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The authors examine the effects of brand strategy (i.e., brand extensions vs. individual brands) on new product market share and advertising efficiency, and the degree to which these effects are moderated by characteristics of the brand, the product to which it is extended, and the market in which that product competes. The findings indicate that brand extensions capture greater market share and realize greater advertising efficiency than individual brands. The strength of the parent brand is related positively to the market share of brand extensions but has no effect on advertising efficiency. Neither the market share nor the advertising efficiency of extensions is affected by the number of products affiliated with the parent brand. The relative effect of brand extensions on market share is not moderated by the degree of similarity between the extension and other products affiliated with the parent brand. Advertising efficiency effects, however, are elevated when similarity is high, but only when it is based on intrinsic attributes. Market share and advertising efficiency effects are elevated when the extension is composed primarily of experience attributes and competes in markets where consumers have limited knowledge of the product class. Competitive intensity does not moderate advertising efficiency effects; however, market share effects are elevated when the extension competes in markets comprising few competitors. Finally, both market share and efficiency effects diminish as the extension becomes established in the market.

The Effects of Brand Extensions on Market Share and Advertising Efficiency

One of a company’s more valuable resources is its historic presence in the marketplace. To a great extent, this resource is embedded in consumers’ impressions of and beliefs about a company’s brands. In an attempt to improve the likelihood of new product success, an increasing number of companies are leveraging this asset by extending their brand names into new product areas. The widespread use of such a strategy has contributed to the growing interest in research on brand extensions. To date, studies have focused primarily on understanding how consumers form impressions of brand extensions based on their knowledge of other products associated with the brand (Aaker and Keller 1990; Boush and Loken 1991; Farquhar, Herr, and Fazio 1989; MacInnis and Nakamoto 1990; Minnesota Consumer Behavior Seminar 1987; Park, Milberg, and Lawson 1991). A complementary research issue that has received minimal attention is the financial implications of using brand extensions.

As a practical matter, the paucity of research examining the financial implications of using brand extensions is cause for concern given the temptation of managers to perceive well-established brands as insurance policies against new product failure. This perception emerged repeatedly in interviews we conducted with senior brand managers at major consumer goods companies. For example, one executive commented, “Our brand and what it means to consumers virtually guarantees the...
success of any product we put it on.” Because much of the evidence about the benefits and pitfalls of brand extensions is anecdotal, such hubris does not seem warranted and may even jeopardize new product success. Indeed, brand extension failures such as Arm & Hammer antiperspirant and Life Saver gum clearly demonstrate that a well-respected brand name affords no guarantee of success (see Abrams 1981).

An equally compelling reason for examining the financial implications of using brand extensions is the potential insight to be gained about the measurement of a brand’s financial equity. Specifically, a brand’s value can be construed in terms of two general dimensions, (1) its contribution to the success of existing products and (2) its contribution to the introduction of new products, or what might be referred to as the brand’s latent value (see Simon and Sullivan 1991 for a similar conceptualization). The latent value of a brand can be conceptualized as the difference in the discounted value of expected future cash flows between an established brand and a new brand, summed across the array of feasible products to which that brand can be extended (Wentz 1989). This conceptualization of a brand’s latent value highlights the relationship between the financial implications of brand extensions and brand equity, and, in so doing, suggests three important questions for guiding inquiry in this area:

1. To what extent does initial cash flow differ between brand extensions and individual brands?
2. Are these differences affected by the basic elements common to all extensions (i.e., the brand, the product to which it is applied, and the market in which the product competes)?
3. How does the difference in cash flow vary over time?

The first question concerns the extent to which brand extensions affect cash flows during a product’s introductory period. In our study, we consider the two aspects of cash flow cited most frequently in justifications for the use of brand extensions: sales volume and marketing communications costs. Specifically, brand extensions generally are held to facilitate entry into new product areas by promoting trial and thus enabling the product to capture a larger initial market share than would be possible if the same product were introduced using a new brand (Aaker 1990; Tauber 1981). Similarly, brand extensions are assumed to increase the efficiency of a firm’s investment in marketing communications (particularly advertising) by generating a greater level of sales from a given advertising investment or achieving a target level of sales with less investment than would be necessary if the same product were introduced using a new brand (Aaker 1990; Simon and Sullivan 1991; Tauber 1988). These assumptions are intuitively appealing, but the extent to which such benefits are derived from brand extensions remains unclear. Therefore, we examine the extent to which the use of brand extensions affects a new product’s market share and advertising efficiency.

The second question of interest is the extent to which the effects of brand extensions on market share and advertising efficiency are moderated by the three basic elements common to all brand extensions, which include characteristics of the (1) brand being extended, (2) new product to which the brand is applied, and (3) market in which that product competes (see Figure 1). As we discuss, many of the benefits that accrue to brand extensions result from the effects of this strategy on consumer information processing and decision making. Therefore, the specific variables we consider reflect conditions that are expected to affect consumers’ use of a known brand in decision making. Specifically, brand characteristics include (1) how similar the extension is to other products affiliated with the brand and (2) the ease with which consumers can evaluate it through visual inspection versus actual trial. Extension market characteristics refer to (1) the level of knowledge consumers have about the product class to which the extension belongs and (2) the number of competing brands from which consumers can choose.

The third question we address is the extent to which the effects of brand extensions on cash flows vary after a product’s introductory period. Though our study is cross-sectional, by examining the extent to which the effects of brand extensions on market share and advertising efficiency differ between new and established products, we can gain insight about how cash flow differences between brand extensions and individual brands might change over time. As illustrated in Figure 1, this variable, referred to as “age of the product,” is represented under the general heading of characteristics of the extension.

After developing a set of predictions related to the three research questions, we discuss the research design, which involved surveys administered to product managers and consumers. We then report the results and conclude with a discussion of the managerial and theoretical implications of the findings.

**THEORY AND HYPOTHESES**

**Main Effects of Brand Extensions**

The primary purpose of our study is to understand the extent to which various brand, product, and market conditions moderate the effects of brand extensions on market share and advertising efficiency. The development of a cogent set of such contingency hypotheses, however, depends on understanding the rationale that underlies the main effect propositions defined by our first research question. Let us examine these justifications.

First, a recognizable brand (e.g., one that has been developed in other product areas) is often relied upon by consumers as a means of coping with perceived risk (Cox 1967; Roselius 1973). In essence, a consumer’s knowledge of a company’s other products acts as a surrogate
for knowledge of the extension product, thus reducing the uncertainty surrounding a purchase and promoting product trial. This surrogate knowledge should also reduce the amount of additional information consumers need to evaluate the extension product, thus providing a company the opportunity to attain its sales objectives with less investment in advertising than would be necessary to develop consumer awareness of and trust in a new brand.

Similarly, established brands tend to be used as quality cues (Bellizzi and Martin 1982; Jacoby, Olson, and Haddock 1973). Wernerfelt (1988) demonstrates that extended brands should serve as particularly valuable cues for inferring quality. Specifically, firms invest considerable sums in developing their brands. This accumulated investment along with the cash streams from other products affiliated with the brand are assumed to act as "collateral" for quality. If the brand is extended to a product of poor quality, consumers will discover its inferiority upon initial trial and opt not to repurchase. Thus, not only is the success of the extension jeopardized but consumers' potential devaluation of the brand may threaten other products affiliated with it (Sullivan 1990). It follows that established brands are not likely to be extended to products of poor quality and so would provide particularly reliable quality cues which should, in turn, promote trial.

