Brand portfolio management and the role of brand acquisitions

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BRAND PORTFOLIO MANAGEMENT AND
THE ROLE OF BRAND ACQUISITIONS

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
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ABSTRACT

This dissertation is the first study to propose and empirically test a framework outlining factors that influence the choice of brand acquisitions versus brand creations in a brand portfolio expansion strategy. Drawing on research on make-or-buy decisions, a multilevel interdisciplinary conceptual model was developed, identifying three potential levels of influence: the market, the firm, and the brand portfolio. Twenty-two firms were selected from the ACSI sample of firms, and secondary data sources were utilized to collect data for the variables in the analysis. The model was tested using logistic regression. The results revealed that factors at the market and firm levels seemed to have the greatest influence. Competitive Intensity of the market has the strongest effect on the choice of brand portfolio expansion strategy, followed by the firm’s Financial Leverage, Market Concentration, and Market Growth. The contributions of the study and directions for future research are also discussed.
CHAPTER 1: INTRODUCTION

In today’s knowledge-intensive era, the importance of creating and deploying intangible assets as an element of a firm’s competitive advantage cannot be overstated. It is now widely acknowledged that intangible assets are a key driver of innovation and corporate value in the 21st century (Coombs and Deeds, 1996; Del Canto and Gonzalez, 1999; Bounfour, 2003) and the appropriate allocation and exploitation of intangible resources is an important strategic decision for organizations (Halliday et al., 1997). Among the firm’s intangible assets, brands have become one of the most manageable and critical assets of the firm. The shift in the strategic role of brands occurred in the 1980’s. Before this time, acquisitions and mergers were valued primarily on the tangible assets involved. But in the 1980’s, firms realized that brand names were often many times more valuable than the primary assets of a firm. As a result, the values of brand names such as Marlboro, Buitoni, or Orange increased substantially because buyers paid several times the “book value” of the acquired brands and other intangible assets. This increased value of brand names marked a turning point regarding the role of brands - not only from a marketing perspective, but also from the viewpoint of overall corporate strategy.

Today, more than two decades later, brands have become major artifacts of modern society. Brands penetrate all spheres of our life: economic, social, cultural, athletic, and even religious (Kapferer, 2004). Within academia, researchers in almost every discipline have studied brands, creating a variety of perspectives regarding their definition. In consumer research, a brand is defined as a set of mental associations; in finance, an intangible and conditional asset; in legal research, a tool in differentiating a company’s offering from that of its competition; and in marketing, a name with considerable power to influence buyers. The unifying theme of these diverse perspectives is that a brand is an important asset of the company, an asset that provides a
competitive advantage over a period of time and hence is far more powerful than as a simple promotional tool used solely by the marketing department.

In practice, the rise in the importance of branding can be seen in its use in almost all facets of a firm and the rapid increase in the average number of brands owned by firms. As a result, not only has consumer choice been enhanced, but market and financial performance of firms has gained another powerful component.

**The Role of Brand Portfolio Management**

The proliferation of brands not only across the entire spectrum of a firm’s products, but also as a key firm asset, has made brand strategy a key element of corporate strategy. Central to any brand strategy is brand portfolio management - the ability to organize all the firm’s brands into a coherent *brand portfolio* and manage the complex interrelationships among brands in these portfolios. This process has become crucial for every company with multiple brands because the objective is to ensure not only that individual brands are successful, but also that the firm’s overall group of brands is well coordinated and holistic. Well-managed brand portfolios create advantages throughout the firm, from avoiding consumer confusion to ensuring internal efficiency by preventing investment in overlapping product-development and/or marketing efforts (Carlotti, Coe, and Perrey, 2004). The far-reaching impact of brand portfolio decisions on a company’s key economic measures highlights the importance of effective brand portfolio management not only in a marketing program’s success, but also in the overall success of a company (Morgan and Rego, 2006; Tybout, Calkins, and Kotler, 2005).

Companies managing brand portfolios must address two primary tasks: (1) optimizing the structure of the brand portfolio so that existing brands meet consumer preferences and enhance the firm’s performance, and (2) adapting the firm’s brand portfolio to changes in the market
environment and in the strategic direction of the firm. The first task requires constant monitoring of the brand portfolio to avoid cannibalization among brands while enhancing the synergistic effects between a company’s brands. Adapting a competitive portfolio to the constantly changing business environment requires that brand portfolio managers integrate strategic decisions and environmental information while engaging in some form of brand portfolio restructuring. Three fundamental options are available for brand portfolio restructuring: (a) reorganizing the portfolio by repositioning brands, (b) rationalizing the portfolio through the deletion and/or divestiture of existing brands, and/or (c) expanding the portfolio by adding new brands (Aaker, 2004). While portfolio restructuring may occur using any option alone or in any combination, each option presents the firm with distinctive issues and approaches to managing not only individual brands but also the overall portfolio. Although all three brand-portfolio restructuring options are viable and widely used, this research will focus exclusively on the third option: brand portfolio expansion.

**Brand Portfolio Expansion**

Brand portfolio expansion can itself be divided into three approaches: brand extension, brand creation, and brand acquisition. Of these, brand extension—defined as any effort to extend a successful brand name through new or modified products or product lines—is generally regarded as the most common strategy for adding new products to a brand portfolio (Kotler, 1991). It is estimated that almost 90 percent of brand portfolio expansion activity involves brand extensions (Aaker, 2004), due to the lower risk and resource commitment associated with this option. Risk is reduced by using a brand already established in the market and by drawing on the associated and established manufacturing skills, customer network, and distribution system. Resource commitments are far lower for brand extensions than for the other approaches to brand
portfolio expansion since company managers are familiar with the brand and its required processes and advertisement synergies are easier to realize. Indeed, the popularity of brand extensions has led to the emergence of an extensive body of research in marketing focusing on this topic. The consensus in this literature is that although brand extensions offer distinct advantages, managers must develop a clear understanding of where they can and cannot extend a brand (Keller and Lehmann, 2006). Establishing and maintaining appropriate limits for brand extensions is especially important, because “brands stretched too far (even if successful) risk diluting the core associations and eroding the customer base” (Farquhar et al. 1993) and even the value of the “mega brand” is limited (Kapferer, 2004). Due to these limitations of brand extensions, today many companies see more long-term growth possibilities in expanding their brand portfolios via brand creation or acquisition rather than in stretching an existing brand further and further. Some companies launch their own brands as entrants in product categories - Coors with Killian’s Red, and Miller with Red Dog are examples in the beer industry. Other firms expand their brand portfolio by identifying gaps in their brand line-ups and seeking brands they can buy from other firms - P&G’s acquisition of Clairol in 2001 is an example from the personal care products industry.

This increased attention to the choice between brand creation and brand acquisition is the topic of this research. It is assumed that in situations in which brand acquisition or creation occurs that a brand extension is neither a possible nor desirable option for brand portfolio expansion. The next section will discuss the specific focus of this research in more detail and will formulate the research questions motivating this research.
Research Objective

Brand portfolio expansion via brand extensions has motivated considerable research efforts leading to the creation of a body of literature (e.g., Czellar, 2003; Bottomley and Holden, 2001; Aaker and Keller, 1990; Bottomley and Doyle, 1996). Brand portfolio expansion via internal brand creation or external brand acquisition, however, has received far less research attention in the marketing literature. Few conceptual papers have addressed this topic (see Doyle, 1990 for one of the only conceptual papers) and very limited empirical research has been completed with any kind of representative sample of these other brand expansion options.

This research seeks to address this gap in the brand management literature by investigating brand portfolio expansion via external brand acquisition versus internal brand creation. More specifically, this dissertation will explore the factors that influence companies to choose between brand acquisition and brand creation as their expansion strategy. Due to the limited theoretical work and conceptual frameworks for brand portfolio expansion outside of brand extensions, this study draws on prior work in the make-or-buy decision in the strategic management literature (e.g., Brouthers and Brouthers, 2000; Hennart and Park, 1993; Chatterlee, 1990) as well as the brand portfolio literature from marketing. At a conceptual level, brand creation and brand acquisition are the brand-management equivalents of the make-or-buy decisions faced by firms in many areas of operation. Firms can build a new brand from scratch via internal efforts (i.e. make) or they can purchase an existing brand in the marketplace (i.e. buy). These are fundamentally the same decision alternatives firms have with regard to entering new domestic or foreign markets and performing other business functions (including the development of new products and technology). Because of the conceptual similarities between the alternatives for brand portfolio expansion and other make-or-buy decisions, this study draws from research
on this topic to develop the conceptual framework underpinning the empirical study. The empirical study will address the following research question:

How do factors identified by prior research on make-or-buy decisions impact brand portfolio expansion strategies via brand creation or brand acquisition?

This dissertation contributes to the marketing discipline by focusing on a strategic marketing decision -- brand portfolio expansion via brand creation and brand acquisition -- which has received minimal attention in academic research while becoming increasingly prevalent in business practice. This research first develops a conceptual model of factors influencing the choice of brand portfolio expansion strategy and then empirically tests it in a large-scale sample of brand portfolio expansions. In addition to the marketing literature, this work contributes to the original literature on make-or-buy decisions by including the insights of a previously neglected but increasingly important context: the management of brand portfolios.
CHAPTER 2: BRAND PORTFOLIO EXPANSION VIA ACQUISITION OR CREATION

This section provides an overview of the two brand portfolio expansion strategies (brand creation and acquisition) that are the focus of this dissertation. In addition to an examination of these two brand portfolio expansion options there will also be a more detailed discussion of the practice of brand acquisition which has received little attention in the marketing literature.

Brand Creation

Brand creation, as defined in this research, involves a firm’s introduction of a brand that is new to a firm and the market. Brand creation, as a brand portfolio expansion strategy, allows a company to overcome the limitations of brand extensions while offering several benefits. First are the internal development benefits (e.g., choosing the brand position that best fits a firm’s existing brand portfolio and precisely addressing the needs of potential customers) and the ability of the firm to manage the pace of brand expansion – both internally to foster orderly assimilation as well as externally to attract consumers in search of something different (Kahn and Isen 1993). Moreover, brand creation avoids cannibalization, often an outcome of brand extensions. With these benefits come several inherent challenges. First, and foremost, is the increased risk as Jones (2004) asserted that brand creation is “a risky venture with a greater chance of failure than success, and existing brands are the source of repeat business and economies of scale” (as cited in Sarkar and Singh, 2005, p. 86). In the same vein, Aaker (1994) argued that it is more difficult to build new brand names today because of the increase in advertising and distribution costs, as well as the intensified competition resulting from brand proliferation. Further, Tybout, Calkins, and Kotler (2005) argue that a new brand will subsequently require a larger marketing budget and potentially increase the complexity of the organization. Yet, as evidenced by the successful
launch of brands like Victoria Secrets’s Pink, Toyota’s Scion, Coca-Cola’s Enviga, and Dannon’s Actimel, even in the face of all these challenges, companies continue to create brands.

**Differences from New Product Development**

It is important to distinguish between brand creation and new product development. The development of a new product and the creation of a new brand are related but conceptually different organizational activities. The processes are similar in that they both focus on introducing something new to the market. They may overlap (i.e. when a new product is introduced under a new brand), but that is not required. A new product can be developed and marketed under an existing brand (i.e. via brand extension). Likewise, a new brand can be created for an existing product. While the former case is generally more common, brand creation without new product development does occur. In the pharmaceutical industry, for example, it is not unusual to introduce “old” products under a new brand. GlaxoSmithKline had successfully introduced and marketed its Wellbutrin brand as an antidote against depression while introducing the Zyban brand as an aid in smoking cessation. Yet both products (Wellbutrin and Zyban) are based on exactly the same compound (Tybout, Calkins, and Kotler, 2005).

While new product development and brand creation are similar in their objectives (i.e. the introduction of something new to the market) they differ substantially with regard to at least three aspects: degree of control, locus of activities, and the evaluation of return on investment.

First, new product development is entirely under the control of the executing firm as it can create and implement its vision of the new product free of interference from sources external to the organization. Management can a priori establish clear parameters for the new product and execute product development to meet those specifications. Brand creation, on the other hand, is inherently an interactive process that involves consumers as much as the executing firm. Even a
brand creation based on the most brilliant vision for the new brand may fail to meet management’s expectations when external circumstances prompt consumers to perceive the brand differently than intended.

Second, the locus of new product development activities and brand creation activities is different, especially the role of the marketing function. While marketing may play a role at certain points during the new product development process (e.g. by collecting information about consumer preferences, or by collecting feedback on prototypes through focus groups) the brand creation process is driven by the marketing function. Due to the importance of marketing expertise in brand creation and the inherent implications of the brand creation process for a firm’s other marketing activities, brand creation is centered on the marketing function to a much greater extent than new product development.

Finally, a third important difference relates to the evaluation of both activities. Assessing the success of new product development efforts is relatively straightforward for a company and its stakeholders. Development costs, sales data, and other information can be used to calculate the return on an investment from the development of a new product. Evaluating the return on brand creation is not as straightforward. While researchers and practitioners have made progress in the estimation of brand equity (e.g. Keller, 1993; Park and Srinivasan, 1994), there is no standard method available for evaluating the benefits of internal efforts to create a brand in monetary terms. This not only makes it difficult for senior managers to assess the payback on brand creation activities, but also imposes significant uncertainty for a firm’s stakeholders.

**Defining Brand Creation**

Amending the definition provided earlier, brand creation involves an introduction of a brand that is new to a firm and the market, it is a process embedded in market and consumers,
driven by marketing strategy as opposed to technological innovation, with benefits that are deferred and difficult to quantify. Brand creation may be based on a new or existing product of the firm, but always has a distinct name, one that is not a part of a firm’s existing brand portfolio and is not used on the market at the time of introduction.

**Brand Acquisition**

Brand acquisition involves a firm’s acquisition of an existing brand offered in the market by another firm. The practice of brand acquisition first attracted serious attention about 20 years ago. In 1988 Philip Morris purchased Kraft, paying about six times the company’s worth as represented by tangible assets. The “price premium” primarily reflected the perceived value of the brand “Kraft” (Klein, 1999). At the same time management theorists popularized the strategy of creating brands versus just products. This unison of practice and theory gave momentum to the practice of brand acquisitions as not only a tactical mechanism for managing a firm’s brand portfolio expansion, but more importantly as a critical success factor from both the strategic and financial perspective.

Although statistics are not compiled on the number of brand acquisitions occurring yearly in the U.S., a recent study of merger and acquisition transactions identified 555 brands that changed ownership between 1998 and 2003 (Fee, Hadlock, and Pierce, 2008). The authors used non-public data collected by a vendor that sells data for marketing intelligence firms; the sample included both public and private companies in the U.S. and abroad. This study highlighted not only the extent of brand acquisitions (i.e. an average of over 100 per year), but also the myriad forms in which they occur (i.e., the 555 brand acquisitions involved 348 distinct events, as 84 of them were cases in which multiple brands were purchased in a single transaction).
The following sections discuss the different forms of brand acquisitions. Then, the advantages and challenges facing firms using this approach are reviewed.

Forms of Brand Acquisition

It is important to note that brand acquisitions can take many forms. Brands can change ownership as part of a company acquisition, or be acquired by themselves as individual brands or as a group of brands. Yet whichever approach is taken, the types of assets that are acquired can differ markedly. One approach is to acquire all the assets associated with a brand (e.g. facilities, management team, distribution network, etc) as is often the case in company acquisitions. For example, in 2008 P&G acquired NIOXIN Research Laboratories Co, which produces a single brand NIOXIN. The acquisition included all facilities, employees, and the CEO of NIOXIN Research Laboratories Co. agreed to work for P&G as the manager of the NIOXIN brand. In another approach, the acquisition may include only the brand elements (e.g., name, logo, etc.) and other intellectual assets (e.g., technical details, acquired market knowledge, etc.) associated with the brand. Here the brand is acquired without being a part of a company acquisition. For example, in 2008 Kellogg Co. acquired Mother’s Cake and Cookie brand from Archway & Mother’s Cake and Cookie Co. receiving nothing but a trademark and the recipes.

The most tangible evidence of a brand acquisition, no matter the form of assets acquired, is the legal transfer of the brand elements from one firm to another through the trademark assignment process. A trademark is a legal form of intellectual property that is used to protect the elements of a brand (i.e., name, logo, sign, symbol, etc.) through rights established by use or by registration with the United States Patent and Trademark Office (USPTO). The registration of a trademark is not required by law, but generally is considered a “good business practice” and is commonly done. Since a trademark is a recognized form of intellectual property, it can be sold to
another party, resulting in a legal change in ownership that is recorded by the USPTO as an assignment. This means that ownership changes for a trademark, to the extent they are recorded with the USPTO, are reflected as assignments in the USPTO database.

