance experience and governance choices (Cavazos and Varadarajan, 2012; Li *et al*, 2010; Sauvée and Coulibaly, 2010), and access to the partner’s customers and resources (Leuthesser *et al*, 2003; O’Dwyer *et al*, 2011).

There are differences between these research streams. First, co-branding research is more concerned with brand-related risks, such as partner brand performance (Abrahams and Granof, 2002), decreasing consumer orientation (Rindfleisch and Moorman, 2010), or brand equity dilution (Herm, 2014), than with the strategic and behavioral risks of alliance formation, such as opportunism (Parkhe, 1993) or knowledge leakage (Kale *et al*, 2000). Second, in addition to, for example, resource endowments, prior ties, partner fit, partner status and reputation (Beckman *et al*, 2004; Chung *et al*, 2000; Gulati, 1998; Varadarajan and Cunningham, 1995), brand-related aspects, such as brand reputation and brand product quality, play a prominent role in co-branding partner selection (Gammoh and Voss, 2011). Market uncertainty differently affects governance choices in strategic and co-branding alliances. In strategic alliances, partner opportunism, market uncertainty, and competition enhance the likelihood of equity-based governance (Dyer *et al*, 2004; Gulati, 1998). Conversely, the likelihood of equity-based governance in co-branding alliances will be lower if market uncertainty increases (Li *et al*, 2010).

In our hypotheses, we combine both strands of literature and emphasize the firm perspective by identifying co-branding partners' potentially dissimilar organizational characteristics. We consider the customer perspective by relating these organizational characteristics to consumers' assessments of brand fit and attitudes towards co-branding alliances.

3. Theory and Hypotheses

3.1 Signaling Theory

According to signaling theory, firms will achieve favorable consumer perceptions and will positively affect consumer decision-making at the point of purchase, if they convey relevant information and reduce firm-consumer information asymmetry. Two brand names with similar or complementary attributes on a single product imply that a firm borrows equity from the partner firm's brand (Rao and Ruekert, 1994; Spence, 1973; Swaminathan *et al*, 2015). Customer perspective research suggests that co-branding alliances serve as intended market signals of innovation, product quality, and credibility (Rao *et al*, 1999). The perception of a high level of brand fit drives consumer affect (Baumgarth, 2004; Sénéchal *et al*, 2014; Simonin and Ruth, 1998). Consumers may react more positively to the combination of two brands than if a product reveals a single brand (Swaminathan *et al*, 2015).

In contrast to other types of alliances, in co-branding alliances customers are well aware that different companies are behind the product (Newmeyer *et al*, 2014). They can observe salient organizational characteristics of the co-branding partners. Based on these signals, customers form corporate associations. They use them for the assessment of the value of the cooperation of these firms on the brand and product level (Brown and Dacin, 1997). Customers' attitudes towards co-branding alliances will be more positive, if the partner firms fit well together and their perceived similarity is high (Sénéchal *et al*, 2014).

Some signals are beyond the control of the co-branding partners (Bangerter *et al*, 2012). Organizational characteristics are a case in point. Co-branding partners may have dissimilar organizational characteristics (De Man, 2013) that can hardly be manipulated. They often unintentionally affect customers' brand fit perceptions and attitudes (Connelly *et al*, 2011; Gürhan-Canli and Batra, 2004). Because the similarity of co-branding partners leads to the perception of a higher brand fit (Simonin and Ruth, 1998), we argue that firms with dissimilar organizational characteristics in terms of size, age, industry scope, and country-of-origin image, which cannot be aligned on short notice, provide potentially unintended market signals and, in turn, achieve lower brand fit evaluations.

3.2 Firm Size

The number of alliance formations between large and small firms is steadily growing (Mellewigt and Decker, 2014; Yang *et al*, 2014). For smaller firms, which often lack brand awareness, market power, and financial resources, forming alliances with large, established corporations often represents the only way to get rapid access to necessary resources at relatively low costs while remaining independent (Dyer and Singh, 1998; Rothaermel, 2001). Allying with an established firm enhances a new venture's legitimacy and quality perception (Stuart *et al*, 1999). Large, mature firms enter into strategic alliances with small firms and start-ups to benefit from their product innovativeness and adaptability (King *et al*, 2003). Therefore, large, established corporations and small start-ups enter alliances because of their complementary resources that, among other things, result from the organizations' difference in size.

