Journal of Business Research xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

Journal of Business Research

Corporate brand effects in brand alliances☆

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ARTICLE INFO

Article history:
Received 5 June 2015
Received in revised form 3 March 2016
Accepted 5 March 2016
Available online xxxx

Keywords:
Brand alliances
Co-branding
Attitude toward the corporation
Perceived quality
Brand attitude

ABSTRACT

Published literature demonstrates that when a single well-known reputable brand is allied with a previously unknown focal brand, perceived quality evaluations of the latter will be more positive. Whether or not the corporate brand improves consumer evaluations of a cobranded product is a topic of interest to marketers. This is true because marketing managers must make decisions regarding investments in building both their corporate and product brands. The authors propose and empirically verify that the corporate brand's role as a parent of its product brands helps determine the extent of the corporate brand's influence on the consumer's evaluation of the focal brand in a brand alliance. Specifically, the corporate brand will be more diagnostic for customer evaluations of a cobranded product when its brand portfolio is more consistent in terms of the customer's attitude toward the brands that comprise the portfolio.

1. Introduction

During a meeting, a business executive wondered whether adding his corporate brand to a product offering that included one of his product brands and the brand of another firm's product (i.e., a brand alliance) would make a difference to customers. The executive cited a brand alliance between Sara Lee and Pixar's *Toy Story 3*, which included the name of Pixar's corporate parent Disney (PKG Brand Design, 2015). An academic remarked that since Disney is a strong corporate brand, the addition of the brand could only improve customer evaluations of the product offering. Thinking more deeply about the question, the advice offered is incomplete because the corporation is both a brand and the owner of a portfolio of product brands. As a result, the customer's perception of a corporation's *brand portfolio* (Dacin & Smith, 1994; DelVecchio, 2000) can provide information that may be diagnostic in determining whether a corporate brand ally adds value over and above that of the product brand ally in consumers' evaluation of a focal brand.

Investigating whether or not the corporate brand's influence on consumer evaluations of a brand alliance depends on brand portfolio dispersion represents a contribution to the brand alliance literature. Brand portfolio dispersion describes the relative homogeneity or heterogeneity of the brands within the corporation's brand portfolio in terms of attitude toward the brand. Attitude toward the brand is consumers' overall evaluation of a brand (Mitchell & Olson, 1981). Published research demonstrates that attitude toward the brand captures attribute/benefit information as well as a component that might result from heuristics, inferences, or other processes (Keller, 1993; Yoo & MacInnis, 2005). When the brands within a portfolio are relatively homogeneous in terms of attitude toward the brand, brand portfolio dispersion is low. When the brands within the brand portfolio are relatively heterogeneous in terms of attitude toward the brand then brand portfolio dispersion is high. Based in both signaling theory and diagnosticity theory, it is argued herein that when brand portfolio dispersion is low the corporate brand will be more diagnostic in consumer evaluations of offerings containing its product brand and the brand of another firm. This is because when brand portfolio dispersion is low, the customer knows what type of products to expect from the corporation. Note that this effect is irrespective of the level of attitude toward the brand.

Isolating the corporate brand's effect relative to the product brand's effect is not straightforward. This hurdle is overcome through a brand alliance study that simultaneously allows controlling the effect of the product brand ally while imposing boundary conditions on the effect of the corporate brand ally. Within a scenario-based stimuli, study participants evaluate the perceived quality of a previously unknown focal brand—used to prevent confounding the effects of study manipulations with preconceived attitudes participants may have for previously known brands. Following previous research (e.g., Voss & Gammoh, 2004; Voss, Gammoh, & Fang, 2012), the product brand ally and the corporate brand ally are well known and reputable brands since the theory suggests only such brands can signal quality on behalf of the unknown focal brand (Rao & Ruekert, 1994). Data from a multilevel experiment

☆ The authors express their appreciation to Alex Zablah, Josh Wiener, Jodie Ferguson, and Bashar Gammoh for their helpful comments on earlier versions of this manuscript.

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http://dx.doi.org/10.1016/j.jbusres.2016.03.007
0148-2963/

demonstrate that the corporate brand ally incrementally improves consumer's perceived quality of the focal brand if (1) the corporation has an above average attitude toward the corporate brand and (2) the corporation's brand portfolio dispersion is low. An important conclusion is that there are two ways to structure brand alliances to achieve increases in consumers' quality perceptions about focal brands.