One complicating factor in using USPTO assignments to identify brand acquisitions is that a trademark is assigned to each separate brand element. For example, a single brand may have separate trademarks representing the name, logo, shape, color combination, etc. When the brand is sold to the acquiring firm, all associated trademarks are transferred and an assignment is recorded for every trademark. Also, the database does not reflect any form of relationship among trademarks, making it impossible to identify the number of unique brands represented by the assignments in any year. Yet, even with these limitations, an examination of the number of assignments recorded by the USPTO over the years provides a representation of the development of this practice. Figure 1 portrays the increasing number of trademark assignments since 1955. Of particular note is the recent trend wherein 2006 represents a fourfold increase from 1980, and a twofold increase from 1995. Thus, even though the absolute number of assignments overstates the actual number of brands being assigned (along with some instances of assignments not representing an actual legal transfer of ownership), it does demonstrate a general trend of the rising popularity of changing ownership of trademarks and thus increased interest in brand acquisitions.

**Advantages and Disadvantages of Brand Acquisitions**

Just as with brand creation, a brand acquisition has unique benefits and disadvantages, making the choice between the two a complex one.

In terms of benefits, brand acquisitions have several advantages not found through brand creation (or even brand extension). First, the costs for an acquired brand can be evaluated against
the outcomes attributable to the brand and can be represented as an asset on the balance sheet of the acquiring firm. In doing so, the costs of brand acquisition are more transparent to external stakeholders than the costs involved with extending a brand or creating a new brand internally. In some situations, acquired brands may actually represent a bargain if they are undervalued due to the poor brand management, poor overall performance of their owner or other strategic considerations. For example, at the end of 2008 the Kellogg Company acquired Mother's Cake & Cookie brand at a substantial “discount” after the original owner met financial distress. Even without such dire circumstances, companies may be willing to sell their developed brands at attractive prices when strategic considerations necessitate it. In 2003 Procter & Gamble was seeking to sell its two juice brands – Sunny Delight and Punica. Both brands were profitable for the company and Procter and Gamble had invested substantially in developing both brands. However, the company’s management concluded that in the future the juice market would increasingly be dominated by specialist firms rather than diversified companies like Procter &
Gamble, thus making divestiture of the brands the primary consideration rather than maximizing value.

A second benefit of acquired brands is the potential for synergy with existing brands or operations due to factors such as the reduction of costs or an increase in marketing competence. Empirical research on horizontal acquisitions involving brands indicates that the redeployment of marketing expertise in both directions after an acquisition – from the acquiring to the acquired firm and vice-versa (Capron and Hulland, 1999) can outweigh the initial capital outlay of a brand acquisition.

Third, the most obvious benefit of brand acquisition is the existing market presence, established manufacturing skills, and extant customer and distribution networks of the acquired brand. To realize these benefits many brands are acquired with the intention of transferring all of the elements of brand equity (e.g., tangible processes or other resources or even just the brand name) to the buyer’s own products. In doing so, the acquisition of an existing brand can enable a portfolio expansion with less risk than possible through creating a brand. As an example, Nestle took advantage of these benefits when it acquired U.K.-based Rowntree in 1988 and integrated the management of both brands under one corporate roof (Capron and Hulland, 1999).

Next, brand acquisition is also a common tactic used when trying to access a foreign market. For example, L’Oreal successfully extended its portfolio to the US market via a series of brand acquisitions and now has plans for a similar strategy in Asia. Strong local brands are acquired either because they are the leaders in their market segment or because they anticipate the trends of the future (Kapferer 2004, p.343). In cases of governmental protection of domestic firms, brand acquisition may act as a “Trojan Horse” where buying a local brand is in many cases the only way to enter the local market.
Finally, today’s dynamic environment often presents firms with challenges created by market shifts and an urgent need to create branded energizers or differentiators. Brand acquisition may be the solution if a firm to respond to fast changing market conditions in a timely manner (Aaker 2004).

While benefits of brand acquisitions are significant, several challenges associated with this practice preclude some companies from using this strategy for their brand portfolio expansion. The first and most obvious disadvantage is that the integration of an acquired brand can be difficult and can make the pursuit of a coherent brand strategy more challenging (Doyle, 1990). For example, when Quaker Oats Company acquired Snapple, at the time a quite successful brand, management did not recognize that Snapple’s success was based in its unique brand identity. Instead they tried to position it as a third option to Coke and Pepsi and the brand quickly lost its appeal to consumers. In the end, Quaker had to sell the brand at a huge loss.

Second, the costs associated with brand acquisition are more obvious to external stakeholders than the costs for the other comparable brand portfolio expansion strategies (Chatterjee, 1990). In some situations (e.g. highly leveraged company) such transparency may have a negative impact on firm’s valuation.

Last, an acquisition target with the desired characteristics may not exist or be difficult to recognize. Information about brands is limited or lacking and it can be challenging to evaluate the match between an existing brand’s features and a firm’s requirements, thereby making it challenging to ensure the expected outcome.

The Practice of Brand Acquisitions

The practice of brand acquisition has been gaining popularity for the past 20 years. Companies have utilized many different forms of brand acquisitions, ranging from the
acquisition of just a brand name to the acquisition of an entire company to which a brand belongs, including associated facilities and employees. Although a comprehensive compilation of brand acquisitions does not exist, some proxy measures indicate that the practice is widely employed.

Brand acquisition may present a firm with opportunities not offered by other brand portfolio expansion options, such as the ability to buy an existing brand at a bargain price, pursue synergies from integrating an acquired brand into existing portfolio, benefit from established market presence of the brand, a means for entering a new market, perhaps closed to other means of entry, in a timely manner. To fully exploit these benefits a firm has to be aware of the challenges associated with a brand acquisition strategy and not underestimate the importance of understanding the distinctiveness of the acquired brand, the issues related to the transparency of the acquisition price (this topic is discussed in more detail later), and the difficulty of finding an acquisition target.
Although the importance of brand acquisition decisions is widely acknowledged in the marketing and management literature (Keller, 1998; Rao, Mahajan, and Varaiya, 1991), research focused solely on brand portfolio expansion strategies is limited to a single conceptual article (Doyle, 1990). No empirical studies have investigated the factors influencing brand portfolio expansion strategies. Moreover, no theoretical framework exists that outlines the factors influencing the choice between new brand creation and brand acquisition.

Due to the lack of a direct theoretical foundation, research on similar types of strategic issues was considered in developing a conceptual model. The most similar form of decision is the make-or-buy decision from the strategic management literature (e.g., D’Aveni and Ravenscraft, 1994; Walker and Weber, 1984; Baker and Hubbard, 2003; 2004). A subset of this research focusing on the make-or-buy decision associated with foreign market entry (e.g. Hennart and Park, 1993) was found to be particularly relevant as it was conceptually similar to the brand acquisition decision in three important dimensions. First, both are strategic choices typically associated with the pursuit of growth opportunities in new market environments. Second, in both cases internal factors (e.g. available management expertise) and external factors (e.g. existence of attractive acquisition objects) directly or indirectly influence the attractiveness and ultimately the choice of one of the options. Finally, make-or-buy decisions either explicitly or implicitly consider the influence of factors at different levels of analysis (e.g. Yip, 1982; Kogut and Singh, 1988; Hennart and Park, 1993). This is consistent with the framework for strategic management research that distinguishes among three levels of factors when analyzing firm-level outcomes – market effects (also referred to as industry effects), firm effects (also
referred to as business or corporate effects), and business segment effects (also referred as a business unit effect) (e.g., see Bowman and Helfat, 2001 for a comprehensive review, and Misangyi, Elms, Greckhamer, and Lepine, 2006 or Hough, 2006 for recent examples of studies analyzing firm performance at all three levels). The result is that the make-or-buy decision has enough similarities to the context of the brand acquisition decision to provide an appropriate conceptual foundation while also being consistent with more general models of firm-level decisions.

**Conceptual Bases**

Consistent with research in strategic management, specifically research that examines make-or-buy decisions associated with entry into new markets (e.g. Hennart and Park, 1993), the conceptual model of brand portfolio expansion to be developed will incorporate factors from three areas: (a) target market characteristics, (b) firm characteristics, and (c) brand portfolio characteristics. To identify the appropriate factors within each category, four research perspectives were utilized: (1) market configurations (e.g., Yip, 1982), (2) transaction cost economics (Williamson, 1975; for an application to market entry via make-or-buy see Hennart and Park, 1993, (3) Penrose’s theory of firm growth (1959), (4) and the capital market perspective (e.g., Chatterjee, 1990). Each of these perspectives will be reviewed briefly before the specific factors in each category are detailed.

**Market Configurations**

The study of market structures and their implications for firm strategy originated with the work of Bain (1956) and others. Subsequently, this perspective has received increased attention through the work of Porter (1985). Its application in the study of entry into new markets focuses in particular on the effects of barriers to entry (e.g. Yip, 1982). Barriers to entry (e.g. economies
of scale, product differentiation, absolute cost, and capital requirements) disadvantage newcomers pursuing an internal development strategy, vis-à-vis market incumbents. Research in international management has investigated how market concentration, the presence of market leaders, and high market growth rates influence make-or-buy decisions (Canez, Platts, and Probert, 2000; Padillo and Diaby, 1999).

**Transaction Cost Economics**

The focus of transaction cost economics is on identifying the most efficient modus of executing economic activities. According to the theory, firms internalize activities (e.g. the entry into a new market) if the cost of acquisition exceeds the cost of performing the activity in-house. The transaction cost approach has been widely used to demonstrate how firm specific advantages influence a firm’s choice of foreign market entry strategy. Specifically, research on make-or-buy decisions related to foreign market entry has investigated how a firm’s mode of foreign entry is influenced by a firm’s level of diversification and asset specificity as well as organizational and contractual obligations (Teece, 1985).

**Firm Growth**

Penrose’s theory of firm growth (1959) postulates that the rate of firm growth via internal development is limited by the firm’s endowment with suitable human resources. More specifically, a firm’s rate of growth via internal development is contingent upon the rate at which the firm can develop internal knowledge, experience and expertise via recruiting and training managers and other personnel. External acquisition allows the firm to obtain human resources and the associated expertise developed elsewhere, thus jumpstarting the market entry for the firm. Research on make-or-buy decisions taking this perspective has investigated the influence of a firm’s capacity and experience on the mode of market entry.
Capital Market Influences

The literature on capital market influences (see Chatterjee, 1990) considers how a company’s financial options for financing an expansion affect its choice of expansion strategy. This perspective assumes that capital markets view internal development and external acquisition differently, because the latter provides an independent valuation of the activity (via the price mechanism) whereas the former allows managers to overstate their valuation of benefits associated with internal development. Research considering the influence of capital markets on make-or-buy decisions associated with foreign market entry has investigated how a firm’s capital structure influences the mode of entry. Several empirical studies have focused on the implications of a firm’s leverage ratio (Chatterjee, 1990; Hennart and Park, 1993)

Combining the Four Perspectives

The four theoretical perspectives form the foundation for the proposed conceptual framework including market-level factors, firm-level factors, and portfolio-level factors. This interdisciplinary and multilevel approach is represented in Figure 2 as a framework for a comprehensive understanding of a firm’s choice between brand creation and brand acquisition. The specific factors in each of the three categories as well as the associated hypotheses are detailed in the following sections.

Market-Level Factors

Prior research in international management has investigated the influence of market concentration, the presence of market leaders (e.g., competitive intensity), and high market growth rates on make-or-buy decisions. This section will propose how these factors may affect a firm’s choice of brand portfolio expansion strategy.
Figure 2: The Three Types of Factors Impacting Brand Expansion Strategy

Market Concentration

Research has demonstrated that the market concentration influences a firm’s choice between internal and external expansion because each alternative confers unique advantages to a firm in differing economic settings (e.g., Yip, 1982; Oster, 1990; Hennart and Park, 1993). Internal expansion (i.e. brand creation) increases production capacity in the target market, especially if an entry barrier exists in form of economies of scale (Yip, 1982). And the greater the economy of scale the more a new brand will increase production capacity forcing prices to fall. In doing so, internal creation is inherently more risky due to the uncertainty as to whether demand at reasonable price levels exists to absorb the additional supply (Jones, 2004). External acquisition, on the other hand, will not increase supply in the target market.

The characteristics of some markets generally do not sustain a large number of competitors (e.g. luxury brand markets). These markets are typically characterized by a high concentration of competitors, and thus are limited in the number of major (e.g., national) brands.
Prior research on make-or-buy decisions suggests that acquisition is advantageous compared to internal creation if a higher number of players is undesirable (Hennart and Park, 1993). In these markets brand acquisitions may provide a means of market consolidation, or if a firm wants to enter such a market, brand acquisition of a major brand may be the only option for market entry (Kapferer, 2004, p.355). Correspondingly, for the choice between brand portfolio expansion via brand creation and brand acquisition the following hypothesis is formulated:

**H1: The degree of market concentration is positively related to the probability of a brand acquisition.**

**Competitive Intensity**

In addition to the overall concentration in the target market, competitive intensity (i.e. the extent to which competitors have established themselves in the target market) is a factor found to affect expansion strategy. It is important to note that competitive intensity is conceptualized at the brand level and thus distinct from the earlier construct of market concentration. Competitive intensity attempts to reflect the consumer’s view of the market, since consumers see individual brands and many times do not even know of the ownership of multiple brands by the same firm. Market concentration and competitive intensity would be equivalent if firms had only one brand in a product category, but differ whenever multi-brand strategies are present.

Research suggests that late entrants seek to speed up their entry into new markets through acquisitions when leading competitors have already established themselves (Wilson, 1980; Caves and Mehra, 1986; Yu and Ito, 1988). However, the empirical evidence regarding the propensity of followers to choose acquisition over internal development is not unequivocal. Contrary to their hypothesis, Hennart and Park (1993) found that followers were more prone to
enter a new market via internal development. This prompted the authors to speculate that followers perceived this mode of entry to be less risky because they were able to benefit from the experience of earlier and better-established competitors.

Thus, drawing on the insights from the research on international entry mode, conclusions are made regarding the influence of competitive intensity at the brand level. It is important to note that brand portfolio expansion via brand creation and brand acquisition may both confer unique advantages when competitors are already well established. As argued earlier, brand acquisition allows a firm to speed up the expansion process and reap the associated benefits. Internal brand creation, on the other hand, may allow a firm to capitalize on the experience of its better-established competitors. In formulating the hypothesis regarding the effect of well-established competitors in the target market, this study posits that firms will be more inclined to facilitate entry into the target market by choosing a brand acquisition strategy. Correspondingly, it is assumed that the opportunity to exploit the experience of well-established competitors has less importance. This decision is based on two considerations. First, research has repeatedly shown that firms face considerable challenges when trying to learn from the experience of other firms, and even their own experience (March and Olsen, 1975; Lant and Mezias, 1992). Learning from the creation and management of a competitor’s brand would seem especially challenging. Second, and more importantly, research in the marketing literature suggests that existing brands enjoy important advantages in established markets. Specifically, studies in consumer behavior have identified competitive intensity as a determinant of consumer preference between new versus existing brands (e.g. see Smith and Park, 1992). According to this research, when a market has many well-established brands, there is little room in consumers’ minds for a new brand. By extension, the investments required to establish a new brand and position it in the
consumers’ mind are significantly higher in a market with well-established brands than if a company chooses to use an established brand (i.e., acquire a brand) that is already positioned in consumer memory and enjoys consumer loyalty. Conversely, in markets comprised of relatively few well-known competitors, the investment needed to establish a new brand is greatly reduced, thus offsetting the advantage of acquisition.

**H2: The level of competitive intensity in the market is positively related to the probability of a brand acquisition.**

**Market Growth**

Aside from the structure of the target market at any point in time, the dynamic properties of the target market have been found to influence the choice of expansion strategy (Hennart and Park, 1993). Market growth is especially relevant for expansion decisions. Oster (1990) pointed to the benefits gained from a firm’s expansion velocity when entering very dynamic markets. In markets that grow rapidly, speed of entry is the essential determinant of firm performance because of the attractiveness of market share as the market grows with time. The relevance of brands in differentiated markets is likely to further increase the importance of expansion velocity. The later a firm enters a rapidly growing differentiated market, the more time competitors had to grow the brand equity of existing brands.

Comparable to the effort involved with internally preparing the entry into a new market, creating a brand internally requires considerable time spent on a range of issues—from idea generation to final marketing mix development. Penrose (1959) postulates that the time and effort required recruiting and train key personnel that can execute these efforts limit the growth rate of a firm significantly.
Empirical research on make-or-buy decisions has also found evidence supporting the argument that a positive relationship exists between target market growth rate and the likelihood of expansion via acquisition (Hennart and Park, 1993). Albeit the general context is different, the conceptual explanation linking target market growth rate and choice of expansion strategy should hold with regard to brand expansion.

**H3: The rate of growth in the target market is positively related to the probability of brand acquisition.**

**Firm-Level Factors**

Apart from the characteristics of the target market, prior research on make-or-buy decisions has emphasized the influence of a firm’s characteristics, such as endowment with experience and expertise (Barkema and Vermeulen, 1998; Hoskisson and Hitt, 1990; Andersson and Svensson, 1994; Brouthers and Brouthers, 2000) as well as the influence of a firm’s stakeholders (Hennart and Park, 1993; Chatterjee, 1990) in the choice of an expansion strategy. Firms tend to choose an expansion strategy that is compatible with their prior experience and the level of knowledge and expertise available in-house while also increasing their transparency towards stakeholders by providing more reliable information about the financial resources involved.