Information about size is publicly available, so that consumers are knowledgeable about the organizational dissimilarity in co-branding alliances between large and small firms. If consumers, who have limited cognitive capacity to process new information (Payne, 1982), evaluate brands, they tend to rely on signals that firms send to reduce information asymmetry (Spence, 1973). The evaluation of a co-branding alliance is more complex than the evaluation of a single brand. Consumers try to reduce the cognitive effort by actively searching for signals and relying on their knowledge about the two brands involved. Because this knowledge includes information about characteristics of the firms behind the brands, co-branding alliances between large and small firms send a dissimilarity signal. As firm size cannot easily be manipulated on short notice and brand managers might not consider organizational characteristics as co-branding alliance signals, firm size dissimilarity might be an unintended signal.

Dissimilarity signals, either intended of unintended, represent a higher cognitive effort to consumers than similarity signals. This higher level of cognitive effort frustrates them and evokes negative affect (Ahn and Sung, 2012; Garbarino and Edell, 1997). Consequently, signals of firm size dissimilarity are evaluated less favorably than firm size similarity signals.

H1: High firm size dissimilarity of co-branding alliance partners is negatively related to customer brand fit perception.

3.3 Firm Age

Despite their innovative capacity, new ventures often lack knowledge and capabilities required for the commercialization of their ideas, 'such as marketing, competing manufacturing, and after sales support' (Colombo *et al*, 2006, p. 1166). By forming partnerships with established firms, young firms can overcome the liability of newness and resource constraints and benefit from reputational spillover effects (Baum *et al*, 2000). They thereby achieve external legitimacy (Dacin *et al*, 2007; Singh *et al*, 1986). Alliances between young firms with new brands and established companies with well-known brands enhance the small brand's quality perception and brand awareness (Fang and Mishra, 2002). Established firms often suffer from a decreasing innovativeness (Das and He, 2006), because their mature organizational structure frequently lacks flexibility and hampers sustained product innovation (Dougherty and Hardy, 1996). Therefore, they form alliances with young firms to explore new growth opportunities by exploiting the younger partners' technological competencies (Colombo *et al*, 2006; Reuer and Tong, 2010; Shan *et al*, 1994).

Firm age significantly influences the corporate social responsibility perception of stakeholders (Dilling, 2011). Therefore, we assume that firm age is well recognizable by consumers. Moreover, consumers tend to be more familiar with established than with new brands, because the likelihood that, for example, they have touch-points or have tried a product that is available for more than ten years is higher than for a product that has recently been launched (Jacoby *et al*, 1977). In addition, the 'larger the number of cues [...] the greater the likelihood that the information can be recalled' (Keller, 1993, p. 5) and the lower is the cognitive effort required for evaluation and decision-making. If consumers evaluate a co-branding alliance with a high firm age dissimilarity, they will be able to recall a high number of brand attributes for the established co-branding partner, while lacking such brand associations for the new brand. This difference in the number of recallable brand attributes for the co-branding partners sends a (mainly unintended) dissimilarity signal to consumers and makes it more difficult for them to establish a cognitive link between the new and the established brand (Ahn and Sung, 2012). This difficulty enhances their frustration and negatively affects their brand fit perceptions (Ahn and Sung, 2012; Garbarino and Edell, 1997).

H2: High firm age dissimilarity of co-branding alliance partners is negatively related to customer brand fit perception.

3.4 Industry Scope

Firms generally enter alliances with firms from different product categories and industries to gain access to new customer groups and enhance brand awareness (Abratt and Motlana, 2002; Ahn *et al*, 2009; Gammoh *et al*, 2006; Smarandescu *et al*, 2013). As partners in these inter-industry alliances have a different industry or product category focus, their industry scopes are dissimilar. Because consumers are knowledgeable about firms' industry scope, so that they, for example, associate Porsche with sports cars or Beiersdorf with skin care products, they are also likely to recognize industry scope dissimilarity in inter-industry co-branding alliances.

