

# Drivers of Brand Extension Success

The research presented in this article addresses the issue of the significance and relative importance of the determinants of extension success by simultaneously investigating ten success factors. The empirical analysis considers the direct relationships between success factors and extension success, the structural relationships among investigated factors, and moderating effects. The authors find that fit between the parent brand and an extension product is the most important driver of brand extension success, followed by marketing support, parent-brand conviction, retailer acceptance, and parent-brand experience. The authors also find several important structural relationships among the investigated success factors (e.g., marketing support → fit → retailer acceptance → extension success). Finally, the interaction terms of fit with the quality of the parent brand and with parent-brand conviction are statistically significant, albeit of relatively low importance.

**B**rand extensions—that is, use of established brand names to launch new products (e.g., use of the name Mr. Clean for a new detergent)—represent one of the most frequently used branding strategies. Extending brands both within and beyond the original product category is deemed to be profitable because, in general, it is assumed that brands that are already known and recognized require lower new product introduction expenses, such as advertising, trade deals, or price promotions (Collins-Dodd and Louviere 1999; Tauber 1988). Nevertheless, the success of brand extensions is uncertain. Failure rates of brand extensions in many fast-moving consumer good (FMCG) product categories are approximately 80% (Ernst & Young and ACNielsen 1999; *Marketing* 2003). Therefore, potential determinants of brand extension success (i.e., success factors of brand extensions) have emerged as an important focus of research inquiry to provide insights that may help managers reduce the failure rates of brand extensions (e.g., Aaker and Keller 1990; Bottomley and Doyle 1996; Dacin and Smith 1994; Swaminathan, Fox, and Reddy 2001). The findings of previous studies provide important insights into the factors that influence brand extension success. In particular, they reveal the kinds of success factors that play an important role in the success of an extension product, at least under certain conditions. For example, despite some mixed results, prior studies show that the quality of the parent brand and the fit between the parent brand and extension product categories are highly important brand extension success factors (Bottomley and Holden 2001). Overall, approximately 15 determinants of extension success have been proved significantly relevant ( $p < .10$ ) in at least one empirical study (for a more detailed discussion, see the subsection “Determinants of Brand Extension Success” in the “Conceptual Framework” section).

However, there are at least two key issues that have received little or no attention in prior work: First, little is known about the relative importance of the success factors in explaining brand extension success because each previous study investigated the effects of only a small fraction of all relevant success factors at one time (usually two to four factors). Second, previous studies tested only the direct relationship between brand extension success (dependent variable) and potential success factors (independent variables). They did not take into account that some success factors may constitute dependent variables in other structural relationships; that is, previous studies did not examine a series of structural relationships. The failure to account for potential relationships among success factors may cause faulty interpretation of the significance and relative importance of the success factors under investigation.

Against this background, this article makes two primary contributions to brand extension research by presenting a large-scale empirical study: First, we address the issue of the significance and relative importance of the determinants of extension success by simultaneously investigating ten success factors. Second, we apply a structural equation analysis to test several conceptual models of the determinants of extension success. Our analysis considers the direct relationships between success factors and extension success, the structural relationships among investigated factors, and moderating effects. Furthermore, an advantage of structural equation analysis is the ability to account for measurement errors. The contributions of our study are especially relevant for marketing practice. To improve brand extension success, it is imperative for managers to know which of the large number of potentially relevant success factors should receive the most attention and how they should allocate resources to the relevant factors.

We consider brand extensions within a comprehensive nomological net by developing a conceptual framework for our empirical research that builds on the results of prior research and the managerial wisdom derived from expert judgments. We specify and empirically test four alternative models. The focus of this article is not on theory development; rather, we pursue an empirical approach to studying the success determinants of brand extensions by unifying

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findings from published research and beliefs of managers into a comprehensive model of brand extension success.

Having outlined the motivation behind this article, in the next section, we develop the conceptual framework for our empirical research. Then, we describe the research design and discuss some methodological issues. We present the results of our study and conclude our article by outlining the implications of the findings, limitations of the study, and opportunities for further research.

## Conceptual Framework

### Overview of the Conceptual Framework

Our conceptual framework identifies potentially relevant success factors and specifies the system of relationships among these factors. Although we refer to the various relationships as hypotheses, this article focuses on testing the fit of alternative models and does not focus on testing various specific hypotheses. We opted to use the term “hypotheses” for the relationships in the models because it is the common term used in the literature.

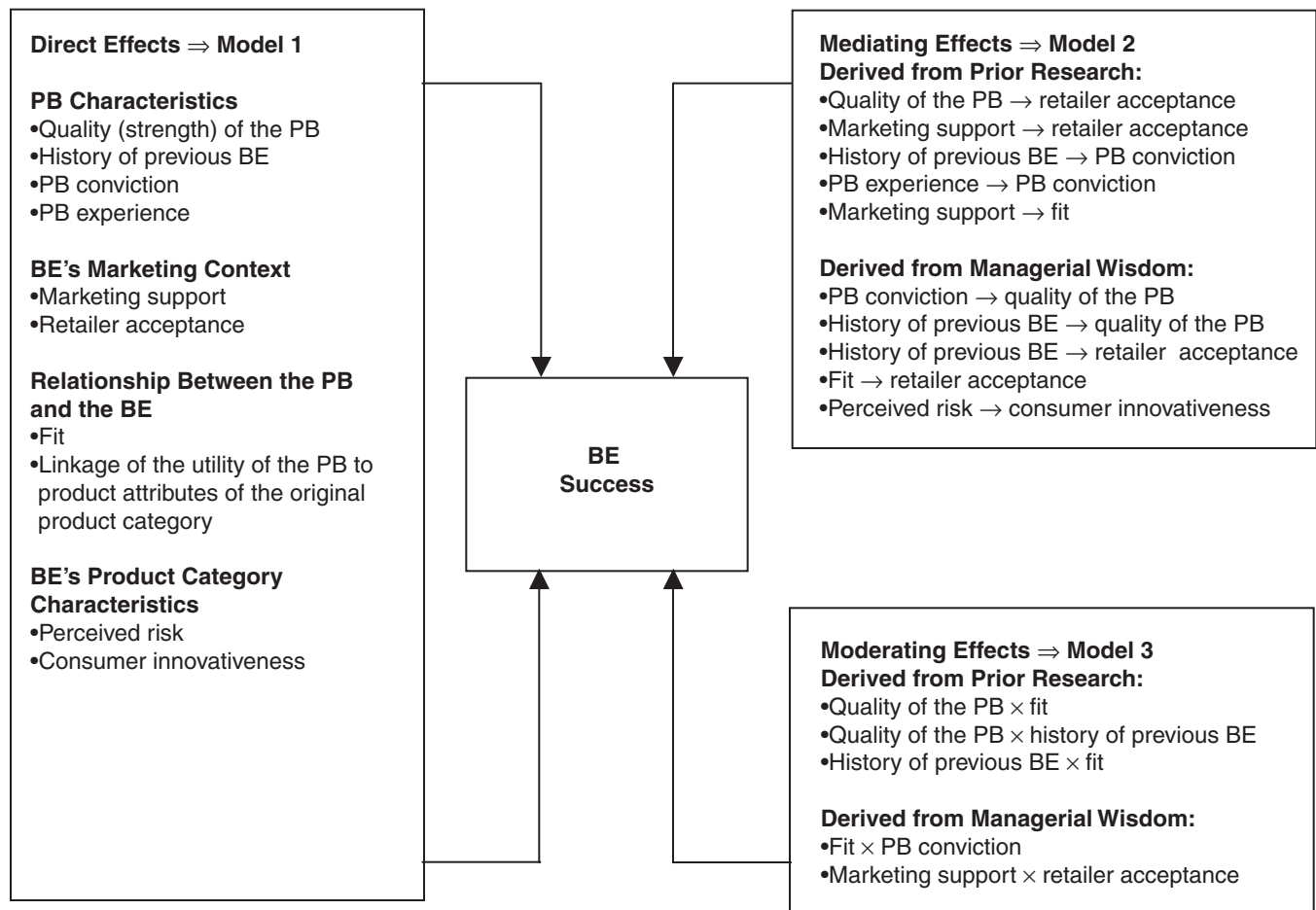
Figure 1 provides an overview of our conceptual framework. The potentially relevant determinants of brand extension success can be assigned to four groups: (1) parent-brand characteristics, (2) the extension’s marketing context, (3) the relationship between the parent brand and the extension product, and (4) the extension’s product category characteristics. Figure 1 proposes that the success of a brand extension is influenced by the direct effects of determinants, mediating effects, and moderating effects. The following discussion presents the details of the constituent elements of our framework.