**Prior Experience**

Prior research on international expansions has found that *prior expansion experience* with specific expansion options influences the choice of expansion strategy (Brouthers and Brouthers, 2000). Behavioral research supports this finding in that March and colleagues propose that accumulated experience can lead to competency traps (March, 1991; Levitt and March, 1988). In this way behavior becomes path-dependent – repeated choices in the past lead to the
accumulation of experience with a specific type of activities and in turn this accumulated experience increases the propensity that in the future a path of action is chosen that involves the repetition of familiar activities. Applying this logic to brand portfolio expansion, firms gain experience as they execute strategies in the expansion process: for example, proficiency in choosing a target, a good relationship with lawyers, and an understanding of negotiation politics might predispose a firm toward brand acquisitions. Also of potential value is knowledge about the brand creation process, which may include factors such as excellence in market research and expertise in brand introduction tactics, etc. This experience with a particular expansion option (either brand acquisition or creation) increases the propensity of choosing that brand expansion strategy. This leads to the following hypothesis:

**H4: The level of a company’s experience with brand acquisitions is positively related to the probability of a brand acquisition**

**Marketing Experience**

In addition to a firm’s experience with a particular brand expansion strategy, its general level of experience in the (functional) area most closely related to the area of expansion is likely to influence the choice of expansion mode. Empirical research in international management suggests that the level of a firm’s general experience abroad influences its preferred mode of expansion (e.g. Hennart and Park, 1993). The same should hold true with regard to brand expansion strategies when functional experience in marketing is most relevant to brand expansion strategies. Setting aside other considerations, more marketing-oriented companies are more likely to expand through brand creation. Companies with a marketing orientation are more likely to have developed experience in activities that are relevant to creating a new brand (e.g. gathering information about consumer preferences, organizing marketing campaigns,
advertisement, etc) while firms with more of a production orientation are less likely to have extensive experience in activities relevant to brand creation and therefore would face higher start-up costs. In addition, their lack of experience with the relevant activities makes it more difficult to gauge the probability of success and the time frame and financial resources necessary to create a new brand. Hence, firms with a production orientation are likely to perceive a brand acquisition strategy as the less risky option for brand expansion.

Despite the appeal of the explanation above, an opposing argument for the role of marketing experience can be made. Marketing-oriented firms may, for example, have developed experience in identifying undervalued brands in the marketplace, allowing them to derive significant economic value from acquiring and then revamping these brands. Marketing-oriented firms may also be better at identifying brands that have synergistic potential in conjunction with the firms existing brand portfolio. There is anecdotal evidence that marketing-oriented firms have pursued market entries through brand acquisition in the past. When Philip Morris entered the beer industry through its purchase of Miller Brewing, for example, it sought to combine its marketing expertise with an existing and well-established beer brand (Yip, 1982).

Neither the strategic management literature nor the marketing or brand management literature provides a strong theoretical argument suggesting the specific way in which marketing experience influences the brand expansion strategy. Large-scale empirical research on the topic is so far lacking, and the available anecdotal evidence is mixed. Therefore, competing hypotheses are formulated regarding the effect of marketing experience on the choice of brand expansion strategy.

**H5a:** The level of a company’s marketing experience is negatively related to the probability of a brand acquisition.

**H5b:** The level of a company’s marketing experience is positively related to the probability of a brand acquisition.
Future research can specifically probe for the mechanisms through which marketing experience influences the choice of brand extension strategy to develop a theoretical explanation.

**R&D Productivity**

This study next seeks to investigate the separate effect of another kind of firm-level proficiency that prior research on make-or-buy decisions in strategic management has linked to the choice of expansion strategy (Andersson and Svensson, 1994; Hennart and Park, 1993): productivity in research and development. **Productivity in research and development** and high levels of ongoing investments in associated activities increases the probability that a company develops innovative products that are not only new to the company but also new to the marketplace. Research on product launches shows that innovative products are more likely to be introduced under a new brand name (i.e. through brand creation) rather than through brand acquisition or through brand extension (Hultink, Griffin, Rubben, and Hart, 1998).

Despite limited empirical evidence, this marketing literature is consistent with research on the effect of research and development productivity on expansion strategy in make-or-buy decisions in other fields. Firms with proficiency in research and development are more likely to expand through in-house efforts than via acquisitions (Andersson and Svensson, 1994; Hennart and Park, 1993). The effect of research and development productivity is similar with regard to the brand portfolio expansion strategy choice. All other factors being equal, companies with high research and development productivity have a higher probability of developing innovative products. Because of the novelty of these new products, existing brands (whether the company’s own brands or those available in the marketplace) will be less likely to be suitable, making the internal creation of a new brand more attractive. Consequently, firms with high research and
development productivity will prefer to launch a new brand to expand their brand portfolio, whereas firms with low research and development productivity will prefer brand acquisition.

**H6: The level of a firm’s research and development productivity is negatively related to the probability of a brand acquisition.**

**Human and Financial Capital**

A key influence in any make-or-buy decision is the resource endowment of the firm (Chatterjee, 1990; Hennart and Park, 1993). Specifically, this research has identified the relevance of a company’s **human resource capacity** and its **financial leverage**. As elaborated earlier, Penrose’s (1959) theory of firm growth is particularly useful for understanding the implications of a company’s human resource endowment on its choice of brand portfolio expansion strategy. Penrose proposed that the execution of an expansion program requires a firm to reorganize its managerial and staff personnel, yet doing so limits growth opportunities. Penrose argued for such constraints because of a clear “physical maximum to the number of things any individual or group of individuals can do” (1959, p. 45). According to Penrose’s view, a firm’s existing human resource endowment limits specifically its potential rate of organic growth because “existing managerial resources control the amount of new managerial resources that can be absorbed, they create a fundamental and inescapable limit on the amount of expansion a firm can undertake at any time” (1959, p. 48). In other words, a firm’s managerial resources limit its ability to effectively integrate new personnel because of the time needed to recruit, train, and generally acquaint new personnel to the ways the company functions.

Due to the limitations imposed by the level of available human resources, companies whose human resource capacity is more constrained should find it more challenging to grow via internal development. All other factors being equal, brand expansion via acquisition then
provides an opportunity to expand the brand portfolio without straining the limited human resources the company has because managerial personnel already familiar with the new brand can be obtained externally.

**H7: The level of a firm’s human resource capacity is negatively related to the probability of a brand acquisition.**

Research on international expansions has also established that the attitudes of stakeholders (i.e. investors that hold debt and equity in the firm) will influence the choice of strategy for brand portfolio expansion (Hennart and Park, 1993; Chatterjee, 1990). Based on the assumption that managers act to benefit current shareholders, Chatterjee (1990) argued that a company’s capital structure influences its preference for internal development or acquisition. Fundamentally, the research proposed that in the case of expansion through internal development, the stock market receives little, if any, independent information about the valuation of the expansion. Generally, managers enjoy considerable discretion with regard to the valuation of the expansion. In the case of external acquisition, the discretion of managers and thereby the risk for those providing capital to the firm, is limited by the market for corporate control.

Financing external expansion through financial resources that require public valuation (e.g., bonds and equity capital) is usually less costly in terms of the negative impact on the stock price than financing internal expansion with financial resources requiring public valuation. Therefore, setting aside other considerations, internal development will be cheaper to finance through debt or retained earnings. This option for financing internal development, however, is contingent on the makeup of the firm’s capital structure. A firm that already has a high debt to equity ratio will find it more challenging to finance internal development via additional debt
financing. A firm with a high leverage ratio may therefore consider an acquisition to be the more viable option.

**H8: The level of financial leverage of a firm is positively related to the probability of a brand acquisition**

**Portfolio-Level Factors**

Research on make-or-buy decisions in the context of international expansions has established a relationship between the makeup of a firm’s portfolio of business activities and its preferred mode of expansion (Wilson, 1980; Yip, 1982; Caves and Mehra, 1986; Brouthers and Brouthers, 2000). According to transaction cost theory, the primary advantage gained from diversification derives from sophisticated management control systems. This advantage is embedded in the organizational processes of the firm as well as in the senior management personnel of the firm. Diversified firms with sophisticated management control systems in place should be better equipped to exploit the synergistic potential of acquisitions. Consistent with this argument, Brouthers and Brouthers (2000), for example, found a positive relationship between a firm’s overall level of product diversification and its preference for acquisition as a foreign market entry mode.

**Portfolio Diversification**

Applying this same theoretical argument to the context of brand portfolio expansion, there should be a positive relationship between a firm’s level of *brand portfolio diversification* and its preference for brand acquisition as a means for brand portfolio expansion. Diversified brand portfolios are more often associated with sophisticated management systems and expertise embedded in senior management, resulting in a greater efficiency in brand exploitation and management control systems. However, companies with less diversified brand portfolios may
have less developed management control systems, and hence have fewer efficiencies to be gained from brand acquisitions and thus are more likely to use brand creation. All other factors being equal, managers in charge of more diversified brand portfolios will favor brand acquisition as the expansion strategy.

**H9: The level of diversification of a firm’s brand portfolio is positively related to the probability of a brand acquisition**

**Product Category Depth**

Aside from the general level of brand portfolio diversification, brand portfolios also differ with regard to **product category depth** (i.e. the number of brands in specific product categories). Having a large number of brands in a single product category within the same portfolio would only be strategically viable if each brand is linked to a specific target segment and has a unique market position. The more brands a firm has in a specific product category the higher the risk of brand cannibalization due to overlapping target segments and/or market positions. Kumar (2004) posits that this trade-off will alleviate consumer brand switching behavior and decrease efficiency and management simplicity.

In this context the depth of a firm’s brands in a specific product category has implications for subsequent expansions in the same product category because of the trade-offs that have to be considered when adding another brand. Brand creation strategy offers the opportunity to build in unique segmentation requirements to complement an existing brand line and minimize cannibalization. In such a situation finding a ideal acquisition target in the market place will be more difficult and time consuming, resulting in a compromise on the existing market segmentation within a product category. This will lead a company with many existing brands
within the same product category to be more likely to create a brand that appeals to uniquely defined customer segments.

**H10: A depth of product category a company expands is negatively related to the probability of a brand acquisition**

**A Conceptual Model of Brand Portfolio Expansion**

An integrative framework based on the reviewed perspectives resulted in the three broad categories of factors that may impact a firm’s choice of strategy for brand portfolio expansion between brand creation and brand acquisition. Within each of these three categories are more specific factors, each with a hypothesized relationship to the options for brand portfolio expansion. Figure 3 provides an overview of the hypotheses within the conceptual model framework.

The review of prior research demonstrated that the choice of an expansion option is a multilevel decision and to be fully understood has to be evaluated beyond specific context, e.g. brand portfolio characteristics. Theoretically, market structure, firm characteristics and brand portfolio configuration were found to collectively influence the choice of brand portfolio expansion option. Recognizing the mutual effect of variables at all these levels is imperative for advancing research on brand portfolio management.
Figure 3: A Conceptual Model of Brand Portfolio Expansion by Brand Acquisition
CHAPTER 4: METHODOLOGY

This section will address several major issues related to the selection of firms, the operationalization of the constructs discussed earlier and the analysis methods to be employed. First, the decision to utilize primary or secondary data sources is outlined by detailing the criteria for selection and then evaluating each data source option against these criteria. Second, a discussion of data requirements for the constructs and the potential data sources follows. Once the data requirements and data sources have been defined, focus shifts to the selection of firms and the operationalization of variables. The criteria for defining the sampling frame are established and then the process of selecting firms for the sample selection is examined. Finally, the operationalization of the variables is described.

Selection of Primary versus Secondary Data Sources

Four criteria were developed to guide the choice between primary and secondary data sources based on the objectives of this study and the nature of the research questions – a) identification of brand acquisition and creation decisions, b) coverage of multi-level data, c) scope and range of the data, and d) feasibility of the data collection process. The first factor related to the ability to reliably and efficiently identify brand acquisition and creation decisions. For example, primary data collection requires that the appropriate respondents be found to provide company-wide estimates of brand portfolio expansion activities. Likewise, secondary sources must rely on some formalized manner of identifying these activities. The ability to reliably and objectively define these activities across a range of firms is essential. The second criterion is based on the data requirements of the conceptual model where the decision between brand creation and brand acquisition is conceptualized as based on influences from multiple levels. Specifically, data must reflect market influences, the firm’s situation in terms of
resources and capabilities, and specific brand portfolio characteristics. The data source must be evaluated for its ability to provide accurate and consistent estimates of each of these differing types of data. The third criterion is the need for data across a representative sample of industries and product categories in a longitudinal setting (i.e., the seven year time period proposed for this study). This broad coverage, versus concentration on a single industry or even a firm or set of firms, was undertaken to provide for generalizability of the results. The final criterion relates to the availability of the data coupled with the cost and time of data collection.

**Evaluation of Primary Data Sources**

The principal primary data source considered for this study involved responses from individuals in brand-management positions at major firms across a broad range of industries. These individuals would provide responses regarding both their knowledge of the brand portfolio expansion activities of their firm or operating unit over a period of time along with their estimates of the market, firm and brand portfolio characteristics in operation in this time period.

One critical issue in using this primary data source is the ability of the survey respondents to reliably identify brand creations and brand acquisitions. To do so, they would require knowledge regarding the decision making process for brand portfolio expansion, which raises two potential difficulties. The first difficulty involves identifying the appropriate individual(s) within a firm or operating unit that is responsible for this type of the decision. Discussions with industry sources revealed that this position varies from firm to firm, thus making it quite challenging to identify the appropriate person who is responsible within each firm for the decisions associated with brand portfolio expansions. A second consideration is that the brand portfolio expansion decision process may involve a group of people, and thus the details of the
decision may be held by several individuals, even across separate units of the firm. Again, identifying a person(s) would be problematic.

With regard to the coverage of information relating to multiple levels (i.e., market, firm and brand portfolio), primary data sources offer a high degree of flexibility as questions can be tailored to obtain very detailed information on the variables of interest, particularly the detailed data required on the portfolio level variables. In collecting the multi-level data, however, the respondents would need to be familiar enough with the market and firm levels to provide accurate estimates. One complication is to ensure that the definition of the market used by the respondent is comparable across respondents and matches the definition of the researcher. Moreover, while the respondents should have a good understanding of the company’s situation, any data collected via a survey must be complemented and verified with secondary data to ensure that the company level data (e.g. company’s financial information) is objective and comparable across different firms.

Examining the third criterion of industry coverage, use of a primary data source will very likely have difficulty providing coverage across a broad range of industries and product categories to achieve a representative sample. Moreover, each of the issues described above becomes more problematic as the number of firms and/or industries increases. Finally, primary data collection from firms represents a substantial cost in each element of the research design, starting with the definition of the sampling frame, which many times requires purchase of mailing lists, to the actual data collection process. As a result, a primary data collection effort in a commercial setting represents a substantial investment in both time and money.
Evaluation of Secondary Data Sources

The use of secondary data sources involves gathering information from a variety of public or proprietary databases along with published reports, such as company reports and press releases. While on initial review this may seem like more effort than surveying individuals in brand management positions, it does have several potential benefits. First and foremost, secondary sources represent a wide array of data types that can potentially provide very specific information regarding elements in the conceptual model. But this approach also runs the risk of providing incomparable data due to the varying levels of detail available, specificity of the information or other characteristics. Thus, use of secondary sources should also be evaluated with regards to the same criteria as noted above.

In terms of identifying the brand portfolio expansion activities of firms, secondary sources provide a wide array of possible methods for identifying specific brand acquisitions and creations. Ranging from the use of the U.S. Patent Office’s database on trademark assignments (a legal adjunct to brand acquisitions) to media sources such as company annual reports and press releases; it is possible to collect a representative sample of brand portfolio expansion activities of a company in a specified period of time. Thus, while the level of detail may be less than obtained through primary data sources, the ability to cover a wide range of firms and industries is a substantive advantage.

In terms of providing data at the market, firm and brand levels, secondary data sources allow for the researcher to combine data from different data sources, either to gather data at different levels or even within a level. This is particularly true for information at the market and company level. There is a wide array of governmental and commercial sources which can provide the necessary data for these two levels, Information at the portfolio and brand level are
more challenging to obtain through secondary sources since this level of information is generally considered proprietary and is not a part of companies’ required reporting for governmental or investment purposes. The researcher must use a combination of several secondary data sources which most likely come from both public and commercially-based sources.

A decided advantage of secondary sources is the coverage of a wide range of firms and industries. Most secondary sources provide some form of market-wide coverage and make comparisons between industries possible. Depending on the level of detail, firm and even brand-specific data may be available, thus providing a single comparable source for elements in the model. A final benefit is that these sources also typically provide historical data, allowing for assessments of trends and company experience as well.

The final criterion, cost and accessibility, has potential advantages and disadvantages for secondary data sources. Many times, especially with market and even firm-level data, governmental or investment-related reporting requirements will provide sufficient data for operationalizing those constructs. But with certain firm and almost all brand-level data, cost and access quickly become problematic. Reporting requirements do not typically require this level of detail due to competitive disclosure concerns. So this information is available for a market or across firms through commercial services, which charge a fee for accessing that data. Given the nature of the information and its commercial value, these costs may exceed those available for this research project.