2. Background

The corporate brand is described as defining "firms that will deliver and stand behind the offering that the customer will buy and use" (Aaker, 2004, p 6). Corporate brands typically are founded on a relatively "small set of fundamental core values" central to the firm's character (Uggla, 2006, p 786). Published literature addresses the importance of the corporate brand in consumer evaluations of product brands. For example, scholars examine the effect of corporate social responsibility efforts on consumer reactions (e.g., Becker-Olsen, Cudmore, & Hill, 2006; Marin, Ruiz, & Rubio, 2009; Sen & Bhattacharya, 2001). Brown and Dacin (1997, p 79) find that "what consumers know about a company can influence their reactions to the company's products." Berens, van Riel, and van Bruggen (2005) show that the corporate brand has maximum influence on product brand attitude when the corporate brand has a high degree of visibility in product-related communications. Biehal and Sheinin (2007) show that a firm's capability associations affect consumer product attitudes, but this effect was less than the product brand's effect. Similarly, Lafferty and Goldsmith (1999) and Goldsmith, Lafferty, and Newell (2000) show that corporate credibility has an effect on consumer evaluations of the firm's brands. Thus, it seems clear that there is a transfer of associations between the corporate brand and the product brand as well as between the corporate brand and other entities that become connected with it. One way to study such transfers of association is through brand alliances.

One hypothesis advanced in the brand alliance literature is that a high equity brand ally can signal relevant market information more effectively than an unknown focal brand (Rao & Ruekert, 1994). If *a priori* product quality is unobservable, credible signals are effective (Rao, Qu, & Ruekert, 1999). Empirical evidence in support of this hypothesis is robust (e.g., Lafferty, Goldsmith, & Hult, 2004; McCarthy & Norris, 1999; Vaidyanathan & Aggarwal, 2000; Voss & Gammoh, 2004; Washburn, Till, & Priluck, 2004). Researchers also provide evidence that when two high equity brands enter a brand alliance, evaluations of both brands are affected by the alliance—and the subsequent effects are not always positive (Simonin & Ruth, 1998).

According to the signaling theory explanation of brand alliances (Rao & Ruekert, 1994), brands, whether known or not, can profit by participating in brand alliances. The signaling brand must be well known and reputable; that is, the brand must be known by consumers and have a reputation for delivering the promised level of product quality (Jung, 2011; Klein & Leffler, 1981). This status results from clear and consistent brand investments (Erdem & Swait, 1998). Brand equity is therefore built when consumers learn about the brand and attach associations to it (Janiszewski & Van Osselaer, 2000). Consumer learning is achieved through repeated interactions between the customer and the brand across time and contexts (Keller, 1993). Thus, brand alliances can be useful elements in a brand building plan by facilitating additional interactions between the firm's brand and its customers.

Brand alliance researchers also address corporate brands. First, some researchers use "branded house" umbrella brands such as Sony and Northwest Airlines as allies and find significant effects (e.g., Ruth & Simonin, 2003; Voss & Gammoh, 2004). He and Balmer (2006) investigate branded airline alliances finding that alliance brands, such as OneWorld or Star Alliance, may benefit airline brands via positive associations owned by the corporate brand. Second, other researchers investigate corporate brands in alliances with sponsorships or causes and find that there can be a significant benefit to the corporation from such unions (Lafferty, 2009; Lafferty and Goldsmith, 2005; Lafferty et al., 2004). Finally, Uggla (2006) makes the hypothesis that brand associations may transfer to the corporate brand via the alliance mechanism.

Examining the effects of creating a brand alliance with a product brand ally together with its corporate parent's brand is timely. One recently observed brand alliance involves International Delight making an Almond Joy version of its well-known Gourmet Coffee Creamer. The packaging for the creamer incorporates the name of Almond Joy's parent company: Peter Paul. Based on the corporate brand literature summarized above, it can be reasoned that the corporate brand may carry information that is unique relative to its product brands. Bluemelhuber, Carter, and Lambe's (2007) conceptualization of such phenomenon is suggestive of interaction effects between the corporate and product brands. What is not known is whether the brand ally's corporate brand may have no effect, whether the corporate brand has incremental effects over and above the product brand ally, or whether the corporate brand may be a substitute for the product brand ally in influencing customer evaluations of a previously unknown brand.

3. Theory and hypotheses

The conceptual model in Fig. 1 depicts a regression model of individual responses that is nested within brand portfolio dispersion and corporate brand standing. This model is a multilevel model because individual-level effects are expected to vary based on the nesting. To make the model description easy to understand, the elements of the models are referred to as levels. The regression model is called the first level, while the nesting effects are referred to as the second and third levels respectively. The model is rooted in signaling theory and diagnosticity theory (Feldman & Lynch, 1988; Purohit & Srivastava, 2001). In the first level of the model, a signaling based explanation of the effect of the brand ally on consumer evaluations of the focal brand's perceived quality is proposed. At the second level, diagnosticity theory