Third, brand extensions promote trial by facilitating consumers' use of brand name as a decision-making heuristic (Alba and Hutchinson 1987; Johnson and Russo 1984; Park 1976; Park and Lessig 1981). Specifically, the use of a brand as a heuristic requires that it be easily retrieved from memory. Research on the content and structure of evoked sets suggests that accessibility is greater for brands with which consumers have frequent contact than for brands that do not have such widespread presence in the marketplace (McNeal, McDaniel, and Smart 1983). Brand extensions provide the opportunity for consumers to come into contact with a brand in multiple product contexts and thus should be more accessible than individual brands. The additional brand exposure that occurs naturally under a brand extension strategy also provides the potential to reduce the advertising investment needed to achieve a particular sales objective.

Finally, brand extensions have the potential to capitalize on spillover effects from advertising for other products associated with the brand. By reinforcing consumers' impressions of the brand, advertising for other products affiliated with the brand may indirectly stimulate demand for recent extensions, thus reducing the advertising investment needed to generate a particular outcome.

The preceding discussion provides formal justification for conventional wisdom, which predicts:

H1: The use of brand extensions has a positive effect on (a) market share and (b) advertising efficiency.

**Brand Characteristics**

**Brand strength.** A basic premise underlying the use of brand extensions is that stronger brands provide greater leverage for extension than weaker brands (Aaker 1990; Aaker and Keller 1990). As can be seen in a widely noted definition of brand equity, brand strength has been articulated implicitly in terms of consumer predispositions toward the brand (Marketing Science Institute 1988). In the context of brand extension research, brand attitude has been defined more precisely in terms of consumer perceptions of quality associated with a brand (Aaker and Keller 1990). This definition, in turn, translates comfortably into a conceptualization of brand strength as reflected in the following comment by Aaker and Keller: "If a brand is associated with high quality, the extension should benefit; if it associated with inferior quality, the extension should be harmed" (p. 29). In short, the strength of a brand is related to its ability to reduce perceived risk. Brands of higher perceived quality should provide greater risk relief and so be better able to stimulate trial with less investment than brands of lower quality.

H2: The (a) market share and (b) advertising efficiency of brand extensions increase as brand strength increases.

**Number of extensions affiliated with the brand.** Several authors in both the academic and practitioner press have suggested that a brand's effectiveness may diminish as the number of extensions associated with it increases (Aaker 1990; Kesler 1987; Ogiba 1988; Tauber 1985, 1988; The Economist 1990). Formal rationale for this position can be found in categorization theory. As the number of products associated with a brand increases,
the “meaning” of the brand becomes blurred in the minds of consumers and therefore does not provide a clear basis for categorizing subsequent extensions. When categorization of an extension is confounded, the likelihood of affect transfer from the parent brand to the extension is reduced.

Though the logic of the potential hazards of using a common brand on multiple products is intuitively appealing, it may be oversimplified. Park, Jaworski, and MacInnis (1986) offer a compelling argument that the systematic extension of a brand can strengthen its position in the minds of consumers. Wernerfelt (1988) suggests that the value of a brand as a signal of quality can be elevated as the number of products associated with it increases. Similarly, a widely recognized, albeit controversial, theory of attitude formation holds that favorability of an attitude toward an object (e.g., a brand) increases with increased exposure (Zajonc 1968, 1980), as would be the case if a brand were used on multiple products. Finally, a recent study by Keller and Aaker (1992) indicates that successful extensions may improve consumer evaluations of the core brand and that brand evaluations appear to be resilient to unsuccessful extensions.

We examine the extent to which the effects of brand extensions on market share and advertising efficiency are affected by the number of products associated with the brand. However, given the conflicting predictions, we do not offer directional hypotheses.

### Extension Product Characteristics

**Referent product–extension product similarity.** As we discuss in the Method section, referent product–extension product similarity (hereafter referred to simply as similarity) is the degree to which consumers perceive the extension as similar to other products affiliated with the brand in terms of the needs they satisfy, situations in which they are used, physical features/component parts, and skills necessary to manufacture them.

Similarity is a complex construct in that its effects on new product success arise from both supply-side and demand-side forces. Though our primary interest is in understanding demand-side effects, supply-side effects cannot be overlooked; to clearly assess the former, we must understand and account for the latter.

The supply-side effects of similarity arise from the synergies that are possible in multiproduct firms. Synergies arise when a new product is able to leverage a company’s current resources. Such resources may be tangible, as is the case when a new product is able to use a company’s present channels of distribution, selling systems, physical distribution systems, and so forth. They may also be less tangible, as is the case when a product is able to benefit from a company’s accumulated expertise and know-how in serving a particular customer segment (Day and Montgomery 1983; Porter 1985; Smith and Sohi 1990; Wells 1984). The ability to tap such resources has long been recognized as pivotal to new product success (Ansoff 1965; Biggadike 1977; Cooper 1980). The likelihood of such synergies arising is in turn a function of how similar a new product is to a company’s other products (Gatignon, Weitz, and Bansal 1990; Peters and Waterman 1982; Teece 1980). Both empirical and conceptual work on synergy suggests that the supply-side effects of similarity are likely to have their greatest effect on introductory market share and marketing costs associated with selling and distribution. The extent to which advertising efficiency is subject to supply-side effects is unclear.

Demand-side effects refer to the effects of similarity on consumer responses to brand extensions. The relationship between similarity and the inferences consumers make about brand extensions is one of the more well-supported demand-side effects of similarity. Specifically, consumers’ beliefs about referent products tend to transfer to an extension most readily when the extension is perceived as being highly related to the referent products. In contrast, consumers tend to be skeptical of extensions they perceive as deviating too far from a firm’s historic domain of expertise (Aaker and Keller 1990; Boush and Loken 1991; Minnesota Consumer Behavior Seminar 1987). Hence, as similarity increases we would expect the perceived risk associated with the purchase to diminish, which in turn should promote trial and reduce consumers’ perceived need for and motivation to process additional marketer-provided information.

A second demand-side effect of similarity arises from its impact on the spillover effects of referent product advertising. Specifically, the effects of spillover information from referent product advertising should increase as its usefulness in evaluating the extension increases. Usefulness of spillover information in evaluating the extension depends on its level of abstraction. As similarity increases, the level of abstraction of spillover information decreases and hence its usefulness in evaluating the extension increases. Thus, as similarity increases, the effects of brand extensions on advertising efficiency should be elevated.

In summary, the supply-side effects of similarity arise from synergies that tend to occur when new products are highly related to a company’s other products. These effects are expected to be reflected primarily in market share and should not differ between brand extensions and individual brands. In contrast, demand-side effects are unique to brand extensions and are expected to affect market share and advertising efficiency. Therefore, because of the presence of both supply- and demand-side effects, the magnitude of the similarity–market share and similarity–advertising efficiency associations should be greater for brand extensions than for individual brands.

**H3:** The relative effect of brand extensions on (a) market share and (b) advertising efficiency is greater when referent product–extension product similarity is high than when it is low.1

1The language “relative effect of brand extensions” refers to the effect of brand extensions in relation to individual brands.
Several studies have found that specific bases of similarity vary in importance in the formation of inferences about brand extensions (Aaker and Keller 1990; MacInnis and Nakamoto 1990). Following from these studies, we examine the extent to which the aforementioned bases of similarity differentially moderate the brand extension—market share and brand extension—advertising efficiency associations.