Choosing Between Primary and Secondary Data Sources

The considerations presented above regarding the advantage and challenges resulting from selecting primary or secondary data sources are summarized in Table 1. Evaluating primary and secondary data against the established criteria lead to the following conclusions. First, using
primary data sources would ensure the best data coverage at all required levels: market, company, and portfolio. However, in terms of brand creation and acquisition identification, representativeness of the sample, and the cost associated with the data collection process, primary sources are much more problematic than secondary data. Using secondary data has several unique advantages as well, including the ability to identify brand creations and acquisitions across multiple firms and industries, ensure a broad coverage of industries and firms and provide a manageable level of resources required to collect the necessary information at all levels. While secondary data sources might be inferior to primary data sources in terms of depth of information available regarding portfolio level variables, they still provide a reliable means of collecting information for all three levels of analysis. After weighing the advantages and disadvantages of both data collection approaches, the decision was made to employ secondary data sources in this research.

Table 1 The Advantages and Shortcomings of Primary and Secondary Data Sources

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<tr>
<th>Criteria</th>
<th>Primary data sources</th>
<th>Secondary data sources</th>
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<tbody>
<tr>
<td>Identification of brand acquisition and creation decisions</td>
<td>(-) difficulty in identifying respondents responsible for the decision (-) group decision – decision details are scattered</td>
<td>(+) many ways to identify acquisitions and creations</td>
</tr>
<tr>
<td>Coverage of multi-level data</td>
<td>(+) very detailed information at all levels (+) best source for portfolio level information (-/+) company level information needs to be complemented from secondary data sources</td>
<td>(+) information is available for all levels (-) incomparability of the data, obtained from different sources (-/+ challenges in collecting data at the portfolio level</td>
</tr>
<tr>
<td>Scope and range of the data</td>
<td>(-) difficult to cover a variety of industries and firms</td>
<td>(+) ability to cover a wide range of firms and industries</td>
</tr>
<tr>
<td>Feasibility of the data collection process</td>
<td>(-) substantial costs at each element of the research design</td>
<td>(+) publicly available sources exist (-) time consuming - the format of data was not conducive for a structured data collection approach</td>
</tr>
</tbody>
</table>

(-) denotes a disadvantage of the data source; (+) denotes an advantage of the data source
Specifying the Sampling Frame

Following the selection of secondary data sources as the basis for this study, attention turned to the definition of the sampling frame. The sampling frame represents the actual units from which the sample is to be drawn. In this research there are two options: (a) directly sample the brand acquisitions/creations and then collect firm and market data, or (b) sample firms and then collect all available data for the firm and market, along with their brand acquisitions/creations. In an ideal context the resulting sample should span across different industries and companies and across a time frame of several years. Moreover, it was essential that all theoretically relevant variables could be collected from the same or compatible data sources.

The decision to develop a sample of brand acquisitions/creations versus a sample of firms focused primarily on the ability to identify a source which would (1) identify the brand acquisitions/creations and (2) reliably relate them to specific firms. Both criteria must be met to establish the necessary link between the dependent and independent variables in the conceptual model. The ability to identify brand acquisitions/creations without a link to a specific firm is unacceptable, as is firm and market data without the ability to identify the relevant brand acquisition/creations. Given that the identification of brand acquisitions and creations was the more problematic of the two tasks, attention was first focused on evaluating the data sources for their identification of acquisitions/creations and then the ability to link that information to the requisite firm and market data.

Identifying Brand Creations and Acquisitions

The evaluation of data sources for the purpose of providing the sampling frame for brand creations and acquisitions was based on four criteria. The first criteria concerned the extent of
coverage of industries, firms and product categories. Ideally the data source would be market-wide and include transactions from several industries and product categories making the final sample representative and generalizable. The second criteria related to the need for longitudinal information on transactions. Any data source must provide information across a span of years to not only provide for a large enough sample of acquisitions/creations, but also provide some historical perspective on each firm’s experience and ensure generalizability across time periods. The third criteria dealt with the compatibility among data sources. It was not expected that a single secondary data source would provide all the information needed to test the conceptual model. Thus, any data source must be “compatible” with other data sources. Compatibility includes the ability to provide the linkage between brand acquisition/creation and the other data elements. For example, market or product definition must be made on the same terms (e.g., SIC codes or other measures) so that an accurate and reliable linkage is possible. This connection becomes especially important whenever commercial or other proprietary data sources are considered, since they hold the greatest chance of using proprietary classification schemes for market, industry or product categories. The final criteria concerned the feasibility of data collection based on the time and resources needed to access the data source and collect the necessary information.

The first step in evaluating the secondary data sources was an extensive literature review of existing branding research to collect pertinent information on all secondary data sources used in these studies. In conjunction with this effort, several interviews were conducted with the LSU business librarians as well as academicians and industry personnel to develop a list of potential data sources that could provide the required information. The result was a set of six potential...
data sources for identifying brand acquisitions and creations. Below, each of these sources is first briefly described and then evaluated with the criteria discussed above.

**United States Patent and Trademark Office (USPTO)**

The first data source evaluated was the USPTO (United States Patent and Trademark Office) databases of trademarks and assignments. The trademark database is the most obvious data source as it contains the registration information for all trademarks registered in the US from 1955 to the present (i.e., brand creations). The assignment database records each instance in which a trademark is transferred between firms, representing a brand acquisition. The transfer is known as an assignment, the legal representation of a trademark changing ownership. Although, as noted earlier, the registration of a trademark is not required by law, it is generally considered a good business practice and is commonly done. Thus, these databases provide almost a complete census of all trademarks created in the U.S. as well as the changes in ownership occurring over the years. In this regard these databases satisfy the first two criteria of broad market coverage and a longitudinal component. However, a problematic feature of the databases is that a single trademark does not represent a single brand. Much more likely is that several trademarks are registered for a single brand. A company can trademark not only the brand name but many other brand elements, such as the font and color scheme used to spell the brand name; a slogan associated with the brand, a shape, a logo, a picture, sound, etc. This becomes problematic in that the databases do not have any method of identifying all the trademarks associated with a single brand. As such, it is not feasible to use these databases as a means of identifying specific brand creations or assignments. Consultations with several trademark experts and trademark librarians of several US universities confirmed the inability to reliably relate trademarks to associated brands. As a result, using the USPTO database to identify brand creations and acquisitions would
require that every trademark registered or assigned in the database for the seven year period of the study be examined and manually assigned to a brand. This task would not only be time consuming, but also in many cases impossible, because a trademark record does not explicitly state its brand association. The conclusion was that even though this was the most logical and comprehensive source for this information, inherent problems made it unacceptable as the primary source for identifying brand creations and acquisitions.

**Business and Company Resource Center**

The second database to be considered was ‘Business and Company Resource Center’, a fully integrated collection of data sources bringing together company profiles, brand information, rankings, investment reports, company histories, chronologies and periodicals. The database provides a very detailed description for over 100,000 companies. Unfortunately, the data is only searchable by company name, and all information regarding a company is presented in a text format. To be able to identify any brand acquisition or creation, the information for each firm has to be retrieved, reviewed and then manually recorded to create a set of acquisitions and creations for the analysis. Repeating this procedure for all companies in this dataset to generate the set of brand creations and acquisitions would be very time consuming. In addition, there was no access available through the LSU library and the only access to the database that could be found required travel to another parish each time data was to be collected. Thus, this source was also judged as infeasible and unacceptable.

**AdSpender**

The third data source to be considered was AdSpender, a commercial database product of TNS Media Intelligence. AdSpender provides a summary of the advertising expenditures across a variety of media for the entire U.S. marketplace. AdSpender monitors local, regional and
national media buying expenditure information for millions of brands across 18-media sources. The database provides annual media expenditures for these brands over the past seven years. The information can be summarized by company, category, industry or even brand. While this database seemingly could be used to define brand creations and acquisitions, several features of the database proved to be problematic. First, expenditures are generally categorized by brand, but in many instances promotional campaigns are tracked rather than specific brands. This creates problems in identifying brand creations since brands must somehow be aggregated across all of these advertising efforts. Efforts to develop a precise method for identifying individual brands with enough reliability to identify when a brand was first created and advertised were not successful. In terms of brand acquisitions, it is necessary to identify when a brand changes ownership. While the database had longitudinal data on all brands, it only retains the most current ownership, making it impossible to identify a brand acquisition (i.e., when a brand changes firms). These two factors combine to make this database infeasible for the purposes of identifying brand creations and acquisitions even though it is the only known database to have identified and compiled a listing for nearly all brands sold in the U.S. and their annual media expenditures.

**Brands and Their Companies**

The fourth data source is the “Brands and their Companies” database developed by the Thompson Gale Group. This database contains over 430,000 consumer brand names and their corresponding owners and product categories across a wide range of industries and product categories. In this regard it satisfies the first criterion of widespread coverage. The database is quite comprehensive. Because approximately half of the brand names are being supplied by the companies themselves, the database contains information generally not available from other
publicly available data sources. The widespread coverage and comprehensive nature of the database, however, was offset to some extent by two issues. First, the database is available on a year-by-year basis, with each database only containing the most recent information (i.e., no longitudinal data is available). As such, it does not allow for systematically tracing any changes in brand ownership over the years and thus of no value in identifying brand acquisitions. Moreover, the database does not provide a search feature for individual brands. This information is contained in a detailed history of each firm’s brand portfolios. So, theoretically, reading through each firm’s histories would identify both brand creations and brand acquisitions. From a practical perspective, however, searching through over 10,000 company histories would take an unreasonable amount of time and effort. Thus, this database as a source for identifying brand creations and acquisitions was deemed unusable as well.

**Million Dollar Database**

The firth data source is the Million Dollar Database, which provides ownership information on nearly all North American companies. It is an excellent source of information on company executives with a focus primarily on ownership structure changes and executive changes. The information regarding the brands is scarce or nonexistent in some instances. This database was quickly seen as unusable in this research.

**Barcodes**

The last data source that was considered as a potential source of brand creations and acquisitions was the barcodes used in product labeling. A barcode is a machine readable representation of the data that is included on the packaging of almost every product sold in the US. The potential for using barcode information came from the fact that every barcode has comprehensive information on company, product category and brand, and having a list of
barcodes for several years might allow a means of identifying the year of change in ownership of a brand along with the year of introduction for a new brand. However, research found that there was no centralized organization or formalized process which would collect information for such analysis. The lack of a centralized organization results in a very fragmented system, almost to the extent that every retailer has its own barcode system, and every barcode has very detailed and proprietary information included in it. The access to these records is strictly controlled by retailers. As a result, this data option failed to meet any of the four established criteria.

**Selecting a Suitable Data Source**

The review of possible data sources revealed that a comprehensive database of brand transactions (i.e. brand creations and brand acquisitions) was not available. Table 2 summarizes the discussion above and outlines the information available for each data source and indicates whether the data source satisfied the criteria established for dataset selection. All of the data sources potentially contain information on brand creations and brand acquisitions (e.g., “The Gale Brands and Their Companies” database contains companies histories, annual reports and press releases that typically provide information about brand transactions), but in each case the format and/or data available was not conducive for a structured data collection approach to identify both brand acquisitions and creations. Consequently, the first approach to data collection, namely identifying a comprehensive list of brand creations and acquisitions, had to be abandoned. Despite the methodological preference for sampling brand creation/acquisition rather than firms, the logistics of the available data sources led to employ the firm sampling method described in the following section.

Although none of the six databases are suitable for generating a representative sample of brand creations and acquisitions, several could be utilized to provide specific firm-level
information. Both AdSpender and ‘The Brands and their Companies’ will be utilized as additional data sources to provide information for when the list of companies for the analysis is specified.

**Selecting Firms for the Sampling Frame**

Due to the issues encountered in the attempt to develop a sampling frame directly from brand acquisitions and brand creations, the decision was made to compile the sample in a two-step approach: the first step would identify a representative sample of companies across industries, with the second step involving an intensive investigation of those firms to identify brand acquisitions and brand creations from all available data sources. The identification of a sampling frame of brand creations and brand acquisitions is a common challenge for research on brand portfolio management, and may in part explain the scarcity of empirical research on this otherwise timely topic. The data collection approach used for this dissertation is consistent with the approach used by recent academic research (Wiles, Morgan and Rego, 2009).

**Selection Criteria**

Four criteria were established to guide the selection of a set of firms for which brand acquisitions and creations will be identified in order to empirically test the hypotheses listed above. The criteria are: (a) the set of firms should include a cross-section of industries encompassing a variety of product categories to ensure that any findings from this research can be generalized beyond the sample; (b) data must be available for each firm at all three levels (market-level, company-level, and brand portfolio-level); (c) the final set of companies should consist only of companies having prior experience with brand acquisitions and brand creations and exclude companies that utilize a family branding strategy; and (d) the firms must be contained in available data sources to ensure the feasibility and timeliness of the data collection process.
<table>
<thead>
<tr>
<th>Database</th>
<th>Information Available</th>
<th>Criteria</th>
<th>Evaluation of Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>USPTO</td>
<td>List of all trademarks registered in the US from 1955-present. Every time a trademark is transferred between firms an assignment is recorded (a legal adjunct to brand acquisitions).</td>
<td>a, b, c – a list of trademarks span across industries, years, and could be merged with different data sources. d – process for specific identification of brand acquisitions and creations not feasible. A brand may have multiple trademarks, yet no link exists between a brand and associated trademarks. Manual matching of trademarks with brands not feasible since the over 500,000 trademarks for a period of past seven years</td>
<td>A, B, C</td>
</tr>
<tr>
<td>Business and Company Resource Center</td>
<td>A fully integrated resource bringing together company profiles, brand information, rankings, investment reports, company histories, chronologies and periodicals.</td>
<td>a – information on firms/brands across all four digit NAICS code industries. b – brands are assigned to a company based on a current ownership and historic information can only be collected manually by reading company’s portfolio histories. No method to sample firms from database of over 100,000 companies. c - information can be merged with other sources d – a data collection process would be feasible, but access to the database was not available from the local sources making it travel intensive and time consuming</td>
<td>A, C, D</td>
</tr>
<tr>
<td>AdSpender (TNS Media Company)</td>
<td>Provides information at brand level (e.g. advertisement spending, market share). Lists all company’s brands for the current year.</td>
<td>a – has an information on companies across all NAICS code industries. b – brands are assigned to a company based on a current ownership c - information can be merged with other sources d – a fee has to be paid to gain an access to the data base, and the data are only available from 2001 to 2007.</td>
<td>A, C, D</td>
</tr>
<tr>
<td>The Gale Brands and Their Companies</td>
<td>Lists all US companies and their associated brands, provides detailed narratives of companies’ histories, and offers brand information including brand category</td>
<td>a – information on firms/brands across all four digit NAICS code industries. b – brands are assigned to a firm based on a current ownership, historic information can only be collected manually, by reading firm’s portfolio histories. However, the database lists over 115,000 companies and a method for sampling companies has to be identified. c - information can be merged with other sources d – a data collection process would be feasible albeit time consuming</td>
<td>A, C, D</td>
</tr>
<tr>
<td>The Million Dollar Database</td>
<td>Lists all companies in NA, with industry information up to 24 individual 8-digit SICs, size criteria (employees and sales), type of ownership, executives, etc.</td>
<td>Does not list brand names under each SIC code</td>
<td>A, B, C, D</td>
</tr>
<tr>
<td>Barcodes</td>
<td>Every barcode has information about a company and a brand.</td>
<td>There is no universal organization that assigns barcodes, and every company develops its own codes.</td>
<td>A, B, C, D</td>
</tr>
</tbody>
</table>
Before describing the sample selection procedure, it is important to note some implications arising from the specified criteria. First, to satisfy the second and fourth criteria outlined above, the sample excluded foreign and private firms. The focus on publicly traded U.S. companies ensured the availability of company-level data and avoided any confounding effects due to differences between national contexts and reporting standards. Second, given this research’s focus on active brand portfolio management, emphasis was placed on firms that market their products and services directly to consumers (business-to-consumer) due to the increased importance of brands and the generally higher levels of branding activity in this sector. Third, brand portfolio expansion activity through creations and acquisitions occurs predominantly in firms that employ a multi-brand strategy. Thus, firms employing a family brand strategy (e.g., Sony, Apple) were excluded from consideration. The exclusion of firms employing a family brand strategy also resulted in the exclusion of service companies, which typically follow this approach. For example, GEICO, an insurance company, offers several products: car insurance, home insurance, flood insurance, etc., and uses the same brand name ‘GEICO’ for all products. Thus, it was decided to exclude service companies from the final sample due to their general lack of multi-brand strategies.

These restrictions had a potential impact on the generalizability of any findings by limiting the scope of branding activity examined. However, given the lack of prior research, a more narrow focus was deemed a necessary tradeoff to avoid the potential confounding effects that might occur if these restrictions were not employed.