If consumers evaluate alliances between brands that are associated with different product categories and serve different consumer needs, they have problems to align the co-branding partners' brand attributes (Smarandescu *et al*, 2013; Zhang *et al*, 2002). Ahn *et al* (2009) suggest that a high perceived 'match-up', which 'refers to consumer perceptions of the degree of relevance or correspondence between two paired product categories' (p. 479) results in more positive consumer evaluations. *Vice versa*, industry scope dissimilarity signals '(for example, the co-branding between a clothing brand and an automotive brand) demand excessive processing to resolve the discrepancy' (Ahn and Sung, 2012, p. 422), which lead to less favorable brand fit perceptions.

H3: High industry scope dissimilarity of co-branding alliance partners is negatively related to customer brand fit perception.

3.5 Country-of-Origin Image

Alliances can be used to introduce brands and products to new geographical regions and markets (Abratt and Motlana, 2002; Lee *et al*, 2013; Ueltschy and Laroche, 2011). International co-branding alliances represent a widely adopted strategy in today's increasingly global business environment (Li and He, 2013). Firms ally with foreign brands, headquartered in different countries (Bluemelhuber *et al*, 2007) in order to avoid market entry barriers (Glaister and Buckley, 1996; Reuer *et al*, 2011), to reduce costs of doing business abroad (Hymer, 1960/1976), and to decrease the liability of foreignness (Zaheer, 1995). Forming partnerships with local firms can help overcome consumer animosity towards foreign brands (Fong *et al*, 2014; Li and He, 2013; Voss and Tansuhaj, 1999). Local brands enter international co-branding alliances to benefit from the foreign partner's investments and technology (Abratt and Motlana, 2002; Grębosz and Otto, 2013).

Consumers take the country image into account when they evaluate a product (Essoussi and Merunka, 2007; Hong and Wyer, 1989; Koschate-Fischer *et al*, 2012) and a co-branding alliance (Bluemelhuber *et al*, 2007). Brands' country images can have positive or negative effects on purchase intentions (Josiassen, 2011). Co-branding alliances between partners that are both associated with a positive country image are more favorably evaluated by consumers than co-branding partnerships between one brand with a positive and one with a negative country image (Lee *et al*, 2013). This finding might be explained by a negative spillover effect from the brand with the negative country image on the perception of the co-branding alliance, resulting in a lower perception of overall co-branded product quality.

Consumer ethnocentrism research asserts that consumers use domestic standards as a reference point in the evaluation of foreign products (Balabanis and Diamantopoulos, 2004). Cultural attributes, such as language, religion, social norms, and beliefs, guide consumers' preferences especially regarding consumer goods, everyday choices, and social interactions (Ghemawat, 2001). Foreign products that come from countries with a high cultural similarity to the home country tend to be evaluated more favorably than products from culturally dissimilar countries (Sharma *et al*, 1995). Consumers attribute to countries with a low cultural distance to their home country a more positive image than to countries with a high cultural distance. If the perceived cultural distance between international co-branding partners is low, it does not challenge a consumer's general beliefs or cultural identity (Ghemawat, 2001). Conversely, the matching of the country images of co-branding partner brands with a high cultural distance requires a higher cognitive effort, which result in less favorable brand fit assessments (Ahn and Sung, 2012; Garbarino and Edell, 1997).

H4: High country-of-origin image dissimilarity of co-branding alliance partners is negatively related to customer brand fit perception.

3.6 Consumer Attitudes towards Co-Branding Alliances

Previous research on co-branding has tested the effect of brand fit perception on the consumer evaluation of the co-branding alliance (Arnett *et al*, 2010; Baumgarth, 2004; Dickinson and Barker, 2007; Lafferty *et al*, 2004; Simonin and Ruth, 1998) as an indicator for overall co-branding alliance performance. Generally, a higher level of perceived brand fit results in more positive consumer evaluations in terms of consumer attitude towards the co-branding alliance (Graeff, 1997). Consumer attitude towards brands and co-branding alliances, which is 'defined as consumers' overall evaluations of a brand' (Keller, 1993, p. 4), directly affects consumer actions, decision-making, and behavior (Dickinson and Heath, 2006).

To investigate whether consumer brand fit perception has implications for consumer decision-making and ultimately for co-branding alliance performance, we include the following hypothesis:

H5: Brand fit perception is positively related to consumer attitude towards the co-branding alliance.