Research exploring the cues consumers use to infer product quality affords insight into which bases of similarity are expected to have the greatest effect on the outcomes of brand extensions. Specifically, Olson and Jacoby (1972) distinguish between intrinsic and extrinsic quality cues. Intrinsic (extrinsic) cues are those aspects of products that, if changed, would (would not) physically alter the product. In the context of our study, the dimensions “physical features/component parts” and “manufacturing skills” are construed as intrinsic bases whereas the dimensions “needs satisfied” and “product usage situations” are construed as extrinsic bases of similarity.1

Consumers have been shown to rely more heavily on intrinsic than extrinsic cues to infer quality (Szybillo and Jacoby 1974). Aaker and Keller (1990) found that the dominant basis of “fit” between a set of referent products and a brand extension is the degree to which the products are perceived as being similar in terms of the skills necessary to produce them. Perceived similarity of manufacturing skills, in turn, tends to be inferred from how similar products are on intrinsic attributes such as physical features (MacInnis and Nakamoto 1990). Interestingly, more “extrinsic” bases of similarity such as the extent to which products satisfy related needs (i.e., substitutability and complementarity, as discussed by Aaker and Keller) seem to have minimal impact on the formation of inferences. These findings suggest that:

H₂: Intrinsic bases of referent product—extension product similarity have a greater effect than extrinsic bases of similarity on the (a) brand extension—market share and (b) brand extension—advertising efficiency relationships.

Mode of product evaluation. As used in our study, “mode of product evaluation” refers to whether products are composed primarily of attributes that can be evaluated accurately through visual inspection versus attributes that must be assessed through actual trial. For convenience of discussion, we refer to the former types of products as search goods and the latter as experience goods (see Nelson 1970, 1974 for similar distinctions).

When a new product is an experience good, consumers have neither actual experience with it nor concrete attributes on which to judge its quality (e.g., cough and cold remedies, packaged foods). Consequently, consumers tend to rely heavily on cues such as known brand names as bases for inferring quality (Kirmani and Wright 1989; Nelson 1974; Wernerfelt 1988). Conversely, with search goods, consumers can obtain useful information about quality through visual inspection and thus the importance of inferences based on a known brand name is reduced. These observations suggest that the effects of brand extensions on product trial and hence market share are greater for experience goods than for search goods.

Mode of product evaluation also is expected to moderate the effects of brand extensions on advertising efficiency. Nelson (1974) demonstrated that the content of advertising for experience goods is dominated by “soft” information focusing on image development or reinforcement. According to Nelson, the information content of advertising for experience goods is carried in the brand name. In contrast, advertising for search goods may contain soft information but is dominated by “hard” information about product performance on key attributes. These findings suggest that the preestablished identity of brand extensions should prove particularly valuable for experience goods. With search goods, a portion of the potential cost benefit of using a known brand is offset by the need to provide “hard” information about the product. Therefore:

H₃: The relative effect of brand extensions on (a) market share and (b) advertising efficiency is greater for experience goods than for search goods.

Age of the product. The effects of brand extensions, particularly on market share, are expected to be elevated when consumers must rely heavily on inferences in making purchase decisions. One of the more prevalent conditions in which this situation occurs is when consumers have limited knowledge of the extension product (Ford and Smith 1987), as would be the case when it is launched. Once experience with the product has been obtained, however, reliance on inferences in future decisions is reduced substantially. We therefore expect the market share effects of brand extensions to be greatest when products are first introduced and to diminish as they become established.

Similarly, the relative effect of brand extensions on advertising efficiency is expected to diminish after product introduction. After a product’s introductory period, advertising costs decline regardless of the brand strategy used (Crawford 1987). The rate of decline, however, should be greater for products introduced using a new brand than for brand extensions. By definition, brand extensions have a significant initial cost advantage over new brands by virtue of being able to leverage an established identity. This source of advantage is transient,
however, because consumer awareness and understanding of an initially unfamiliar brand can, over time, approach the levels of previously established brands. Thus, the new brand—brand extension cost differential should shrink as products become established. Therefore:

\[ H_0: \text{The relative effect of brand extensions on (a) market share and (b) advertising efficiency is greater when products are first introduced than after they have become established.} \]

**Characteristics of the Extension Product Market**

Markets consist of two basic entities, consumers and competing firms. We consider two aspects of these entities that affect consumers’ use of known brands in decision making: (1) consumers’ knowledge of the product class and (2) the number of alternatives from which they can choose.

**Consumers’ knowledge of the extension product class.** The extent to which consumers rely on brand name in decision making is often governed by their level of knowledge about the product class in question. When a consumer’s knowledge of a product class is low, the level of perceived risk associated with a purchase is high. As perceived risk increases, consumers are expected to increase their reliance on a known brand name. Similarly, the use of relatively simple decision heuristics that place considerable weight on brand name tends to increase as consumers’ knowledge of the product class decreases (Alba and Hutchinson 1987; Bettman and Park 1980; Johnson and Russo 1984; Park and Lessig 1981; Park 1976).

This evidence suggests that the effects of brand extensions on new product trial are elevated when a sizable fraction of the market has limited product class knowledge, and are offset somewhat when product class knowledge is high. Similarly, the advertising efficiency effects arising from the risk-reduction properties of brand extensions are expected to be offset as consumers’ knowledge of the extension product class increases.

\[ H_0: \text{The relative effect of brand extensions on (a) market share and (b) advertising efficiency is greater when consumers’ knowledge of the extension product class is low than when it is high.} \]

**Number of established competitors.** It has long been recognized that the presence of well-established brands in a market serves to deter entry (Porter 1980). This benefit awarded to incumbent brands can be explained partially by limitations in consumers’ cognitive capacity (Bettman 1979), which restricts the size and composition of evoked sets (McNeal, McDaniel, and Smart 1983). When a product category comprises many well-established brands, cognitive capacity is highly utilized and evoked sets are well defined. Such conditions increase the difficulty of gaining trial of a completely new brand, and so elevate the investment needed to launch a product with a new brand. Thus, the relative advantage of using a brand extension should be elevated in markets comprising many established competitors (see Sullivan 1989 for a similar discussion). Conversely, the difficulty of gaining trial of a new brand and the level of investment needed to achieve a particular outcome should be reduced in markets comprising few well-known competitors. Therefore:

\[ H_0: \text{The relative effect of brand extensions on (a) market share and (b) advertising efficiency is greater in markets comprising many competitors than in markets comprising few competitors.} \]

**METHOD**

Data were gathered in two phases. In the first phase, data on brand strategies, the number of products affiliated with the brand, the number of competitors in the extension product market, market share, and advertising costs were collected through a survey of product managers. In the second phase, for the brands/products contained in the managerial database, we surveyed consumers to obtain data on brand strength, referent product—extension product similarity, mode of product evaluation, and product class knowledge.

**Survey of Product Managers**

**Data collection.** Questionnaires were mailed to 447 product managers in consumer goods companies. Two mailings were used. In both the initial and follow-up mailings, respondents were given $1.00 as a token of gratitude. Additionally, a personalized note of appreciation hand-written on each cover letter emphasized the importance of the respondent’s participation and restated that all information provided would be treated confidentially.

A total of 181 questionnaires were returned for a 40.5% response rate. Data from seven additional respondents were gathered as part of a continuation of the study, bringing the total sample size to 188. Respondents were predominantly senior product/brand managers and averaged 5.8 years with their respective companies. To assess the degree of nonresponse bias, we contacted by telephone a sample of 38 of the 266 managers who did not return their questionnaires. These individuals were asked to provide information on the brand strategies, sales growth rates, and advertising/sales ratios of the product with which they were most familiar (see the forthcoming definition of “focal product”). Nonrespondents did not differ from respondents on these three variables. The most common reason for not completing the questionnaire was lack of time.

**Measures.** Brand strategy was measured by asking respondents to list up to six types of consumer products offered by their companies. Consistent with previous definitions of brand extensions (see, e.g., Farquhar 1989; Tauber 1988), “type of product” was defined for respondents as products from different product categories.

Respondents then listed the product with which they were most familiar (i.e., referred to as the focal product). Because the hypotheses of primary interest in our study involve new products, it was important that the sample consist of enough new products to allow for re-
liable tests of our predictions. Therefore, this question was modified on half the questionnaires such that respondents were asked to list the newest product with which they were most familiar.