**Firm Selection**

The first task in selecting a sample of firms is to identify the appropriate sampling frame. One approach would be to employ a data source that had all firms within the U.S. and then select
from this set. An example would be to utilize the COMPUSTAT database, which has information on all publicly traded firms. In considering this approach, it was determined that the sampling process would be too complicated to satisfy all the criteria listed above. One example would be the identification and then elimination of service-oriented firms as well as firms outside the B2C sector. As a result, pre-selected sets of firms already compiled for other purposes were considered most appropriate. After examining several alternatives, the firms used in compilation of the American Customer Satisfaction Index (ACSI) were selected.

The ACSI has been extensively utilized in past research (e.g. Xueming and Bhattacharya, 2006; Fornell, Johnson, Anderson, Cha, and Bryant, 1996) and is generally deemed representative of the U.S. economy, representing a set of industries and sectors that collectively represent over 40 percent of the U.S. GDP (www.theacsi.org). Specifically, the ACSI has also been used as the sampling frame for similar brand management research (e.g., Wiles, Morgan, and Rego 2009). The ACSI is organized into 10 economic sectors, 43 industries, and is composed of more than 200 public and private companies and federal agencies. Furthermore, firms selected for the ACSI are generally larger consumer companies, and hence they are likely to be actively involved in managing brand portfolios. These characteristics satisfy the first and fourth criteria for defining the sampling frame. The complete list of companies is available from the ACSI website.

Next, in order to ensure that the companies retained for the analysis satisfy the remaining two criteria, additional constraints relating to industry sectors were placed on the firms selected from the ACSI sample. First, industries where services are predominant were eliminated since the branding of services uses largely a family-branding strategy (e.g. banks). Retail industries employing both “brick and mortar” and internet distribution systems (e.g. supermarkets and
internet retailers) were also eliminated due to their reliance primarily on corporate/family branding rather than developing separate brands for individual channels. Finally, industries, where branding was infrequently used or had little importance (e.g., the utilities industry), were eliminated, along with industries where the cost and time of brand development are disproportionate to the majority of other industries (e.g. automobiles).

A second constraint dealt with the specific firm characteristics that disqualified a firm from inclusion. Firms were eliminated if they had any of the following characteristics: a) non-US based companies (e.g. Nestle), to ensure comparability of the financial information; b) private companies, to ensure availability of financial information; and c) companies with family branding strategies, because they primarily expand their portfolios via brand extensions (e.g. Sony).

Final Firm Sample

As a result of applying the criteria described above, 29 US public companies in five industries were retained from the original list of over 200 companies in 43 industries (see Table 3). Although the ACSI sample of firms was deemed representative, it is important to assess the representativeness of the final set of firms as compared to the ACSI overall. The set of retained firms represents approximately 15 percent of the companies in the full ACSI sample and about 12 percent of the industries. The ACSI typically has 5 companies per industry and the retained set has about 6 companies per industry. Thus, the retained sample mirrors the structure of the original sample and is deemed a representative sample of the ACSI firms considering the criteria imposed on it. The detailed description of the set of retained firms selected for the analysis is provided in a later section.
<table>
<thead>
<tr>
<th>Industry</th>
<th>Company</th>
<th>Acquisitions</th>
<th>Creations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Example</td>
</tr>
<tr>
<td>Apparel Manufacturing</td>
<td>Jones Apparel Group</td>
<td>14</td>
<td>Energie</td>
</tr>
<tr>
<td></td>
<td>Fruit of the Loom</td>
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</tr>
<tr>
<td></td>
<td>Hanes Brands</td>
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<tr>
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<td>Levi Strauss</td>
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<td></td>
<td>Liz Claiborne</td>
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<td>Juicy Couture</td>
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<td>Nike Inc</td>
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<td>Converse</td>
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<tr>
<td></td>
<td>VF Corp</td>
<td>8</td>
<td>Nautica</td>
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<tr>
<td>Chemical and personal care</td>
<td>Colgate-Palmolive</td>
<td>1</td>
<td>Tom’s of Me</td>
</tr>
<tr>
<td>manufacturing</td>
<td>Procter and Gamble</td>
<td>9</td>
<td>Oral-B</td>
</tr>
<tr>
<td></td>
<td>Clorox</td>
<td>1</td>
<td>Burt’s Bee</td>
</tr>
<tr>
<td>Tobacco and pet supplies</td>
<td>Philip Morris</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>manufacturing (combined)</td>
<td>Reynolds American</td>
<td>1</td>
<td>Natural American Spirit</td>
</tr>
<tr>
<td></td>
<td>DelMonte Foods</td>
<td>3</td>
<td>9Lives</td>
</tr>
<tr>
<td>Food and Beverage manufacturing</td>
<td>Campbell Soups</td>
<td>1</td>
<td>Wolfgang Puck</td>
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<td>ConAgra Foods</td>
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<td>Lincoln Snacks</td>
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<td></td>
<td>General Mills</td>
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<td>Humm Food</td>
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<tr>
<td></td>
<td>Heinz</td>
<td>9</td>
<td>Aunt Millie’s</td>
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<tr>
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<td>Hershey</td>
<td>7</td>
<td>Ice Breakers</td>
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<tr>
<td></td>
<td>Kellogg</td>
<td>2</td>
<td>Live Bright</td>
</tr>
<tr>
<td></td>
<td>Kraft Foods</td>
<td>2</td>
<td>Nabisco</td>
</tr>
<tr>
<td></td>
<td>Molson Coors</td>
<td>1</td>
<td>Worthington</td>
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<tr>
<td></td>
<td>PepsiCo</td>
<td>3</td>
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<td>Sara Lee</td>
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<td></td>
<td>Coca-Cola</td>
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<td>Miller Co</td>
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<td></td>
<td>Tyson Foods</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>82</td>
<td></td>
</tr>
</tbody>
</table>

**Operationalizing the Dependent and Independent Variables**

The next section describes (1) which data sources were used in the study; (2) how the sample of brand creations and acquisitions were selected to represent the dependent variable; and
(3) how the constructs representing the independent variables were operationalized to test the theory-based hypotheses regarding the choice between brand acquisition and brand creation empirically.

**Data Sources**

The data used in testing the conceptual model were collected from several sources. As described earlier, the initial screening of brand creations and acquisitions involved multiple data sources. Once the brand creations and acquisitions were identified, data requirements for each of the three levels (market, firm and brand portfolio) could be specified. Many data sources were considered but then discarded for one or more of the following reasons: a) only cross-sectional data were available and changes over time could not be traced; b) inability to select a subset of variables from a larger set; and c) inability to match a brand with a corresponding company in a given year. The final set of data sources used for the empirical tests of the proposed hypotheses is summarized below, along with a discussion of the advantages and specific limitations of each data source. The challenges encountered in this process provided a unique perspective on the practice of brand portfolio expansion along with a greater appreciation for the issues confronting the researcher involved with academic research on brand portfolio expansion via brand creation and brand acquisition.

Eventually, six data sources were utilized in operationalizing the dependent and independent variables. Three of them were already detailed above (i.e., ‘Brands and their Companies’, USPTO, and the proprietary database AdSpender). The three remaining data sources used were Mergent, LexisNexis Patent Count and COMPUSTAT. The discussion below details the data sources used for each variable in the hypothesis testing.
Dependent Variable: Brand Creation and Brand Acquisition

The primary approach for identifying brand acquisitions and creations is to identify the brand portfolios of firms and then identify the changes in those portfolios over time. For the purposes of this study, the time period of 2001 to 2007 was used. The brand portfolio histories of the companies selected for the sample were manually compiled utilizing two data sources: “Brands and their Companies” and Mergent.

The primary data source is the “Brands and their Companies” database developed by the Thompson Gale Group and described in a prior section in more detail. A unique advantage of this database is its focus mainly on brands in over 20 product categories of consumer goods, a match with the characteristics of the set of companies selected for the analysis. Using this database, it was possible to develop a complete brand portfolio for each firm from 2001 to 2007. In doing so, however, a shortcoming which had an impact on developing the brand portfolios had to be addressed. The product categories used to classify brands do not correspond with any commonly used categorization schemes (e.g. SIC or NAICS), thereby making it difficult to match any brand acquisition or creation with the appropriate market and brand level data. To overcome this limitation the brand categorization developed for the AdSpender database was adopted to classify all brand acquisitions and creations. In this way information extracted from the AdSpender database could be directly related to the brand acquisitions and creations.

Review of the histories for a period from 2001 to 2007 provided a record of all events related to brand creations or brand ownership changes by noting each addition to the brand portfolio and noting whether the new brand was created internally or acquired from another company. The coding of the dependent variable was performed by the author and by a second individual trained to identify all brand portfolio additions. The information was then cross
validated to ensure that no events were missing and all events are entered accurately. All differences between individuals were reconciled to ensure that each event was recorded accurately as to both type (brand creation or acquisition) and year of occurrence.

To ensure that all brand creations and acquisitions had been identified, the Mergent database was used as a supplementary data source. This database provides detailed information for 10,000 U.S. public companies including their histories, SEC filings, and current and historical annual reports. This database was used to corroborate and complement information obtained from “The Brands and their Companies” database by examining the complete set of information for each firm in the analysis. When any discrepancy was noted between the two sources, further research was conducted using companies’ websites and other sources to ensure accuracy of the data. Ultimately it was also found that the Mergent database had a more complete listing of brand creations than “The Brands and their Companies” database and using the combination of the two sources provides a high level of assurance that all relevant brand portfolio expansion activities were identified.

A final check was performed by examining the press releases of every firm included in the analysis for the selected timeframe either through the firm websites or with the LexisNexis database. This search confirmed the date and nature of the acquisitions and creations retained in the analysis. As will be discussed later, seven firms in the original set of firms had no brand acquisitions or creations in the 2001 to 2007 time period and thus were excluded from the analysis.

**Independent Variables**

The measures representing the ten independent variables were based on data from four secondary data sources: (1) USPTO, (2) AdSpender, (3) LexisNexis Patent announcement
records and (4) COMPUSTAT. The following section details the independent variables within each of the three levels (market, firm and brand portfolio) in terms of their operational definition and the specific measures used from the data sources.

**Market-Level Variables**

The independent variables for this level represent the characteristics of the product category within which the brands (acquisition or creation) compete. One of the most common measures of market competitiveness is the concentration ratio, which reflects the extent to which a particular market or sub-market is dominated by large firms. While differing forms of concentration ratios exist (e.g., four-firm concentration ratio versus the Herfindahl-Hirschman Index), the objective of each measure is to characterize the competitive structure (e.g., perfect competition, imperfect competition, oligopoly or monopoly) of the set of firms competing in that market (Bikker and Haaf, 2002). To create this type of measure requires that (1) data are available for all brands and firms within the product category and (2) that the brand acquisitions and creations identified earlier can be associated with a specific product category. The only available database which met these requirements was the AdSpender database, which contains yearly media expenditures for all brands advertised in the U.S. This was the most extensive and exhaustive listing of brands that also had some measure of market presence available. Using this data, product category and even firm totals can be calculated as well as the specific values for any brand. Although the product categories used in AdSpender do not exactly match NAICS categories, they are quite similar and were thus used to define product categories for this study.

The database has one shortcoming in calculating the independent variables: the data were only available for the period from 2001 to 2007. While this provided a sufficient timeframe to identify an adequate sample of brand acquisitions and creations, it limited calculation of several
ratios that required historical information covering a greater span of years. As described later in this section, it would be desirable to calculate multi-year (e.g., 3 year) product category growth rates, but the lack of data before 2001 precluded anything other than annual values for the transactions completed prior to 2004.

One implication in the use of the AdSpender database was the substitution of media expenditures for the more traditional measures of market presence (e.g., sales) used in calculating the market-level variables. For example, the concentration ratio, whether at the firm or brand level, represents the market structure and thus the implied competitiveness of that market. Whereas sales data for firms or brands are used in many contexts to provide a direct measure of market performance, the use of media expenditures provides a comparable perspective that is appropriate for this research context for two reasons. First, media expenditures represent a key component in branding strategies, but particularly those in the brand introduction phase in consumer-based markets which are the context for this research. As such, the media expenditures of competing firms represent a relevant measure of market structure and hence the competitiveness faced by the brand management team. Second, although the use of firms’ sales leads to the conventional measure of market share used in assessing market competitiveness, the use of media expenditures leads to a measure of “share of voice” representing a more marketing-oriented measure of competitiveness (Chaudhuri and Holbrook, 2001). Share of voice (SOV) has been shown to be correlated with market share in several market contexts similar to that found in this research. For example, Jones (1990) found a positive association (correlation value was not reported) between market share and SOV in a cross-section of 1,096 brands. More recently, Hansen and Christensen (2005) analyzed the relationship between share of voice and market share for a sample of FMCG products (fast moving consumer goods) that are directly
comparable to this research context. They found that in 29 of 34 markets there was a “clear, positive correlation between share of voice and share of market” (p. 309). The correlations ranged from 0.476 to 0.668.

As a result, the managerial relevance of media expenditures in brand introduction and the empirical support for the relationship between SOV and market share are used as the conceptual basis for extending the market share-based relationships to this research context where SOV is substituted for market share. It should be noted that any measure of market structure or growth is used only as a relative measure among firms. Moreover, because these measures are calculated within product categories, any differences in scale among product categories are eliminated.

The **degree of market concentration** is traditionally measured as a function of the number of firms and their respective shares of the total industry. In this research, market concentration is calculated for a product category to reflect the competition directly facing the firm. For each product category in which a brand acquisition or creation occurred, all the brands in a product category are grouped by their respective firms and the total media expenditures of each firm in that product category are then calculated along with total expenditures across all firms in the product category. In this study the four-firm ratio was used to measure concentration and was calculated as:

\[
\text{Market Concentration} = \frac{\text{Total Media Expenditures of Top Four Firms}}{\text{Total Media Expenditures in Product Category}}
\]

The four-firm ratio was used instead of the Herfindahl-Hirschman Index (HHI) because of the requirement that market shares must be calculated for all firms to calculate the HHI. The concern was for the potential unreliability of market share estimates for smaller firms in the
market. Thus, the four-firm ratio was used as it relies only on the precise estimates of the top four firms.

A brand-specific variant of the market concentration measure is competitive intensity, which represents the advantage that established brands have in a product category. Competitive intensity is operationalized as the market presence of the four largest brands in a product category. The four-brand ratio was used in this context rather than the HHI for the same reasons as noted in calculating market concentration. Note that this differs from market concentration in that individual brands are represented here, whereas firms were considered in the measure of market concentration. The objective of competitive intensity is to distinguish between a firm’s presence (which may be obtained through multiple brands in the product category) and the extent to which individual brands dictate the competitive situation in the product category. The calculation of competitive intensity is as follows:

\[
\text{Competitive Intensity} = \frac{\text{Total Media Expenditures of Top Four Brands}}{\text{Total Media Expenditures in Product Category}}
\]

As with market concentration, the AdSpender database was used to determine media expenditures for both brands and the product category. Competitive intensity values were calculated for each product category which had either a brand acquisition or creation between 2001 and 2007.

The final product category characteristic is the Market (product category) growth rate representing the direction and rate of growth in the product category. Just as was done for the concentration measures discussed above, the level of advertising expenditures from the AdSpender database was used as a substitute for product sales, which were unavailable. This
provides a comparable measure to the earlier measures of market structure that were also based on advertising expenditures of firms and brands. The measure is calculated as follows:

\[
\text{Market growth rate} = \frac{\text{Total Media Expenditures}_t - \text{Total Media Expenditures}_{t-1}}{\text{Total Media Expenditures}_{t-1}}
\]

For all three variables at the market level the average of the ratio for the three years preceding the transaction is calculated. It was done to even out the unusual events and to understand a medium term trends on the market. As it was mentioned above if a transaction occurred in years between 2001 and 2004 there were no data available to calculate three years average. Thus, for transactions occurring in 2001 the growth rate between 2001 and 2002 was used instead. For the transactions occurring in 2002 and 2003, a one year growth rate and a two year growth rate was used respectively.

Table 4 provides an overview of the operational measures used for the three independent variables used in testing the hypotheses at market level.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variable</th>
<th>Operational Definition</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Market (product category) concentration</td>
<td>A ratio of the total presence of the four largest firms in a product category to the total presence of all firms in this product category.</td>
<td>AdSpender</td>
</tr>
<tr>
<td>H2</td>
<td>Competitive intensity</td>
<td>A ratio of the total presence of the four largest brands in a product category to the total presence of all brands in this product category.</td>
<td>AdSpender</td>
</tr>
<tr>
<td>H3</td>
<td>Market (product category) growth rate</td>
<td>The growth rate of the overall market presence in a product category.</td>
<td>AdSpender</td>
</tr>
</tbody>
</table>
Firm Level Variables

The USPTO trademark and assignment databases as well as COMPUSTAT and LexisNexis Patent announcement records were used to calculate variables at firm level. The independent variables at this level capture the characteristics of the firms that perform brand creations or acquisitions. Calculation of these measures requires that information regarding firms’ sales, number of employees, debt structure, and advertisement and research and development expenses to be publicly available. Since all firms in the sample are publicly traded, this information was available from COMPUSTAT database. This database “contains fundamental financial, statistical and market data for corporations listed on the New York Stock Exchange, American Stock Exchange, National Association of Securities Dealers Automated Quotations, and Over-the-Counter markets”. The database provides information for the years from 1962 to the present (http://www.lib.lsu.edu/databases.descriptions/compustat.html). This information was collected for every firm in the sample for the past ten years.

