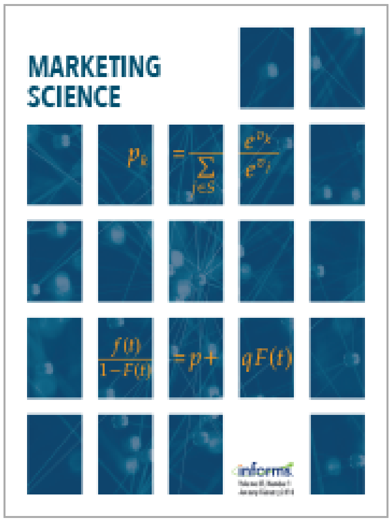

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Brands and Branding: Research Findings and Future Priorities

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Branding has emerged as a top management priority in the last decade due to the growing realization that brands are one of the most valuable intangible assets that firms have. Driven in part by this intense industry interest, academic researchers have explored a number of different brand-related topics in recent years, generating scores of papers, articles, research reports, and books. This paper identifies some of the influential work in the branding area, highlighting what has been learned from an academic perspective on important topics such as brand positioning, brand integration, brand-equity measurement, brand growth, and brand management. The paper also outlines some gaps that exist in the research of branding and brand equity and formulates a series of related research questions. Choice modeling implications of the branding concept and the challenges of incorporating main and interaction effects of branding as well as the impact of competition are discussed.

Key words: brands; brand equity; brand extensions
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Introduction

Brands serve several valuable functions. At their most basic level, brands serve as markers for the offerings of a firm. For customers, brands can simplify choice, promise a particular quality level, reduce risk, and/or engender trust. Brands are built on the product itself, the accompanying marketing activity, and the use (or nonuse) by customers as well as others. Brands thus reflect the complete experience that customers have with products. Brands also play an important role in determining the effectiveness of marketing efforts such as advertising and channel placement. Finally, brands are an asset in the financial sense. Thus, brands manifest their impact at three primary levels—customer market, product market, and financial market. The value accrued by these various benefits is often called brand equity.

Our primary goal in this paper is to both selectively highlight relevant research on building, measuring, and managing brand equity and to identify gaps in our understanding of these topics. We put considerable emphasis on the latter and suggest numerous areas of future research.[1] Five basic topics that align with the brand-management decisions and tasks frequently performed by marketing executives are discussed in detail: (1) developing brand positioning, (2) integrating brand marketing, (3) assessing brand performance, (4) growing brands, and (5) strategically managing the brand. We then consider the implications of this work for choice models. Finally, we present a simple framework for integrating the customer-market, product-market, and financial-market level impact of brands and how the brand is created and developed by company actions.

Branding Decisions and Tasks

Developing Brand Positioning

Brand positioning sets the direction of marketing activities and programs—what the brand should and should not do with its marketing. Brand positioning involves establishing key brand associations in the minds of customers and other important constituents to differentiate the brand and establish (to the extent possible) competitive superiority (Keller et al. 2002). Besides the obvious issue of selecting tangible product attribute levels (e.g., horsepower in a car), two areas particularly relevant to positioning are the role of brand intangibles and the role of corporate images and reputation.

[1] For commentary on the state of branding, see special issues of *International Journal of Research in Marketing* (Barwise 1993) and *Journal of Marketing Research* (Shocker et al. 1994). For a more exhaustive review of the academic literature on brands and brand management, see Keller (2002).

Brand Intangibles. An important and relatively unique aspect of branding research is the focus on brand intangibles—aspects of the brand image that do not involve physical, tangible, or concrete attributes or benefits (see Levy 1999). Brand intangibles are a common means by which marketers differentiate their brands with consumers (Park et al. 1986) and transcend physical products (Kotler and Keller 2006). Intangibles cover a wide range of different types of brand associations such as actual or aspirational user imagery; purchase and consumption imagery; and history, heritage, and experiences (Keller 2001). A number of basic research questions exist concerning how brand tangibles and intangibles have their effects.

Research Questions:

1. In developing brand equity, what is the role of product performance and objective or tangible attributes versus intangible image attributes?

2. Are intangible attributes formative (causes) or reflective (constructed) reasons for equity or choice? That is, are they considered a priori or "constructed" after experience with the brand?

3. When and to what extent does recall of pleasant images (or "hot" emotions) shield a brand from less positive or even negative cognitive information?

4. How much of brand equity is tied to unique attributes of a product? What happens when competitors copy these attributes?

5. Which attribute associations are most stable and beneficial to a brand over the long run (e.g., "high quality" and "upscale") and which have limited useful life (e.g., being "hip")?

6. Can brands be thought of as simply a judgment bias or in terms of context effects in consumer decision making? What implications do these perspectives have for brand-equity measurement and valuation?

Brand Personality. Aaker (1997) examined the personalities attributed to U.S. brands and found they fall into five main clusters: (1) sincerity, (2) excitement, (3) competence, (4) sophistication, and (5) ruggedness. Aaker et al. (2001) found that three of the five factors also applied to brands in both Japan and Spain, but that a "peacefulness" dimension replaced "ruggedness" both in Japan and Spain, and a "passion" dimension emerged in Spain instead of "competency." Aaker (1999) also found that different brand personality dimensions affected different types of people in different consumption settings. She interpreted these experimental results in terms of a "malleable self," which is composed of self-conceptions that can be made salient by a social situation (see also Graeff 1996, 1997). While Azoulay and Kapferer (2003) have challenged the conceptual validity of this particular brand personality scale, the anthromorphism of a brand is common in both casual consumer conversation (e.g., "that brand is 'hip' ") and advertising messages.

Research Questions:

1. How does brand personality affect consumer decision making? Under what circumstances?

2. Is brand personality of more strategic or tactical (e.g., in terms of the "look and feel" of ad executions) importance?

3. What is the value of the different personality dimensions? Are certain personality dimensions more valuable at driving preference or loyalty than others? Does the value vary by product category or by other factors?

4. How stable are these various personality dimensions and what causes them to evolve or change? How does this stability compare to the stability of other types of brand associations?

Brand Relationships. Research has also explored the personal component of the relationship between a brand and its customers. Fournier (1998) examined the nature of relationships that customers have—as well as want to have—with companies (see also Fournier and Yao 1997, Fournier et al. 1998). Fournier views brand-relationship quality as multifaceted and consisting of six dimensions beyond loyalty or commit ment along which consumer-brand relationships vary: (1) self-concept connection, (2) commitment or nostalgic attachment, (3) behavioral interdependence, (4) love/passion, (5) intimacy, and (6) brand-partner quality. She suggests the following typology of metaphors to represent common customer-brand relationships: (1) arranged marriages, (2) casual friends/buddies, (3) marriages of convenience, (4) committed partnerships, (5) best friendships, (6) compartmentalized friendships, (7) kinships, (8) rebounds/avoidance-driven relationships, (9) childhood friendships, (10) courtships, (11) dependencies, (12) flings, (13) enmities, (14) secret affairs, and (15) enslavements.

While this typology contains most positive relationships, it may overlook a range of possible negative (e.g., adversary) and neutral (e.g., trading partner) ones. Aaker et al. (2004) conducted a two-month longitudinal investigation of the development and evolution of relationships between consumers and brands. They found that two factors—experiencing a transgression and the personality of the brand—had a significant influence on developmental form and dynamics. Aggarwal (2004) explored how relationship norms varied for two types of relationships: exchange relationships, in which benefits are given to others to get something back, and communal relationships, in which benefits are given to show concern for others' needs.

Research Questions:

1. How can a customer's desired relationship be determined? Have concerns over privacy and the increased use of customer data by firms resulted

in customers wanting more anonymous, transactional relationships, or do customers still desire close relationships with companies? Does personalization of communication make customers feel empowered and/or valued, or do they feel more exploited?

2. How can a desired customer relationship be cultivated by the company through marketing activities? How do different types of marketing activities such as advertising, customer service, and online resources combine to affect customer relationships?