### Determinants of Brand Extension Success

This section presents the results of a systematic literature review that resulted in identification of a broad variety of determinants of extension success.<sup>1</sup> The review included the following journals between 1985 and 2001 (the year of data

<sup>1</sup>Our research does not consider the effect of ingredient branding strategies that has been investigated in recent empirical studies (e.g., Desai and Keller 2002).

**FIGURE 1**  
**Overview of Conceptual Framework**



Notes: PB = parent brand; BE = brand extension. Model 1: direct effects; Model 2: direct and mediating effects; Model 3: direct, mediating, and moderating effects.

collection): *International Journal of Research in Marketing*, *Journal of Consumer Research*, *Journal of Marketing*, *Journal of Marketing Research*, *Management Science*, *Marketing Letters*, and *Marketing Science*. In addition, we included articles that were frequently cited in these journals in the review. We limited our review to empirical studies that investigate the effect of certain success factors (e.g., quality of the parent brand) on some kind of extension success measure (typically, customer evaluations of brand extensions linked, for example, to the perceived quality of the extension). Most of the studies were based on consumer surveys that used hypothetical brand extensions (i.e., extensions not introduced to the market). Respondents were asked to rate independent (i.e., success factors) and dependent (i.e., success of the extension; e.g., the perceived quality of the extension) variables on rating scales. Aaker and Keller's (1990) fundamental study represents a typical example. Few studies used market data as dependent variables (e.g., market share or stock market value; Lane and Jacobson 1995; Reddy, Holak, and Bhat 1994; Smith and Park 1992).

We identified 15 determinants of extension success that had been proved significantly ( $p < .10$ ) relevant in at least one empirical study. We excluded the following three determinants because they had only minor influence on brand extension success in prior studies: (1) difficulty in producing a product from the extension's product class (e.g., Bottomley and Doyle 1996; Bottomley and Holden 2001; Nijssen and Bucklin 1998; Sunde and Brodie 1993), (2) consumers' knowledge of the extension's product class (e.g., Smith and Park 1992), and (3) company size (Reddy, Holak, and Bhat 1994). Likewise, we excluded the order and direction of previous brand extensions (Dawar and Anderson 1994) and consumers' mood (Barone, Miniard, and Romeo 2000) because measuring these two factors is extremely complex within the scope of a consumer survey. Furthermore, on the basis of the results of a comprehensive pretest, we found that only a few consumers could correctly state the order and direction of previous brand extensions of real brands. This finding suggests that the order and direction of previous extensions play only a minor role in consumers' evaluations of a new brand extension product.

In summary, the literature review resulted in ten success factors that may influence brand extension success. These factors are included in our empirical study (see the second column of Table 1). Given that we considered the results of 45 empirical studies that cover 15 years of extensive research effort, it seems reasonable to assume that the ten identified success factors cover a substantial subset of all potentially relevant success factors. The term "potentially relevant" seems adequate because there are many examples of mixed results for a particular factor (e.g., Dacin and Smith [1994] and Reddy, Holak, and Bhat [1994] find mixed results on the number of previous brand extensions). In other words, a certain factor that was significant in one study was not significant in another study.

In addition to prior work, interviews with brand managers and researchers can also be useful in broadening the scope of knowledge about brand extension evaluations. Therefore, we used expert knowledge as an additional infor-

mation source to build further confidence in the relevance of identified brand extension success factors. There is an important tradition in marketing research of incorporating judgmentally derived information into marketing models (Leeflang and Wittink 2000), especially managerially estimated parameter values (e.g., Sandor and Wedel 2001). We interviewed 21 brand managers and researchers. We set the requirement that all experts needed to be highly knowledgeable in brand extension issues and in the German FMCG market. All brand managers hold senior management positions in major German FMCG companies. The researchers stem from marketing departments at several German universities. We conducted 21 semistructured interviews regarding the relevance of success factors and the system of relationships among them. During the interviews, we gave participants a description of the ten success factors, which we identified in the literature review, and asked them to evaluate the factors' relevance. Almost all experts agreed that, in general, the ten success factors are relevant for brand extension success. Finally, we asked the experts to add success factors that might play a major role for brand extension success. Most of them did not name any additional factors. Within the group of experts that mentioned additional determinants of extension success, only one type of factor was mentioned more than once, namely, profitability of the market as one of the characteristics of the extension's market. Although it is highly plausible to assume that this factor is important for new product success, we decided not to explore it in our study, because our analysis focused on consumers' evaluations of brand extensions. We also needed to restrict the number of success factors in our study to keep the evaluation task manageable for respondents.

Table 1 ( $H_1$ – $H_{10}$ ) presents the success factors that we considered in our study and their corresponding hypotheses. We abridged the original wording of the hypotheses because of limited space. We treat multiple measures of the same factor (e.g., fit or history of previous extensions) as one determinant of extension success. Table 1 quotes only one source per hypothesis. The sources listed provide a theoretical foundation for the postulated hypotheses. Therefore, we dismissed a detailed discussion of the ten direct effects. However, we provide a detailed explanation of the mediating and moderating effects because not all of them build on the results of prior research.

### **Mediating Effects**

*Mediating effects derived from prior research.* Prior research has focused on the relationship between extension success and its potential determinants. On the basis of our systematic literature review, we identified four studies (see Table 1) that investigated the impact of a certain success factor (independent variable) on another success factor (dependent variable). Nevertheless, the issue of how structural relationships among the success factors affect extension success is still not clear, because none of the studies considered extension success a component of the estimated model.

To begin with, retailers' utility for brand names is based on associations, such as retail performance expectations and positioning characteristics. Strong brands have more posi-

**TABLE 1**  
**Hypotheses Regarding Success Factors of Brand Extensions**

		A Brand Extension Is More Successful ...	Source
<b>Main Effects: Direct Effects of the Success Factors</b>			
<b>Parent-Brand Characteristics</b>			
H <sub>1</sub>	Quality (strength) of the parent brand	If the quality of the parent brand is high.	Smith and Park (1992)
H <sub>2</sub>	History of previous brand extensions	If the history of previous brand extensions is successful. For example, <ul style="list-style-type: none"> <li>•High number of previous brand extensions.</li> <li>•High variability among product types offered by the parent brand.</li> <li>•Low variance in quality among previous brand extensions.</li> </ul>	Dacin and Smith (1994) Boush and Loken (1991)
H <sub>3</sub>	Parent-brand conviction	If parent-brand conviction is high.	Dacin and Smith (1994) Kirmani, Sood, and Bridges (1999)
H <sub>4</sub>	Parent-brand experience	If parent-brand experience is high.	Swaminathan, Fox, and Reddy (2001)
<b>Extension's Marketing Context</b>			
H <sub>5</sub>	Marketing support	If the marketing support is high. For example, <ul style="list-style-type: none"> <li>•Advertising support.</li> <li>•Firm's marketing competence.</li> </ul>	Reddy, Holak, and Bhat (1994) Reddy, Holak, and Bhat (1994)
H <sub>6</sub>	Retailer acceptance	If the retailer acceptance is high.	Nijssen (1999)
<b>Relationship of Parent Brand to Extension Product</b>			
H <sub>7</sub>	Fit between parent brand and extension product	If the fit between the parent brand and the extension is high. For example, <ul style="list-style-type: none"> <li>•High global similarity.</li> <li>•High ability of the owner of the parent brand to make a product in the extension product class.</li> <li>•High relevance of the extended associations for the extension product.</li> </ul>	Aaker and Keller (1990) Aaker and Keller (1990)
H <sub>8</sub>	Linkage of the utility of the parent brand to product attributes of the original product category	The less the utility of the parent brand is linked to product attributes of the original product category.	Broniarczyk and Alba (1994) Rangaswamy, Burke, and Oliva (1993)
<b>Extension's Product Category Characteristics</b>			
H <sub>9</sub>	Perceived risk	If the perceived risk is low.	Nijssen and Bucklin (1998)
H <sub>10</sub>	Consumer innovativeness	If consumer innovativeness is high.	Klink and Smith (2001)
		Expected Sign	Source
<b>Mediating Effects: Dependence Relationships Between Success Factors</b>			
H <sub>11</sub>	Quality of the parent brand → retailer acceptance	+	Collins-Dodd and Louviere (1999)
H <sub>12</sub>	Marketing support → retailer acceptance	+	Collins-Dodd and Louviere (1999)
H <sub>13</sub>	History of previous brand extensions → parent-brand conviction	+	DeVecchio (2000)
H <sub>14</sub>	Parent-brand experience → parent-brand conviction	+	Kirmani, Sood, and Bridges (1999)
H <sub>15</sub>	Marketing support → fit between parent brand and extension product	+	Klink and Smith (2001)
<b>Moderating Effects</b>			
H <sub>21</sub>	Quality of the parent brand × fit	+	Aaker and Keller (1990)
H <sub>22</sub>	Quality of the parent brand × history of previous brand extensions	+	Keller and Aaker (1992b)
H <sub>23</sub>	History of previous brand extensions × fit	+	Dacin and Smith (1994)