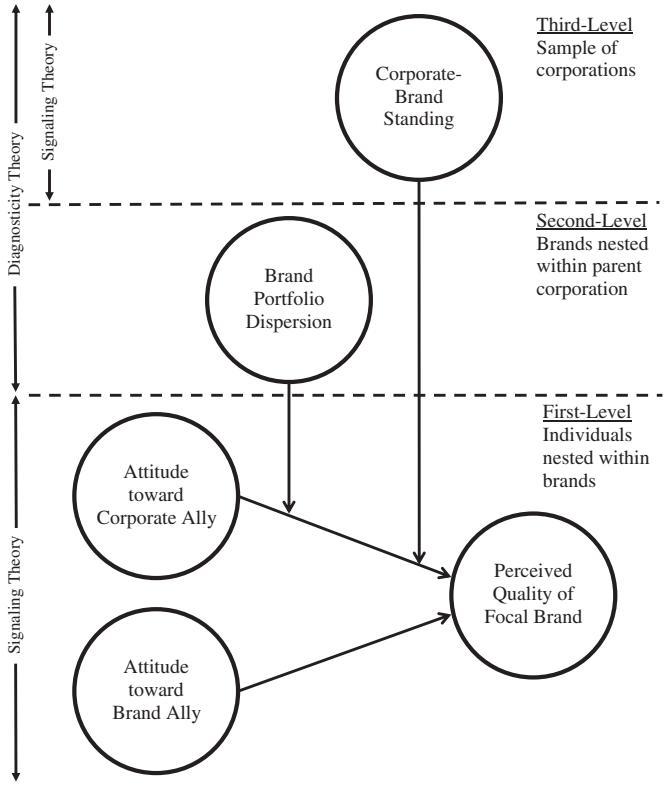

Fig. 1. Conceptual model of brand portfolio dispersion and corporate brand standing on the perceived quality of the focal brand.

Please cite this article as: Voss, K.E., & Mohan, M., Corporate brand effects in brand alliances, *Journal of Business Research* (2016), http://dx.doi.org/10.1016/j.jbusres.2016.03.007

explains how the first-level effect of attitude toward the corporate brand on the consumer's evaluation of the previously unknown focal brand varies due to brand portfolio dispersion. At the third level, both theories explain how the first-level effect of attitude toward the corporation on the consumer's evaluation of the previously unknown focal brand varies due to corporate brand standing and brand portfolio dispersion.

In the first level, the consumer's attitude toward the ally brand and the consumer's attitude toward the ally corporation affect the consumer's perceived quality evaluation of the previously unknown focal brand. Thus, the first level captures the consumer's projection of their corporate and product brand attitudes onto the focal brand. Brand alliance research using signaling theory demonstrates that well-known and reputable brand allies increase perceived quality evaluations of a previously unknown focal brand (Rao et al., 1999). Since the signaling effects are widely supported in previously published literature no hypotheses are offered (e.g., Simonin & Ruth, 1998; Voss & Gammoh, 2004).

Skowronski and Carlston (1987) propose cue diagnosticity as an approach to help understand biases that occur when people integrate information. Information cues that help people classify an entity as being of one kind or type, as opposed to other kinds or types, are said to be diagnostic cues (Payne, 1982). Purohit and Srivastava (2001) utilize a cue diagnostic framework to explore customer evaluations of product quality. They find that manufacturer reputation is the most important determinant of product quality evaluations (cf. Maheswaran, Mackie, & Chaiken, 1992; Rao & Monroe, 1988). Voss and Gammoh (2004) demonstrate that well-known credible brand allies are diagnostic cues for evaluating a previously unknown brand in a brand alliance. Gürhan-Canli and Batra (2004) show that customers use diagnostic corporate image associations in product evaluations when the perceived risk of the product is high. Thus, to be effective a signal must be diagnostic.

By considering the corporation's capability as an owner and manager of a portfolio of brands, diagnosticity is built into the current study. The corporate brand will be a more diagnostic cue when connected to a consistent set of product brands than a corporate brand connected to an inconsistent set of product brands (Dacin & Smith, 1994; DelVecchio, 2000). The second-level construct, brand portfolio dispersion, captures the dispersion of the consumers' attitude toward the brand relative to the other brands within the same corporate portfolio. When a firm associates its corporate brand with a previously unfamiliar focal brand, it is signaling that both are of good quality (Wernerfelt, 1988). However, such effects can only occur when the customer is relatively certain of what the corporate brand represents (Montgomery & Wernerfelt, 1992). When brand portfolio dispersion is low customers can be more certain of what the corporate brand ally represents (Dacin & Smith, 1994). Thus, low brand portfolio dispersion makes the corporate brand a more diagnostic cue for inferring quality.

H1. *The first-level effect of attitude toward the corporate brand on consumer evaluations of the focal brand will be stronger when brand portfolio dispersion is low.*

Of interest at the third level is how corporate brand standing influences evaluations at the first and second levels. As discussed above, the hypothesis (Rao & Ruekert, 1994; Rao et al., 1999) that well-known, customer facing, corporate brands improve ratings of otherwise unknown focal brands is supported by published empirical evidence (Voss & Gammoh, 2004). Owing to the different strategies firms use for structuring their brand portfolios, not all well-known and credible brands will have well-known and credible corporate parents. Thus, the first-level effect of attitude toward the corporation on the consumer's evaluation of the focal brand is likely to be stronger when the corporate brand is evaluated more highly than other corporate brands (Berens, Riel, & Bruggen, 2005; Biehal & Sheinen, 2007). Thus, in accordance with signaling theory as corporate brand standing increases, the effect of attitude toward the corporate brand on the perceived quality of the focal brand will increase.