3. In a world where information is widely shared and discrimination is seen as bad, should a firm deal differently with customers who desire different relationships? Can customer relationships be segmented and can customers who desire different types of relationships be identified? Does this vary by product category or by competing product benefits?

4. What is the relative profitability of different types of customer relationships? Should some customers be encouraged and others discouraged or "fired?" Alternatively, are there systematic ways to migrate unprofitable customers into profitable relationships?

Brand Experience. Experiential marketing is an important trend in marketing thinking. Through several books and articles, Schmitt (1999, 2003) has developed the concept of *customer experience management* (CEM), which he defines as the process of strategically managing a customer's entire experience with a product or company. According to Schmitt, brands can help to create five different types of experiences:

• *Sense* experiences involving sensory perception;
• *Feel* experiences involving affect and emotions;
• *Think* experiences which are creative and cognitive;
• *Act* experiences involving physical behavior and incorporating individual actions and lifestyles; and
• *Relate* experiences that result from connecting with a reference group or culture.

Research Questions:

1. What are the different means by which experiences affect brand equity? How can firms ensure that experiences positively impact brand equity? More specifically, how can advertising trigger positive experiences with a brand or make negative ones less salient or influential?

2. How much of brand-related experiences are under the control of the company? How can they be effectively controlled?

3. When and to what extent do customers respond—positively or negatively—to attempts to control their experiences? How do customers make attributions about company actions and attitudes toward control of experiences?

4. How does the recognition or realization of company involvement impact brand experiences? Can brand identification facilitate experiences? How much does product placement (e.g., in movies) impact brand equity and how enduring is such equity?

5. How can a firm take advantage of unusual circumstances such as when the brand is associated with a positive event? How can a firm minimize the impact of being associated with a negative event (e.g., a spokesperson behaving badly)?

Corporate Image and Reputation. Corporate image has been extensively studied in terms of its conceptualization, antecedents, and consequences (see reviews by Biehal and Sheinin 1998 and Dowling 1994). Corporate brands—versus product brands—are more likely to evoke associations of common products and their shared attributes or benefits, people and relationships, and programs and values (Barich and Kotler 1991).

Several empirical studies show the power of a corporate brand (Argenti and Druckenmiller 2004). Brown and Dacin (1997) distinguish between corporate associations related to corporate ability (i.e., expertise in producing and delivering product and/or service offerings) and those related to corporate social responsibility (i.e., character of the company with regard to societal issues), such as treatment of employees and impact on the environment.

Keller and Aaker (1992, 1998) define corporate credibility as the extent to which consumers believe that a company is willing and able to deliver products and services that satisfy customer needs and wants (see also Erdem and Swait 2004). They showed that successfully introduced brand extensions can lead to enhanced perceptions of corporate credibility and improved evaluations of even quite dissimilar brand extensions. They also showed that corporate marketing activity related to product innovation produced more favorable evaluations for a corporate brand extension than corporate marketing activity related to either the environment or, especially, the community (see also Gürhan-Canli and Batra 2004). In addition, Bhattacharya and Sen (2003) extended the thinking on consumer-brand relationships to consider consumer-company relationships, adopting a social identity theory perspective to argue that perceived similarity between consumer and company identities play an important role in relationship formation.

Research Questions:

1. How much are corporate images created by words versus actions? What is the role of public relations and publicity in shaping corporate reputation and corporate brand equity?

2. What are important determinants of corporate credibility? How do "corporate social responsibility" or cause marketing programs work?

3. How do corporate images affect the equity of individual products? Alternatively, how do individual product equities build up to corporate equity?

4. What is the impact of corporate image on customer purchases and firm profitability and value? Does it operate directly or indirectly through its effect on specific brand equity?

Integrating Brand Marketing

A variety of branding and marketing activities can be conducted to help achieve the desired brand positioning and build brand equity. Their ultimate success depends to a significant extent not only on how well they work singularly, but also on how they work in combination, such that synergistic results occur. In other words, marketing activities have interaction effects among themselves as well as main effects and interaction effects with brand equity. Three noteworthy subareas of this topic are the brand-building contribution of brand elements, the impact of coordinated communication and channel strategies on brand equity, and the interaction of company-controlled and external events.

Integrating Brand Elements. Brands identify and differentiate a company's offerings to customers and other parties. A brand is more than a name (or "mark"). Other brand elements such as logos and symbols (Nike's swoosh and McDonalds' golden arches), packaging (Coke's contour bottle and Kodak's yellow and black film box), and slogans (BMW's "Ultimate Driving Machine" and VISA's "It's Everywhere You Want to Be") play an important branding role as well.

A number of broad criteria are useful for choosing and designing brand elements to build brand equity (Keller 2003): (1) memorability, (2) meaningfulness, (3) aesthetic appeal, (4) transferability (both within and across product categories and across geographical and cultural boundaries and market segments), (5) adaptability and flexibility over time, and (6) legal and competitive protectability and defensibility. Brand elements vary in their verbal versus visual content and product specificity. Although a robust industry exists to help firms design and implement these various brand elements (Kohli and LaBahn 1997), comparatively little academic research attention, even in recent years, has been devoted to the topic of designing and selecting brand elements other than brand names.

Brand name properties have been studied extensively through the years. For example, researchers studying phonetic symbolism have demonstrated how the sounds of individual letters can contain meaning that may be useful in developing a new brand name (see Klink 2000, Yorkston and Menon 2004 for reviews). Other research has examined global and cross-cultural implications of brand names (e.g., Zhang and Schmitt 2001, Tavassoli and Han 2002).

Although companies frequently spend considerable sums on the design of logos, little academic research has explored the impact on consumer behavior of logo design or other visual aspects of branding (see Schmitt and Simonson 1997 for background discussion). As one exception, Henderson and Cote (1998) conducted a comprehensive empirical analysis of 195 logos to determine the ability of different design characteristics to achieve different communication objectives (see also Henderson et al. 2004, Janiszewski and Meyvis 2001).

A related area, packaging, has begun to receive greater attention in recent years (e.g., Garber et al. 2000, Folkes and Matta 2004). For example, Wansink has conducted several studies related to packaging size and shape and consumption (e.g., Wansink and van Ittersum 2003; see also Raghubir and Krishna 1999).

Research Questions:

1. What are the brand-building contributions of brand logos and other nonverbal brand elements? Are names and logos differentially effective or important in different circumstances, e.g., for high versus low involvement purchases or early versus late in the life cycle?

2. How are visual and verbal effects manifested in consumer memory for brand elements? Which are more accessible? Do more easily accessible elements influence or bias what is recalled subsequently?

3. From both a physiological and psychological perspective, how do brand and design elements gain attention and instill favorable attitudes? How long of a productive life do they have, i.e., when do they cease being effective?

4. How do consumers integrate packaging and other brand element information with information about product performance, marketing communications, or personal experience?

5. Are there criteria for combining a diverse set of brand elements? How do marketers know if their brand elements are "well integrated?" What are the financial consequences of integration?

Integrating Marketing Channels and Communications. Marketers employ an increasingly varied means of communication (e.g., various forms of broadcast, print, and interactive advertising; trade and consumer promotions; direct response; sponsorship; public relations; etc.) and multiple means of going to market (via retailers, company-owned stores or outlets, telephone, Internet, mail, etc.). Some marketers have attempted to orchestrate these activities to create synergistic effects (Duncan 2002).

Research has shown that coordinating marketing activities can lead to beneficial results (Naik and Raman 2003). For example, print and radio reinforcement of TV ads—where the video and audio components of a TV ad serve as the basis for print and radio ads—has been shown to leverage existing communication effects from TV ad exposure and more strongly link them to the brand (Edell and Keller 1989, 1999). Cueing a TV ad with an explicitly linked radio or print ad can create similar or even enhanced processing outcomes of the radio or print ad that can substitute for additional TV ad exposures.