tive associations of sales volume, competitive clout, and traffic-generating appeal. Retailers also expect that manufacturers are unlikely to place a strong brand name on an inferior product and risk diluting its brand equity. Therefore, the quality or strength of a parent brand is expected to have a positive influence on retailer acceptance of a new extension product (H<sub>11</sub>; Collins-Dodd and Louviere 1999). Furthermore, in general, retailers appreciate manufacturers' consumer advertising because it increases consumers' product awareness, thereby preselling the product and reducing retailers' selling costs. Therefore, greater marketing support in terms of consumer advertising should generate more retailer acceptance (H<sub>12</sub>; Collins-Dodd and Louviere 1999). Prior research has also found support for a positive impact of the history of previous brand extensions and parent-brand experience on parent-brand conviction. It might be expected that consumers' exposure to the brand name increases as the number of previous brand extensions increases. If we assume that experiences are positive, greater exposure to the brand name may generate greater liking for and trust in the brand name.<sup>2</sup> Therefore, the history of previous extensions might have a positive effect on brand conviction (H<sub>13</sub>; DeVeechio 2000). Related, direct experience with the parent brand may increase the personal relevance of the brand and generate greater liking for the brand. This phenomenon has been labeled the "mere ownership effect." Direct experience might also cause greater

<sup>2</sup>Although negative brand experiences that make consumers dislike the brand are possible, such experiences are likely to be rare; otherwise, brands would not survive in the marketplace.

parent-brand knowledge, stronger brand associations, and stronger autobiographical memories, all of which might result in higher levels of parent-brand conviction (H<sub>14</sub>; e.g., Kirmani, Sood, and Bridges 1999). Finally, research on typicality suggests that repeated exposure to an extension product may elevate consumers' perceptions of fit. Greater exposure to the brand extension helps consumers identify more shared attributes between the parent brand and the extension. Thus, higher levels of marketing support in terms of advertising lead to higher levels of perceived fit (H<sub>15</sub>; e.g., Klink and Smith 2001; Lane 2000).

*Mediating effects derived from managerial wisdom.* During the interviews with brand managers and researchers, we gave them a description of the ten success factors and asked them to point out possible structural relationships among the factors and to give a reason for each. The experts specified a total of 13 structural relationships. However, just one or a few respondents pointed out several of these relationships. We decided to exclude the relationships that were specified by only five or less experts (25%) to avoid any influence of personal subjective opinions on model development. As a result, we identified 8 structural relationships that were specified by at least six or more participants (see Table 2, Panel A).

In general, the experts provided highly plausible reasons for the hypothesized relationships among success factors. A total of 13 participants expected a positive effect of parent-brand conviction on perceived quality of the parent brand (H<sub>16</sub>). They reasoned that consumers who like or trust a parent brand should have more favorable beliefs about brand attributes and greater confidence in their beliefs than con-

**TABLE 2**  
**Judgmentally Derived Mediating and Moderating Effects of the Success Factors**

<b>A: Personal Interviews with Brand Managers and Researchers</b>		
<b>Mediating Effects: Dependence Relationships Between Success Factors</b>	<b>Expected Sign</b>	<b>Percentage of Experts</b>
H <sub>16</sub> Parent-brand conviction → quality of the parent brand	+	62
H <sub>17</sub> History of previous brand extensions → quality of the parent brand	+	52
H <sub>18</sub> History of previous brand extensions → retailer acceptance	+	38
H <sub>19</sub> Fit between parent brand and extension → retailer acceptance	+	29
H <sub>20</sub> Perceived risk of unknown brands → consumer innovativeness	–	29
<b>See Table 1</b>		
H <sub>11</sub> Quality of the parent brand → retailer acceptance	+	48
H <sub>12</sub> Marketing support → retailer acceptance	+	43
H <sub>15</sub> Marketing support → fit between parent brand and extension product	+	38
<b>B: Group Discussion with Brand Managers and Researchers</b>		
<b>Moderating Effects</b>	<b>Expected Sign</b>	
H <sub>24</sub> Fit × parent-brand conviction	+	
H <sub>25</sub> Marketing support × retailer acceptance	+	
<b>See Table 1</b>		
H <sub>21</sub> Quality of the parent brand × fit	+	
H <sub>22</sub> Quality of the parent brand × history of previous brand extensions	+	
H <sub>23</sub> History of previous brand extensions × fit	+	

sumers who dislike the brand. Moreover, strong and favorable brand associations enable the brand to be strategically differentiated and positioned in the consumer's mind. High levels of parent-brand conviction reflect favorable predispositions toward the brand and may function as a "filter" for how a consumer evaluates the specific attributes of the brand (including perceived quality), all of which would lead to a positive relationship between parent-brand conviction and parent-brand quality. Within this context, 11 experts also expected a positive influence of the history of previous brand extensions on perceived quality of the parent brand ( $H_{17}$ ). It might be expected that consumers' exposure to the brand name and their likelihood to try one of the brand's products increase as the number of previous brand extensions increases. Product trial provides new information about a brand. Information generated from product trial typically results in increased brand recall and stronger brand attitudes, which in turn have a powerful and positive impact on parent-brand evaluation, unless product experience is negative (Swaminathan, Fox, and Reddy 2001). Moreover, several experts agreed that the history of previous brand extensions has a positive impact on retailer acceptance of a new extension product ( $H_{18}$ ). They assumed that a successful history of previous extensions typically results in favorable beliefs about extension attributes, such as retail performance expectations and positioning characteristics. They also assumed that a successful history of brand extensions might increase retailers' confidence in and favor of their evaluations of subsequent brand extensions. Retailers may perceive the parent brand as highly competent in making and introducing extension products, which would also result in a positive relationship between the history of previous extensions and retailer acceptance. Continuing with possible effects on retailer acceptance, 6 participants expected a positive impact of perceived fit on retailer acceptance ( $H_{19}$ ). Retailers want to avoid creating poor assortment perceptions among customers. Not listing a new extension product, which is obviously affiliated with the parent brand (in terms of perceived fit between the extension product and the parent brand), may create the perception of an incomplete assortment. Therefore, high levels of fit might enhance the perceived importance of listing the new extension product to maintain store selection and quality reputations, which initiates a positive relationship between fit and retailer acceptance. Finally, 6 experts expected that the perceived risk of unknown brands would have a negative impact on consumer innovativeness ( $H_{20}$ ). They believed that the desire or willingness to try new experiences should decrease as the level of perceived risk increases. Diffusion theory holds that people respond differently to new products. To some extent, the response differences reflect differences in risk-taking propensity. Later adopters tend to be more risk averse than earlier adopters (Rogers 1983), which supports the notion that high levels of perceived risk are associated with a low desire to try new products.

### **Moderating Effects**

*Moderating effects derived from prior research.* In addition to the ten main effects variables ( $H_1$ – $H_{10}$ , Table 1) and the ten indirect effects ( $H_{11}$ – $H_{20}$ , Tables 1 and 2), a third

group of effects, namely, moderating or interaction terms, may play an important role in determining extension success. Given the results of prior studies, there are three interactions between the success factors under investigation that are expected to influence extension success (see Table 1,  $H_{21}$ – $H_{23}$ ).