4. Methodology

4.1 Research Design

We used a quasi-experimental design. Respondents received a questionnaire comprising a set of hypothetical vignettes that they had to assess. Vignettes are scenarios comprising 'short descriptions of a person or a social situation, which contain precise references to what are thought to be [...] important factors in decision-making or judgment-making processes of the respondents' (Alexander and Becker, 1978, p. 94). The scenarios described our unit of analysis – co-branding alliances – and a limited set of dimensions – the independent variables. Each scenario represented a unique combination of different dimensions (Atzmüller and Steiner, 2010). We used a full factorial design (Karren and Barringer, 2002). The scenario universe of this study representing all combinations of four dimensions' variations comprised 16 scenarios. We described hypothetical co-branding alliances (Ahn and Sung, 2012) to "avoid any additional brand associations aside from those presented in the scenario" (Kalafatis *et al*, 2012, p. 627). We omitted real brand names in order to avoid framing effects and cognitive biases resulting from respondents' experiences with a brand or with real marketing situations (Jun *et al*, 2005; Zhang and Taylor, 2001).

Such a design offers several advantages. First, researchers can control the independent variables, while excluding external factors that might distort assessments (Aguinis and Bradley, 2014;

Ashill and Yavas, 2006). Second, the design allows for simultaneous testing of individual effects of multiple factors on a dependent variable (Groß and Börensen, 2009; Sauer *et al*, 2009). Third, because factorial research employs scenarios as stimuli, which describe a specific decision problem and require a lower cognitive effort of respondents, it is more likely that respondents grasp the decision problem correctly and focus on the variables tested in factorial research than in standardized direct-question-based surveys (Groß and Börensen, 2009; Weber, 1992). Fourth, all respondents receive the same set of standardized stimuli, which increases the replicability of results (Alexander and Becker, 1978).

The research design addresses consumers' perceptions in general, so that students represent relevant and suitable respondents (Fang *et al*, 2013; Gammoh *et al*, 2006; Thompson and Strutton, 2012). We collected data in two German universities in February 2015. One university was a small, private business school offering bachelor and master study programs in management, whereas the other was a public university in Northern Germany providing a wide range of study programs in various disciplines. The questionnaires included a cover page with guidelines and a definition of co-branding alliances and 16 scenarios. The sequence of scenarios was varied randomly across questionnaires. Out of 200 originally spread questionnaires, we received 126 usable questionnaires (2,016 observations), yielding a response rate of 63 percent.

4.2 Variables and Measures

The scenarios described co-branding alliances in terms of the partner firms' size, age, industry scope, and country-of-origin. The variables were all defined by two levels representing either high or low (or no, respectively) co-branding partner dissimilarity. An irregular number of levels may have distorted results (Karren and Barringer, 2002).

Firm size (dis-)similarity was measured based on the alliance partners' annual turnover and employees (Mellewigt and Decker, 2014). Partners with low firm size dissimilarity have a comparable annual turnover and number of employees. The high dissimilarity-scenario describes an alliance between a large and a small firm. We used significant differences in turnover (more than 1 billion Euros versus less than 10 million Euros) and number of employees (more than 1,000 versus less than 50 employees).

Firm age was captured by the number of years since foundation (Mellewigt and Decker, 2014). Partners with low firm age dissimilarity have been founded approximately at the same time. An alliance with high firm age dissimilarity comprises an established firm and a start-up.

The *industry scope*-dimension had to fulfill two criteria. First, the industry had to be popular for co-branding alliances and, second, respondents should feel comfortable with the products. The consumer goods industry was selected for partners with low industry scope dissimilarity. High industry scope dissimilarity was inspired by the example of Walt Disney and Carrefour's private label. It describes a partnership between a firm engaged in consumer goods and a firm operating in the media industry.

The dimension *country-of-origin image* should involve a noticeable cultural distance between co-branding partners with high dissimilarity. Hence, real countries were used in the scenarios. Because the study was conducted in Germany, for low or no country-of-origin dissimilarity, both partners were defined to be German firms. For high dissimilarity, the country-of-origin of company A was Japan, company B was a German firm. These countries were selected due to the significant cultural differences between them and the well observable cultural distance (Ghemawat, 2001; Hall and Soskice, 2001; Hofstede, 2001).