Research Questions:

1. Under what circumstances is marketing integration more appropriately based on consistency (sharing common brand meaning) versus complementarity (presenting different brand meanings)?

2. How should brand-building activities change as different audiences are targeted (e.g., consumers, distributors, press, analysts, etc.)? To what extent can and should a firm tailor different messages to different segments? When does confusion overwhelm the benefits of more precise targeting?

3. What are cost-effective vehicles for building brands? How do public relations, product placement, and experiential marketing approaches compare to traditional advertising and promotion programs?

4. What is the relative impact of third-party communications (e.g., competitors, rating services, web communications, or the government) on brand equity? How can a firm utilize positive communications and counter negative ones?

5. How do customer contact points (personal and automated) influence brand equity?

6. When changing the information communicated about a brand over time, how important is it for the messages to follow a logical progression?

Combining Company-Controlled and External Events. Marketers are increasingly embracing alternative forms of brand-building activities. In particular, greater emphasis is being placed on "guerilla marketing," creating emotion-laden experiences, generating "buzz" among consumers, and creating online and real-world communities. To understand the underpinnings of these activities, researchers studying interpersonal communication and influence have uncovered some important insights.

Muniz and O'Guinn (2000) defined "brand communities" as a specialized, nongeographically bound community based on a structured set of social relationships among users of a brand. After studying the Apple Macintosh, Ford Bronco, and Saab brands, they note that, like other communities, a brand community is marked by (1) a shared consciousness, (2) rituals and traditions, and (3) a sense of moral responsibility.

Schouten and McAlexander (1995) defined a "subculture of consumption" as a distinctive subgroup of society that self-selects on a basis of a shared commitment to a particular product class, brand, or consumption activity. Studying the Harley-Davidson and Jeep brands, they explore various relationships that consumers could hold with the product/possession, brand, firm, and/or other customers and use these to develop a measure of loyalty (McAlexander et al. 2002).

A number of other researchers have explored word-of-mouth effects and their effect on brand evaluations (e.g., Laczniak et al. 2001, Smith and Vogt 1995). Moore et al. (2002) delineated how intergenerational influences affected intrafamily transfer of brand equity in some product categories. Despite this attention to interpersonal sources of influence and communication, however, research has not systematically contrasted company-controlled and externally-driven marketing activities.

Research Questions:

1. How can brand communities and social networks best be modeled, cultivated, and influenced by marketers? What is the relative impact on consumers of verbal versus other types of communication (e.g., mere observation)?

2. What is the relative impact of company actions, agents and evaluators, and customer conversations (e.g., web sites) on brand equity? How are sequences of interactions combined in the customer's mind? Does being first or last have any real advantages?

3. How much do opinion leaders influence other consumers? To what extent is communication "vertical" (from expert to novice) versus "horizontal" (experts talking to each other)? Are there "anti-opinion leaders," i.e., people from whom others consciously try to behave differently? What is their impact?

4. For socially conspicuous products, a major association influencing brand equity is other customers of the product. What is the relative importance of these associations versus company-controlled communications?

5. Does the Internet reduce the effects of brand equity and its impact on consumer decision making?

Assessing Brand Performance

To manage brands properly, marketers should have a clear understanding of the equity in their brands—what makes them tick and what they are worth. Two interesting subareas of this topic are the measurement and valuation of brand equity at different levels—customer, product market, and financial market—and the relationship of customer equity to brand equity.

Measuring Brand Equity. In recognition of the value of brands as intangible assets, increased emphasis has been placed on understanding how to build, measure, and manage brand equity (Kapferer 2005; Keller 1993, 2003). There are three principal and distinct perspectives that have been taken by academics to study brand equity.

1. *Customer based*. From the customer's point of view, brand equity is part of the attraction to—or repulsion from—a particular product from a particular company generated by the "nonobjective" part of the product offering, i.e., not by the product attributes per se. While initially a brand may be synonymous with the product it makes, over time through advertising, usage experience, and other activities and influences it can develop a series of attachments and associations that exist over and beyond the objective product. Importantly, brand equity can be built on attributes that have no inherent value (Broniarczyk and Gershoff 2003, Brown and Carpenter 2000, Carpenter et al. 1994), although Meyvis and Janiszewski (2002) show irrelevant information can be counterproductive in consumer decision making.

2. *Company based*. From the company's point of view, a strong brand serves many purposes, including making advertising and promotion more effective, helping secure distribution, insulating a product from competition, and facilitating growth and expansion into other product categories (Hoeffler and Keller 2003). Brand equity from the company perspective is therefore the additional value (i.e., discounted cash flow) that accrues to a firm because of the presence of the brand name that would not accrue to an equivalent unbranded product. In economic terms, brand equity can be seen as the degree of "market inefficiency" that the firm is able to capture with its brands.[2]

3. *Financial based*. From a financial market's point of view, brands are assets that, like plant and equipment, can and frequently are bought and sold. The financial worth of a brand is therefore the price it brings or could bring in the financial market. Presumably this price reflects expectations about the discounted value of future cash flows. In the absence of a market transaction, it can be estimated, albeit with great difficulty (Ambler and Barwise 1998, Feldwick 1996), from the cost needed to establish a brand with equivalent strength or as a residual in the model of the value of a firm's assets (Simon and Sullivan 1993).[3]

Comprehensive models of brand equity have been developed in recent years to incorporate multiple perspectives (Ambler 2004, Epstein and Westbrook 2001, Keller and Lehmann 2003, Srivastava et al. 1998). Each of the three brand-equity measurement perspectives has produced relevant work.

[2] See Erdem (1998a, b) for some economic perspectives on branding.

[3] See the special issue on brand valuation in the *Journal of Brand Management* (1998, **5**(4)) for additional discussion and points of view.

Customer Level. The value of a brand—and thus its equity—is ultimately derived from the words and actions of consumers. Consumers decide with their purchases, based on whatever factors they deem important, which brands have more equity than others (Villas-Boas 2004). Although the details of different approaches to measuring brand equity differ, they tend to share a common core: All typically either implicitly or explicitly focus on brand-knowledge structures in the minds of consumers—individuals or organizations—as the source or foundation of brand equity.

To capture differences in brand-knowledge structures, a number of hierarchy of effects models have been put forth by consumer researchers through the years (e.g., AIDA, for Awareness-Interest-Desire-Action). Customer-level brand equity can largely be captured by five aspects that form a hierarchy or chain, which are bottom (lowest level) to top (highest level) as follows:

(a) awareness (ranging from recognition to recall);
(b) associations (encompassing tangible and intangible product or service considerations);
(c) attitude (ranging from acceptability to attraction);
(d) attachment (ranging from loyalty to addiction);
(e) activity (including purchase and consumption frequency and involvement with the marketing program, other customers through word of mouth, etc., or the company).

Many similar models exist (e.g., Aaker 1996, Keller 2003). Several commercial versions are also available (e.g., Young and Rubicam's BrandAsset Valuator (BAV), WPP's Brand Z, and Research International's Equity Engine), although many focus largely on the first three aspects above.

There are several available research techniques to measure brands at each of these five levels (Agrawal and Rao 1996). In addition, research has provided insight into how the value of a brand's customer base relates to stock-market value (Gupta et al. 2004). In the more qualitative realm, a variety of alternatives exist for understanding the structure of associations that a customer has for a product. These "mental maps" rely on concepts such as metaphors (i.e., "It is like a ____") to develop deeper texture in representing customer reactions to a brand (e.g., Zaltman 2003).

Research Questions:

1. How much brand equity can be captured by structured procedures (e.g., conjoint analysis or scanner data modeling) and how much requires qualitative understanding (e.g., via metaphors or mental maps)? Are there certain aspects of brand equity that can only be uncovered with qualitative research?

2. Can the value of different qualitative aspects of brand equity be quantified? What is the relationship between qualitative and quantitative aspects?