H2. *The first-level effect of attitude toward the corporate brand on consumer evaluation of the focal brand will be stronger when the attitude toward the corporate brand is high relative to other corporate brands.*

The most important hypothesis generated from the proposed model is an interaction effect between the second- and third-level constructs. While H2 is straightforward, it is also too simplistic. The cue diagnosticity argument is that when the corporation maintains a low variance brand portfolio then attitude toward the corporate brand will have maximum impact. When the brand portfolio dispersion is relatively high, customers will be less certain of the corporations' parenting ability. A relatively strong corporate brand will be more diagnostic when that company produces a brand portfolio that is relatively homogeneous. That is, the corporate brand must be credible *and* diagnostic.

H3. *The first-level effect of attitude toward the corporation on consumer evaluations of the focal brand will be stronger when corporate brand standing is high and brand portfolio dispersion is low.*

4. Methods

4.1. Design and manipulations

An experiment was developed for analysis using a multilevel linear model. Multilevel linear models are useful for analyzing how the parameters in an individual-level model vary when these models are nested in a meaningful way. For example, if one develops a regression model of the determinants of student exam performance, one should account for the reality that students are nested within classrooms, which are nested within schools. In this study, a product concept description is used in which an unknown focal brand called “MAX” is paired with 85 different brand allies and the brand ally's corporate parent. These allies can be viewed as nested because they belong to brand portfolios owned by corporations. To ensure enough observations to identify the model and to keep the required number of participants at an attainable level, the target was to achieve at least 30 corporations at the third level, with two to four brands per corporation at the second level, and a goal of ten participants for each brand at the first level (LaHuis & Ferguson, 2009; Snijders & Bosker, 1999).

4.1.1. Corporate allies

The selection of corporations was a thorny problem. First, firms use a variety of strategies in building their brand portfolios. Some firms use a portfolio branding or “house of brands” strategy, other firms use a family branding or “branded house” strategy, while still other firms use of mix of these two strategies (Aaker, 2004; Rao, Agarwal, & Dahlhoff, 2004). Second, to ensure a reasonable degree of variation, firms with well-known brands but whose corporate brand is relatively unknown must be included. However, many selection methods would be unlikely to meet these requirements. For example, elicitation exercises using samples of participants would be unlikely to produce corporations like Brinker International whose name is not very well known. Thus, a brainstorming task was used to generate an initial list of multibrand corporations from within each of six broad consumer product categories: automobiles, apparel, food and beverage, household products, entertainment, and restaurants. The list of corporations was then verified so that both portfolio (e.g., LVMH which owns De Beers, Fendi, Gucci, etc.) or mixed/umbrella branding strategies were included (e.g., Nike, which in addition to the Nike umbrella brand owns Hurley International and Converse).

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Next, a number of pre-tests assessed the variation in subject evaluations of the corporations in terms of familiarity and favorableness of opinion. Pre-tests were conducted with single-item seven-point semantic differential scales that measured familiarity (very unfamiliar to very familiar) and favorability (very unfavorable to very favorable). In three pre-tests, a total of 143 participants rated a total of 71 corporations. Subsequently, corporations were selected from each of the six product categories to ensure that both very familiar/favorable and very unfamiliar/unfavorable corporations, and that both portfolio brand strategy and the mixed/umbrella strategy were included in the study. As an example, the pre-tests included eight corporations in the entertainment category. Based on the pre-test data, CBS (Fam = 5.98; Fav = 5.27), The Walt Disney Company (Fam = 6.43; Fav = 5.84), News Corporation (Fam = 2.57; Fav = 3.28), Time-Warner (Fam = 5.23; Fav = 4.76), and Viacom (Fam = 3.15; Fav = 2.98) were selected. Not selected were Dow Jones (Fam = 5.20; Fav = 4.72), Comcast (Fam = 3.40; Fav = 3.07), and Gannett (Fam = 1.40; Fav = 1.86). In this category, News Corporation and Gannett were classified as portfolio brand strategy firms, while the others were mixed/umbrella strategy firms. In a similar manner, the selection of brands from each of the other product categories resulted in 33 multibrand corporations (Web Appendix A available at https://gofile.me/2np0S/Laul01ji) selected to serve as corporate brands in the study. The mean familiarity/favorability and variance in familiarity/favorability of the selected sample of 33 was compared to the larger group of 71—neither the variances nor the means were significantly different indicating that the reduced sample was representative of the larger one.