We conducted a pretest with ten professionals with different backgrounds (researchers, students, Ph.D. students, doctors, and lawyers) and of different ages to ensure that the scenarios were easy to understand and perceived as relevant. It showed that all participants clearly perceived the intended differences between the scenarios, because all cues had been manipulated on just two levels, namely either high or low dissimilarity.

We asked our respondents to assess all scenarios based on two single items referring to *brand fit* perception ('I perceive the co-branding alliance as positive') and *consumer attitude* towards the co-branding alliance ('The partner firms complement each other'). These single-items differ from the multi-item scales originally suggested by Simonin and Ruth (1998) because of the results of our pretest. This pretest had revealed that we had to adapt the scales for brand fit perception and consumer attitude, because the participants did not perceive the five items adopted from Simonin and Ruth (1998) as distinct. Based on their feedback, we transformed them into two clear statements and six-point rating scales (ranging from 1 = 'strongly disagree' to 6 = 'fully agree').

We included control variables regarding consumers' characteristics and attitudes. Age and gender affect perceptions and purchasing decisions. Consumers' capacities to absorb and process information on products and their preferences differ depending on their age (Charry and Demoulin, 2014; Czellar, 2003; de Faultrier *et al*, 2014). According to selectivity theory, men and women use different strategies to process information on products. Because women have a lower elaboration threshold and are more likely to relate their existing knowledge to new information, they will be more likely to perceive a fit between two brands on the same product than men (Lau and Phau 2010). Furthermore, when consumers evaluate a co-branded product, they try to categorize it based on contextual factors (Bouten *et al*, 2011). It is possible that brand fit perceptions will be more favorable, if the characteristics of the organizations involved in a co-branding alliance are relevant to consumers (Samuelson *et al*, 2014). Therefore, we consider the importance of brands, firm size, firm age, and country-of-origin in our analysis.

--- Table 1 about here ---

An examination of the bivariate correlations reported in Table 1 indicates that gender and age are significantly correlated with brand fit perception. The importance of firm size and brands is significantly correlated with both brand fit perception and attitude towards the co-branding alliance. The importance of firm age is significantly related to the attitude towards the co-branding alliance. The importance of country-of-origin is negatively correlated with both dependent variables, though not significantly. Tests of our hypotheses with and without the aforementioned control variables yielded identical results.

5. Results

5.1 Descriptive Findings

Most of the respondents studied management, 45 percent were enrolled in other programs, such as industrial engineering or computer science. On average, the respondents were 23 years old. Among them, 58 percent were male. Levene's test showed no significant differences in terms of age and gender between students from the two universities, indicating homogeneity of variances. Descriptive statistics are reported in Table 2.

--- Table 2 about here ---

The respondents assessed the importance of brands as high (mean = 4.333). Chi-square tests indicated that brands were more important to students with a major than to those with a minor in management or to those enrolled in other programs ($X^2(5)=19.962$, $p \leq 0.001$). Brands were slightly more important to students from the small, private university than to students from the bigger public university ($X^2(5)=12.822$, $p<0.050$).

Variance inflation factors (VIFs) were well below the conservative threshold of 5 (Menard, 1995, p. 66), indicating no problem of multicollinearity (highest value: importance of size = 1.37).

5.2 Manipulation Checks

To assess the effectiveness of the manipulations, we conducted a one-way ANOVA with, first, brand fit perception and second, consumer attitude toward the co-branding alliance as the experimental factors. The overall F-value for brand fit was significant (F(4,2011)=23.05, p=0.00). Tukey post-hoc tests revealed that the mean scores for low versus high dissimilarity in size (M=3.968 vs. M=3.656), industry (M=3.929 vs. M=3.695) and country-of-origin image (M=4.010 vs. M=3.615) were significant. They were not significant for age (M=3.813 vs. M=3.811). The overall F-value for consumer attitude was also significant (F(4,2011)=17.44, p=0.00). Tukey post-hoc comparisons indicated significant differences between low versus high dissimilarity in size (M=3.886 vs. M=3.519) and country-of-origin image (M=3.867 vs. M=3.538), but not in age (M=3.684 vs. M=3.721) and industry (M=3.726 vs. M=3.679).