3. How "independent" versus redundant are the numerous customer-related brand-equity measures which have been studied? Is there a reduced set which is applicable to all products and/or all countries? What unique measures are relevant in different categories, cultures, locations, or to different customer groups?

4. Well-known brands provide a role in reducing risk: Not only are brands signals of quality (both in terms of mean and variance), but they also provide the "deep pockets" needed to rectify a product failure. To what extent is increased confidence in decision making a key or even critical factor of brands and brand equity; i.e., are standard deviations more important than means?

Product-Market Level. A number of approaches have been developed to assess the impact of brand equity in the product market. These include measures of price premiums, increased advertising elasticity, decreased sensitivity to competitors' prices, and the ability to secure and maintain distribution through channels (Hoeffler and Keller 2003).

Several studies have demonstrated that leading brands can command large price differences (Simon 1979, Agrawal 1996, Park and Srinivasan 1994, Sethuraman 1996) and are more immune to price increases (Sivakumar and Raj 1997). Lower levels of price sensitivity have been found for households that are more loyal (Krishnamurthi and Raj 1991). Ailawadi et al. (2003) proposed that the revenue premium a brand commands vis-à-vis an unbranded product is a simple useful measure of brand equity and showed how it responds to brand actions. They contend that neither the sales premium nor the price premium alone captures the increased demand attributable to a brand.

Advertising may play a role in decreasing price sensitivity (Kanetkar et al. 1992). Consumers who are highly loyal to a brand have been shown to increase purchases when advertising for the brand increased (Raj 1982, Hsu and Liu 2000). Research suggests that stores are more likely to feature well-known brands if they convey a high quality image (Lal and Narasimhan 1996). Fader and Schmittlein (1993) proposed that differences in retail availability may be a key component of the higher repeat-purchase rates for higher-share brands.

Research Questions:

1. What are the advantages of residual versus direct measures of the effect of the brand on marketing-program effectiveness?

2. How do you assess and identify the "option value" of the extension potential of a brand? What are the "cost savings" that result from higher brand equity in terms of advertising effectiveness, etc.?

3. How can brand equity be disentangled from its causes or source (e.g., product quality)? How can brand and category equity be separated?

4. How can the impact of the brand be separated from that of company market power, entry order, and other possible determinants?

5. What are the best approaches to tracking brand performance? How frequently should it be measured?

6. How much explanatory power does brand equity have after accounting for market-share effects (Uncles et al. 1995)?

Financial-Market Level. A different approach to measuring brand equity is based on financial market performance (Amir and Lev 1996, Barth et al. 1998). One measure that has been proposed uses the component of market value unexplained by financial assets and results (i.e., profits). Using Tobin's Q (the market value of assets divided by their replacement value as estimated by book value) as a proxy of brand equity, Lindenberg and Ross (1981) found that consumer goods companies such as Coca-Cola, Pepsico, Kellogg's, and General Foods had Tobin Q's greater than 2, suggesting that these companies had considerable intangible value. On the other hand, more commodity-like manufacturers such as metal producers and paper products companies had Tobin Q's of about 1.

Simon and Sullivan (1993) decomposed firm value into tangible and intangible components: Tangible components reflected replacement costs and included assets such as plant and equipment and net receivables; intangible components were broken down into industry-wide, cost, and brand factors. The brand factors were derived from a market share equation using an instrumental variables approach (i.e., brand value was determined by order of entry and advertising). As a percent of replacement values, brand equity ranged from a low of essentially zero for categories such as paper and allied products; petroleum and coal; stone, glass, and coal; and primary and fabricated metals to as much as 61% for apparel, 58% for printing and publishing, and 46% for tobacco. Firms for which brand value exceeded replacement cost included Dreyer's Ice Cream, Tootsie Roll, and Smucker.

Another approach to assessing the financial value of a brand involves taking customer mindset measures and relating them to stock-market values. This approach is used by Stern Stewart's Brand Economics which link Young & Rubicam's BrandAsset Valuator, a survey-based measure of brand strength, to economic value added (EVA), a financial performance measure. Along those lines, Aaker and Jacobson (1994) relate yearly stock returns for 34 companies during 1989 to 1992 to unanticipated changes in ROI, brand equity, and brand salience. Using EquiTrend's perceived quality rating as a proxy for brand equity, they find that changes in quality and thus equity had a significant effect over and above that of changes in ROI. Firms who experienced the largest gains in brand equity saw their stock return average 30%; conversely, those firms with the largest losses in brand equity saw stock return average a negative 10%. Interestingly, other results suggest that there is a bigger improvement when the changes in quality perceptions occur among heavy users, a result consistent with suggestions that retention (impacting current customers) may often be the best way to increase customer and, hence, firm value (Thomas et al. 2004).

Using data for firms in the computer industry in the 1990s, Aaker and Jacobson (2001) found that changes in brand attitude were associated contemporaneously with stock return and led accounting financial performance. Awareness that did not translate into more positive attitudes, however, did little to the stock price. Adopting an event study methodology, Lane and Jacobson (1995) showed that the stock market response to brand extension announcements depended interactively and nonmonotonically on brand attitude and familiarity: The stock market responded most favorably to extensions of either high esteem, high-familiarity brands or those of low esteem, low-familiarity brands. Mizik and Jacobson (2003) examined the relative importance of value-appropriation activities (i.e., extracting profits in the marketplace via advertising and promotion) versus value-creating activities (i.e., through R&D) on the stock market.

In an event study of 58 firms that changed their names in the 1980s, Horsky and Swyngedouw (1987) found that, for most of the firms, name changes were associated with improved performance. The greatest improvement tended to occur in firms that produced industrial goods and whose performance prior to the change was relatively poor. Not all changes, however, were successful. They interpreted the act of a name change as a signal that other measures to improve performance—e.g., changes in product offerings and organizational changes—will be seriously and successfully undertaken.

Mahajan et al. (1994) suggest how to assess the level of brand equity in the context of firm acquisitions. Kerin and Sethuraman (1998) also have examined the link between brand value and stock value. In the brand strategy arena, Rao et al. (2004) examined the question of whether a "branded house" strategy with a corporate brand as an umbrella was associated with higher stock-market returns than a multiple-brand "house of brands" strategy. In their data, a corporate branding strategy produced higher average return than a multibrand strategy, perhaps to compensate for the greater risk due to the nondiversification involved.

Research Questions:

1. What are the links between customer-market, product-market, and financial-market level measures of brand equity? For example, does customer-level equity lead to financial-market equity by generating additional cash flow or by directly influencing investor decisions?
2. How can the causal impact of brand equity on financial market performance be established given the large number of other factors that drive stock price?
3. Are large values of brand equity limited to consumer and hedonic goods or can they also exist for business-to-business and other high-involvement, utilitarian products?
4. Should brand equity be reported on the balance sheet? If so, how?
5. Which are forward- versus backward-looking brand-equity measures?

The Marketing-Mix and Brand Equity. Marketing-mix modeling has increased in popularity with industry and academics (Gatignon 1993, Hanssens et al. 1998). Considerable research has examined the effectiveness of different elements of the marketing mix. For example, numerous studies have examined the short-term and long-term effects of advertising and promotion (e.g., Ailawadi et al. 2001, Anderson and Simester 2004, Dekimpe and Hanssens 1999, Mela et al. 1997). This research often looks at different outcomes and indicators of marketing effectiveness. For example, Pauwels et al. (2002) found that price promotion has a strong effect on category purchase incidence for a storable product but a correspondingly larger impact on brand choice for perishable products.

Although these research streams have provided considerable insight, they have not typically addressed the full breadth of brand equity dimensions. In particular, it is rare that measures of customer mindset are introduced as possible mediating or moderating variables in analyzing marketing effectiveness.