4.1.2 Brand allies

The set of brands owned by each corporation was listed—ranging from four to eleven brands. Two pre-tests were conducted with the same two items reported above in which 69 participants rated a set of brand names with no reference to the corporate parent. Because signaling theory suggests unfamiliar and disliked brands will not be effective brand allies, selected brands were either relatively highly rated or relatively moderately rated in terms of their familiarity and favorability within their corporate family. Thus, variance is constrained by not selecting low-rated brands. The pre-tests yielded between two and four brands within each corporation, which resulted in 85 brands (Web Appendix A).

4.1.3. Stimulus

Participants were exposed to a product concept description (PCD). The PCD contained information about a fictitious focal brand called MAX, owned by a fictitious corporate parent, Mountain Lake Inc. All the PCDs where identical, except for the alliance information (i.e., the ally brand and ally corporation). In order to make the PCD realistic and believable, changes had to be made to ensure the ally brand and ally's corporation were a good fit for the focal brand (Samu, Krishnan, & Smith, 1999). Ensuring good fit involved varying information as to whether the focal brand was a product or service, the product category the offering was a part of, and the type of outlet through which the focal brand would be sold. At the end of the PCD, participants read that "(an) element of MAX's marketing plan includes an agreement with <*brand name*> which is owned by <*corporate brand name*>." A short statement on the promotional emphasis was also modified for the same reasons. An example of the stimulus is provided in Web Appendix B. Previous published research that has used similar product concept manipulations has produced relatively small effect sizes but impressive results in terms of statistical significance (e.g., Voss & Gammoh, 2004). Since the current design does not include a control group, measures of experimental effect size are not available. In summary, planned cell sizes are small, there is no control group, and it is reasonable to expect small effect sizes. Moreover, the study design averages over 85 different brand alliances and effect size is expected to vary based on the strength of the brand ally and the brand ally's corporate parent. Thus, statistically significant results should be more impressive not less.

4.2. Procedures

Participants were 935 students at mid-western university who took part in the study in return for course credit. None of the pre-test participants took part in the main study. Participants were randomly assigned to one of the 85 conditions. Data collection took place in three phases. Phase one involved measuring participants' attitude, familiarity, and favorability for three brands and three corporations. One of the three brands and its corporate parent were matched to the product and corporate brand in phase three (described below). The other two brands and corporations were randomly selected from the set of 33 corporations and 85 brands without replacement. Selection was constrained to ensure that participants did not respond to two brands from the same corporation. The attitude toward product brand items appeared on the first page, followed by the attitude toward the corporate brand on the second page; the brand and corporate names were rotated to control for order effects.

In the second phase, participants completed a distracter task unrelated to the current study. In phase three, participants were exposed to the PCD and then asked to respond to the dependent measure and manipulation checks. The PCD contained information that connected one of the brands and its parent corporation from phase one to the fictional brand. Thus, evaluation of attitude toward the product brand and attitude toward the corporate brand occurred prior to exposure to the stimulus and temporally separated by the distracter task. Participants were given the questionnaire and told not to open the booklet until instructed to do so. The instructions, which were printed on the cover page, and the PCD on the following page were read to the participants. Afterward, participants were instructed to complete the questionnaire. Cell sizes ranged from a low of five to a high of eighteen with an average of eleven.

4.3. Measures

Scales were seven-point, multi-item measures drawn from published research. The dependent variable, perceived quality (PQ), was measured using a six-item Likert-type scale from Ratneshwar and Chaiken (1991). Both attitude toward the brand ally (A_{ba}) and attitude toward the brand ally's corporate brand (A_{ca}) were measured with three-item semantic differential scales based on MacKenzie, Lutz, and Belch (1986). Scale means, standard deviations, and zero-order correlations are in Table 1, while scale items and the measurement model appear in Web Appendix C. As expected, mean perceived quality of the focal brand is lower than mean brand attitude for the brand ally and the corporate parent which are both better known. Brand portfolio dispersion and corporate brand standing are calculated. Brand portfolio dispersion is estimated by subtracting the average attitude toward brand ratings for all the brands in the study owned by the same corporation from the average attitude toward the brand for each brand.

Table 1
Means, construct reliabilities[a], and zero-order correlations[b]

				Group mean range[c]				
		Mean	SD	High	Low	PQ	A_{ba}	A_{ca}
PQ	Perceived quality—focal brand	4.56	1.21	5.36	3.60	.90		
A_{ba}	Attitude toward brand ally	5.41	1.38	6.83	3.33	.21	.93	
A_{ca}	Attitude toward corporate ally	5.02	1.47	6.83	2.93	.13	.31	.95

[a] Construct reliabilities are on the diagonal.
[b] Correlations are significant at $p < .05$.
[c] Highest and lowest group mean values from the 85 brand alliance conditions; SD = standard deviation.

Corporate brand standing is estimated by subtracting the average attitude toward the corporation for all corporations included in the study from the average attitude toward the corporation for each corporation.