Finally, respondents were asked to identify the products listed that used the same brand name as the focal product. The focal product was classified as a brand extension if it had the same name as one or more of a company’s other products and was not the original product to use that particular name. Six products were the original products affiliated with the brand and were not included in subsequent analyses (adjusted sample size = 182).

In measuring brand strategy as just described, a potential confound arises when a company follows an individual brand strategy (in the traditional sense of the term), but prominently features the company’s name or logo on multiple products. For example, Nabisco prominently features its name on many individually branded products (e.g., Oreo cookies, Saltine crackers). Such a strategy operates in much the same way as a brand extension in that it highlights the relationship among a set of products, thus enabling consumers to generalize their knowledge from a company’s other products to a new product. Therefore, respondents were asked also to indicate which products prominently featured their company’s name or logo on the product or its package. Focal products that were part of such a strategy, even though they may have used individual brands in a strict sense, were classified as extensions.

On the basis of prior conceptualizations of “brand dilution” (see, e.g., Aaker 1990; Tauber 1981, 1985), respondents were asked to indicate the number of different types of products that use the same brand as the focal product.

A measure of age of the focal product was needed not only for a test of $H_0$, but also to define the sample of new products to be used in testing the remaining predictions. Age of the focal product was defined in terms of how long the respondent’s company had offered the product to consumers. On the basis of previous research (Cooper 1980; Cooper and Kleinschmidt 1987), new products were defined as those that have been offered for more than three years and established products were defined as those that have been offered for more than three years. Of the sample of 182 products, complete data were available for 79 new products and 91 established products.

The number of competitors in the focal product market was measured by asking respondents to indicate the number of direct competitors their product faced in its served market.

The dependent variable market share was measured as the unit market share of the focal product in its served market. Market share was chosen because of its wide use as an indicant of performance among consumer product marketers. Note that this measure ignores the possibility that the product may achieve high sales volume yet have a low market share because it operates in a large market and vice versa. This potential concern, however, is dwarfed by the problems with alternative measures such as sales volume or sales growth, which are subject to wide variation across product categories (e.g., sales of 1 million units may be cause for celebration in one category and considered mediocre in another).

Efficiency of advertising spending was measured in terms of the advertising cost/sales (A/S) ratio, which captures the notion of advertising efficiency discussed in the Theory section. If a company fixes ad spending at a certain level, extensions should generate higher sales than individual brands, thus driving the A/S ratio downward. Similarly, if a company seeks to reach a particular sales target, brand extensions should enable it to do so with less ad spending than individual brands, yielding a lower A/S ratio for brand extensions. Questionnaire pretests revealed that respondents were hesitant to provide advertising costs and sales dollars. Therefore, respondents were asked to provide the A/S ratio directly. It is notable that the two dependent variables are not highly correlated ($r = .14, p < .20$).

To assess more clearly the effects of brand extensions on market share, we considered the effects of two covariates that influence new product sales and advertising efficiency: (1) the extent to which the product is differentiated from competing alternatives in terms of functional features and quality and (2) the extent to which the focal product shares a salesforce with the company’s other products. The first covariate is particularly critical because the benefits derived from brand extensions are assumed to be over and above other sources of competitive advantage (e.g., differentiation) a product might have. We measured differentiation by using two items asking respondents to indicate the extent to which the focal product was differentiated from competing alternatives in terms of functional benefits provided and quality (where 1 = not highly differentiated and 7 = highly differentiated).

The second covariate measures whether the focal product capitalizes on current channel relationships. It is intended to account partially for the supply-side effects of similarity. Specifically, new products that are closely related to a company’s other products often are able to capitalize on the firm’s present salesforce (Smith and Sohi 1990). This variable assumes a value of zero if the focal product used an individual salesforce and a value of one if it shared a salesforce with the company’s other products.

Survey of Consumers

Data collection. Information obtained from the survey of product managers was used to construct questionnaires that were administered to consumers (see Ap-
pendix for a subset of the items from the consumer questionnaire). A questionnaire was constructed for each new focal product for which complete data were available (N = 79). Each questionnaire was administered to a sample of 35 consumers.4 For example, 35 consumers were asked to respond to the items in the Appendix for the focal product of fragrances by Liz Claiborne. The means based on the 35 responses were calculated for each item and were merged with the managerial data corresponding to that product (in the Appendix, fragrances by Liz Claiborne).

The consumer survey was administered by door-to-door interviews in suburban areas of a large midwestern city. Door-to-door interviews were used because pretests (telephone surveys) had revealed that consumers have difficulty responding to the measures of similarity in the absence of visual aids (discussed shortly). Each respondent was asked to complete questionnaires for two products. A total of 1383 interviews were conducted ((35 respondents per product \times 79 products)/2 questionnaires per respondent). For products that were targeted to clearly defined market segments (e.g., infant toys, womens’ fragrances, hand-held power tools), respondents were screened for product relevance. For example, though Liz Claiborne fragrances may be purchased by men as gifts for women, the predominant purchaser is female. Therefore the Liz Claiborne questionnaire was completed by 35 female respondents.

The interviews were conducted by four students (two graduate students and two students beginning their senior year) majoring in marketing. Prior to going into the field, interviewers participated in training sessions conducted by the first author. For validation purposes, interviewers obtained respondents’ names and telephone numbers. The first author contacted approximately 10% of the sample to confirm that the interviews were completed as planned.

Measures. Following previous conceptualizations discussed in the Theory section, we measured brand strength by taking the average of two items that asked respondents to indicate the level of (1) quality and (2) value they associate with a particular brand. Responses were recorded on 7-point scales (1 = very low and 7 = very high). The correlation between the two items was .89 (p < .001). This measure correlated highly with a measure of trust in the brand (r = .80, p < .001).

Referent product–extension product similarity was measured by asking respondents to indicate how similar they believed the focal product was to each of the other products affiliated with the brand in terms of (1) the types of needs they satisfy, (2) the situations in which they are used, (3) skills required to manufacture them, and (4) their physical features (see Aaker and Keller 1990 and Maclnnis and Nakamoto 1990 for similar distinctions). As shown in the Appendix (see panel A), 7-point not similar/very similar scales were used to record consumers’ similarity judgments.

Pretests (using telephone interviews) revealed that respondents experienced difficulty in providing similarity judgments. The source of difficulty was the number of cognitions respondents had to remember simultaneously—the referent product, the extension, the basis of similarity, and the 7-point response scale. To facilitate response, interviewers prepared visual aids in which the similarity scale appeared at the top of a 3” \times 5” card followed by directions stating: “How similar is a (focal product) to a (referent product) in terms of (basis of similarity #1)?” One such card was prepared for each focal product–referent product basis-of-similarity comparison (see Appendix, panel A, for an example).

To account for the presence of the supply-side effects of similarity, we obtained a measure of the extent to which individually branded products were related to other products offered by the company. Without such a measure, testing the similarity hypotheses would distill to examining the correlation between similarity and share, and similarity and advertising efficiency. Such analyses could be misleading. It would not be possible to discern whether the effects of similarity were due to supply-side effects that arise in both extensions and individual brands or to the transference of consumer beliefs (i.e., demand-side effects unique to brand extensions). This measure was obtained in the same way as for brand extensions, with the exception that respondents were not informed of the company’s name. They received only the visual aid (i.e., the material on the 3” \times 5” card) and were asked to provide their perceptions of similarity between the focal product and other products offered by the same (unnamed) company on each dimension described previously.