Research Questions:

1. How stable is brand equity? Does the stability depend on the marketing driver involved, e.g., an ad versus a personal experience?
2. How does the effectiveness of marketing drivers of brand equity change over time? When are emotional drivers more important: early on or as a market matures? Are emotional drivers more relevant to corporate brands and rational drivers more relevant to product brands?
3. To what extent can and should a company try to influence (versus respond to) what the key drivers are?

Relationship of Brand Equity to Customer Equity. An important emerging line of research concerns customer equity and the antecedents and consequences of developing strong ties to customers (Rust et al. 2000). A number of researchers have noticed the relationship between the brand-management and customer-management perspectives (e.g., Ambler et al. 2002). Indeed, under one set of assumptions the value of a customer to the firm (i.e., customer equity) can be shown algebraically to be the sum of the profit from selling equivalent generic products and the additional value from selling branded goods (i.e., brand equity).

Research Questions:

1. Does brand equity management simply reflect an aggregate view of customer equity management? How do concepts such as customer lifetime value and CRM relate to brand equity? How can they be integrated?
2. How closely related are measures of brand equity and customer equity (e.g., loyalty and share of wallet or requirements, brand relationship and customer retention)?
3. How can a firm balance a product-driven brand focus with a customer-driven CRM one? Which strategies are most effective? Under what circumstances?

Brands as Growth Platforms

No problem is more critical to CEOs than generating profitable growth. Brands grow primarily through product development (line and category extensions) and market development (new channels and geographic markets). Important subtopics here include new-product and brand-extension strategies and their effects on brand equity.

New Products and Brand Extensions. Brand extensions are one of the most heavily-researched and influential areas in marketing (Czellar 2003). Marketing academics have played an important role in identifying key theoretical and managerial issues and providing insights and guidance.

Research has shown that extension success depends largely on consumers' perceptions of fit between a new extension and parent brand (Aaker and Keller 1990; but see Klink and Smith 2001, van Osselaer and Alba 2003). There are a number of bases of fit—virtually any brand association is a potential basis—but two key bases are competence (attribute) and image (Batra et al. 1993). Research has also shown that positively evaluated symbolic associations may be the basis of extension evaluations (Reddy et al. 1994, Park et al. 1991), even if overall brand attitude itself is not necessarily high (Broniarczyk and Alba 1994). One key conclusion is that consumers need to see the proposed extension as making sense.

Based on a meta-analysis of seven studies using 131 different brand extensions, Bottomley and Holden (2001) concluded that brand extension evaluations are based on the quality of the original brand, the fit between the parent and extension categories, and the interaction of the two, although cultural differences influenced the relative importance attached to these model components. Studies have shown how well-known and well-regarded brands can extend more successfully (Aaker and Keller 1990, Bottomley and Doyle 1996) and into more diverse categories (Keller and Aaker 1992, Rangaswamy et al. 1993). In addition, the amount of brand equity has been shown to be correlated with the highest- or lowest-quality member in the product line for vertical product extensions (Randall et al. 1998). Brands with varied product category associations developed through past extensions have been shown to be especially extendible (Dacin and Smith 1994, Keller and Aaker 1992, Sheinin and Schmitt 1994). As a result, introductory marketing programs for extensions from an established brand can be more efficient (Erdem and Sun 2002, Smith 1992, Smith and Park 1992).

A number of other factors also come into play to influence extension success, such as consumer knowledge of the parent and extension categories (e.g., Moreau et al. 2001) and characteristics of the consumer and extension marketing program (e.g., Barone and Miniard 2002, Maoz and Tybout 2002, Zhang and Sood 2002). Kirmani et al. (1999) found evidence of an ownership effect whereby current owners generally had more favorable responses to brand line extensions.

One oft-cited concern with brand extensions is that a failed brand extension could hurt (dilute) the parent brand in various ways. Interestingly, academic research has found that parent brands generally are not particularly vulnerable to failed brand extensions. An unsuccessful brand extension potentially damages a parent brand only when there is a high degree of similarity or "fit" involved—e.g., in the case of a failed line extension in the same category—and when consumers experience inferior product performance directly (Ahluwalia and Gürhan-Cali 2000, Gürhan-Canli and Maheswaran 1998, Keller and Aaker 1992, Loken and Roedder John 1993, Milberg et al. 1997, Roedder John et al. 1998, Romeo 1991).

Several other factors also influence the extent of damage to a parent brand from an unsuccessful brand extension. The more involved the consumer is with the extension decision (e.g., if they own or use the parent brand), the more likely it is that harmful dilution effects will occur (Kirmani et al. 1999). Importantly, research has shown that a subbranding strategy, where an extension is given another name in addition to the parent brand (e.g., Courtyard by Marriott), can effectively shield a parent brand from dilution from a failed similar extension (Keller and Sood 2004, Milberg et al. 1997).

Research has also shown that extensions can create positive feedback effects to the parent brand (Balachander and Ghose 2003). For instance, brand extensions strengthened parent brand associations (Morrin 1999) and "flagship brands" were highly resistant to dilution or other potential negative effects due to unfavorable experiences with an extension (Roedder John et al. 1998, Sheinin 2000).

Research Questions:

1. How can the long-term new product potential of a brand be assessed? What is the optimal product breadth for a brand franchise?

2. How should a brand be built and managed as a growth platform? Which kinds of brand associations are most beneficial or detrimental for future brand growth? What kind of brand associations facilitate versus inhibit the introduction of line and brand extensions?

3. What should be built into a pioneer brand to retard future competition?

4. For new-to-the-world products, what should be the relative emphasis on building the brand versus establishing and growing the category? More generally, what should be the brand versus product focus over the product life cycle?

Strategically Managing the Brand

In many firms, the CEO is effectively the chief brand officer (CBO) as well. Regardless of who (if anyone) is in charge of managing the brand, several general strategic issues arise: the optimal design of brand architecture, the effects of co-branding and brand alliances, and cross cultural and global branding strategies.

Brand Architecture. Brand architecture has been studied in the context of line extensions, vertical extensions, multiple brand extensions, subbrands, and brand portfolios (Aaker 2004). Several researchers have examined characteristics of successful line extensions (Andrews and Low 1998, Putsis and Bayus 2001, Reddy et al. 1994). In the context of fast-moving packaged goods, Cohen et al. (1997) developed a decision support system to evaluate the financial prospects of potential new line extensions.

Although many strategic recommendations have been offered concerning "vertical extensions"—extensions into lower or higher price points (e.g., Aaker 1997)—relatively little academic research has been conducted to provide support for them (see Randall et al. 1998 for an exception). Kirmani et al. (1999) found that owners had more favorable responses than nonowners to upward and downward stretches of nonprestige brands (e.g., Acura) and to upward stretches of prestige brands (e.g., Calvin Klein and BMW). Downward stretches of prestige brands, however, did not work well because of owners' desires to maintain brand exclusivity. A subbranding strategy, however, protected owners' parent-brand attitudes from dilution.

In terms of multiple brand extensions, Keller and Aaker (1992) showed that by taking "little steps," i.e., by introducing a series of closely related but increasingly distant extensions, it was possible for a brand to ultimately enter product categories that would have been much more difficult, or perhaps even impossible, to have entered directly (Dawar and Anderson 1994, Jap 1993, Meyvis and Janiszewski 2004).

Joiner and Loken (1998), in a demonstration of the inclusion effect in a brand extension setting, showed that consumers often generalized possession of an attribute from a specific category (e.g., Sony televisions) to a more general category (e.g., all Sony products) more readily than they generalized to another specific category (e.g., Sony VCRs). Research has shown that family-brand evaluations depend on the expected variability of individual product quality and attribute uniqueness (Gürhan-Canli 2003; see also Swaminathan et al. 2001).