The premise for extending an existing brand name is that consumers use their beliefs about the parent brand to draw conclusions about an extension product. The degree to which brand associations are transferred to the extension depends on the level of perceived fit between the brand and the extension product. Therefore, a positive interaction is expected between the fit variable and the quality of the parent brand (e.g., Aaker and Keller 1990); that is, the positive effect of the quality of the parent brand on extension success increases as the level of perceived fit increases ( $H_{21}$ ). Consumers also tend to be much more confident about their judgments of parent-brand quality if they are based on a large sample of instances (i.e., products that bear the parent brand name) rather than on a comparably small one. The "database" from which consumers draw information for forming judgments about the brand extension increases with the increase in the number of products affiliated with the brand (e.g., Dacin and Smith 1994). Consequently, the positive effect of higher levels of parent-brand quality on extension success increases as the number/success of previous brand extensions increases ( $H_{22}$ ). Consumers' skepticism arising from low fit can also be thwarted if a company has historically demonstrated that it provides consistently good products across several product categories (e.g., Dacin and Smith 1994). Therefore, the negative effect of low levels of fit on extension evaluations diminishes as the number/success of previous brand extensions increases ( $H_{23}$ ).

*Moderating effects derived from managerial wisdom.* We used expert knowledge to gain further insight into potentially relevant interaction terms. We acquired expert knowledge by conducting a second expert survey during a group discussion. The group consisted of three senior brand managers (from major German FMCG companies) and three researchers (from marketing departments of German universities). We presented the experts with ten success factors that we identified in the literature and asked them to identify highly relevant interaction effects between these factors. The six experts were required to come up with a solution during the group discussion that represented a consensus of all their opinions. This procedure resulted in five interaction terms: the aforementioned moderating effects ( $H_{21}$ – $H_{23}$ ), an interaction between fit and parent-brand conviction ( $H_{24}$ ), and an interaction between marketing support and retailer acceptance ( $H_{25}$ ; see Table 2, Panel B). The experts provided highly plausible reasons for the interaction terms. For example, the degree to which brand trust and likeability are transferred to an extension product depends on the level of perceived fit between the brand and the extension, similar to the interaction between fit and the quality of the parent brand. Higher levels of perceived fit allow for better transfer of brand associations (i.e., affect and beliefs). Therefore, a positive interaction between the fit variable and parent-brand conviction is expected ( $H_{24}$ ). Likewise, the experts agreed that the positive effects of high

levels of consumer advertising on extension success depend (to an extent) on the distribution support of the extension ( $H_{25}$ ). Consumer advertising is expected to increase consumers' product awareness and utility, thus generating consumer pull. The degree to which increased awareness and product utility translate into purchases of the extension product depends (to an extent) on the availability of the item on the shelf. Thus, consumer advertising positively influences extension success, provided that the product is available in retail stores, which brings about a positive interaction between the extension's marketing support and retailer acceptance.

### **Model Specification**

As we previously mentioned, the primary purpose of this study is to determine empirically the mediating and moderating effects between a broad set of determinants of brand extension success and the extent to which these determinants affect the success of brand extensions. Therefore, we integrated the identified direct, indirect, and moderating effects into alternative models. First, we estimated a main effects-only model (M1). Model M1 contains the direct effects of success factors on extension success that have been proposed in academic literature ( $H_1$ – $H_{10}$ ; see Table 1). Second, we specified Model M2, which considers the direct effects we investigated in M1 and the identified structural relationships among the determinants of extension success ( $H_1$ – $H_{20}$ ; see Tables 1 and 2). Third, we introduced moderator effects in Model M3, which contains the direct and indirect effects we investigated in M2 and the identified moderator effects ( $H_1$ – $H_{25}$ ). We included the moderator variables by using a step-by-step procedure that resulted in two significant moderator effects (M3a and M3b). Finally, Model M4 explores the moderating effect of consumers' familiarity with the extension product by means of a two-group analysis.

## **Research Design**

We tested the proposed models using a broad variety of real extensions and real parent brands in the German FMCG industry. We conducted two pretests to identify the parent brands and extension products that we finally used in the main study. We began with a set of 50 brands, taken from a list of the 100 brands on the German FMCG market, that generate the highest sales revenues. We limited our sample of brands to those that had launched at least five extensions within the past four years. We asked respondents ( $n = 40$ ) in the first pretest to rate their familiarity with these brands. We chose the 25 brands with the highest awareness ratings. We concentrated on well-known brands in our study because brand extensions are particularly popular in the marketplace for well-established brands (e.g., Swaminathan, Fox, and Reddy 2001; Tauber 1988).

We randomly selected five real brand extensions introduced between 1998 and 2001 for each of the 25 brands from the German LPV New Products Database.<sup>3</sup> (When we

designed our study, the LPV database contained all the new products introduced in Germany since January 1996.) We conducted a second pretest with a convenience sample of 171 participants to warrant that the brand extensions finally used in our study varied in terms of awareness and (perceived) extension success. The participants answered a series of questions about their familiarity with the extension products and their perceived quality of the extensions. We selected 22 parent brands with three extensions each on the basis of the pretest results. This process yielded 66 brand extensions for the main study.

We used multiple-item measures for extension success and for success factors. We developed a questionnaire using variables and rating scales that closely coincide with those used in previous studies (see the Appendix). We conceptualized extension success as perceived extension quality (e.g., Aaker and Keller 1990; Bottomley and Doyle 1996; Broniarczyk and Alba 1994; Klink and Smith 2001) and measured it with three questions that ascertained (1) the perceived overall quality of the extension ( $-3 =$  "very low," and  $+3 =$  "very high"), (2) the market position of the extension product (extent to which participants agreed/disagreed with the statement "[extension product] belongs to the top 3 products in the market" [ $-3 =$  "strongly disagree," and  $+3 =$  "strongly agree"]), and (3) the perceived overall quality relative to competing products in the market ( $-3 =$  "below average," and  $+3 =$  "above average").

We took measures of success factors from typical previous studies. For example, we measured the perceived fit by asking participants to rate the following kinds of items: (1) the overall similarity of the brand extension to the parent brand ( $-3 =$  "not very similar," and  $+3 =$  "very similar"), (2) the perceived ability of the company to make a product in the extension product class ("Would the people, facilities, and skills used in making the original product be helpful if the manufacturer were to make the extension product?") [ $-3 =$  "not at all helpful," and  $+3 =$  "very helpful"], and (3) the relevance of the brand-specific associations in the extension product category (Broniarczyk and Alba 1994). The Appendix provides an overview of all the measures we used.

The questionnaire was administered to people living in Germany by means of door-to-door interviews. Respondents participated voluntarily without any compensation and were selected according to a quota sampling procedure with a representative structure for Germany in terms of age, gender, and number of household members. In addition, we required respondents to know the brands that appeared on the questionnaire. Students majoring in marketing conducted the interviews. They attended detailed training sessions before going into the field. Interviewers obtained respondents' names and telephone numbers for validation purposes. We randomly contacted 5% of the respondents to confirm that the interviews were completed as planned. A total of 2426 respondents completed the questionnaire, and 7278 cases were obtained because each questionnaire had scales for 3 of the 66 brand extensions ( $2426 \times 3 = 7278$ ). We excluded respondents for whom extension categories were not relevant, which reduced the number of cases to 6668. We used a combination of listwise deletion and the

<sup>3</sup>The initialism LPV stands for "Lebensmittelpraxis Verlag," an information service for the German FMCG industry.

informative imputation procedure (Ford 1976) to handle missing values (.2%).

We used STREAMS 2.50 (Gustafsson and Stahl 2000) to handle the hierarchical structure (i.e., “repeated measures” nature) of our data, applying two-level structural equation modeling within a framework of maximum likelihood estimation (e.g., Muthén 1989, 1990). STREAMS provides an interface to the estimation program AMOS 4.0 (Arbuckle and Wothke 1999).<sup>4</sup> We performed outlier analysis and excluded influential outliers before we estimated each of the specified structural equation models (e.g., Baumgartner and Homburg 1996, p. 148; Bollen 1989; Mullen, Milne, and Doney 1995).

The sufficiently large sample enabled us to split the data randomly into two parts (Sample 1 and Sample 2), facilitating the cross-validation of findings (Byrne 2001). Sample 1 served as the calibration sample, which we used to test the hypothesized models. We subsequently tested the replicability of each model on the basis of Sample 2 (the validation sample).

## Results

We present the results of our study in three sections. First, we briefly describe the results of the assessment of the multiple-item measures we used. Second, we analyze different models with the direct, indirect, and moderating effects of the ten success factors shown in Tables 1 and 2. Third, we illustrate the managerial relevance of our findings by applying our “best” model to several hypothetical extension decisions and comparing it with an intuitive model advocated by managers.