A measure of referent product–focal product similarity was constructed for each basis of similarity (needs, usage situations, etc.) by summing similarity judgments across referent products on each basis of similarity and dividing the sum by the corresponding number of referent products. For example, in the Appendix, a measure of similarity based on needs satisfied would be obtained by summing responses for similarity based on needs satisfied across the four referent products and dividing the sum by four.

A factor analysis (see Appendix, panel B) of the four bases of similarity revealed that similarity could be construed in terms of the two dimensions specified in the
Theory section: (1) intrinsic bases (i.e., physical features of products and the skills needed to manufacture them) and (2) extrinsic bases (i.e., needs products satisfy and the situations in which they are used). The correlations between the two items that compose each dimension are .80 and .82 for the intrinsic and extrinsic scales, respectively. Measures of intrinsic and extrinsic similarity were constructed by summing the responses on the two items that compose each dimension.

Mode of product evaluation was measured by asking respondents to indicate on 7-point scales the extent to which they agreed with statements about the degree to which quality of the focal product could be assessed accurately through visual inspection versus actual trial (see Appendix, panel C). Cronbach’s alpha for the 4-item scale is .84.

Product class knowledge was measured in terms of the amount of knowledge consumers believe they have about the focal product class. We use “perceived knowledge” rather than “actual knowledge” because the former tends to drive information search and the types of decision heuristics consumers use (Bettman and Park 1980; Park and Lessig 1981), both of which are central to the theory underlying many of our hypotheses. Respondents were asked to indicate on 7-point scales the extent to which they agreed with four statements about the degree to which quality of the focal product could be assessed accurately through visual inspection versus actual trial (see Appendix, panel C). Cronbach’s alpha for the 4-item scale is .80.

RESULTS

Tables 1 and 2 report the descriptive statistics associated with the variables in our study. The results of formal hypothesis testing are discussed shortly. We find that brand extensions are able to capture an average of 8.3 more share points than new brands and have advertising/sales ratios that are 8.7 percentage points lower than those of new brands (see Table 1). Interestingly, the market share differential diminishes dramatically to 1.8 share points once products have become established in the market. Though the advertising/sales ratio differential diminishes after product introduction, it remains substantial at 5.2 percentage points.

As illustrated in Tables 3 and 4, we examined the relative effects of brand extensions on market share and advertising efficiency by using multiple regression. The models included the main effects of the covariates, independent variable, and moderator variables, along with the relevant independent variable × moderator interactions. To reduce the effects of multicollinearity between the interaction terms and the variables from which they are constructed, all variables were mean-centered as suggested by Cronbach (1987). Separate analyses (see Table 3) were used to test hypotheses involving variables for which data were available for brand extensions only (i.e., number of products affiliated with the brand and brand strength). Similarly, the effects of age of the focal product could not be tested simultaneously with the effects of the other variables because data on the other moderator variables were available for new products only.

Prior to hypothesis testing, the data were examined for outlying cases. Two cases had market shares beyond three standard deviations of the mean and therefore were not included in subsequent analyses. As can be seen in Table 2, the low correlations among the variables considered in our study suggest that multicollinearity should not be a major concern and that the moderator variables are unique.

Main Effects of Brand Extensions

The use of brand extensions was predicted to have favorable effects on market share and advertising efficiency. As shown in Table 4, the main effect of brand extensions on market share is significant in the expected direction ($\beta = 12.27, p < .05$). We also examined the effect size of brand extensions by isolating the change in $R^2$ that occurred when brand strategy was introduced.

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
</table>
| **Means and Standard Deviations of Study Variables**

<table>
<thead>
<tr>
<th></th>
<th>Total sample</th>
<th>Brand extensions</th>
<th>New brands</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brand strategy</strong></td>
<td>.63</td>
<td>(45)</td>
<td></td>
</tr>
<tr>
<td><strong>Brand strength</strong></td>
<td>5.64</td>
<td>(.54)</td>
<td>5.64</td>
</tr>
<tr>
<td><strong>Number of extensions</strong></td>
<td>4.49</td>
<td>(1.35)</td>
<td>4.49</td>
</tr>
<tr>
<td><strong>Intrinsic similarity</strong></td>
<td>4.54</td>
<td>(.69)</td>
<td>4.51</td>
</tr>
<tr>
<td><strong>Extrinsic similarity</strong></td>
<td>4.39</td>
<td>(.78)</td>
<td>4.30</td>
</tr>
<tr>
<td><strong>Evaluation mode</strong></td>
<td>5.50</td>
<td>(.61)</td>
<td>4.45</td>
</tr>
<tr>
<td><strong>Product knowledge</strong></td>
<td>5.37</td>
<td>(2.22)</td>
<td>5.36</td>
</tr>
<tr>
<td><strong>Number of competitors</strong></td>
<td>10.86</td>
<td>(10.64)</td>
<td>11.11</td>
</tr>
<tr>
<td><strong>Product age</strong></td>
<td>1.61</td>
<td>(.70)</td>
<td>1.62</td>
</tr>
<tr>
<td><strong>Market share</strong></td>
<td>13.06</td>
<td>(14.34)</td>
<td>15.11</td>
</tr>
<tr>
<td><strong>Advertising efficiency</strong></td>
<td>12.99</td>
<td>(9.46)</td>
<td>10.83</td>
</tr>
</tbody>
</table>
| **Standard deviations for the combined sample of new and established products. All other values are for new products only.**

*Values in parentheses are the standard deviations associated with each mean.

**New product sample = 79. Combined sample of new and established products = 170.**

**Data for brand strength and number of extensions were gathered for brand extensions only.**

**Means and standard deviations for the combined sample of new and established products. All other values are for new products only.**
Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Brand strategy</th>
<th>Brand strength</th>
<th>Number of extensions</th>
<th>Intrinsic similarity</th>
<th>Extrinsic similarity</th>
<th>Evaluation mode</th>
<th>Product knowledge</th>
<th>Number of competitors</th>
<th>Product age</th>
<th>Market share</th>
<th>Advertising efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand strategy</td>
<td>1.00</td>
<td>*</td>
<td>- .09</td>
<td>- .20</td>
<td>- .15</td>
<td>- .01</td>
<td>.25 ( .04)</td>
<td>- .40** (- .29)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand strength</td>
<td>1.00</td>
<td>.07</td>
<td>.15</td>
<td>.27**</td>
<td>- .18</td>
<td>.18</td>
<td>.23</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of extensions</td>
<td>1.00</td>
<td>.06</td>
<td>.04</td>
<td>.07</td>
<td>- .09</td>
<td>.17</td>
<td>.12</td>
<td>.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrinsic similarity</td>
<td>1.00</td>
<td>.51**</td>
<td>1.9</td>
<td>.23</td>
<td>.09</td>
<td>e</td>
<td>.10</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extrinsic similarity</td>
<td>1.00</td>
<td>2.1</td>
<td>.22</td>
<td>- .10</td>
<td>e</td>
<td>.13</td>
<td>.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation mode</td>
<td>1.00</td>
<td>- .32*</td>
<td>.14</td>
<td>e</td>
<td>- .07</td>
<td>e</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product knowledge</td>
<td>1.00</td>
<td>- .01</td>
<td>e</td>
<td>- .10</td>
<td>- .29*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of competitors</td>
<td>1.00</td>
<td>.11</td>
<td>- .23</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product age</td>
<td>1.00</td>
<td>.32*</td>
<td>- .18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising efficiency</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Data on brand strength and number of extensions were applicable to brand extensions only; hence, these correlations could not be calculated.

**Values in parentheses are correlations based on the combined sample of new and established products (n = 170). All other correlations are for new products only (n = 79).

*p < .05.

**p < .01.

after all other main effects and relevant interactions. Though significant statistically, brand strategy accounts for only 4.1% of the variance in market share (i.e., $\Delta R^2$ due to brand strategy = .041).