5. Results

5.1. Psychometrics

Measurement quality was assessed by a confirmatory factor model (CFA) fit in LISREL 8.8 (Jöreskog & Sörbom, 1999). After deleting one item, the measurement model fit well (CFA: $\chi^2 = 280.43$, $p < .001$, df = 41; CFI = .97; RMSEA = .079) with all standardized item loadings above .91. Construct reliabilities were all above .90 and average variance extracted (AVE) was greater the recommended .50 threshold (AVE: PQ = .65, A_{ba} = .81, A_{ca} = .86). Next, discriminant validity between the scales was assessed due to their obvious commonality in stimulus (PQ and A_{ba}) and scale items (A_{ba} and A_{ca}). As recommended by Voorhees, Brady, Calantone, and Ramirez (2016), discriminant validity was examined by comparing AVE to the squared multiple correlation (SMC) between the constructs. In all cases, AVE exceeded the SMC between constructs (SMC: PQ vs. A_{ba} = .04, PQ vs. A_{ca} = .02, A_{ca} vs. A_{ba} = .09; Fornell & Larcker, 1981). Thus, the test confirmed that each of the measures capture a substantial amount of unique information. Based on the psychometric test results, each of the scales demonstrated adequate reliability and validity.

5.2. Model fitting

The model (see Web Appendix D) was fit in HLM 6.0 (Raudenbush, Bryk, Cheong, & Congdon, 2004) using the model fitting strategy of Snijders and Bosker (1999). During the model fitting process, confirmation for whether the data support the multilevel conceptualization was tested utilizing variance components (Snijders & Bosker, 1999). At each step, statistically significant variance components were observed supporting the multilevel conceptualization (Table 2). Importantly, at the third level, the variance components were no longer statistically significant, indicating that brand portfolio dispersion and corporate brand standing accounted for significant variation in the first-level parameter estimates. Across the 85 brand alliances, explained variance ranged from a low of 2.7% to a high of 21%. Thus, the data provide support for the multilevel conceptualization and affords significant opportunity to add explanatory value by accounting for second- and third-level nesting effects.

In Fig. 1, the perceived quality of the focal brand should be influenced by attitude toward the brand ally (A_{ba}) and attitude toward the brand ally's corporation (A_{ca}). The results from the first-level regression model demonstrate that both A_{ba} and A_{ca} were significant predictors of the perceived quality of the focal brand. Therefore, as suggested by signaling theory, both A_{ba} and A_{ca} affected the participant's evaluation of the previously unknown focal brand.

Table 3
Corporate brand standing and brand portfolio dispersion affect parameter estimates for A_{ba} and A_{ca}

Parameter	Estimate	Standard error	*p*-value
Intercept	4.526	0.050	<0.001
Attitude towards the brand ally (A_{ba})	0.161	0.036	<0.001
Attitude towards the corporate brand ally (A_{ca})	0.128	0.035	<0.001
Effects on the first-level intercept			
Brand portfolio dispersion	0.134	0.059	0.030
Corporate brand standing	−0.023	0.060	0.709
Corporate brand standing × brand portfolio dispersion	−0.049	0.064	0.455
Effects on the first-level slope of A_{ba}			
Brand portfolio dispersion × A_{ba}	0.099	0.097	0.310
Corporate brand standing × A_{ba}	−0.051	0.030	0.096
Corporate brand standing × brand portfolio dispersion × A_{ba}	0.138	0.108	0.209
Effects on the first-level slope of A_{ca}			
Brand portfolio dispersion × A_{ca}	−0.076	0.062	0.233
Corporate brand standing × A_{ca}	0.101	0.043	0.025
Corporate brand standing × brand portfolio dispersion × A_{ca}	−0.173	0.070	0.019

Note: A_{ba} is individual's attitude toward the brand ally minus the average attitude toward the brand ally within that brand; A_{ca} is individual's attitude toward the brand ally's corporation minus the average attitude toward that corporation; brand portfolio dispersion is the average attitude toward the brand ally within brand minus the average attitude toward the brand ally within the brand's corporation; corporate brand standing is the average attitude toward the brand ally's corporation minus the average attitude toward the brand ally's corporation across all corporations.

The full model was then fit. As shown in Table 3, the intercept coefficient is explained only by brand portfolio dispersion ($p = .030$). Regarding the slope coefficient for A_{ba}, only the *p*-value for the interaction of corporate brand standing and A_{ba} approached significance ($p = .096$). Even though this relationship is not strong, this interaction effect explained 40% of the variance in the slope coefficient for A_{ba}. Refuting H1, the regression coefficient for the effect of the two-level interaction of brand portfolio dispersion and A_{ca} on the first-level slope coefficient for A_{ca} was not statistically significant. This result should be interpreted in light of the significant three-level interaction reported below. Supporting H2, the regression coefficient for the two-level interaction effect of corporate brand standing and A_{ca} on the first-level slope of A_{ca} was statistically significant ($p = .025$)—thus, stronger corporate brands have stronger transfer to the focal brand. The regression coefficient for the three-level cross-level interaction for the effect of brand portfolio dispersion, corporate brand standing, and A_{ca} on the first-level slope coefficient of A_{ca} is also statistically significant ($p = .019$). The model explained 49.5% of the variance in the slope coefficient for A_{ca}.