### Measurement Model Assessment

In our examination of the reliability and validity of our measures, we computed Cronbach’s alpha for all scales. The alphas varied from .80 to .92. We then subjected the items to exploratory and confirmatory factor analyses. We ascertained the quality of the construct measurement by examining the sign, size, and significance of the estimated factor loadings and the magnitude of measurement error. All the factor loadings were significant ( $t > 30.54$ ), and they were highly related to their respective constructs, in support of convergent validity. Explained variance ranged from 52.9% to 84.9%. We computed two reliability indexes to ascertain how well the constructs are measured by their indicators (e.g., Bagozzi and Yi 1988; Fornell and Larcker 1981; Steenkamp and Van Trijp 1991). All constructs displayed satisfactory levels of reliability, as indicated by individual-item reliabilities in excess of .70 and composite reliabilities ranging from .62 to .85. These figures are comparable to figures obtained in many marketing studies (e.g., Edison and Geissler 2003; Laroche, Bergeron, and Goutaland 2001). Finally, we conducted a test for construct discriminant validity. We calculated the shared variance estimate for each success factor and compared it with the

square of the phi coefficient that represents the correlation between pairs of success factors (Fornell and Larcker 1981). Each of the shared variance estimates exceeded the square of the corresponding phi coefficient, which provided evidence of discriminant validity among all success factors. They represent distinct constructs in the structural equation models. In summary, the measures fit well with the data, and we used them in the following process to estimate and test the models previously described.

### Estimating and Testing Models with Direct, Indirect, and Moderating Effects

Table 3 reports the parameter estimates and goodness-of-fit indicators of Models M1, M2, and M3. We use overall fit indicators to assess how well the models fit the data (e.g., Hu and Bentler 1995). All fit indicators are within a satisfactory range and show that the models account for a substantial amount of variance.

A comparison of the path coefficients across models denotes that there are almost no differences, indicating that the estimates are robust. Furthermore, we cross-validated our findings by comparing the estimates across the calibration and the validation sample as a means to assess the robustness of the postulated model. The test involved constraining the path coefficients and factor loadings and the variance–covariance of the constructs to be equal across the two samples. We then evaluated whether the resulting change in chi-square was significant ( $p < .01$ ), with the appropriate number of degrees of freedom. We observed no statistically significant differences. This indicates that the models are robust when other samples are used.

*Effects of parent-brand characteristics.* All the models provided statistically significant support for the positive role of the parent brand’s quality and consumers’ brand conviction in determining brand extension success. We found notable differences for the history of previous brand extensions and parent-brand experience between the model that reflected only direct effects (M1) and the models that included indirect (M2) and moderator (M3) effects. When we examined only direct effects, parent-brand experience had no influence on extension success. Nevertheless, M2 and M3 reveal that there is a powerful and highly significant relationship between parent-brand experience and parent-brand conviction (standardized path estimate = .64,  $p < .01$ ). In other words, parent-brand experience has a significant and positive impact on extension success due to its positive effect on parent-brand conviction, even in the absence of any significant direct relationship between parent-brand experience and extension success. Therefore, ignoring the indirect effects of a variable results in faulty interpretation of the relevance of this factor for brand extension success. In this case, the estimated influence of the parent-brand experience on the success of a brand extension increases from .00% (nonsignificant direct effect in M1) to 10.39% (M2).

Model M1 similarly provides a biased estimate for the effect of the history of previous brand extensions on brand extension success. In M1, the direct influence of the history

<sup>4</sup>Covariance matrices are available on request.



**TABLE 3**  
**Structural Parameter Estimates and Goodness-of-Fit Indicators**

Paths	Estimates			
	M1	M2	M3a	M3b
H <sub>1</sub> Quality of the parent brand → extension success	+ .10**	+ .11**	+ .11**	+ .11**
H <sub>2</sub> History of previous brand extensions → extension success	− .04*	n.s.	n.s.	n.s.
H <sub>3</sub> Parent-brand conviction → extension success	+ .25**	+ .30**	+ .30**	+ .30**
H <sub>4</sub> Parent-brand experience → extension success	n.s.	n.s.	n.s.	n.s.
H <sub>5</sub> Marketing support → extension success	+ .13**	+ .14**	+ .13**	+ .13*
H <sub>6</sub> Retailer acceptance → extension success	+ .29**	+ .30**	+ .30**	+ .30**
H <sub>7</sub> Fit → extension success	+ .45**	+ .46**	+ .47**	+ .47**
H <sub>8</sub> Linkage of the utility of the parent brand to specific product attributes → extension success	n.s.	n.s.	n.s.	n.s.
H <sub>9</sub> Perceived risk of unknown brands → extension success	+ .08**	+ .09**	+ .08**	+ .08**
H <sub>10</sub> Consumer innovativeness → extension success	+ .05**	+ .06**	+ .06**	+ .07**
H <sub>11</sub> Quality of the parent brand → retailer acceptance	—	n.s.	n.s.	n.s.
H <sub>12</sub> Marketing support → retailer acceptance	—	+ .56**	+ .56**	+ .56**
H <sub>13</sub> History of previous brand extensions → parent-brand conviction	—	.13**	.13**	.13**
H <sub>14</sub> Parent-brand experience → parent-brand conviction	—	.64**	.64**	.64**
H <sub>15</sub> Marketing support → fit	—	+ .40**	+ .40**	+ .40**
H <sub>16</sub> Parent-brand conviction → quality of the parent brand	—	+ .74**	+ .74**	+ .74**
H <sub>17</sub> History of previous brand extensions → quality of the parent brand	—	+ .05*	+ .04*	+ .04*
H <sub>18</sub> History of previous brand extensions → retailer acceptance	—	+ .11**	+ .11**	+ .11**
H <sub>19</sub> Fit between parent brand and extension → retailer acceptance	—	+ .23**	+ .23**	+ .23**
H <sub>20</sub> Perceived risk of unknown brands → consumer innovativeness	—	− .25**	− .25**	− .25**
H <sub>21</sub> Fit × quality of the parent brand → extension success	—	—	+ .07**	—
H <sub>24</sub> Fit × parent-brand conviction → extension success	—	—	—	+ .08**

History × fit; marketing support × retailer acceptance; perceived risk of unknown brands × quality; history × quality: n.s.

**Total Effects of the Success Factors (i.e., Significant Direct Effect + Significant Indirect Effects)**  
**[Percentage Relative Importance in Brackets]**

Quality of the parent brand	.10 [7.19]	.11 [4.76]	.11 [4.62]	.11 [4.60]
History of previous brand extensions	− .04 [2.88]	.09 [3.90]	.09 [3.78]	.09 [3.77]
Parent-brand conviction	.25 [17.99]	.38 [16.45]	.38 [15.97]	.38 [15.90]
Parent-brand experience	n.s. [.00]	.24 [10.39]	.24 [10.08]	.24 [10.04]
Marketing support	.13 [9.35]	.52 [22.51]	.52 [21.85]	.52 [21.76]
Retailer acceptance	.29 [20.86]	.30 [12.99]	.30 [12.61]	.30 [12.55]
Fit	.45 [32.37]	.53 [22.94]	.54 [22.69]	.54 [22.59]
Perceived risk of unknown brands	.08 [5.76]	.08 [3.46]	.07 [2.94]	.06 [2.51]
Consumer innovativeness	.05 [3.60]	.06 [2.60]	.06 [2.52]	.07 [2.39]
Linkage of the utility of the parent brand to product attributes	n.s. [.00]	n.s. [.00]	n.s. [.00]	n.s. [.00]
Fit × quality of the parent brand	—	—	.07 [2.94]	—
Fit × parent-brand conviction	—	—	—	.08 [3.35]
NFI	.93	.92	.92	.92
NNFI	.93	.92	.92	.92
CFI	.95	.93	.93	.93
RMSEA	.045	.048	.046	.046
p value of test of close fit	1.000	.995	1.000	1.000
n (calibration sample)	3068	3068	3068	3068

\*Significant at the  $p < .05$  level.

\*\*Significant at the  $p < .01$  level.

Notes: n.s. = not significant. NFI = normed fit index, NNFI = nonnormed fit index, CFI = comparative fit index, and RMSEA = root mean square error of approximation.

of previous brand extensions on extension success is significant but negative. Thus, H<sub>2</sub> is not supported.<sup>5</sup> However,

<sup>5</sup>The negative direct influence might be attributed to some kind of parent-brand dilution effect. A history of brand extensions may cause increasing incongruity in the parent brand's product range. A review of the data indicates that respondents assessed nearly

Models M2 and M3 reveal that this factor is a significant, positive determinant of brand extension success as a result

one-half of the selected parent brands as having only a moderately clear brand image (seven-point rating scale: −3 = "very unclear," and +3 = "very clear"; for ten brands, means range from −1 to .5).

of its significant and positive effects on parent-brand conviction, quality of the parent brand, and retailer acceptance.