To represent a firms’ previous experience with brand creations and acquisitions the USPTO database was utilized. The USPTO trademark and assignment databases were used to compile a list of all trademarks registered and assignments recorded for every year starting three years prior to the analyzed period of time for every selected company. The number of trademarks registered and assignments recorded is used as a proxy for brand creation and brand acquisition respectively. As discussed earlier, the number of trademarks registered does not correspond exactly to the number of brands a firm creates, because a firm usually registers several trademarks per brand. However, the number of trademarks registered offers a measure of the activity a company had in the brand creation process. Thus, it is assumed that the higher the number of trademarks a firm registered the more brands it introduced to the market. Following
the same logic, the brand assignments recorded with the USPTO are used as a measure for brand acquisition activity, and thereby as a proxy of brand acquisition experience. Similar to trademarks registered, the limitation here is that the number of assignments recorded is not the same as the number of brand acquisitions performed, because an assignment is recorded not only when a brand changes ownership but also when a company changes address, for example. In spite of these limitations, the number of trademarks registered and assignments recorded can be used as a proxy for a company’s experience with brand creations or brand acquisitions respectively.

The final data source for the firm-level variables was the LexisNexis Patent announcement records, which were used to estimate the firm’s previous experience with research and development. This database contains information on all patents registered by U.S. companies for over 30 years, and provided the basis for determining the number of patents for each firm in the sample.

The first firm-level variable was a company’s **prior experience with brand acquisitions** which represented a company’s activity in brand portfolio expansion through brand acquisition or brand creation decisions. This measure was calculated as the ratio of the number of brand acquisitions to a total number of brand creations and brand acquisitions for three years prior to a focal year. The higher this ratio the more brand acquisition experiences compared to brand creation experiences a firm had prior to the analyzed transaction. In this study, the firm’s prior experience with brand acquisitions was calculated as:

\[
\text{Firm’s experience with brand acquisitions} = \frac{\text{Number of trademark assignments recorded}}{\text{Number of trademark assignments recorded plus number of trademarks registered}}
\]
Past research has used different ways to measure a firm’s marketing experience. However, there are two common approaches for operationalizing marketing experience using secondary data. The first approach, used, for example, by Moorman and Slotegraaf (1999), utilizes market share, an indirect measure, as a proxy for marketing experience. The second approach, used, for example, by Dutta, Narasimhan, and Rajiv (2005), is based on the view that marketing experience arises from marketing activities (e.g., advertising or other marketing tactics). In this approach some measure of marketing activity is used, based on the assumption that experience comes from engaging in these marketing activities. In both cases, marketing experience is deemed relevant because experience is a major factor in increasing productivity and efficiency. For this study the second approach is adopted for conceptual and practical reasons. The second type of measure aligns better with the theoretical assumptions, and the data for the corresponding variable are publicly available, unlike the data for the first measure. The measure of a firm’s marketing experience is operationalized as a ratio of advertising expenditures or sales and general administrative (SGA) expenses to its sales. In this instance, advertising is used instead of SGA as a more direct proxy for marketing effort. In this study, the firm’s marketing experience was calculated as:

\[
\text{Marketing Experience} = \frac{\text{Firm’s advertising expenditures}}{\text{Firm’s Sales}}
\]

Research and development productivity is a measure of a company’s ability to innovate. Research and development expenditures are generally reported on a company’s financial statement, but for various reasons many companies report no separate amounts for research and development expenses (e.g. Procter and Gamble). To overcome issues associated
with missing data, a proxy is used to estimate a firm’s innovativeness. For this proxy, the average number of patents registered by a company in the three years prior to the brand portfolio expansion is compiled. To make this number relative to a firm’s size, the ratio of the average number of patents registered by a firm to its average sales (as with other variables used for this study, an average of the three prior years) was calculated (see Hit, Ireland, Harrison, and Hoskisson (1991) for an example of this approach). LexisNexis Patent announcement records are used to count patents and COMPUSTAT databases to obtain information on firms’ sales. Thus, the firm’s research and development productivity was calculated as:

\[ \text{R&D Productivity} = \frac{\text{Number of patents registered}}{\text{Firm’s Sales}} \]

**Human resource capacity** reflects whether a company has adequate personnel resources to undertake the internal development of the brand, or a brand acquisition is necessitated due to shortage of human resources. This variable is operationalized as the ratio of the number of firm employees to its sales. A lower ratio would mean that a firm’s human resource capacity is low and it is more difficult for such a firm to undertake brand portfolio expansion via the internal development of a brand. It should be noted that this variable is similar, but the inverse of the widely used measure of employees’ productivity (the-sales-per-employee ratio) (e.g. Dewenter and Malatesta, 2001; Megginson, Nash, and Van Randenborgh, 1994). HR capacity as used in this research is intended to reveal how many employees are involved in producing a dollar of sales rather than the focus on the productivity or efficiency of the employees. Data from the COMPUSTAT database are used to calculate the ratio for this variable. In this study the firm’s human resource capacity was calculated as:

\[ \text{Human Resource Capacity} = \frac{\text{Number of employees}}{\text{Firm’s Sales}} \]
The final firm-level variable is a firm’s financial leverage, defined as the extent to which a company finances its assets itself through long-term debt (Muller, 1999). This commonly used financial measure is calculated as the ratio of firm’s long-term debt to its total assets in a year prior to transaction. Data from the COMPUSTAT database are used to calculate the following:

\[
\text{Financial Leverage} = \frac{\text{Long Term Debt}}{\text{Total Assets}}
\]

Table 5 provides an overview of the operational measures used for the five independent variables used in testing the hypotheses at firm level.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variable</th>
<th>Operational Definition</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>H4</td>
<td>Company’s experience with brand acquisitions</td>
<td>A ratio of the number of brand acquisition to a total number of brand creation and brand acquisition experiences</td>
<td>USPTO</td>
</tr>
<tr>
<td>H5</td>
<td>Company’s marketing experience</td>
<td>A ratio of the company’s advertisement expenditures to its sales</td>
<td>COMPUSTAT</td>
</tr>
<tr>
<td>H6</td>
<td>Research and development productivity</td>
<td>A ratio of an average number of patents registered by the company (3 years) prior to event to company sales average (3 years)</td>
<td>LexisNexis Patent announcement records and COMPUSTAT</td>
</tr>
<tr>
<td>H7</td>
<td>Personnel resources (human resource capacity)</td>
<td>A ratio of the company’s number of employees to its sales</td>
<td>COMPUSTAT</td>
</tr>
<tr>
<td>H8</td>
<td>Company’s financial leverage</td>
<td>A ratio of company’s long term debt to its total assets</td>
<td>COMPUSTAT</td>
</tr>
</tbody>
</table>
**Brand Portfolio Level Variables**

The two independent variables at the brand portfolio level represent the characteristics of a firm’s brands within the product categories within which it competes as well as the array of brands in the specific product category where the brand portfolio expansion takes place.

The degree of **brand portfolio diversification** is measured by the number of product categories in which a firm operates. The larger the number of product categories in which a firm operates, the more diversified its brand portfolio. While brand portfolio diversification could be developed from several sources, the categories provided by the AdSpender database were utilized. For purposes of this study, brand portfolio diversification was calculated as:

\[
\text{Brand Portfolio Diversification} = \text{Number of product categories for a firm}
\]

The second measure of a firm’s brand portfolios is **product category depth**. This is a measure of firm’s experience in the specific product category where the brand portfolio expansion occurs. While it is not possible to reliably calculate the number of years for which a firm has had a brand in the category, it is possible to estimate its current position in the product category through the number of brands in the category. While it might be preferable to “standardize” this value by relating it to the total number of brands in the category to account for differences in categories, the unreliability of the data source for smaller brands made this measure unacceptable. Therefore, the measure was simply the number of brands held by a firm in the expansion product category, with a higher number suggesting more experience within that product category:

\[
\text{Product Category Depth} = \text{Number of firm brands in the expansion product category}
\]
Table 6 provides an overview of the operational measures used for the two independent variables used in testing the hypotheses at brand portfolio level.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variable</th>
<th>Operational Definition</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>H9</td>
<td>The level of diversification of a firm’s brand portfolio is positively related to the probability of a brand acquisition</td>
<td>Level of brand portfolio diversification</td>
<td>A total number of product categories a firm operates in</td>
</tr>
<tr>
<td>H10</td>
<td>A depth of product category a company expands is negatively related to the probability of a brand acquisition</td>
<td>Product category depth</td>
<td>A total number of brands a firm owns in a product category it expands</td>
</tr>
</tbody>
</table>

Control Variables

To account for uncontrollable effects relating to the specific product categories and firms examined, two control variables were utilized: industry type and total number of brands in firm’s brand portfolio. The industry type control variable was used to parse out the effects of specific industries in their brand portfolio expansion activities. For example, in the food and beverage industry brand preferences are more profound than in the apparel industry, where brand loyalty has been declining significantly in the past 20 years (Chazen, 1996). This consideration may influence firms to favor acquisitions of existing brands or brand extensions in the food and beverage industry, while having an opposite effect on brand portfolio expansion choice in the apparel industry. The brands were assigned to the industries based on the AdSpender product classification scheme. Initially, the sample of firms included brands from five manufacturing industries: apparel, chemicals and personal care, tobacco, pet supplies, and food and beverage manufacturing. Two industries, tobacco and pet supplies, were later combined due to the small number of brands in each industry. The industry type effect was represented by dummy or indicator coding, where three of the industries are expressed as binary indicators, representing
their differences in brand acquisition decisions not captured in the set of independent variables. The industry effect variables represent the industry tendency across all firms in the industry to utilize either brand creation or brand acquisitions.

The second control variable was a measure representing the size of a firm’s overall brand portfolio (i.e., the total number of brands for a firm across all categories). This measure was used to account for any effect the absolute size of a firm’s brand portfolio may have on portfolio expansion choice. It controls for the overall experience a firm has with managing multiple brands. A higher number of brands, for example, may make managers more confident that they can successfully develop brands internally. On the other hand, firms with more brands have better opportunity to find synergy effects and thus can integrate a brand to the portfolio easier, and hereby prefer brand acquisition. This measure was included as a control variable rather than an independent variable for several reasons. First, there was no relevant literature upon which to develop a hypothesized relationship except for a general notion of branding experience. But more importantly, the more direct effects due to brand management were hopefully captured in the two brand portfolio variables. So this measure was included to assess any overall effects not represented by those variables.

Brands were defined operationally as unique brand names which had media expenditures in the prior three years. All duplicate entries for a separate brand name were eliminated to provide a listing of unique brands for each company in each year. This initial list of brands for every company was then verified using company histories in ‘The Brands and their Companies’ database. This process allowed for not only confirmation of the list of brands but also identification of any divested brands that might not be reflected in the AdSpender database.
Summary

This chapter detailed the rationale and process for two major issues in the research design: how the set of firms was selected for the analysis and the choice between primary and secondary data sources as the source for both dependent and independent variables used in the analysis. In doing so, criteria for selecting data sources for the analysis were developed, and then detailed descriptions of data sources considered and ultimately chosen for the study were provided. After that, the algorithm for selecting firms for the sample was discussed and applied to ultimately select 22 companies from the ACSI list of companies. Next, operationalizations for the dependent and independent variables were provided. Finally, the two control variables were defined and operationalized.
CHAPTER 5: RESULTS

This section will address the major issues related to sample description, multicollinearity assessment, model estimation and hypothesis testing. First, this section profiles the firms in the sample on the constructs of the conceptual model to provide an overview of the companies in the sample and basic understanding of the characteristics of each group – brand creations and brand acquisitions. The next step is to assess the degree of multicollinearity among the independent variables to identify any complications that might arise in the analysis, particularly as it would impact the hypothesis tests. Third, the model specification is discussed detailing the analytical approach employed to test the model. Three groups of models are estimated: univariate models, “block” models representing the three different levels of variables, and the overall model. As each of these types of models is discussed a new degree of understanding of the research question emerges. Finally, the hypotheses are tested and the significance of each variable is assessed.

Sample

This section first addresses the adequacy of the sample size to provide enough power for the model estimation. Then, industries, product categories and companies in the sample are described to provide an overview of the empirical setting for the hypotheses testing.

Sample Size

To enable statistical inference tests (Cook and Campbell, 1979), a representative sample, stratified by year, was created, including all brand creations and brand acquisitions executed by the 22 companies between 2001 and 2007.

To detect effects outlined by the hypotheses, it is important to construct a sample large enough to ensure that the power of the statistical analysis is adequate. The statistical model is
expected to contain approximately 12 independent variables, including control variables to account for industry type and size of each company’s brand portfolio (total of brands a company owns). Cohen (1992) recommends a minimum sample size of 138 observations for a multiple regression analysis with 15 predictor variables, a medium effect size, and α-level of 0.05, to have a power of 0.80. This study has 125 observations and 12 variables, which provides sufficient power to detect the effects outlined by the stated hypotheses.

**Sample Characteristics**

The considerations outlined above guided the selection of the final sample for this study which consists of 22 companies (refer to Table 3) in the following industries (as classified by the AdSpender industry classification): apparel (e.g. Jones Apparel), food and beverage (e.g. Kellogg), chemical and personal care (e.g. Procter and Gamble), tobacco products (e.g. Reynolds American), and pet supplies (e.g. Del Monte Foods). The companies in the sample operate in 57 product categories¹. The companies vary in size and economic activity from the smallest with sales of $3 billion dollars a year and 7,000 employees to the largest company with $83 billion dollars in sales and 157,000 employees. Companies included in the sample also vary regarding the breadth of industries they operate in. Some companies have products in as many as three of the represented industries, while others focus on just one industry.

The mean number of product categories in a company’s brand portfolio is 21.05 with an average of 32.69 brands. On average, a company had four brands (4.54) in the product category it expanded via creation or acquisition. However, this number varies substantially (SD = 4.66), with some companies expanding in a product category where they already have a substantial presence, and some entering a product category where they have no prior experience. The firms

¹ Product category definitions as defined in by AdSpender.
in the sample had from 1 to 17 creation/acquisition transactions between 2001 and 2007. On average, a company had 6 transactions over this period of time (on average, 4 acquisitions and 2 creations per company). Note that for purposes of this study each brand acquisition/creation is analyzed separately. This is particularly important for brand acquisitions, where higher brand acquisition activity does not necessarily equate to a higher level of general acquisition activity; often a company acquires more than one brand in one transaction. This is especially likely in cases that involve the acquisition of an entire company or a company’s division. Table 7 shows details on the firms in the sample.

Table 7 Sample Firms Profiles

<table>
<thead>
<tr>
<th>Brand Activity</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Employees</td>
<td>7,000</td>
<td>157,000</td>
<td>50.31</td>
<td>38.2</td>
</tr>
<tr>
<td>Firms’ Sales (billion dollars)</td>
<td>3</td>
<td>83</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Number of Product Categories</td>
<td>2</td>
<td>62</td>
<td>21.05</td>
<td>14.8</td>
</tr>
<tr>
<td>Total Number of Brands</td>
<td>5</td>
<td>90</td>
<td>32.69</td>
<td>23.6</td>
</tr>
<tr>
<td>Brands Per Expansion Category</td>
<td>0</td>
<td>23</td>
<td>4.54</td>
<td>4.7</td>
</tr>
<tr>
<td>Number of Brand Portfolio Expansions</td>
<td>1</td>
<td>17</td>
<td>5.7</td>
<td>4.5</td>
</tr>
</tbody>
</table>

The largest number of brand creations took place in the food manufacturing industry, and the largest number of brand acquisitions occurred in the apparel manufacturing industry. In general, companies tended to modify their brand portfolios in all industries by both creating and buying brands. Table 8 provides overview of brand portfolio expansion activity in each of the industries in the sample.

Table 8 Brand Portfolio Expansion Activity by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Acquisition</th>
<th>Creation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apparel manufacturing</td>
<td>36</td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>Chemical and personal care manufacturing</td>
<td>10</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Tobacco and pet supplies manufacturing (combined)</td>
<td>7</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Food and beverage manufacturing</td>
<td>29</td>
<td>36</td>
<td>65</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>43</td>
<td>125</td>
</tr>
</tbody>
</table>
While the brand profiles and portfolio expansion activity of the firms was discussed above, a number of other market, firm and brand portfolio characteristics are included in the conceptual model as impacting brand expansion activity (see Table 9). With regard to the market characteristics of the sample, the market concentrations range from average to very high. In some markets, the top four firms had 100 percent of the share of voice, meaning that no more than four firms are active in these markets (except for very minor and/or inconsequential brands). At the other extreme were markets where only 24 percent of share of voice belonged to the top four firms, making these markets very fragmented. Markets also varied in terms of their competitive intensity, from being very competitive to being dominated by top four brands, with an average of 60 percent of share of voice belonging to the top four brands in the market. Finally, in terms of market growth, some markets were growing quite fast (125% a year) while others experienced a significant decline (40% a year) prior to the time of transaction. On average, however, markets had a moderate growth (9% a year).