Interpreting the three-level interaction using simple slope lines (Fig. 2) leads to the conclusion that when brand portfolio dispersion is low and corporate brand standing is high, the consumer's attitude toward the corporation has a strong positive relationship to the mean

Table 2
Tests of explainable variance in model regression coefficients

Random effect	Variance component	χ^2	*df*	*p*-value
From Level-1 model estimation				
Level-2 error attributable to Level-1 A_{ba} slope	.04351	75.799	52	.017
Level-2 error attributable to Level-1 A_{ca} slope	.01928	77.257	52	.013
From Level-2 model estimation				
Level-3 error attributable to Level-1 A_{ba} slope	.06262	45.907	31	.041
Level-3 error attributable to Level-1 A_{ca} slope	.03972	44.885	31	.051
From Level-3 model estimation				
Level-3 error attributable to Level-1 A_{ba} slope	.02374	25.336	19	.150
Level-3 error attributable to Level-1 A_{ca} slope	.00973	22.960	19	.239

Note: A_{ba} is Attitude towards the Brand Ally; A_{ca} is Attitude towards the Corporate Brand Ally.

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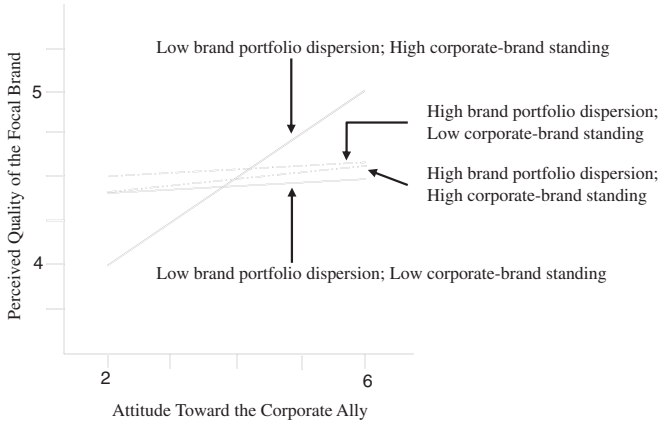

Fig. 2. Simple slope graph of the three-level interaction on perceived quality of the focal brand.

perceived quality evaluations of the focal brand. In all other conditions, the consumer's attitude toward the corporation has no relationship to the mean perceived quality evaluations of the focal brand. Overall, there is strong support for H3, and the results are consistent with the theorizing put forward herein.

6. Discussion

Corporate brands can play an important but complex role in consumer evaluations of a focal brand in a brand alliance. Consistent with previously published research, the authors show that brand equity, as operationalized through A_{ca} and A_{ba}, transferred onto a previously unknown focal brand in a brand alliance. Over the 85 alliances, the regression coefficients for A_{ca} and A_{ba} are random variables that vary across allies and corporations. A significant contribution to the literature is finding explanations for this variance.

It is argued herein that some brands are more diagnostic than others and hence the parameter estimates for the first-level effects of A_{ba} and A_{ca} on participants' perceived quality of the focal brand would be random variables. Significant random-error terms were observed lending credence to the conceptualization offered herein. A surprising finding is that the first-level intercept was significantly higher when brand portfolio dispersion was high. From the perspective of the focal brand then, there are two potential routes to brand alliance success. If the brand portfolio dispersion of a corporation is high, then the focal brand would desire to ally with product brands, which are strong relative to their portfolio-mates. On the other hand, if the brand portfolio dispersion of the ally's corporation is low, then including the corporate brand in the alliance in addition to the product brand will increase evaluations of the focal brand.

The results also demonstrate that A_{ca} has a much stronger effect on the perceived quality evaluations of the focal brand when the product brand portfolio is relatively homogeneous *and* the corporate brand is rated more positively than the average corporation. Thus, corporations interested in developing leveraging opportunities are faced with limitations. If the corporation's brand portfolio has a wide dispersion, then the leverage opportunities will positively correlate with A_{ba}—the strongest brands in the portfolio will get more and better leverage opportunities. At the same time, the corporate brand will not be able to exert strong leverage. Building a strong corporate brand in terms of consumer's attitude toward the brand is important, but optimally, such efforts should be accompanied by developing a brand portfolio with low brand portfolio dispersion.

6.1. Research Implications

The use of an experimental design within a multilevel linear model presents interesting possibilities for research. When the effects of stimuli have random components, then additional explanatory variables at the second, third, or higher levels help improve overall understanding of the impact of the stimuli on the dependent variable. A similar approach could be used in a variety of contexts. Such situations naturally arise whenever a stimuli that consumers respond to appear to be nested.