*Effects of the extension's marketing context.* All models support the direct effect on brand extension success associated with marketing support of the extension. However, Model M1 again provides a biased estimate of the impact of this success factor on extension success. Models M2 and M3 reveal that marketing support has both a direct impact on extension success and three indirect effects on extension success through the following paths:

1. Marketing support → fit → extension success.
2. Marketing support → fit → retailer acceptance → extension success.
3. Marketing support → retailer acceptance → extension success.

Accordingly, marketing support has a substantial total effect of .52 on the success of a brand extension. Consequently, a considerable change emerges in the relative influence of this variable compared with Model M1, which ignores structural relationships among the success factors. The relative influence of marketing support on the success of a brand extension increases from 9.35% (M1) to 22.51% (M2). In general, the total effect of any variable  $X_1$  on any variable  $X_2$  represents the comprehensive impact of  $X_1$  on  $X_2$ , when the entire system of structural relationships is considered among the variables under investigation. As with the total effect of the marketing support variable, the total effects of all other success factors can be computed to determine their relative importance for the success of a brand extension. Similarly, all models find strong support for the significance of the effect related to retailer acceptance. However, Table 3 shows that M1 overestimates the relevance of this factor for the success of an extension product.

*Effects of the relationship between the parent brand and the extension product.* The linkage of the utility of the parent brand to specific product attributes is statistically insignificant in all models, whereas the fit between the parent and the extension category emerges as the most important factor (sign as expected). Although the significance of this factor was not unexpected (given the results of prior research; e.g., Bottomley and Holden 2001), the overwhelming impact of this factor compared with other brand extension success factors is a notable result, especially because we used real brand extensions. Not too long ago, researchers repeatedly presumed that the overwhelming impact of the fit could be attributed to the use of hypothetical brand extensions (e.g., Klink and Smith 2001). However, the results of our study show that the fit still has a substantial effect on brand extension success, even under exclusive use of real brand extensions. Note that we applied a widely accepted and comprehensive measure of perceived fit (see the Appendix). The total effects reveal a considerable change in the relative influence of perceived fit on brand extension success compared with Model M1, which ignores structural relationships among the success factors. Relative importance of the fit between the parent brand and the extension product decreases from 32.4% to 22.6% (though fit still remains the most important success factor).

*Effects of the extension's product category characteristics.* Perceived risk of unknown brands and consumer innovativeness emerged as significant determinants of extension success in all models. However, these factors exhibited only minor relevance.

*Moderator effects.* We applied the single-indicator technique to incorporate the effects of moderating variables (Ping 1995, 1998). We found statistically significant effects for only two interaction terms (see Table 3), namely, the interaction terms of fit with the quality of the parent brand and with the parent-brand conviction. However, the contribution of the two interaction terms was small compared with the main effects of the success factors (direct and indirect effects of the variables). This means that moderating effects play a relatively minor role and that the incremental variance explained by the interaction terms is small. Simultaneous estimation of both interaction effects supports their statistical significance. However, the various fit indicators are significantly lower than for M2, and they suggest that the model does not represent an acceptable fit to the data (normed fit index = .87, nonnormed fit index = .87, comparative fit index = .88, and root mean square error of approximation = .058;  $p$  value of the test of close fit = .000).

Finally, the degree to which a consumer is familiar with the extension might be an important moderating variable because we used real brand extensions. For example, parent-brand characteristics (see Table 1) and the fit between the parent brand and the extension product should have a much greater effect when the extension is relatively unfamiliar. We applied a subgroup analysis (e.g., Jöreskog 1971; Ping 1998) to test the moderating effect of consumers' familiarity. The procedure involved dividing our sample into two groups of cases on the basis of different levels of familiarity (low and high) and estimating M2 in each subgroup without coefficient equality constraints. We measured consumers' familiarity with the extension by asking respondents how often they used the extension product ( $-3$  = "not at all," and  $+3$  = "very frequently"). We divided our sample into two groups on the basis of a mean split. The low- (high-) familiarity subgroup comprised respondents below (above) the mean. Table 4 reports the parameter estimates and goodness-of-fit indicators of the two-group model (M4).

In many ways, the results of the two-group analysis support the analysis that is based on the total sample. The estimates are quite robust. We find notable differences between the two groups for only three variables. The quality of the parent brand and the marketing support of the extension have a greater impact when the extension is relatively unfamiliar. This seems reasonable because respondents, who are unfamiliar with the extension product, will rely more heavily on external cues (e.g., brand name, marketing support) when evaluating the extension. The fit between the parent brand and the extension product has a greater effect when consumers are relatively familiar with the extension. This result is notable. We expected that the fit would have a greater impact within the group of consumers who were relatively unfamiliar with the extension product. However, high familiarity might help consumers identify or create

**TABLE 4**  
**Moderating Effect of Consumers' Brand Extension Familiarity (M4)**

Paths	Estimates		
	Low Familiarity (Below Mean)	High Familiarity (Above Mean)	Total Sample
H <sub>1</sub> Quality of the parent brand → extension success	+ .20**	+ .11**	+ .11**
H <sub>2</sub> History of previous brand extensions → extension success	n.s.	n.s.	n.s.
H <sub>3</sub> Parent-brand conviction → extension success	+ .31**	+ .31**	+ .30**
H <sub>4</sub> Parent-brand experience → extension success	n.s.	n.s.	n.s.
H <sub>5</sub> Marketing support → extension success	+ .21**	+ .05*	+ .14**
H <sub>6</sub> Retailer acceptance → extension success	+ .25**	+ .26**	+ .30**
H <sub>7</sub> Fit → extension success	+ .46**	+ .53**	+ .46**
H <sub>8</sub> Linkage of the utility of the parent brand to specific product attributes → extension success	n.s.	n.s.	n.s.
H <sub>9</sub> Perceived risk of unknown brands → extension success	+ .08**	+ .09**	+ .09**
H <sub>10</sub> Consumer innovativeness → extension success	+ .09**	+ .06*	+ .06**
H <sub>11</sub> Quality of the parent brand → retailer acceptance	n.s.	n.s.	n.s.
H <sub>12</sub> Marketing support → retailer acceptance	+ .56**	+ .39**	+ .56**
H <sub>13</sub> History of previous brand extensions → parent-brand conviction	+ .14**	+ .16**	.13**
H <sub>14</sub> Parent-brand experience → parent-brand conviction	+ .60**	+ .61**	.64**
H <sub>15</sub> Marketing support → fit	+ .30**	+ .32**	+ .40**
H <sub>16</sub> Parent-brand conviction → quality of the parent brand	+ .73**	+ .72**	+ .74**
H <sub>17</sub> History of previous brand extensions → quality of the parent brand	+ .05*	+ .08**	+ .05*
H <sub>18</sub> History of previous brand extensions → retailer acceptance	+ .12**	+ .18**	+ .11**
H <sub>19</sub> Fit between parent brand and extension → retailer acceptance	+ .19**	+ .29**	+ .23**
H <sub>20</sub> Perceived risk of unknown brands → consumer innovativeness	-.26**	-.25**	-.25**
<b>Total Effects of the Success Factors (i.e., Significant Direct Effect + Significant Indirect Effects)</b> <b>[Percentage Relative Importance in Brackets]</b>			
Quality of the parent brand	.20 [8.20]	.11 [4.98]	.11 [4.76]
History of previous brand extensions	.10 [4.10]	.11 [4.98]	.09 [3.90]
Parent-brand conviction	.46 [19.74]	.39 [17.65]	.38 [16.45]
Parent-brand experience	.27 [11.07]	.24 [10.86]	.24 [10.39]
Marketing support	.50 [20.49]	.35 [15.84]	.52 [22.51]
Retailer acceptance	.25 [10.25]	.26 [11.76]	.30 [12.99]
Fit	.51 [20.90]	.61 [27.60]	.53 [22.94]
Perceived risk of unknown brands	.06 [2.46]	.08 [3.61]	.08 [3.46]
Consumer innovativeness	.09 [3.69]	.06 [2.71]	.06 [2.60]
Linkage of the utility of the parent brand to specific product attributes	n.s.	n.s.	n.s.
	<b>Two-Groups Model</b>		<b>Total Sample</b>
NFI	.91	.92	
NNFI	.91	.92	
CFI	.92	.93	
RMSEA	.033	.048	
p value of test of close fit	1.000	.995	

\*Significant at the  $p < .05$  level.