Firms included in the analysis had very different past experiences with brand portfolio expansion. While a small number of the firms only had experience in either brand acquisition or brand creation, most of the firms had some experience with both strategies. On average, firms had more experience with brand acquisitions, since the ratio of brand acquisitions to the total brand portfolio expansion experiences was 0.24. Marketing experience was very extensive for some companies, as they spent almost 20 percent of their sales on advertising, yet some firms had very low levels of marketing experience, with advertising less than one percent of sales. The average percent of sales spent on advertising was 6 percent. R&D productivity did not vary greatly among firms in the sample, and all firms had some experience with R&D. In terms of HR capacity, firms in the sample employed from 1 to 10 employees to generate one million
dollars of sales, with four employees being an average. On average firms in the sample had about 30 percent leverage, however some of them were almost long term debt free (i.e., very low leverage), and some borrowed over 75 percent of the value of their assets.

This overview shows that firms included in the sample represent a broad variety of internal situations, and operate in very different markets. The sample characteristics in general assure that the results of the analysis are generalizable beyond the sample. This fact reflects that the sample was developed to not be specific to a particular market or firm situation.

### Table 9 Firm Profiles on Variables in Conceptual Model

<table>
<thead>
<tr>
<th></th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1- Market Concentration</td>
<td>0.24</td>
<td>1.00</td>
<td>0.781</td>
<td>0.222</td>
</tr>
<tr>
<td>H2- Competitive Intensity</td>
<td>0.09</td>
<td>1.00</td>
<td>0.634</td>
<td>0.254</td>
</tr>
<tr>
<td>H3- Market Growth</td>
<td>-0.40</td>
<td>1.25</td>
<td>0.089</td>
<td>0.223</td>
</tr>
<tr>
<td>H4- Acquisition Experience</td>
<td>0.00</td>
<td>1.00</td>
<td>0.242</td>
<td>0.401</td>
</tr>
<tr>
<td>H5- Marketing Experience</td>
<td>0.01</td>
<td>0.19</td>
<td>0.061</td>
<td>0.039</td>
</tr>
<tr>
<td>H6- R&amp;D Productivity</td>
<td>0.00</td>
<td>0.01</td>
<td>0.001</td>
<td>0.002</td>
</tr>
<tr>
<td>H7- HR Capacity</td>
<td>1.50</td>
<td>10.04</td>
<td>3.686</td>
<td>1.656</td>
</tr>
<tr>
<td>H8- Financial Leverage</td>
<td>0.01</td>
<td>0.76</td>
<td>0.266</td>
<td>0.141</td>
</tr>
<tr>
<td>H9- Brand Portfolio Diversification</td>
<td>2</td>
<td>62</td>
<td>21.050</td>
<td>14.834</td>
</tr>
<tr>
<td>H10- Product Category Depth</td>
<td>0</td>
<td>23</td>
<td>4.540</td>
<td>4.660</td>
</tr>
<tr>
<td>Control1 - Industry</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Control2 - Total # of Brands</td>
<td>5</td>
<td>90</td>
<td>32.690</td>
<td>23.623</td>
</tr>
</tbody>
</table>

### Model Specification and Interpretation

The dependent variable is binary, with a value of one representing a brand acquisition and a zero a brand creation. Given the nature of the dependent variable, a binominal logistic regression model is used to test the proposed hypotheses by assessing the probability of brand
acquisition as explained by the independent variables described above. The model can be expressed as:

\[ P(\text{yi} = 1) = \frac{1}{1 + \exp(-a + X_iB)} \]

where \( y_i \) is the dependent variable, \( X_i \) is the vector of independent variables for the \( i \)th observation, \( a \) is the intercept parameter, and \( B \) is the vector of regression parameters (Hastings, 1986).

Estimation of a logistic regression model requires that the dependent variable be transformed to an odds ratio due to its binary nature. The odds ratio is “the ratio of the odds that event X will occur versus that it will not occur given a unit change in the independent variable” (Scott and Ingels, 2007, p. 30). In the context of this study, the odds express the likelihood of the brand portfolio expansion occurring via acquisition rather than creation. An odds ratio of greater than 1 indicates an increase in the odds of a company using brand acquisition as a brand portfolio expansion option relative to the odds of a company using brand creation. For an odds ratio of less than 1 the opposite is true. An odds ratio of 1 indicates that both expansion options are equally likely.

The regression coefficients estimate the impact of the independent variables on the probability that the expansion strategy of a firm will be a brand acquisition. A positive sign for the coefficient means that the variable increases the probability of brand acquisition. The magnitude of the effect of each independent variable is best expressed by the antilog of the coefficient, commonly termed the exponentiated coefficient. The percentage change in the odds ratio is equal to the exponentiated coefficient minus 1.0. So an exponentiated coefficient of 1.0 denote no change (1.0 – 1.0 = 0). Exponentiated coefficients above 1.0 indicate increases in the odds ratio, while those below 1.0 denote decreases in the odds ratio. It should be noted that
exponentiated coefficients above 1.0 correspond to regression coefficients with a positive sign, and vice versa for exponentiated coefficients below 1.0. So either coefficient can be used for interpretation, but each presents unique properties in portraying the direction and magnitude of the relationship.

The goodness-of-fit of the logistic regression models will be assessed from the perspectives of predictive accuracy and statistical significance. The predictive accuracy of the logistic regression model is by comparing the percentage of correctly classified observations with some goodness-of-fit criterion measure. The most commonly used goodness-of-fit criteria are the proportional chance and maximum chance measures. The proportional chance criterion (i.e. the “average” probability of classification considering all group sizes) is calculated as the sum of the squared proportions for each group. For the sample of brand acquisitions/creations, 34.4% (43/125) are brand creations and 65.6% (82/125) are brand acquisitions. Thus, the proportional chance value for the sample is 0.55 (0.55 = (0.344)^2 + (0.656)^2). The second commonly used goodness-of-fit criterion is the maximum chance criterion (i.e. the percentage correctly classified if all observations are placed in the group with the highest probability of occurrence). For this study that would be 0.656 – if all respondents were classified as brand acquisitions, 65.6% would be correct. The proportional chance criterion (0.55) represents the “lower bound” of the percentage correctly classified, while the maximum chance criterion (0.656) is a stricter threshold. It is suggested that the goodness-of-fit criteria be increased by 25% as an even more conservative test. Thus, in this case, the suggested threshold for the maximum chance criterion would be 81.9% (65.6 * 1.25) and the proportional chance criterion would be 68.7% (0.55 * 1.25). The percentage correctly classified for all models will be assessed against both of these thresholds.
As a measure of model validation, the original sample will be split into analysis and holdout samples. The analysis sample (65% of the original sample) will be used to estimate the model and the holdout sample (35%) will be used to independently validate the predictive accuracy of the model.

In determining the statistical significance of a logistic regression model, two tests are commonly used to assess overall model fit: the Hosmer and Lemeshow test and the Omnibus test. The Hosmer and Lemeshow statistic determines the degree of fit between the actual and predicted values of the dependent variable. As such, the desired outcome is a non-significant value, meaning that the prediction by the model is not significantly different from the observed values. The Omnibus test of model coefficients estimates significance levels using the traditional chi-square method to assess if the model with the predictors is significantly different from the model with only the intercept. Finally, the Wald statistic is used to test individual variables and the associated hypotheses. It provides a statistical significance level for each individual variable, comparable to the statistical tests performed in multiple regression.

**Model Estimation**

The analysis of the conceptual model involves a series of steps of differing model specifications. First, the profiles of the two groups – creation and acquisition -- are examined. This step provides some insights into the sample and an initial look at the differences between groups on each independent variable. Second, multicollinearity among the independent variables is assessed to ensure that all significant relationships are identified and interpreted correctly. Third, a series of univariate tests is conducted to obtain preliminary results regarding the significance and direction of relationships between the dependent variable and independent variables. Next, blocks of variables are tested; with each block containing the variables in the
three levels discussed earlier. The goal of this analysis is to reveal the effects of each block of variables on the choice between brand creation and brand acquisition. Finally, the overall model is tested, first with all hypothesized variables, and then with the most parsimonious model to focus only on those independent variables with significant effects.

**Group Profiles**

The first step of the analysis is to profile the market, firm and brand-level variables associated with the 43 instances of brand creation and the 82 instances of brand acquisition. Table 10 profiles the groups (minimum and maximum values, means, and standard deviation) on the ten independent variables to be tested in the conceptual model as well as the two market- and firm-specific variables to be used as controlling factors. These profiles provide some insight into the competitive environments in which the companies made their brand portfolio expansion decisions. The two groups show significant difference for seven of the ten variables, a precursor to effects they may demonstrate in the conceptual model. In the next section the significant differences are discussed first, followed by a discussion of the variables with no differences.

First, market concentration was much higher for brand creation group (M = 0.854; SD = 0.140) as compared to the group of brand acquisitions (M = 0.742; SD = 0.247). While the market concentration is theoretically expected to be higher in markets where brand acquisitions are more prevalent, the mean relationship here indicates an opposite effect. In terms of market growth, markets where acquisitions occurred grew on average by about 8 percent per year (M = 0.083; SD = 0.185) versus about 10 percent (M = 0.102; SD = 0.284) for markets where creations occurred. Although the difference is not statistically significant the direction of the mean difference is contrary to hypothesized. A higher market growth rate is expected to be more conducive for brand acquisitions; however, the means show the reversed relationship.
Among the firm-level variables, two groups were significantly different. First, the brand acquisition group used a significantly lower degree of financial leverage ($M = 0.239; SD = 0.120$) compared to the firms that created brands ($M = 0.320; SD = 0.164$). Further, firms following the acquisition strategy employed more employees to per million of dollars of sales ($M = 3.915; SD = 1.847$) than firms that preferred brand creations ($M = 3.249; SD = 1.105$). These mean differences are theoretically expected to be reversed. The brand acquisition group had less brand acquisition experience ($M = 0.208; SD = 0.382$) than the group that choose brand creations ($M = 0.307; SD = 0.430$), this difference is not statistically significant but is in the opposite direction from the one expected by the theoretical model.

With regard to brand portfolio structure, companies that choose brand acquisition generally operate in more product categories ($M = 22.40; SD = 15.340$) versus firms that opted for brand creations ($M = 18.47; SD = 13.618$), but have fewer brands in the category they are expanding ($M = 4.07; SD = 4.039$; versus $M = 5.44; SD = 5.603$). The mean differences for portfolio level variables although not significant are in the hypothesized direction.

Three of the hypothesized variables did not demonstrate any differences between the two groups. These three variables were competitive intensity, marketing experience and research and development productivity. The implications of the equality between groups are discussed in subsequent sections.

**Assessing Multicollinearity**

The second step of the analysis plan involved assessing the multicollinearity among independent variables because increasing levels of multicollinearity inflate the variances of the parameter estimates, making assessment of the unique effects of each variable problematic. The sample size in this research is moderate and even though the overall model may still be
| Table 10 Profiles of Variables Associated With Brand Acquisitions and Creations |
|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
|                                                   | Acquisition                                      | Creation                                        | t-value                                           |
| H1- Market Concentration                          | 0.24 | 1.00 | 0.742 | 0.247      | 0.63 | 1.00 | 0.854 | 0.140      | 2.739**                                           |
| H2- Competitive Intensity                         | 0.15 | 1.00 | 0.631 | 0.253      | 0.00 | 1.00 | 0.640 | 0.257      | 0.999                                             |
| H3- Market Growth                                 | -0.40 | 0.65 | 0.083 | 0.185      | -0.26 | 1.25 | 0.102 | 0.284      | 0.454                                             |
| H4- Acquisition Experience                       | 0.00 | 1.00 | 0.208 | 0.382      | 0.00 | 1.00 | 0.307 | 0.430      | 1.322                                             |
| H5- Marketing Experience                          | 0.01 | 0.19 | 0.059 | 0.041      | 0.01 | 0.15 | 0.064 | 0.035      | 0.751                                             |
| H6- R&D productivity                              | 0.00 | 0.01 | 0.001 | 0.002      | 0.00 | 0.00 | 0.001 | 0.001      | -0.549                                            |
| H7- HR Capacity                                   | 1.50 | 10.04 | 3.915 | 1.847      | 1.50 | 5.30 | 3.249 | 1.105      | -2.164*                                           |
| H8- Financial Leverage                            | 0.01 | 0.54 | 0.239 | 0.120      | 0.04 | 0.76 | 0.320 | 0.164      | 3.152**                                           |
| H10- Product Category Depth                       | 0    | 17   | 4.07  | 4.039      | 0    | 23   | 5.44  | 5.603      | 1.569                                             |
| Control1- Industry                               | n/a  | n/a  | n/a   | n/a        | n/a  | n/a  | n/a   | n/a        |                                                   |
| Control2- Total # of Brands                       | 6    | 90   | 31    | 24.483     | 5    | 90   | 35.91 | 21.804     | 1.104                                             |
| Number of Cases                                   | 82   |      |       |           | 43   |      |       | n/a        |                                                   |

Significant, multicollinearity may lead to lack of statistical significance of individual independent variables, wrong signs and incorrect magnitudes of coefficient estimates. As a result, conclusions about relationships between independent and dependent variables may be drawn that are misleading or even incorrect.

The correlations between most of the independent and control variables are either small or moderate, with two exceptions (Table 16 in the Appendix is the complete correlation matrix among variables). First, market concentration and competitive intensity in the focal product
category are relatively highly correlated \( (r = 0.759, p < 0.01) \). Market concentration is conceptualized as a share of voice for the top four firms in the market of the brand portfolio expansion transaction, while competitive intensity is conceptualized at the brand level, and presents a share of voice of the top four brands in this market. While distinct conceptually, market concentration and competitive intensity would be the same if firms had only one brand in a product category. The two values differ to the extent that firms manage several brands in the same product category. In this study there is a fairly high correlation \((0.759)\) between the two variables, indicating that product categories that are dominated by few firms tend to be dominated by few brands as well (i.e. the companies dominating the product category market their products under one or very few brands). The product category “Shaving Equipment – Mens & Unisex”, for example, has been dominated by Procter & Gamble (60% market share), Energizer Holding Inc. (23%), Spectrum Brands Inc. (12%), and Philips (4%). Together these companies controlled a market share of 99 percent. Procter and Gamble marketed its products under the Gillette brand (which has a market share of 59%). Energizer Holding Inc. brands its products using the name ‘Schick’ (23%), while Spectrum Brands Inc. used the Remington brand (12%). Philips marketed the Norelco brand (4%).

A second high correlation was seen between the number of product categories a firm operates in and the control variable for number of brands a firm owns \((r = 0.849, p < 0.01)\). Although the two measures are different for many firms, the two variables again become more highly correlated as brands follow a single-brand strategy for each product category.

While there were only two instances of potentially high bivariate correlations, multicollinearity can occur due to intercorrelation of multiple variables. To access multicollinearity further the following two step process was used: (1) the variance inflation
factor (VIF) and tolerance values for each variable are examined, and then (2) the condition index is examined. First, the VIF and tolerance values demonstrate inconsequential collinearity (refer to Table 11). All VIF values are below 10.0 (a usual threshold value). Tolerance values show that although all variables exceed the threshold of 0.10, several of them are close to this threshold. The four variables with indications of potential multicollinearity issues are the same variables that had high bivariate correlations: market concentration, competitive intensity, number of product categories, and total number of brands. Thus, no additional instances of problematic levels of multicollinearity appeared. While these levels may impact the estimation of effects for these four variables collectively, they can still individually demonstrate impact in the model. Moreover, no other variables should be impacted by multicollinearity in the estimation or interpretation of the results.

To further explore multicollinearity, the condition index was calculated (Table 12). All condition indexes were below the threshold value of 30. Even when employing the more stringent threshold value of 15 (three condition indices exceeded this value), the variance proportions fell below 90 percent for all variables. Thus, no support for existence of high multicollinearity was found, and thus no remedies are needed to proceed with the analysis.