A negative relation between the use of brand extensions and advertising/sales would provide evidence of favorable effects of brand extensions on advertising efficiency. As can be seen in Table 4, the effect of brand extensions on advertising efficiency is significant in the expected direction ($\beta = -12.58$, $p < .01$). In terms of

Table 3

<table>
<thead>
<tr>
<th>Variable</th>
<th>Market share</th>
<th>Advertising efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of characteristics of the parent brand*</td>
<td>Standardized coefficient</td>
<td>Unstandardized coefficient*</td>
</tr>
<tr>
<td>Brand characteristics</td>
<td>(n = 49)</td>
<td>(n = 50)</td>
</tr>
<tr>
<td>Brand strength</td>
<td>.23</td>
<td>6.84*</td>
</tr>
<tr>
<td>Number of extensions</td>
<td>-.05</td>
<td>-.62</td>
</tr>
<tr>
<td>Covariates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salesforce synergy</td>
<td>.18</td>
<td>1.18</td>
</tr>
<tr>
<td>Differentiation</td>
<td>.29</td>
<td>2.29*</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>3.67*</td>
<td></td>
</tr>
<tr>
<td>Effects of age of focal product</td>
<td>(n = 168)</td>
<td>(n = 170)</td>
</tr>
<tr>
<td>Brand strategy</td>
<td>.13</td>
<td>5.01*</td>
</tr>
<tr>
<td>Brand strategy x product age</td>
<td>-.11</td>
<td>-7.20</td>
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<td>Covariates and moderator main effects</td>
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<td>Salesforce synergy</td>
<td>.00</td>
<td>.06</td>
</tr>
<tr>
<td>Differentiation</td>
<td>.19</td>
<td>1.53*</td>
</tr>
<tr>
<td>Product age</td>
<td>.40</td>
<td>13.20**</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.15</td>
<td></td>
</tr>
</tbody>
</table>

*Values in parentheses are the standard errors associated with the parameter estimates.

*Analyses of the effects of brand strength and number of extensions are based on brand extensions only.

*p < .05.

**p < .01.
Table 4
EFFECTS OF BRAND EXTENSIONS ON MARKET SHARE AND ADVERTISING EFFICIENCY

<table>
<thead>
<tr>
<th>Variables included</th>
<th>Market share (n = 77)</th>
<th>Advertising efficiency (n = 79)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standardized coefficient</td>
<td>Unstandardized coefficient</td>
</tr>
<tr>
<td>Independent variable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand strategy</td>
<td>.37</td>
<td>12.27**</td>
</tr>
<tr>
<td></td>
<td>(5.86)</td>
<td>(5.86)</td>
</tr>
<tr>
<td>Relevant interactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand strategy × intrinsic similarity</td>
<td>.12</td>
<td>5.02</td>
</tr>
<tr>
<td></td>
<td>(8.52)</td>
<td>(8.52)</td>
</tr>
<tr>
<td>Brand strategy × extrinsic similarity</td>
<td>.07</td>
<td>2.92</td>
</tr>
<tr>
<td></td>
<td>(8.36)</td>
<td>(8.36)</td>
</tr>
<tr>
<td>Brand strategy × evaluation mode</td>
<td>-.25</td>
<td>-16.56**</td>
</tr>
<tr>
<td></td>
<td>(9.70)</td>
<td>(9.70)</td>
</tr>
<tr>
<td>Brand strategy × product knowledge</td>
<td>-.26</td>
<td>-3.92*</td>
</tr>
<tr>
<td></td>
<td>(2.17)</td>
<td>(2.17)</td>
</tr>
<tr>
<td>Brand strategy × number of competitors</td>
<td>-.25</td>
<td>-.71*</td>
</tr>
<tr>
<td></td>
<td>(.38)</td>
<td>(.38)</td>
</tr>
<tr>
<td>Main effects of moderator variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extrinsic similarity</td>
<td>.17</td>
<td>3.18</td>
</tr>
<tr>
<td></td>
<td>(2.64)</td>
<td>(2.64)</td>
</tr>
<tr>
<td>Intrinsic similarity</td>
<td>.09</td>
<td>1.87</td>
</tr>
<tr>
<td></td>
<td>(2.77)</td>
<td>(2.77)</td>
</tr>
<tr>
<td>Evaluation mode</td>
<td>-.07</td>
<td>-1.70</td>
</tr>
<tr>
<td></td>
<td>(2.83)</td>
<td>(2.83)</td>
</tr>
<tr>
<td>Product knowledge</td>
<td>-.02</td>
<td>-1.14</td>
</tr>
<tr>
<td></td>
<td>(.83)</td>
<td>(.83)</td>
</tr>
<tr>
<td>Number of competitors</td>
<td>-.11</td>
<td>-.15</td>
</tr>
<tr>
<td></td>
<td>(.15)</td>
<td>(.15)</td>
</tr>
<tr>
<td>Covariates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salesforce synergy</td>
<td>.21</td>
<td>1.28**</td>
</tr>
<tr>
<td></td>
<td>(1.68)</td>
<td>(1.68)</td>
</tr>
<tr>
<td>Differentiation</td>
<td>.26</td>
<td>1.96**</td>
</tr>
<tr>
<td></td>
<td>(.84)</td>
<td>(.84)</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.24</td>
<td>2.95**</td>
</tr>
<tr>
<td>F for full model</td>
<td></td>
<td>2.95**</td>
</tr>
</tbody>
</table>

*Values in parentheses are the standard errors associated with the parameter estimates.

*p < .10.

**p < .05.

***p < .01.

effect size, brand strategy accounts for 7.3% of the variance in advertising/sales (i.e., $\Delta R^2$ due to brand strategy $= .073$).

**Characteristics of the Brand**

**Brand strength.** Stronger brands were predicted to have a greater effect on market share and advertising efficiency than weaker brands. In testing this hypothesis, we used only brand extensions because few new (i.e., individual) brands in our sample had achieved a level of recognition substantial enough to provide reliable measures of brand strength. As illustrated in Table 3, brand strength is related positively to market share ($\beta = .62, p < .01$). $H_{2b}$ is supported. Using the same approach to examining effect size as described before, we found that brand strength explains 4.8% of the variation in extension market share. Advertising efficiency, however, is not affected by brand strength. $H_{2b}$ is not supported.

**Number of extensions associated with the brand.** Recall that directional hypotheses were not offered about the effects of the number of products associated with a brand on market share and advertising efficiency. Analyses were restricted to multiproduct brands (i.e., the brand extension group). As shown in Table 3, the number of extensions affiliated with a brand has no effect on the market share ($\beta = -.62, p < .60$) or advertising efficiency ($\beta = 1.05, p < .30$) of subsequent extensions.

**Characteristics of the Extension**

Referent product–extension product similarity (general effects). We predicted that the relative effect of brand extensions on market share and advertising efficiency would be greater under conditions of high similarity than low similarity. As noted in the Method section, our measure of similarity consists of an intrinsic and extrinsic dimension. To provide the greatest amount of insight, we tested $H_{3a}$ and $H_{3b}$ using each basis of similarity separately.
As can be seen in Table 4, intrinsic similarity does not moderate the effects of brand extensions on market share (β for the brand strategy × intrinsic similarity interaction = 5.02, p < .60). However, consistent with predictions, the effect of brand extensions on advertising efficiency is elevated as intrinsic similarity increases (β for the brand strategy × intrinsic similarity interaction = -9.03, p < .10). Extrinsic similarity has no effect on the brand extension–market share association (β for the brand strategy × extrinsic similarity interaction = 2.92, p < .70) or on the brand extension–advertising/sales association (β for the brand strategy × extrinsic similarity interaction = 4.51, p < .40). H₃b is not supported. H₄b, however, is supported but only for intrinsic similarity.