Research has also shown that a subbranding strategy can enhance extension evaluations, especially when the extension is farther removed from the product category and less similar in fit (Keller and Sood 2004, Milberg et al. 1997, Sheinin 1998). A subbrand can also protect the parent brand from unwanted negative feedback (Milberg et al. 1997, Janiszewski and van Osselaer 2000, Kirmani et al. 1999), but only in certain circumstances, e.g., if the subbrand consists of a meaningful individual brand that precedes the family brand, e.g., Courtyard by Marriott (Keller and Sood 2004). Wänke et al. (1998) showed how subbranding strategy could help set consumer expectations.

Bergen et al. (1996) studied branded variants—the various models that manufacturers offer different retailers (see also Shugan 1989). They showed that as branded variants increased, retailers were more inclined to carry the branded product and provide greater retail service support. Other research has shown how brand portfolios can increase loyalty to multiproduct firms (Anand and Shachar 2004). Kumar (2003) argues that companies can rationalize their brand portfolios to both serve customers better and maximize profits (see also Broniarczyk et al. 1998).

Research Questions:

1. How do product brands impact the equity of corporate brands (and vice versa)?

2. How can the interplay and flow of equity between product and corporate brands be measured ("ladder up" versus "waterfall down")?

3. Can and should line extension proliferation be controlled? What are the design criteria for the optimal brand portfolio?

4. Does it matter who and where in the organization controls the brand?

5. How should a company deal with differences (heterogeneity) in terms of what consumers think about and want from a brand?

Co-Branding and Brand Alliances. Brand alliances—where two brands are combined in some way as part of a product or some other aspect of the marketing program—come in all forms (Rao 1997, Rao et al. 1999, Shocker et al. 1994) and have become increasingly prevalent. Park et al. (1996) compared co-brands to the notion of "conceptual combinations" in psychology and showed how carefully selected brands could be combined to overcome potential problems of negatively correlated attributes (e.g., rich taste and low calories).

Simonin and Ruth (1998) found that consumers' attitudes toward a brand alliance could influence subsequent impressions of each partner's brands (i.e., spillover effects existed), but these effects also depended on other factors such as product "fit" or compatibility and brand "fit" or image congruity. Desai and Keller (2002) found that although a co-branded ingredient facilitated initial expansion acceptance, a self-branded ingredient could lead to more favorable long-run extension evaluations. In other words, borrowing equity from another brand does not necessarily build equity for the parent brand (see also Janiszewski and van Osselaer 2000).

Research Questions:

1. What is the proper executional approach to combining brands? What characterizes effective implementation?

2. What are the relative implications of formal alliances, co-branding, and ingredient branding on customer reactions and company profits?

3. When one brand buys another or is merged with it, how should it be determined whether or not one brand should dominate?

4. Does a brand carry the same value after it is acquired?

5. How much brand equity is derived from surroundings (e.g., retail stores, distributors) and how much does a brand contribute to the equity of these surroundings?

6. What are the roles of different brands in providing "complete solutions" to consumers? How are "lead brands" best determined?

Cross-Cultural and Global Branding. Branding is increasingly being conducted on a global landscape. A number of issues emerge in attempting to build a global brand. Levitt (1983) has argued that companies needed to learn to operate as if the world were one large market—ignoring superficial regional and national differences. Much research, however, has concentrated on when marketers should standardize versus customize their global marketing programs (e.g., Gatignon and Vanden Abeele 1995, Samiee and Roth 1992, Szymanski et al. 1993).

Research has also examined cultural and linguistic aspects of branding, e.g., showing how Chinese versus English brand names differ in terms of visual versus verbal representations (Schmitt et al. 1994, Pan and Schmitt 1996, Zhang and Schmitt 2001). From a brand building standpoint, Steenkamp et al. (2003) show how perceived brand globalness creates brand value.

Research Questions:

1. How do consumer schemas and accepted practices for branding strategies and activities vary across countries?

2. What is the optimal degree of localization for branding and marketing communications? To what extent should both the marketing programs for a brand and the product itself (e.g., level of sweetness for Coca-Cola) be varied across locations?

3. How does global brand management vary by product life-cycle stage? Should it be mandated or encouraged by sharing best practices across the company?

4. To what extent does country image (or equity) impact the equity of brands from that country?

Branding and Social Welfare. Brands would exist even if no money were spent on advertising and promotion for products. Customers would find some distinguishing characteristics (name, color, shape) to identify products or services that had served them well and use them to simplify (make more efficient) future choices. Moreover, as satisficers, customers are slow to update performance improvements (or decreases) in their current or other alternative choices. The result, at least in the short run, is market inefficiency in the physical attribute product space. In essence, market inefficiency (see Hjorth-Anderson 1984) can be seen as the same as brand equity, raising several interesting questions.

Research Questions:

1. Do brands create value, provide value, or reduce value for customers?

2. Are there categories of goods for which large brand equities are acceptable (e.g., luxury goods marketed to affluent customers), and others where they are not (e.g., pharmaceuticals)?

3. Is market inefficiency and the creation of brand equity desirable or undesirable in terms of its effect on the overall economy?

4. How should marketers respond to criticisms of brands as being overpriced? As creating needs versus satisfying real needs? How about issues of product failure or safety?

5. What is the role of brands in acquiring and retaining employees? Do brands positively impact employee effort and hence customer satisfaction or welfare?

Implications for Choice Modeling

The previous discussion captures some of the research progress and gaps in the study of branding. The discussion also has some specific implications for incorporating branding concepts into choice models.

To demonstrate how brands influence consumer choice through their value (utility), we contrast the stylized "classic" microeconomic view of utility and choice (Lancaster 1966) with a view which explicitly and/or implicitly encompasses the impact of brands. In the classic view, the value of brand j is the sum of its I (objective) attributes, net of price, as follows:

$$VB_j = \sum_{i=1,\dots,I} B_i X_{ji} - P_j. \tag{1}$$

Essentially, at the customer level, a brand is the lens through which the words and actions of a company, its competitors, and the environment in general are converted to thoughts, feelings, images, beliefs, perceptions, and attitudes, etc., about a product (or family of products). Much of the value of a branded product is in these subjectively determined components. The manner by which consumers transform objective product value to create additional (intangible) value leads to four components of brand value:

- *Biased Perceptions* $(X^*_{ji} - X_{ji})$, i.e., the extent to which specific product attribute perceptions are influenced by the halo effect (Beckwith and Lehmann 1975).
- *Image Associations* (Z_{jk}), i.e., nonproduct-related attribute beliefs such as "friendly" or "stylish."
- *Incremental Value* (V_j), an additive constant associated with the brand name that is not related to any particular attribute or benefit.
- *Inertia Value* (S_j), the value to consumers of simply choosing the same option rather than spending effort to consider others, e.g., due to switching costs, or the confidence (less uncertainty) of a known alternative.

The value of a branded product (VBP) can be seen as the sum of the objective value of a product as well as the four components of brand value listed above:

$$VB_j = \sum_{i=1,\dots,I} \beta_i X_{ji} - P_j + \sum_{i=1,\dots,I} \beta_i (X^*_{ji} - X_{ji}) + \sum_{k=1,\dots,K} C_k Z_{jk} + V_j + S_j. \tag{2}$$

Note that S_j is not strictly a brand term but rather reflects state dependence and can be modeled using the last brand purchased (otherwise, V_j and S_j are not identifiable).