\*\*Significant at the  $p < .01$  level.

Notes:  $n = 3853$  (below mean)/2275 (above mean). n.s. = not significant. NFI = normed fit index, NNFI = nonnormed fit index, CFI = comparative fit index, and RMSEA = root mean square error of approximation.

more shared attributes between the extension and the brand schema (e.g., Klink and Smith 2001). As a result, higher levels of familiarity may increase the impact of fit on consumers' extension evaluations.

To determine whether the differences between the two groups were significant, we constrained the model coefficients to be equal between subgroups, and we reestimated the model. We compared the resulting chi-square statistic

with the chi-square statistic from the first estimation. We found a statistically significant chi-square difference between the two groups, which suggests that the differences are significant.

*Model comparison.* We compared the performance of the estimated models using nested and nonnested model comparisons (Leeflang et al. 2000) based on the results of the cross-validation. Model M2 emerged as the "best"

model. The chi-square difference for M2 was substantially lower than that for the other models; that is, applying the constrained model (constrained path coefficients, factor loadings, and variance-covariance of the constructs) had the least negative consequence for Model M2. Mere addition of parameters should improve model fit. Therefore, it was important to consider the degrees of freedom when we compared the performance of the alternative models. The chi-square difference divided by the difference in the degrees of freedom was lower for M2 than for the other models. Therefore, incorporating indirect effects into M1 (resulting in M2) substantially improved prediction, whereas the incremental improvement by the interaction terms, which we introduced after accounting for the indirect effects of the ten success factors, was small.

### ***Empirical Application***

To illustrate the managerial relevance of our findings, we applied our best-fitting Model M2 to several hypothetical extension decisions in an additional empirical study and compared it with an intuitive model that managers who are not aware of M2 might use. We knew from our first expert survey that, in general, nearly all 21 managers agreed that the ten success factors implemented in M2 were relevant for brand extension success. However, the experts were not able to agree on the relative importance weights for the ten success factors. Thus, an intuitive model that managers might use would assume equal importance weights for all success factors (i.e., M1 with equal importance weights). Indeed, many managers with whom we spoke seemed to use some kind of a heuristic technique with equally weighted success factors to arrive at expected performance judgments.

In our application, we considered a manager who needed to decide whether to introduce several new products by extending established brands. We focused our illustrative cases on 12 typical, realistic brand extensions that had not been introduced yet (e.g., aspirin, adhesive bandages, Mon Cheri ice cream). The 12 brand extensions stemmed from six well-known FMCG brands in Germany. To apply M2 in this context, we needed data from a consumer survey on the levels of the ten brand extension success factors (seven-point rating scales) under consideration, in addition to the estimated parameters in Table 3. We administered a corresponding questionnaire to a convenience sample of 119 marketing students to obtain the required data. The application of M2 to the collected data provided estimates of the expected overall extension success and the incremental influence of each driver of brand extension success. This kind of information helps managers decide whether to introduce a proposed extension.

On the basis of the collected data, we assessed expected performance of the hypothetical extension products by taking (1) the average of the ten success factors (i.e., M1 with equal importance weights) and (2) the weighted average of the ten success factors using the empirically determined importance weights (M2). We scaled the importance weights so that they added up to 100%. Therefore, an extension product with the lowest rating on all success factors

earns an expected performance score of 1, and an extension product with the highest rating on each factor earns a score of 7. We found notable differences between M2 and the intuitive model that managers advocated. Differences in expected performance scores achieved up to .5 points on a seven-point rating scale, which can be viewed as substantial.

Furthermore, the assumption of equal weights for the success factors resulted in faulty interpretation of the incremental effect of the success factors on the expected performance of an extension product. The estimated path coefficients of the various success factors are a possible measure for the incremental effect of a certain success factor on brand extension success. However, elasticity is the usual measure for the incremental effect of a variable. Therefore, using (1) a model with equal weights of the success factors and (2) the empirically determined importance weights (M2), we calculated the resulting increase in expected performance (expressed as a percentage) if a certain success factor is increased by 10%. The resulting elasticity measured the incremental effect on expected performance (expressed as a percentage) of a 10% increase in a specified success factor. Table 5 reports the calculated elasticities for all success factors averaged across the extension products. There are substantial differences between the two models for nearly all elasticities. For example, a 10% increase in marketing support results in a 2.52% increase of expected performance in Model M2 versus a 1.14% increase in a model with equal weights. This means that the assumption of equal weights substantially underestimates the effect of marketing support on expected performance. The incremental effects that are associated with certain variables are the key factors in the decision of how to allocate resources to them. Thus, an intuitive model with equal weights can result in largely inappropriate allocation of resources.

### ***Summary***

We tested several conceptual models that considered brand extensions within a comprehensive nomological net by building on the results of prior research and managerial wisdom derived from expert judgments. Our simultaneous analysis of a broad variety of success factors revealed nine factors that significantly influence brand extension success. Fit between the parent brand and the extension product, marketing support, parent-brand conviction, retailer acceptance, and parent-brand experience were particularly major contributors in driving brand extension success. These factors deserve managerial attention. In addition, we found several important structural relationships among the investigated success factors. An analysis that fails to account for these relationships causes faulty interpretation of the significance, the relative importance, and the incremental influence of success factors. In addition, we found statistically significant effects for two interaction terms: the interaction of fit with the quality of the parent brand and with parent-brand conviction. However, the contribution of the two interaction terms is small compared with the main effects of the success factors. We illustrated the managerial relevance of our findings in an additional empirical study.

**TABLE 5**  
**Comparing M2 with an Intuitive Model (M1 with Equal Weights)**

Success Factor	Model M2		Equal Weights		(a)/(c)
	(a) Elasticity <sup>a</sup>	(b) SD	(c) Elasticity <sup>a</sup>	(d) SD	
Quality of the parent brand	.52	.18	1.10	.33	.47
History of previous brand extensions	.31	.08	.82	.23	.38
Parent-brand conviction	1.64	.59	1.01	.31	1.62
Parent-brand experience	.99	.18	.98	.13	1.01
Marketing support	2.52	.59	1.14	.21	2.20
Retailer acceptance	1.26	.35	1.02	.33	1.24
Fit	2.26	1.23	1.05	.62	2.15
Linkage of the utility of the parent brand to specific product attributes	.00	.00	1.14	.19	.00
Perceived risk of unknown brands	.27	.04	.81	.13	.34
Consumer innovativeness	.24	.03	.94	.09	.25

<sup>a</sup>Incremental effect (percentage) on expected performance of a 10% increase in the success factor. For example, an increase in marketing support of 10% results in a 2.52% increase of expected performance in Model M2 versus a 1.14% increase in a model with equal weights (i.e., equal weights substantially underestimate the effect of marketing support on expected performance).

## Discussion

### Managerial Implications

*Success factors that managers should care about.* From a managerial perspective, it is especially important to know the relevant determinants of extension success. Our analyses help managers divide the large number of potentially relevant success factors into essential factors (i.e., fit, marketing support, retailer acceptance, parent-brand conviction, and parent-brand experience) and less relevant or unimportant factors (i.e., history of previous extensions, consumer innovativeness, linkage of the utility of the parent brand to specific product attributes, and moderating effects). Managers should pay the greatest attention to the five success factors that substantially influence brand extension success. Consequently, the question arises of how to influence these factors to increase the likelihood of extension success. Our research uncovers several important mediating effects that may serve as a starting point for the identification of promising ways to influence certain success determinants and, consequently, the likelihood of extension success. The following points focus on the issue of how managers can influence the five most important success factors identified in our study:

- Fit between parent brand and extension product:* Appropriate selection of the parent brand and extension product category can directly affect fit. Extension advertisements can also increase the salience of crucial brand associations that help consumers infer extension features and benefits and thus understand how an extension fits. Consumers will likely infer judgments of fit and consistency when an advertisement illustrates how parent-brand attributes improve the extension's ability to provide benefits. Repeated exposure to advertisements that evoke appropriate parent-brand associations also helps consumers establish linkages between the brand and the extension product, thus positively influencing perceived fit between the extension product and the extending brand (Lane 2000).