**Differential effects of extrinsic and intrinsic similarity.** We predicted that intrinsic bases of similarity would have a greater moderating effect on the brand extension–market share and brand extension–advertising efficiency relationships than extrinsic bases. Though there are several ways to test these predictions, the most direct approach is to compare the coefficients associated with the brand strategy × intrinsic similarity and brand strategy × extrinsic similarity interactions for each of the two dependent variables. As mentioned previously, neither extrinsic nor intrinsic similarity moderates the effects of brand extensions on market share. Because both of these coefficients (i.e., the β’s for the brand strategy × extrinsic similarity and the brand strategy × intrinsic similarity interactions) are essentially zero, no support is provided for H₄a. For the brand extension–advertising efficiency association, the moderating effect of intrinsic similarity (β for the brand strategy × intrinsic similarity interaction = -9.03, p < .10) is greater than that of extrinsic similarity, which is essentially zero (β for the brand strategy × extrinsic similarity interaction = 4.51, p < .40). H₄b is supported.

**Mode of product evaluation.** We predicted that the relative effect of brand extensions on market share and advertising efficiency would be greater for experience goods than search goods. As illustrated in Table 4, the effect of brand extensions on market share diminishes as a product’s search attributes increase (β for the brand strategy × evaluation mode interaction = -16.56, p < .05). H₅a is supported. Similarly, the effect of brand extensions on advertising efficiency is greater for experience goods than search goods (β for the brand strategy × evaluation mode interaction = 6.28, p < .15). H₅b is supported.

---

2 Though mean-centering reduces multicollinearity between an interaction term and the variables from which it is constructed, correlations among interaction terms that contain common variables may reduce the significance of the interaction terms when, in fact, the interaction is significant. To guard against making type II errors with the interactions, we followed Fedhazur’s (1982) recommendation of considering effects where p < .20 as evidence of support for the hypothesis in question.

3 The effects of similarity. We were somewhat surprised to find that similarity did not have a greater effect on the brand extension–market share relationship. Because this variable has been the cornerstone of previous research on brand extensions, and is assumed to be pivotal in the success of the brand extension strategy, we decided to explore these findings further. Of particular interest was the possibility of ceiling effects that may have occurred as a result of having a sample consisting of products that have survived in the marketplace long enough to be part of a study such as ours. As discussed in the Theory section, the degree of similarity, or fit, between a new product and a company’s other products is a key determinant of new product success. By virtue of having a sample composed of “surviving products,” finding a relatively high mean and low variance associated with the similarity measures would not be sur-
The preceding discussion is not meant to imply that similarity is unimportant. We are simply saying that, given the amount of product-related information available to consumers combined with a sample of extensions that appears to be beyond some threshold level of similarity, it is not surprising that the effect of similarity on the brand extension—market share association is modest.
Another finding that warrants discussion concerns the effect of the number of competitors on the brand extension-market share association. Recall that the relative effect of brand extensions on market share diminished as the number of competitors in the extension market increased, which was counter to predictions. One possible explanation for this finding is related to stage of market development. Specifically, in markets in early stages of development, there are relatively few competitors and so early entrants are often faced with the task of developing primary demand. Under such conditions, brand extensions might prove to be particularly effective because the presence of a recognizable competitor (e.g., a brand that is established in other product categories) often facilitates legitimation of the market (Park and Smith 1990; Porter 1980, 1985). Similarly, in a market where there are few established competitors, entering with a well-known brand provides a particularly strong point of competitive differentiation.

In contrast, once markets mature, stimulation of primary demand is less crucial. Under such conditions, competitors are concerned primarily with defending market share, thus making it difficult for new products, regardless of brand strategy, to secure entry. Further, the differential advantage of having a well-known brand (i.e., a brand extension) is reduced somewhat in markets having many well-known competitors.

IMPLICATIONS

Choice of Brand Strategy

Our findings clearly indicate that the choice of brand strategy can play a significant role in the success of new products. It is equally clear, however, that brand extensions should not be viewed as guarantees against product failure. Though brand extensions contribute favorably to market share and advertising efficiency, brand strategy accounts for only 4% of the variance in share and 7% of the variance in advertising efficiency. Even when conditions highly favor the use of brand extensions, a sizable fraction of the variance in market share and advertising efficiency is still accounted for by other factors. For example, when new products comprise primarily experience attributes, brand strategy explains approximately 9% of the variance in market share and 16% of the variance in advertising efficiency.

Another issue in the choice of brand strategy is the growing reliance on brand extensions. Specifically, the "extension mindset" gives rise to a subtle cost in the form of lost opportunities to develop new brands that might enhance the long-term value of the firm by building its brand portfolio. Our findings do not reveal conditions under which brand extensions should not be used per se. There are, however, situations in which the contribution of using brand extensions is slight, such as when products comprise primarily search attributes and/or a large portion of a market is highly knowledgeable about the product class. Such conditions suggest opportunities for launching new brands rather than extending established ones.

Brand Valuation

Examination of the financial implications of brand extensions affords the potential for insight into the larger notion of measuring a brand's equity. Recall that an important aspect of such a measure is a brand's latent value and that this aspect of a brand's equity can be defined in terms of the differences in the discounted cash flows generated by using an established brand and those generated by using a new brand summed across the array of feasible products to which the established brand can be applied. Our findings suggest that the brand extension—new brand differential in the revenue component of cash flow widens as brand strength increases and when extension products (1) comprise primarily experience attributes and (2) compete in markets consisting of relatively few competitors and where consumers have limited knowledge of the product class. The brand extension—new brand advertising cost differential is widened when the extension (1) is highly related to other products affiliated with the brand on intrinsic attributes, (2) comprises primarily experience attributes, and (3) competes in markets where consumers have limited knowledge of the extension product class. These implications, however, must be interpreted in the face of evidence indicating that both revenue and advertising cost differentials diminish considerably after a product's introductory period. Indeed, when analyses were restricted to established products, the relative effect of brand extensions on market share was no longer significant. Hence, of the two aspects of cash flow examined, advertising costs may be the only enduring source of difference between extensions and new brands.

Effects of Inferential Beliefs in General

Our study provides insight into other areas of research underpinned by an understanding of how consumers use inferential beliefs in decision making. One such area, for example, is concerned with understanding how consumers' knowledge of a product's country of origin affects the product's success in the marketplace (see, e.g., Han 1989). Strategies that highlight country name operate in much the same way as brand extensions, enabling consumers to form inferences about a product based on their knowledge of and beliefs about other products from that country. Therefore, we would expect the conditions that affect financial aspects of brand extensions to have similar effects on the outcomes of strategies that highlight a product's country of origin.

LIMITATIONS

Though products in the brand extension and individual brand groups varied widely in terms of performance, our study is somewhat incomplete in that we consider only successful brand extensions and individual brands (i.e., the products were still on the market at the time the study
was conducted). One of the more important implications of this limitation pertains to our findings on the effects of brand strength and similarity. The likelihood of successfully introducing a new product increases (1) when the company can leverage a strong brand and (2) as the degree of similarity between that product and the company’s other products increases. So, for a sample consisting of surviving products, the relatively high scores on the brand strength and similarity scales are not surprising. As a consequence, we cannot conclude that brand strength and similarity do not affect the market share of brand extensions. Rather, we know only that over “moderate” to “high” ranges, brand strength and similarity do not moderate the relative effect of brand extensions on market share.

More generally, the conclusions drawn from this and similar studies could be strengthened by including a sample of product failures. For example, in our study, we concluded that the use of extensions is particularly advantageous when the new product comprises primarily experience attributes. Extensions were assumed to afford a greater degree of competitive advantage to experience goods than to search goods. Hence, this conclusion would be strengthened if we were able to demonstrate also that the incidence of extension failure was lower for experience goods than for search goods. Inclusion of product failures under both brand strategies would provide valuable comparison groups in future research.