Much of the previous research that incorporates brands has focused on assessing the impact by modeling consumer choice with a specific brand term (Srinivasan 1979). The rationale is a view that brand equity is what remains of consumer preferences and choices after accounting for physical product effects. Several approaches have been suggested:

- Kamakura and Russell (1993) proposed a scanner-based measure of brand equity that attempts to explain the choices observed by a panel of consumers as a function of the store environment (actual shelf prices, sales promotions, displays, etc.), the physical characteristics of available brands, and a residual term dubbed brand equity (here, V_j).
- Swait et al. (1993) proposed a related approach for measuring brand equity which utilizes choice experiments that account for brand name, product attributes, brand image, and differences in consumer sociodemographic characteristics and brand usage. They define the equalization price as the price that equates the utility of a brand to the utilities that could be attributed to a brand in the category where no brand differentiation occurred.
- Park and Srinivasan (1994) proposed a methodology for measuring brand equity based on the multiattribute attitude model. The attribute-based component of brand equity is the difference between subjectively perceived attribute values and objectively measured attribute values, essentially the $X^*_{ji} - X_{ji}$ terms in (2) (i.e., the "halo effect," Beckwith and Lehmann 1975, 1976). The nonattribute-based component of brand equity is the difference between subjectively perceived attribute values and overall preference and reflects the consumer's configural representation of a brand that goes beyond the assessment of the utility of individual product attributes.
- Dillon et al. (2001) presented a model for decomposing ratings of a brand on an attribute into two components: (1) brand-specific associations (i.e., features, attributes, or benefits that consumers link to a brand), and (2) general brand impressions (i.e., overall impressions based on a more holistic view of a brand, here the Z_{jk}s).

One clear and important implication of the above discussion is that the value of a brand is greater than either its additive (main effect) incremental value (e.g., in a conjoint study or logit model) or its impact on perceptions, and it needs to be separated from state dependence.

Influences on Brands

Brands are made, not born. The process of their construction is complex. From a manufacturer's point of view there is a reduced form, "stimulus-response" style simplicity to it: (1) the manufacturer takes actions (e.g., the marketing mix) and that leads to (2) customer mental responses towards the brand (perceptions, beliefs, attitudes, and so on). These perceptions (and the resulting willingness to pay) in turn lead to (3) customer behavior in the product market (e.g., sales), which in turn generates (4) financial value in general and stock market and market capitalization in particular.

This framework or value chain is a useful basic conceptualization. Still, it obscures some important complexities. The first is that a brand's position is heavily influenced by others, e.g., competitors, governmental bodies, and interest groups, as well as by actions of employees and the identity and behavior of customers of the brand. Analogous to the customer level, high levels of brand equity reduce price sensitivity and make advertising more effective. Perhaps most important, it ensures distribution in channels with limited selection (e.g., convenience stores or small distributors), making it available in more locations. Greater availability may in turn impact (signal) perceptions: "If a brand is widely carried and displayed, then it must be good."

Thus, another complexity is that the impact of what the brand does depends on the brand itself (i.e., is endogenous), particularly in terms of its overall strength. Considerable evidence exists that strong brands have lower price elasticity with respect to their own price increases or price decreases of their competitors. Similarly, the advertising elasticity of strong brands may be larger. This leads to different decisions.

Consider the impact of advertising on one component of brand equity—image associations. Specifically, consider a simple model of how a specific image association k is related to a specific marketing program activity (M_n) for brand j:

$$Z_{jkt} = Z_{jkt-1} + D_{jn} * M_{jn}. \tag{3}$$

For a strong brand, the marginal impact of its advertising (D_{jn}) may be greater than for a weak brand. Thus, strong brand j can spend less than a weak brand and still improve its image. More generally, the image of a brand depends on the N marketing activities of the various R competitors as well as main and interaction effects of its own activities:

$$\begin{aligned} Z_{jkt} = Z_{jkt-1} &+ \sum_{n=1,\ldots,N} D_{jn} M_{jn} \\ &+ \sum_{n=1,\ldots,N} \sum_{p=n+1,\ldots,N} D_{jnp} M_{jn} M_{jp} \\ &+ \sum_{r=1,\ldots,R} \sum_{n=1,\ldots,N} D_{jrn} M_{rn}. \end{aligned} \tag{4}$$

The multiple consequences of brand equity mean that an aggregate product-market level model should at least include a brand main effect, brand interaction effects, and the impact of competition. This is obviously a very complex model so that simplifications are needed. For example, we can assume brand equity modifies the impact of marketing activities through a varying parameter formulation such as ($D_{jn} = D_n + wV_j$). It is also difficult, of course, to separate the impact of a brand from its unique attributes or attributes not included in the analysis. This separability problem makes it hard to identify whether apparent brand equity is due to brand image or attribute differences; attributing it all to the attributes may induce omitted variable bias whereas attributing it all to the brand may overstate brand impact.

Further levels of complication are also possible, although rarely considered. For example, the decision of channels to stock and support a brand depends on how much revenue it will generate which, in turn, depends in part on brand equity (e.g., see Besanko et al. 2005). Similarly, brand equity can have indirect cost effects through its impact on volume (i.e., economies of scale) or by providing the confidence to suppliers for them to commit resources to "partnering" with a firm and supporting its product. It is also possible that brand equity influences competitive actions and reactions. For example, will a competitor be more or less likely to cut price when faced with a high equity competitor who is to some degree insulated from the impact of their price cuts? While we have no specific answers to these issues, these areas are promising and underdeveloped avenues for future modeling research.

Allowing mix elements to have different, competitor-specific effects, greatly complicates modeling by introducing more parameters than can be effectively estimated. One issue, therefore, is whether it is worthwhile trying to capture such complexity, i.e., by adding the large number of possible interaction (moderating) effects. Said differently, for some purposes, is a "wrong" but simple model likely to outperform an extensive but likely misspecified more complete/complex model? Another related issue, particularly relevant for modelers, is how to capture such complexity in structural models of brand evaluation and competition. For purposes of this review, we leave these as an area for future analysis.

More generally, there may be a "virtuous circle." As brands develop positive brand equity, it becomes easier for them to develop further (and harder for competitors to compete with them). The obvious implication is that there are increasing returns to scale to building a brand, at least up to a point. The research question then becomes when, if ever, and under what conditions additional brand building becomes less efficient (e.g., see Naik et al. 2005). Combined with the earlier discussion on the multiple ways a brand manifests its extra value, this suggests an important measurement issue: how to capture its total value and how to determine the relative contribution of its multiple sources.

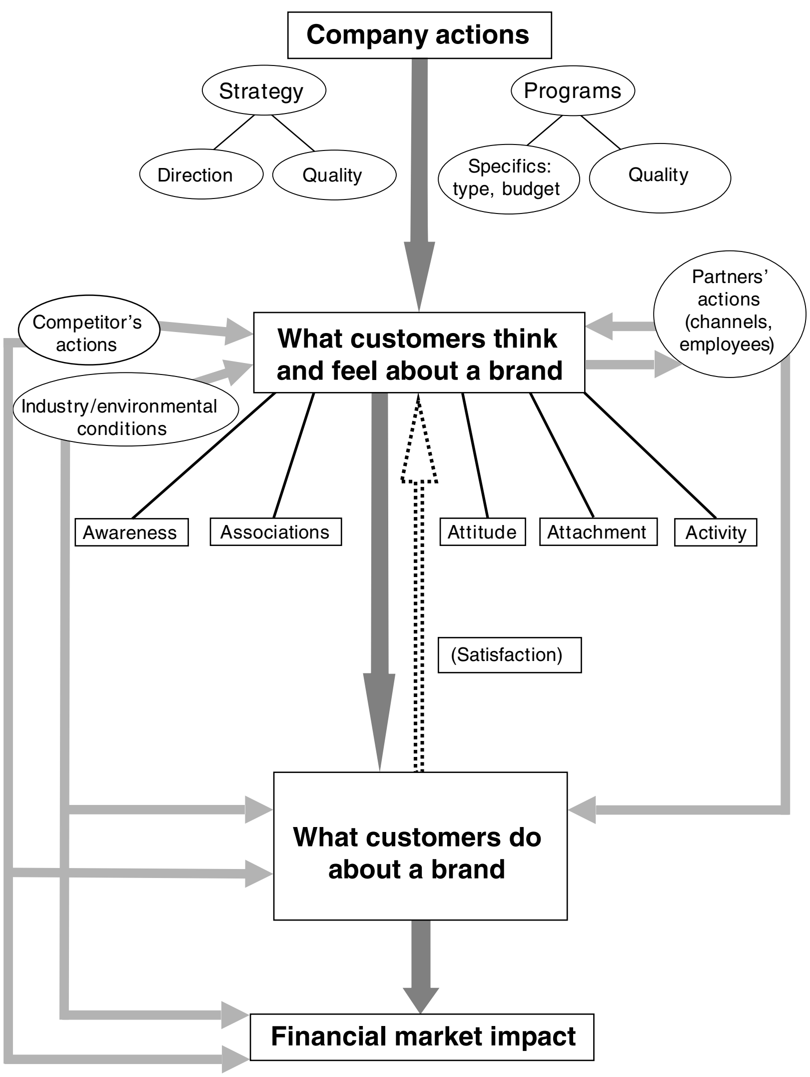
Finally, it should be noted that the topics concerning brand-management decisions discussed above have direct implications for these modeling formulations. Developing brand positioning relates to how marketing activities (Ms) lead to the formation of attribute perceptions (Xs) and image associations (Zs) in Equation (2). Integrating brand marketing addresses, in part, consistency issues and is implicitly related to the interaction terms among marketing activities in general and making their impact positive in particular. Assessing brand performance relates to metrics which both measure the elements of Equation (4) and their consequences in the product and financial markets. Brands as growth platforms addresses the key strategic issues of how to orchestrate efforts over time to develop brands not just for their own current market (as in Equation (4)) but so they provide a basis for both expanding the existing market and the option of entering others.