5.3 Test of Hypotheses

We used OLS regressions with robust standard errors. We clustered the observations at the individual level, because each respondent assessed several scenarios. Moreover, the variables represent factors on the alliance and the individual level. Table 3 shows the results.

--- Table 3 about here ---

In line with Hypothesis 1, high firm size dissimilarity is negatively related to customer brand fit perception. Hypothesis 2 asserts that firm age dissimilarity negatively affects brand fit. The results do not support this hypothesis. The coefficient is negative as expected but insignificant. High industry scope dissimilarity and high country-of-origin image dissimilarity both have a significant negative impact on customer brand fit perception, supporting Hypotheses 3 and 4.

Consistent with previous studies (Bluemelhuber *et al*, 2007; Simonin and Ruth, 1998) and supporting Hypothesis 5, brand fit nurtures consumer attitude towards a co-branding alliance. In addition, high firm size dissimilarity negatively affects consumer attitude, while high industry scope dissimilarity fosters it.

6. Discussion

Based on signaling theory, we hypothesized that high partner dissimilarity in terms of firm size, firm age, industry scope, and country-of-origin image negatively affects brand fit perception. We introduced dissimilarity signals on the organizational level to the field of co-branding, which have not yet been addressed in previous customer perspective research.

6.1 Contributions

Our results make three contributions. First, we identified antecedents on the organizational level to consumer brand fit perception. These have implications for co-branding alliance formation, consumer evaluation, and co-branding alliance performance. Our finding that there is a negative relationship between the co-branding partners' combined organizational characteristics of firm size, industry scope, and country-of-origin image dissimilarity and consumer brand fit perception suggests that, in addition to brand-related factors, organizational characteristics affect consumer assessments of co-brands. Organizational dissimilarity results from strategic alliance formation motives, such as access to complementary resources (Chung *et al*, 2000; Wernerfelt, 1984), new customer segments (Harrigan and Newman, 1990; O'Dwyer *et al*, 2011) and new geographical markets (Glaister and Buckley, 1996; Reuer *et al*, 2011). Co-branding alliance formation between firms with a heterogeneous organizational structure make sense from a strategic perspective. However, it sends a potentially unintended dissimilarity signal to consumers, which adversely affects brand fit perception. Brand fit perception, on the other hand, drives consumer attitude towards the alliance (Arnett *et al*, 2010; Baumgarth, 2004; Dickinson and Barker, 2007; Lafferty *et al*, 2004; Simonin and Ruth, 1998) and decision-making (Dickinson and Heath, 2006). Using the antecedents of brand fit perception as control variables in the models testing consumer attitudes toward co-branding alliances, we see that high industry scope dissimilarity nurtures them, but high firm size dissimilarity affects them negatively. Consumers appreciate and understand the potentially complementary effects of different industrial backgrounds involved in the development and commercialization of a joint product. They do not see complementarities, efficiency gains or quality improvements in co-branding alliances between firms of different sizes. Overall, our results indicate that consumers are well aware of the firms behind a co-branded product (Newmeyer *et al*, 2014) and that dimensions of organizational dissimilarity of co-branding partners differently affect brand fit perception and consumer attitude.

Second, this study reveals the potential of extending co-branding alliance research beyond the brand level. It adds to the understanding of co-branding alliances as a multi-dimensional construct (Oeppen and Jamal, 2014). We considered both the firm and the brand level in our study. Our results emphasize the importance of including multiple levels of analysis in co-branding research (Hitt *et al*, 2007).

Third, contrary to Hypothesis 2, the relationship between firm age dissimilarity and brand fit perception is insignificant though negative as expected. Prior research asserts that consumers face difficulties in evaluating co-branding alliances between young and established brands, because they lack brand associations with the less familiar start-up brand (Keller, 1993). Our non-finding may be due to today's business environment, in which start-ups can rapidly gain a high level of brand awareness through various online channels, affiliates and social media (Chaffey *et al*, 2009). Examples of established firms that are known for sustained innovation, such as General Electric, Siemens, and Sony, rebut the assumption that age decreases innovation. The arguments that consumers are less familiar with start-up brands (Keller, 1993) and that new brands are perceived to have a higher innovative potential than established firms (Das and He, 2006) might be outdated. Moreover, compared to the other organizational characteristics included in our analysis, firm age was of minor importance to respondents.