The evidence presented here suggests that the effect of A_{ba} on the perceived quality of the focal brand is variable. However, only corporate brand standing had any effect on the A_{ba} slope coefficient and the explained variance was much lower than that for the A_{ca} slope coefficient. Thus, an interesting area for future research is to propose and test theoretical constructs that might improve the explanation of such variation. Goldsmith and Lafferty (2013) suggest several constructs that might work here, including brand–partner congruence, brand–customer congruence, and partner–customer congruence. Future research might also consider constructs such as perceived risk (Voss et al., 2012), self-congruity with brands (Mazodier & Merunka, 2014), or credibility (Rao et al., 1999).

There is a paucity of research exploring corporate capability associations regarding the firm's perceived ability to introduce, nurture, and grow a homogeneous set of product brands, two exceptions being Dacin and Smith (1994) and DelVecchio (2000). Based on the results herein, when the corporation sponsors a homogeneous portfolio of product brands, customers can have more confidence in evaluating new brands, extensions, and brand leverage strategies in which the corporate brand participates. As suggested earlier, a diagnosticity effect could be at play here. However, the current study design does not permit examination of process mediators to verify the diagnosticity hypothesis. Future studies should examine the relationship between brand portfolio dispersion and its effect on customers' product evaluations through process mediation analysis.

6.2. Managerial Implications

Brands need time to build their reputation to the point at which they can successfully communicate market signals (Shapiro, 1983). Such brands may benefit from a connection to a strong corporate brand that is the parent of a homogeneous portfolio of brands. Based on published findings, well-known and reputable brands can serve as allies for relatively unknown brands. The same principle applies to the corporate brand, but such an ability seems conditional on the homogeneity of that corporations' brand portfolio. Thus, when managers build a portfolio of brands which are all perceived similarly by customers, the corporate brand is strengthened.

Caution should be used in extending the present findings to third entities, which are not brands. Whether the pattern of results when corporate brands are leveraged to causes, events, or other entities depend on the brand portfolio dispersion and is still an open a question. Published research suggests corporate brands can benefit by such leverage opportunities (e.g., Ruth & Simonin, 2003). More research is needed to determine if the corporate brand portfolio has an effect in such relationship types. In the meantime, managers should evaluate opportunities on a case by case basis.

6.3. Limitations and future research

The complex model used herein permits the inclusion of variables to explain variance in parameter estimates that vary across stimuli. In addition to the attitude measures reported herein, corporate and product brand familiarity were also collected. The familiarity measures, however, added no explanatory value and were omitted from the analysis. The present study included a limited set of explanatory variables.

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Expansion of the current model with additional effects would likely prove beneficial for both building the knowledge base and for applied brand management. Even though process mediation of the brand alliance effect has been explored in other published research (Voss et al., 2012), the replication of the current research should include risk reduction measures to solidify the attribution of the experimental effect to the hypothesized theoretical process. Researchers might also choose to explore the effects of advertising, either in terms of spending, message appeal, warranties, price, or other marketing variables that have been identified as marketplace signals (Kirmani & Rao, 2000). Finally, Goldsmith and Lafferty (2013) offer several suggested constructs that might be profitably deployed in expanding upon the current model. It should be noted that this research was designed to test theoretical propositions (Calder, Phillips, & Tybout, 1981) rather than to produce results generalizable to specific populations. Because theory is general and because the data supported the theoretical hypotheses, the theory can and should be applied in a wide range of situations. However, caution should be exercised in trying to generalize the results herein to specific brands, corporations, or populations. Preferably, further replications would be required to confirm the results here and produce results generalizable to specific target populations.

The construction of a multilevel experimental design presents new challenges and issues that have not been fully explored in the literature. Relevant issues for future research would include sample size, effect size, power, the use of control groups, and the potential to include fully crossed designs. The current study implements a design that used 85 treatment groups and no control group making calculation of experimental effect sizes impossible. Therefore, the current study relies on reduction in the variance components to estimate effect size. The current design is persuasive because the design includes manipulations known to produce small effect sizes, uses small cell sizes, but still achieves significant results. Nevertheless, more attention is needed to develop stronger measures of effect size in multilevel linear models generally and in the type of design used herein specifically. Finally, as a reviewer noted, in this study, brand portfolio dispersion is measured as brand attitude relative to the attitude of other brands within the firm's portfolio that were included in this study. This does not account for attitudes towards each and every brand that included corporations own. Future replications of this study should attempt to examine whether the inclusion of all brands in the corporate portfolio verifies the present results.

The primary focus in the research reported herein was on exploration of the cross-level effects between corporate brand standing and brand portfolio dispersion. For corporate brands to have an influential effect on consumers' perceived quality evaluations of the focal brand the corporate brand should have high corporate brand standing and low dispersion in its brand portfolio.

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Please cite this article as: Voss, K.E., & Mohan, M., Corporate brand effects in brand alliances, *Journal of Business Research* (2016), http://dx.doi.org/10.1016/j.jbusres.2016.03.007

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