- Parent-brand conviction and parent-brand experience:* Although extension products do not guarantee success on the basis of the brand name alone, our results indicate that parent-brand characteristics, such as consumers' parent-brand experience and conviction, play an important role in driving brand extension success. Managers frequently cannot influence these two factors in the short or medium term, because both factors reflect specific characteristics of the parent brand. However, our results indicate that building customer-based brand equity and/or acquiring strong brands are favorable strategies because they represent a prerequisite for the successful leveraging of an existing brand to reap some financial benefit. Moreover, managers who have access to a portfolio of parent brands might consider influencing parent-brand conviction and parent-brand experience by selecting an appropriate brand that performs favorably in terms of these factors.

- Retailer acceptance:* There are various possible ways to influence retailers' acceptance of a new product. For example, previous research has shown the positive effects of trade and slotting allowances on retailer acceptance of new products (e.g., Collins-Dodd and Louviere 1999). Promotional allowances reduce retailers' costs of telling consumers that the extension product can be obtained in a given store, thus strengthening interstore competition. Consumer advertising also builds demand and therefore should have a positive effect on retailers' decisions to accept new listings.

- Marketing support:* The marketing support that the extension product receives plays a critical role for FMCGs in determining the success of the new product. This factor is of specific interest for managers because it is under a company's direct control and, in general, can be influenced in the short term. However, the financial well-being of the company represents a boundary condition regarding the total support that new introductions may receive.

*Relative importance of success factors.* Another set of implications for managers is related to the incremental influence of each success factor on the performance of the extension product. Thus far, little has been known about the relative importance of success factors in explaining brand

extension success. Therefore, managers might intuitively assume equal importance weights for all success factors. Our results indicate that relative importance varies substantially across the success factors. To illustrate the managerial relevance of this finding, we applied the model advocated by managers and our best model (M2) to 12 hypothetical extension decisions. Our illustrative cases show that the assumption of equal weights for the success factors results in faulty prediction of extension success and in faulty interpretation of the incremental effect of the success factors on expected performance of an extension product. This is a serious problem because it is imperative for managers to know the magnitude of effects so that they can analyze the reasons for brand extension failure/success and properly allocate resources to the various success factors that are under a firm's control. Managers need to be aware that simple heuristic techniques, which ignore the differences in importance weights among the success factors, are likely to cause notable deviations from marketplace performance. Our results demonstrate that managers need to pay attention to the varying incremental effects of success determinants when evaluating and managing extension products.

### Limitations and Further Research

Measurement of the relative importance of brand extension success factors is a complex issue. It has been one of the key issues in prior research, but this work has provided limited insights into the relative importance of success factors because it has only analyzed a small fraction of success factors at one time. Against this background, our study is more appropriate for understanding relative importance. It synthesizes prior work and simultaneously examines the direct and indirect effects of a large number of potentially relevant success factors. However, note that the range and variance of brand extension success factors, among others, drive relative importance. We selected a broad variety of parent

brands and extension products to ensure that the brand extensions used in our study varied with respect to consumers' judgments of success factors. The selected parent brands belong to major firms on the German FMCG market. The extension products covered the ten most important food and nonfood product categories of ACNielsen's well-known classification. The manipulation check of success factors confirmed a large empirical variance. In this context, we note that the majority of previous studies also did not vary consumers' judgments of the success factors by means of an experimental design. A notable exception might be the fit variable that was often manipulated in previous work by the selection of low-fit and high-fit extensions. We realized the latter in our study and thus selected parent brands and extension products appropriately. Nevertheless, it might be useful for validation purposes if future work were to replicate our study in a laboratory setting using hypothetical parent brands and extension products that enable explicit manipulation of success factors. However, use of hypothetical parent brands represents a serious threat to the external validity of the results (e.g., Boush and Loken 1991).

Furthermore, we chose to analyze only FMCGs. It would be interesting to investigate the extent to which our findings could be generalized to other fields, such as consumer durables or services. Further research is also needed to investigate the generalizability of our results across multiple categories in FMCG.

In conclusion, fit should become a focus of further research, given the importance of the fit variable found in our study and in previous studies (e.g., Bottomley and Holden 2001). There is no universally accepted conceptualization of fit, which raises the more general question, What constitutes fit? The answer to this question is especially important for understanding how managers can manipulate perceived fit.

## APPENDIX Measures

Success Factor/Item	Source
<b>Quality of the Parent Brand</b>	
Perceived overall quality of the flagship product (-3 = "inferior," and 3 = "superior")	Aaker and Keller (1990); Sheinin and Schmitt (1994)
Extent to which participants agreed/disagreed with the following statements (-3 = "strongly disagree," and 3 = "strongly agree"): [Brand name] offers high-quality products. The quality of [brand name] products is far above average.	Aaker and Keller (1990); Sheinin and Schmitt (1994)
<b>History of Previous Brand Extensions</b>	
Number of products affiliated with the brand (-3 = "very few products," and 3 = "a lot of products")	Dacin and Smith (1994); Keller and Aaker (1992a); Sheinin and Schmitt (1994)
Success of the products affiliated with the brand (-3 = "not at all successful," and 3 = "very successful")	Aaker (1992a); Sheinin and Schmitt (1994)
Degree of similarity between the products affiliated with the brand (-3 = "not very similar," and 3 = "very similar")	
Participants were instructed to answer questions about products previously introduced and not the new extension product. This clarified that the question referred to all products previously introduced under the brand name and not to the new extension product.	

**APPENDIX**  
**Continued**

Success Factor/Item	Source
<b>Parent-Brand Conviction</b>	
Extent to which participants agreed/disagreed with the following statements (-3 = "strongly disagree," and 3 = "strongly agree"): In evaluating a new [product category] product, I could trust [brand name]. [Brand name] is a likeable brand. I relate to [brand name].	DelVecchio (2000); Kirmani, Sood, and Bridges (1999)
<b>Parent-Brand Experience</b>	
Frequency of using the parent brand (-3 = "not very often," and 3 = "very often") Frequency of purchasing the parent brand (-3 = "not very often," and 3 = "very often") Intention to buy the parent brand in the future (-3 = "not very likely," and 3 = "very likely")	Broniarczyk and Alba (1994); Swaminathan, Fox, and Reddy (2001)
<b>Marketing Support</b>	
Extent to which participants agreed/disagreed with the following statements (-3 = "strongly disagree," and 3 = "strongly agree"): [Extension product] is well supported in terms of advertising. [Extension product] receives competent marketing support.	Nijssen (1999); Reddy, Holak, and Bhat (1994)
<b>Retailer Acceptance</b>	
Extent to which participants agreed/disagreed with the following statements (-3 = "strongly disagree," and 3 = "strongly agree"): [Extension product] is well supported in terms of distribution. [Extension product] is available in many supermarkets.	Nijssen (1999)
<b>Fit</b>	
Global similarity between the parent brand and the extension product (-3 = "not very similar," and 3 = "very similar") Would the people, facilities, and skills used in making the original product be helpful if the manufacturer were to make the extension product? (-3 = "not at all helpful," and 3 = "very helpful") Extent to which parent-brand-specific associations are relevant in the extension category: Step 1: stating of brand associations; Step 2: relevance of these associations in the extension category (-3 = "not at all relevant," and 3 = "very relevant").	Aaker and Keller (1990); Bottomley and Doyle (1996); Broniarczyk and Alba (1994)
<b>Linkage of the Utility of the Parent Brand to Product Attributes of the Original Product Category</b>	
Extent to which participants agreed/disagreed with the following statement (-3 = "strongly disagree," and 3 = "strongly agree"): [Brand name] is closely tied to the attributes of the original product category. My associations with [brand name] are closely tied to the attributes of the original product category.	Rangaswamy, Burke, and Oliva (1993)
<b>Perceived Risk of Unknown Brands</b>	
Extent to which participants agreed/disagreed with the following statements (-3 = "strongly disagree," and 3 = "strongly agree"): If I buy an unknown brand, I would feel very uncertain of the level of quality that I am getting. I prefer buying a well-known brand, because I need the reassurance of an established brand name. I prefer buying a well-known brand, because the risk that my needs will not be met is low compared with an unknown brand.	DelVecchio (2000)
<b>Innovativeness</b>	
Extent to which participants agreed/disagreed with the following statements (-3 = "strongly disagree," and 3 = "strongly agree"): Overall, I enjoy buying the latest products. I like to purchase new products before others do. Overall, it is exciting to buy the latest products.	Hem, Chernatony, and Iversen (2001); Klink and Smith (2001); Midgley and Dowling (1978)

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