6.2 Limitations and Directions for Future Research

The limitations that we see, may trace promising avenues for future research. First, we used a full factorial survey consisting of 16 vignettes, which is well below the recommended maximum of 80 vignettes per questionnaire (Aiman-Smith *et al*, 2002). Nevertheless, respondents reported fatigue while assessing the vignettes. To avoid respondent overload and increase respondent's motivation to participate in the study, further policy capturing research should adopt a fractional approach instead (Graham and Cable, 2001).

Second, we used a sample of German students. Due to their study programs, the possibility that participants were sensitized to topics, such as co-branding, cultural distance between alliance partner,s and alliance partner fit, cannot be excluded. Studies in other contexts could increase the generalizability of our results by validating them with a bigger, more diverse consumer sample in terms of age, professional background, nationality, and brand awareness (Aiman-Smith *et al*, 2002).

Third, Ahn and Sung (2012) criticize the measurement of partner brand fit as a unitary construct. They suggest that researchers should differentiate between functional fit (fit between the brands' product categories) and symbolic fit (the brands' concept consistency). Future studies could test whether and to what extent organizational dissimilarity signals differently affect consumer perceptions of these brand fit perceptions, attitudes toward co-branding alliances and purchasing decisions.

Fourth, we tested a co-branding scenario between partners that were, first, either operating in the consumer goods or the media industry and, second, based in either Germany or Japan. Future co-branding studies testing our hypotheses in other industry and country-of-origin constellations could provide further insights. In addition, attitudes towards firms, brands, industries, and countries may evolve over time because of accumulated consumer experiences. A cross-sectional dataset cannot depict the development of brand fit perception and consumer attitude over time. It also raises endogeneity concerns. Researchers should develop designs involving the collection of longitudinal data in order to consider the dynamics of brand fit perceptions and attitudes and strengthen the direction of causality (Meier *et al*, 2016).

Finally, in line with previous studies (for example, Baumgarth, 2004; Gammoh and Voss, 2011; Rao *et al*, 1999; Simonin and Ruth, 1998), we analyzed co-branding alliances from a customer perspective. However, co-branding alliances are not always formed with the consumer in mind (O'Dwyer *et al*, 2011) and one-sided performance evaluations may not fully capture co-branding alliance success. Future studies could include internal performance indicators based on secondary data on co-branding alliances instead of purely focusing on key informants. Moreover, our study design excludes the possibility of co-branding alliance failure. It draws on the assessment of currently (at least hypothetically) existing co-branding alliances. To avoid a potential survivor bias, researchers could follow recommendations by Meier and colleagues (2016) and compare evaluations of successful and failed co-branding alliances.

6.3 Managerial Implications

From a managerial perspective, our results provide implications for co-branding alliance formation and communication. First, marketing managers, besides carefully forming co-branding alliances with partners that fit based on strategic considerations, should assess whether such firm-perspective driven co-branding alliances make sense from a customer perspective (Ahn and Sung, 2012; Arnett *et al*, 2010). Given the finding that brands are important to consumers, the formation of a co-branding alliance that is strategically sound but does not satisfy customers, co-branding alliance success and long-term brand performance could be compromised.

Second, taking into account that organizational dissimilarity between co-branding partners can usually not be avoided as some characteristics cannot be altered on short notice, managers should ensure that they sufficiently communicate and explain the co-branding alliance to consumers to assist them in cognitively processing the potential partner dissimilarity signals (Ahn and Sung, 2012; Samuelsen *et al*, 2015). A marketing campaign that highlights the co-branding partner brands' matching attributes might reduce a consumer's dissimilarity perception resulting in a higher level of brand fit perception and a more favorable attitude towards the alliance.

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Table 1. Correlations

Variables		1	2	3	4	5	6	7	8
1	Brand Fit	1.000							
2	Consumer Attitude	0.713***	1.000						
3	Gender	-0.048**	-0.033	1.000					
4	Age	0.096***	0.035	0.039*	1.000				
5	Import. Country-of-Origin	-0.029	-0.011	0.065**	0.132***	1.000			
6	Importance Firm Age	0.034	0.037*	0.004	0.045**	0.226***	1.000		
7	Importance Firm Size	0.064**	0.048**	-0.065**	-0.162***	0.085***	0.448***	1.000	
8	Importance Brands	0.065**	0.047**	-0.070**	0.041*	0.133***	0.163***	0.252***	1.000

Notes: N = 2,016 vignettes provided by 126 individuals. Significance levels: * $p < 0.100$; ** $p < 0.050$; *** $p < 0.001$.