A Systems Model of Brand Antecedents and Consequences

A number of brand dashboards have been developed by firms which capture, but rarely link, many aspects of brand equity and performance. For branding research to be scientifically rigorous, it is important to develop a comprehensive model of how brand equity operates and to develop estimates of the various cause-and-effect links within it. To that end, we expand on the notion of a "brand value chain" (Keller and Lehmann 2003) discussed earlier. The chain focuses on the following four major stages (see Figure 1):

1. *What companies do*. Marketing programs, as well as other company actions, form the controllable

Figure 1 A Systems Model of Brand Antecedents and Consequences



antecedents to the brand value chain. Importantly, these activities can be characterized along two separate dimensions: quantitative factors such as the type and amount of marketing expenditures (e.g., dollars spent on media advertising), and qualitative factors such as the clarity, relevance, distinctiveness, and consistency of the marketing program, both over time and across marketing activities.

2. *What customers think and feel*. Customer mindset consists of the "Five As" discussed above. Importantly, there are feedback effects here, as demonstrated by the "halo effect" where brand attitudes affect perceptions of brand associations (Beckwith and Lehmann 1975, 1976). Moreover, what customers think and feel about brands is obviously not under the sole, or often even primary, control of the company. Individual customer characteristics as well as competition and the rest of the environment help shape what is thought of the brand, e.g., by influencing expectations (Boulding et al. 1993). Both personal experience (feedback from use and product satisfaction) and the experience of others (through word of mouth and "expert" ratings) also determine what a customer thinks of a brand.

3. *What customers do*. The primary payoff from customer thoughts and feelings is the purchases that they make. This product-market result is what generates revenue, share, and other metrics commonly used to evaluate the effectiveness of marketing programs. Of course, other things customers do, especially word of mouth, impact future product-market results and need to be considered in any comprehensive model.

4. *How financial markets react*. For a publicly held company, stock price and market capitalization, as well as related measures such as Tobin's Q, are critical metrics. In essence, these measures are the ultimate bottom line. As such, they are relevant at the CFO and CEO level, unlike most marketing metrics which are at the customer level or product-market level. Importantly, stock price is impacted by a number of other variables such as the growth potential of the industry as a whole, general economic trends, and stock-market dynamics, which need to be controlled for in assessing the financial value of brands.

The overall model is thus conceptually fairly simple (i.e., it has only four main components), but in practice is both complicated (to account for all the influences and feedback effects) and stochastic.

The model reflects and accounts for a number of marketing principles. Consider the impact of a brand extension in the context of the Bass model of new product diffusion. Assuming there is some level of fit with a parent brand which has positive equity, a brand extension has advantages in terms of assumed product quality and the willingness of the firm to stand behind the product in the event of problems. These expectations should increase the number of people willing to buy the brand extension initially (p, the coefficient of innovation) and the speed of diffusion of the extension through word of mouth (q, the coefficient of imitation) since it will seem less risky to those consumers who wait for others to buy it first. A stronger brand can more easily gain wider distribution which will also lead to faster trial among innovators (in effect, makes the market potential m larger). Thus, a reasonable prediction is that stronger brands will, ceteris paribus, have both faster diffusion and greater market potential.

To move branding toward becoming a rigorous science, a general model similar to Figure 1 needs to be tested and calibrated. Currently, little progress has been made toward estimating such a comprehensive model, or even a reduced form version of the model, such as marketing activities → product-market results → financial impact. As noted above, there are certainly scattered empirical generalizations. For example, we know increasing ad budgets has little impact on current sales unless either the product or the use that is promoted is new (Lodish et al. 1995, Assmus et al. 1984). What is badly needed are: (1) metaanalyses that combine partial tests of model components (i.e., only relating a subset of variables) into an overall estimate of the average links and key contingencies in the model, and (2) comprehensive studies that systematically examine the model, or at least a large part of it, in its entirety.

Conclusion

Branding and brand management has clearly become an important management priority for all types of organizations. Academic research has covered a number of different topics and conducted a number of different studies that have collectively advanced our understanding of brands. Table 1 summarizes some of the generalizations that have emerged from these research studies that were reviewed in this paper.

To put the academic literature in marketing in some perspective, it could be argued that there has been somewhat of a preoccupation with brand extensions and some of the processes that lead to the development of brand equity. By contrast, there has been relatively limited effort directed toward exploring the financial, legal, and social impacts of brands. In terms of methodology, considerable effort has been devoted to controlled experimentation (often with student subjects), although some work has focused on choice modeling of scanner data. Little integration of these two streams with each other or the qualitative work on branding has appeared.

Although much progress has been made, especially in the last decade or so, a number of important

Table 1 Sample Branding Generalizations

Brand positioning and values
- Brands have personalities and the basic types exist across products and, to a large extent, countries/cultures.
- Customers have multiple types of relationships with brands.
- Product experiences are multisensory and impact brand equity in different ways.
- Corporate and brand reputation interact.

Integrated marketing
- Brands consist of multiple brand elements that can play different roles.
- A number of criteria can be employed to judge the brand-building capabilities of various brand elements.
- Semantics and language matter with brand names.
- Brand equity is increasingly being determined by activities outside the company's direct control.

Assessing brand performance
- Customer-level brand equity can be characterized in terms of awareness, associations, attitudes (or attraction), attachment, and activity.
- Qualitative research approaches can supplement quantitative research approaches to provide useful insights into brands.
- At the product-market level, brand equity increases communications and channel effectiveness and decreases own price sensitivity.
- Product-market level brand equity can be assessed as the additional (net) revenue from a brand versus a generic.
- Brands constitute a substantial fraction of the market cap of many companies.
- Brand-equity measures can be related to stock price and value.
- Brand equity is closely linked to customer equity.

Growing the brand
- Fit is a key determinant of extension success but fit comes in many forms.
- Extensions impact the parent brand positively in the case of successes and negatively only when the extension is (a) closely related to the parent, and (b) of poor quality.

research priorities exist that suggest that branding will be a fertile area for research for years to come. This review of these different areas suggests a number of specific research directions in those various research programs. Many important branding questions and issues are yet to be resolved. The above discussion will hopefully stimulate progress in these and other areas.

Upon reflection, it may seem that some of these research questions are fairly uncontroversial. Further, there undoubtedly exists some research which bears, at least tangentially, on all of them. Nevertheless, they are worthy research questions because: (1) the issues have not been fully resolved at the level of "laws" or empirical generalizations, and (2) the issues are frequently raised by practitioners, suggesting that as a field our communications, if not our findings, have failed to reach and impact an important constituency.

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