A second potential limitation stems from the unique nature of the database used in our study. Specifically, there is a lag between the time when products in our sample were introduced and when the consumer data were gathered. Market share and advertising cost data were gathered for 1988. To obtain those data, however, we had to use products introduced during or before 1987. Consumer perceptions were gathered in the middle of 1989. The concern is simply that what is critical to new product success is consumer perceptions of referent product—extension product similarity at the time of product introduction. It is not clear that perceptions measured at the time of introduction and those taken one year later would differ. If they do differ, however, one would expect perceived similarity to increase over time as consumers become familiar with a new addition to a family of products associated with a brand. Though the absolute levels of perceived similarity observed in our study might be greater than those at the time when the dependent variables were measured, the same would be true for all products in the sample and hence interpretation of the results should not be affected.

Finally, the usual caveat about causation that accompanies all cross-sectional studies holds here. Indeed, one could argue that managers do not expose established brands to unnecessary risk and so use brand extensions only when they have evidence that the product is likely to be successful. This proposition of reverse causation does not appear to be a significant concern, however. In the early phases of our study, interviews with product managers revealed that brand strategy decisions are made prior to test marketing. Though managers do assess the degree of “fit” between a new product and other products that are associated with the brand, the brand decision per se does not seem to be influenced by managers’ perceptions of riskiness of the project. In fact, most managers with whom we spoke viewed the ability to use an established brand as a key determinant of new product success.

**DIRECTIONS FOR FUTURE RESEARCH**

Our findings not only contribute to the growing body of knowledge in the area of brand equity, but also augment previously defined research agendas by suggesting several specific issues warranting further inquiry. First, the construct of brand strength is one of the most central components of any model of brand equity. At the present time, however, empirical studies such as ours have conceptualized brand strength in terms of consumers’ attitude toward the brand with respect to quality. Though this aspect of brand strength is undoubtedly important, it is limited. As noted, the relationship between consumer attitudes and marketplace behavior is tenuous. Future conceptual and empirical work therefore should explore the implications of different approaches to measuring brand strength. Aaker’s (1991) conceptual model of brand equity suggests several dimensions of brand strength. Given these dimensions, it may be possible to develop a composite measure of brand strength that integrates attitudinal dimensions with behavioral dimensions such as brand loyalty and brand share across the markets in which the brand competes.

Another measurement-related issue is referent product—extension product similarity. In our study, similarity was measured by aggregating similarity measures on specific dimensions (e.g., the needs products satisfied) across multiple products. Such a measure presumes that consumers are aware of the set of other products affiliated with the brand and attempt to interpret a new extension in terms of this set of referent products. However, because of consumers’ cognitive limitations, this may not be the case. Given the importance of this construct in developing a theory of brand equity, future research should explore the implications of alternative conceptualizations of similarity. Of particular interest is understanding the nature of the heuristics consumers use to arrive at similarity judgments. For example, consumers may fit a new extension to a prototypic product (i.e., the product they most associate with the brand) rather than fitting it to the portfolio of products affiliated with the brand. Alternatively, consumers may base judgments of similarity on how well an extension fits with the general brand concept (Park, Milberg, and Lawson 1991). Indeed, if such “fit heuristics” are operating, composite measures of similarity such as the ones used in our study may lead to erroneous conclusions.

A third issue for future research is the effects of recent brand extensions on demand for other products affiliated
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with the brand. Such reciprocal effects require that consumers make inferences about other products affiliated with a brand on the basis of the outcomes of an extension and act on those inferences when evaluating the other products. Our findings suggest that the effects of brand-based inferences on decision making diminish once consumers have actual experience with the product. Hence, we would not expect the outcomes of extensions to have a major effect on demand for established products affiliated with the brand. Recent research conducted in laboratory settings suggests that brands are very resilient to the outcomes of recent extensions (Keller and Aaker 1992; Park, McCarthy, and Milberg 1991). Yet, Sullivan (1990) found that the outcomes of within-product-category extensions can affect the demand for other established products affiliated with the brand. Such conflicting evidence suggests the need for research examining conditions under which reciprocal effects occur.

Finally, at a more general level, future conceptual and empirical work on brand equity should broaden the domain of the constituency groups studied. Specifically, prior research has focused on understanding brand equity in the context of product-market transactions. A more comprehensive model of brand equity should include the leverage that brand identity may have in resource markets. For example, one manager interviewed in the early stages of our study noted that his company was awarded a contract with Ford Motor Company at a profit margin significantly below his company's historic "cutoff" point. This manager held that it was worth taking the lower margin because the Ford name provided an implicit endorsement of his company's ability to meet stringent quality and delivery standards. This endorsement, in turn, provided a valuable point of leverage in future negotiations with other prospective accounts. As this example illustrates, a company's investment in developing brand strength is recovered not only in product markets, but potentially in resource markets as well. Therefore, an interesting avenue for research is examining the extent to which brand/company identity affects a company's input costs.

APPENDIX
SELECTED MEASURES FROM THE CONSUMER SURVEY

A. Measure of referent product–focal product similarity

Listed below are several types of products made by Liz Claiborne. Liz Claiborne also makes a line of fragrances. On a scale of 1 to 7 where 1 is "Not Very Similar" and 7 is "Very Similar," please tell me how similar you believe fragrances are to each of the products listed in terms of the following characteristics:

<table>
<thead>
<tr>
<th>Needs they satisfy</th>
<th>Major component parts/features</th>
<th>Manufacturing skills</th>
<th>Usage situations</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Apparel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Accessories (e.g., earrings)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Shoes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Handbags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sample visual aid shown to respondents:

Please tell me how similar you believe FRAGRANCES are to each of the products listed below in terms of the NEEDS THEY SATISFY. Please use the following scale to indicate your response:

<table>
<thead>
<tr>
<th>Not Very Similar</th>
<th>Very Similar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>a. Fragrances and Apparel</td>
<td></td>
</tr>
<tr>
<td>b. Fragrances and Accessories (e.g., earrings)</td>
<td></td>
</tr>
<tr>
<td>c. Fragrances and Shoes</td>
<td></td>
</tr>
<tr>
<td>d. Fragrances and Handbags</td>
<td></td>
</tr>
</tbody>
</table>

B. Factor analysis of similarity scale

<table>
<thead>
<tr>
<th>Extrinsic bases of similarity</th>
<th>Intrinsic bases of similarity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs satisfied</td>
<td>.88</td>
</tr>
<tr>
<td>Usage situations</td>
<td>.96</td>
</tr>
<tr>
<td>Component parts</td>
<td>.07</td>
</tr>
<tr>
<td>Manufacturing skills</td>
<td>.13</td>
</tr>
</tbody>
</table>


C. Measure of mode of product evaluation

Responses were recorded on a 7-point strongly agree/strongly disagree scale.

a. First time buyers of this product would find it difficult to judge its quality through visual inspection alone.
b. The only way you can tell the quality of this product is to actually try it.
c. You can easily tell the quality of different brands of this product by simply looking at them.

d. I feel very knowledgeable about this product.

d. I feel very confident about my ability to tell the difference in quality among different brands of this product.

D. Measure of product class knowledge

Responses were recorded on a 7-point strongly agree/strongly disagree scale.

a. I feel very knowledgeable about this product.
b. If a friend asked me about this product, I could give them advice about different brands.
c. If I had to purchase this product today, I would need to gather very little information in order to make a wise decision.
d. I feel very confident about my ability to tell the difference in quality among different brands of this product.

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