Table 2. Descriptive Statistics

Stimuli
Firm Size Dissimilarity Low: Company A and company B have a similar annual turnover and a similar number of employees. High: Company A is with more than 1,000 employees and an annual turnover of over €1 billion a big enterprise. Company B is with less than 50 employees and an annual turnover of less than € 10 million a small business.
Firm Age Dissimilarity Low: Company A and company B were founded approximately at the same time. High: Company A is an established business that was founded more than 10 years ago. Company B is a start-up that was founded within the last three years.
Industry Scope Dissimilarity Low: Company A and company B are both operating in the consumer goods industry. High: Company A operates in the media industry. Company B is specialized in consumer goods.
Country-of-Origin Image Dissimilarity Low: Company A and company B are both German businesses. High: Company A is a Japanese business. Company B is a German business.

Variable	Mean	Standard Deviation	Minimum	Maximum
Consumer Evaluations				
Brand Fit Perception I perceive the co-branding alliance as positive. (1 = ‘disagree’, …, 6 = ‘agree’)	**3.812**	**1.324**	**1**	**6**
Consumer Attitude The partner firms complement each other. (1 = ‘disagree’, …, 6 = ‘agree’)	**3.702**	**1.357**	**1**	**6**
Control Variables				
Age in years	**22.651**	**2.140**	**18**	**29**
Importance Country-of-Origin 1 (‘not important’), …, 6 (‘very important’)	**3.937**	**1.385**	**1**	**6**
Importance Firm Age 1 (‘not important’), …, 6 (‘very important’)	**2.635**	**1.245**	**1**	**6**
Importance Firm Size 1 (‘not important’), …, 6 (‘very important’)	**3.063**	**1.379**	**1**	**6**
Importance Brands 1 (‘not important’), …, 6 (‘very important’)	**4.333**	**1.148**	**1**	**6**
Gender male/female	**Male: 58%**	**Female: 42%**		

Notes: N = 2,016 vignettes provided by 126 individuals.

Table 3. Regression Analyses

Variables	Brand Fit Perception: Model 1	Brand Fit Perception: Model 2	Consumer Attitude: Model 3	Consumer Attitude: Model 4
Constant	2.031** (0.620)	2.502*** (0.632)	1.385** (0.422)	1.403** (0.423)
Gender	-0.110 (0.110)	-0.110 (0.110)	0.003 (0.070)	0.002 (0.070)
Age	0.071** (0.026)	0.071** (0.026)	-0.243 (0.017)	-0.024 (0.017)
Importance Country-of-Origin	-0.052 (0.045)	-0.052 (0.045)	0.012 (0.025)	0.012 (0.025)
Importance Firm Age	0.002 (0.048)	0.002 (0.048)	0.019 (0.021)	0.019 (0.031)
Importance Firm Size	0.069 (0.044)	0.069 (0.044)	-0.013 (0.028)	-0.013 (0.028)
Importance Brands	0.053 (0.052)	0.053 (0.052)	0.001 (0.035)	0.002 (0.035)
H1: Firm Size Dissimilarity		-0.312*** (0.065)		-0.139** (0.042)
H2: Firm Age Dissimilarity		-0.003 (0.061)		0.040 (0.044)
H3: Industry Scope Dissimilarity		-0.233** (0.074)		0.123* (0.062)
H4: Country-of-Origin Image Dissimilarity		-0.394*** (0.073)		-0.041 (0.045)
H5: Brand Fit Perception			0.736*** (0.029)	0.731*** (0.030)
F	2.70**	10.17***	102.34***	82.21***
R-square	0.022	0.066	0.510	0.515
Adj. R-square	0.019	0.061	0.509	0.513

Notes: N = 2,016 observations adjusted to 126 individual-level clusters. Robust standard errors in parentheses are reported below the coefficients.
Significance levels: * $p < 0.100$; ** $p < 0.050$; *** $p < 0.001$.