**Univariate Tests**

The next step of the data analysis was to conduct a series of logistic regressions where the relationship between the dependent variable and each of the independent variables are analyzed separately. These univariate models examine each variable separately, apart from any impacts due to multicollinearity to assess the univariate effects for each independent variable. The results of these binary regressions are summarized in Table 13. Three univariate tests are significant: market concentration, human resource capacity and financial leverage; however the signs for all
Table 11 Profiles of Variables Associated With Brand Acquisitions and Creations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1- Market Concentration</td>
<td>0.248</td>
<td>4.038</td>
</tr>
<tr>
<td>H2- Competitive Intensity</td>
<td>0.296</td>
<td>3.379</td>
</tr>
<tr>
<td>H3- Market Growth</td>
<td>0.683</td>
<td>1.465</td>
</tr>
<tr>
<td>H4- Acquisition Experience</td>
<td>0.772</td>
<td>1.295</td>
</tr>
<tr>
<td>H5- Marketing Experience</td>
<td>0.570</td>
<td>1.755</td>
</tr>
<tr>
<td>H6- R&amp;D productivity</td>
<td>0.500</td>
<td>2.001</td>
</tr>
<tr>
<td>H7- HR Capacity</td>
<td>0.636</td>
<td>1.573</td>
</tr>
<tr>
<td>H8- Financial Leverage</td>
<td>0.649</td>
<td>1.542</td>
</tr>
<tr>
<td>H9- Brand Portfolio Diversification</td>
<td>0.113</td>
<td>8.858</td>
</tr>
<tr>
<td>H10- Product Category Depth</td>
<td>0.615</td>
<td>1.625</td>
</tr>
<tr>
<td>Control1- Industry</td>
<td>0.308</td>
<td>3.248</td>
</tr>
<tr>
<td>Control2-#BrandsTotal</td>
<td>0.125</td>
<td>8.020</td>
</tr>
</tbody>
</table>

Table 12 Collinearity Diagnostics: Condition Index

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Condition Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.000</td>
</tr>
<tr>
<td>2</td>
<td>2.588</td>
</tr>
<tr>
<td>3</td>
<td>2.995</td>
</tr>
<tr>
<td>4</td>
<td>3.709</td>
</tr>
<tr>
<td>5</td>
<td>4.274</td>
</tr>
<tr>
<td>6</td>
<td>4.454</td>
</tr>
<tr>
<td>7</td>
<td>5.548</td>
</tr>
<tr>
<td>8</td>
<td>7.830</td>
</tr>
<tr>
<td>9</td>
<td>8.266</td>
</tr>
<tr>
<td>10</td>
<td>9.574</td>
</tr>
<tr>
<td>11</td>
<td>17.674</td>
</tr>
<tr>
<td>12</td>
<td>25.418</td>
</tr>
<tr>
<td>13</td>
<td>27.661</td>
</tr>
</tbody>
</table>

of these variables are opposite of the one theoretically expected. Among the insignificant variables three have the correct sign: marketing experience, and both portfolio level variables: brand portfolio diversification and product category depth. The other variables are not significant.
and have opposite signs than the ones expected. The implications and reasons are explained later, however at this stage of the analysis it is evident that several relationships in the final model will not be supported as hypothesized.

Table 13 Results of the Univariate Models

<table>
<thead>
<tr>
<th>Variable</th>
<th>Univariate Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>n/a</td>
</tr>
<tr>
<td>Market-Level Variables</td>
<td></td>
</tr>
<tr>
<td>Market Concentration</td>
<td>-2.664**</td>
</tr>
<tr>
<td>Competitive Intensity</td>
<td>-0.150</td>
</tr>
<tr>
<td>Market growth</td>
<td>-0.380</td>
</tr>
<tr>
<td>Firm-Level Variables</td>
<td></td>
</tr>
<tr>
<td>Acquisition Experience</td>
<td>-0.604</td>
</tr>
<tr>
<td>Marketing Experience</td>
<td>-3.588</td>
</tr>
<tr>
<td>R&amp;D productivity</td>
<td>58.954</td>
</tr>
<tr>
<td>HR Capacity</td>
<td>0.238*</td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>-4.194**</td>
</tr>
<tr>
<td>Brand-Portfolio Level Variables</td>
<td></td>
</tr>
<tr>
<td>Brand Portfolio Diversification</td>
<td>0.020</td>
</tr>
<tr>
<td>Product Category Depth</td>
<td>-0.061</td>
</tr>
</tbody>
</table>

* Significance level of 0.01
** Significance level of 0.05

Estimating Block Models

The third step of the analysis is to enter the independent variables in three separate groups or “blocks”, with a block containing all the variables of a particular level: market, firm or brand portfolio. Then, logistic regression models were estimated for each block separately. The two control variables used in the final model were also included in each model. The goal of the analysis by blocks was to understand the importance of each of the three levels of variables overall, irrespective of the significance of each individual variable. Table 14 summarizes the results for each of these models. The first model, with the three market-level variables, predicts 76.3 percent of the cases correctly (holdout sample 79.6 percent), while lower than the desired
level of 81.9 percent, it exceeds the maximum chance criterion of 65.6 percent by over ten percent.

The second model, with five firm level variables, predicts 72.4 percent of the cases correctly (holdout sample 81.6 percent), which is again lower than the desired level of 81.9 percent and the prediction for the holdout sample is very close to the set threshold level of 81.9 percent. The third model, with the two portfolio level variables, predicts 75 percent of the cases correctly (holdout sample 81.6 percent), exceeding the maximum chance criterion of 65.6 percent and once again very close to the desired classification percent of 81.9. Overall, every block model exceeds the minimum threshold of the maximum chance criterion and all exceed the upper threshold of the proportional chance criterion. These results indicate that all three groups of variables can contribute significantly to the explanatory power of the model and demonstrate that variables at every level are important in understanding the firm’s choice of brand portfolio expansion. It is expected however, that combining the three levels in one model will have even higher predictive accuracy. This overall model is tested in the next section.

**Estimating the Final Model**

The final model was estimated in two steps summarized in Table 15. First, all of the independent variables were entered into the model and the significance of each variable was assessed. Then a “trimmed” model was estimated, retaining only those variables with statistical significance in the first model. For each model, the sample size adhered to the ratio of 5 cases for each independent variable.

Model 1 in Table 15 presents the results of logistic regression of brand portfolio expansion on the core control variables and the independent variables, with a correctly classified percentage of 81.6% for the analysis sample and 71.4% for the holdout sample.
Table 14 Results of the Block Model Estimation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 2 (Market Level)</th>
<th>Model 2 (Firm Level)</th>
<th>Model 2 (Portfolio Level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.362</td>
<td>-0.454</td>
<td>0.121</td>
</tr>
<tr>
<td>Control Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry: Food and beverage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry: Apparel</td>
<td>2.465*</td>
<td>2.745*</td>
<td>2.977*</td>
</tr>
<tr>
<td>Industry: Chemicals and Personal care</td>
<td>1.670</td>
<td>2.032</td>
<td>0.499</td>
</tr>
<tr>
<td>Industry: Combined tobacco and pet supplies</td>
<td>0.310</td>
<td>0.436</td>
<td>0.186</td>
</tr>
<tr>
<td>Total number of brands</td>
<td>0.005</td>
<td>-0.004</td>
<td>-0.002</td>
</tr>
<tr>
<td>Market-Level Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market Concentration</td>
<td>-5.075</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive Intensity</td>
<td>4.089</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market growth</td>
<td>-1.406</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm-Level Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition Experience</td>
<td>-0.318</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing Experience</td>
<td>-0.688</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D Productivity</td>
<td>-34.818</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR Capacity</td>
<td>0.517*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>-3.877†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Portfolio-Level Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Portfolio Diversification</td>
<td></td>
<td>0.024</td>
<td></td>
</tr>
<tr>
<td>Product Category Depth</td>
<td></td>
<td>-0.120</td>
<td></td>
</tr>
<tr>
<td>Classification Percentage</td>
<td>76.3</td>
<td>72.4</td>
<td>75.0</td>
</tr>
<tr>
<td>(analysis sample)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classification Percentage</td>
<td>79.6</td>
<td>81.6</td>
<td>81.6</td>
</tr>
<tr>
<td>(hold out sample)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significance level of 0.01
** Significance level of 0.05
† Significance level of 0.1

The Hosmer and Lemeshow statistic is non-significant (0.626) and is greater than 0.5, indicating acceptable model fit as measured by the correspondence of the predicted and observed values. The significant Omnibus test for the Model 1 (Chi-Square = 35.648, df = 14, p=0.001) also indicates that there is adequate fit of the data to the model, meaning that at least one of the predictors is significantly related to the response variable.
To assess the significance of the individual independent variables, the Wald statistic was used. The independent variables ‘Acquisition Experience’, ‘Marketing Experience’, ‘R&D productivity’, ‘HR Capacity’, ‘Brand Portfolio Diversification’, and ‘Product Category Depth’ were not significant at the 0.1 level. Thus, they were removed from the model to ensure model parsimony.

A “trimmed” model (Model 2) was estimated with the remaining variables, achieving a correctly classified percentage of 82.9% for the analysis sample and 75.5% for the holdout sample. The classification accuracy for the analysis sample exceeded the threshold level for this model of 81.9%; although for the hold out sample the classification accuracy was lower than the threshold level it exceeded the maximum chance criterion of 65.6% by almost 10%.

The Hosmer and Lemeshow test was again non-significant (0.536), demonstrating adequate model fit as did the Omnibus test of the model coefficients (Chi-Square = 33.843, df = 9, p = 0.000). Hence, there is adequate fit of the model to the data and the individual variables can be assessed for their relationship and magnitude of effect on the probability of brand acquisition. The Wald statistics indicate that three of the independent variables retained in the model (i.e. ‘Market Concentration’, ‘Competitive Intensity, and ‘Financial Leverage’) are significant at the 0.05 level, while ‘Market Growth’ variable is significant at the 0.10 level. The interpretation of each variable as it relates the proposed hypotheses is discussed in the next section.

Hypothesis Testing

With the overall model exhibiting acceptable levels of overall model fit, attention turns to examining the variables remaining in the final model and their use in testing the ten hypotheses
forming the conceptual model. In the following section the hypotheses will be examined by level: first the market-level effects, then firm-level and finally the brand portfolio hypotheses.

Table 15 Results of Testing the Full Conceptual Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1: Full Model</th>
<th>Model 2: Trimmed Model(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.510</td>
<td>2.800</td>
</tr>
<tr>
<td>Control Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry: Food and beverage</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Industry: Apparel</td>
<td>1.676</td>
<td>1.992</td>
</tr>
<tr>
<td>Industry: Chemicals and personal care</td>
<td>1.847</td>
<td>2.412</td>
</tr>
<tr>
<td>Industry: Tobacco and pet supplies</td>
<td>0.071</td>
<td>0.263</td>
</tr>
<tr>
<td>Total number of brands</td>
<td>-0.023</td>
<td>-0.001</td>
</tr>
<tr>
<td>Market-Level Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market Concentration</td>
<td>-7.603*</td>
<td>-6.569/0.0014*</td>
</tr>
<tr>
<td>Competitive Intensity</td>
<td>4.567*</td>
<td>4.514/91.314**</td>
</tr>
<tr>
<td>Market growth</td>
<td>-2.875†</td>
<td>-2.222/0.1083 †</td>
</tr>
<tr>
<td>Firm-Level Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition Experience</td>
<td>-0.606</td>
<td></td>
</tr>
<tr>
<td>Marketing Experience</td>
<td>5.086</td>
<td></td>
</tr>
<tr>
<td>R&amp;D Productivity</td>
<td>-111.367</td>
<td></td>
</tr>
<tr>
<td>HR Capacity</td>
<td>0.639†</td>
<td></td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>-6.993*</td>
<td>-7.134/0.0007**</td>
</tr>
<tr>
<td>Brand-Portfolio-Level Variables</td>
<td></td>
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</tr>
<tr>
<td>Brand Portfolio Diversification</td>
<td>0.043</td>
<td></td>
</tr>
<tr>
<td>Product Category Diversification</td>
<td>-0.017</td>
<td></td>
</tr>
<tr>
<td>Percent Correctly Classified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis sample</td>
<td>81.6%</td>
<td>82.9%</td>
</tr>
<tr>
<td>Holdout sample</td>
<td>71.4%</td>
<td>75.5%</td>
</tr>
</tbody>
</table>

\(^a\) The two values are the regression coefficient and the exponentiated coefficient
* Significance level of 0.01
** Significance level of 0.05
† Significance level of 0.1

Table 15 above contains the coefficient relating to each hypothesis and its significance.

The implications of the results and potential explanations are discussed in the Discussion of the Results section that follows immediately.
Market Level Variables

The first set of variables considered were those characterizing the market within which the brand portfolio expansion was to occur. H1 hypothesized that a company will prefer brand acquisition as a brand portfolio expansion option as a market becomes more oligopolistic (i.e., as the ratio of the total presence of the four largest firms on the market increases). The ‘Market Concentration’ variable is significant and negative (b = -6.569, p = 0.041), indicating that while the predicted relationships are significant their effect is in the opposite direction. This finding implies that companies are more likely to acquire a brand if the target market is less oligopolistic.

H2 hypothesized that a company will prefer brand acquisition as a brand portfolio expansion option if the target market has many well-established brands. Thus, the higher the competitive intensity the more likely the company will use brand acquisition as a brand portfolio expansion option. The ‘Competitive Intensity’ variable, representing brand concentration, is significant and positive (b = 4.514, p = 0.012), indicating that the predicted relationship is significant and its effect is in the hypothesized direction. This finding supports the hypothesis that companies are more likely to acquire a brand if the target market has many well established brands.

H3 hypothesized that a firm will prefer brand acquisition as a brand portfolio expansion option in a faster growing target market. Thus, the higher the growth rate of the target market the more likely a company will use brand acquisition. The ‘Market Growth’ variable is significant and negative (b = -2.222, p = 0.095), indicating that while the predicted relationships are significant their effect is in the opposite direction. This finding implies that companies are more likely to create a brand as the growth of the target market increases.
Firm Level Variables

The next set of variables related to characteristics of the firm that might influence the brand portfolio expansion strategy. H4 theorized that a firm’s prior experience with brand acquisitions will influence its selection of a brand portfolio expansion strategy. Thus, the more a company has used brand acquisitions in the past, the more likely this company is to prefer brand acquisition in subsequent decisions. The ‘Acquisition Experience’ variable, however, is not significant (b = -0.606, p = 0.544), indicating that companies’ past experience is not an influential factor when making a decision regarding the brand portfolio expansion option.

H5 stated that a firm’s marketing experience will influence the selection of the brand portfolio expansion strategy. The hypothesis proposed competing effects given the extant research that showed support for each hypothesis. The ‘Marketing Experience’ variable is not significant (b = 5.086, p = 0.621), indicating that firms’ marketing experience did not impact the decision regarding the brand portfolio expansion option.

H6 theorized that a firm’s research and development productivity will guide selection of the brand portfolio expansion strategy. The hypothesis stated that companies with a higher research and development productivity will be more likely to develop a brand than to acquire one when they expand their brand portfolios. The ‘Research and Development Productivity’ variable is not significant (b = -111.367, p = 0.718), indicating that firms’ research and development productivity is not a significant factor when making a decision regarding brand portfolio expansion.

H7 hypothesized that a company will prefer brand acquisition as a brand portfolio expansion option if its human resource capacity is low. The model results show that the ‘Human Resource Capacity’ variable is not significant and positive (b = 0.639, p = 0.112), indicating that
the predicted relationships are not significant. This finding implies that companies are equally likely to create a brand or to acquire a brand if they have a lower human resource capacity.

Finally, H8 stated that a highly leveraged company will prefer brand acquisition as a brand portfolio expansion option. The ‘Financial Leverage’ variable is significant and negative (b = -6.993, p = 0.028), indicating that, while the predicted relationships are significant, their effect is in the opposite direction. This finding implies that highly leveraged companies are more likely to create a brand rather than acquire a brand.

**Portfolio Level Variables**

The final set of variables related to characteristics of the brand portfolio. H9 stated that companies with highly diversified brand portfolios will prefer a brand acquisition. Thus, the companies owning brands in many product categories will most likely expand their brand portfolios with brand acquisition. The ‘Brand Portfolio Diversification’ variable, however, is not significant (b = 0.043, p = 0.447), indicating that companies with more diversified brand portfolios do not have a higher tendency to acquire a brand than companies with a less diversified portfolio.

H10 stated that companies with a higher degree of diversification of an expanding category will prefer a brand acquisition. The ‘Product Category Diversification’ variable is not significant (b = -0.017, p = 0.881), indicating that a diversity of a target company’s category is not central when a decision regarding the brand portfolio expansion option is made.

**Magnitude of Significant Effects**

The final assessment of the hypotheses is to examine the relative magnitude of the effect for each variable found to be significantly related to the choice of brand acquisition. As noted earlier, the magnitude of the effect of a variable in a logistic regression model is best expressed
by the exponentiated coefficient. The coefficient, minus 1.0, represents the percentage increase in the odds ratio due to that variable. Thus, for example, an exponentiated coefficient of 2.35 represents an increase of 135% \(((2.35 - 1.0) \times 100)\) in the odds ratio in favor of a brand acquisition. Likewise, a value less than 1.0 indicates a decrease in the odds ratio. So the exponentiated coefficient represents a method of directly comparing the effects of separate variables on the probability of utilizing a brand acquisition.

The four variables found to be significantly related to the brand portfolio expansion choice can be ranked in the following order (from highest to lowest) by the magnitude of their effect: Competitive Intensity, Financial Leverage, Market Concentration, and Market Growth. Thus, apart from the direction of the relationship, it can be concluded that the most influential variable on choice of brand acquisitions is Competitive Intensity, followed by Financial Leverage and Market Concentration that are roughly equal in impact and then by Market Growth. Thus, the Competitive Intensity variable has the biggest influence on the odds ratio. The other three variables are almost equal to one another in their effects, but significantly less influence than the Competitive Intensity variable.

**Discussion of the Results**

The discussion section addresses three broad issues: an overview of the final model, potential explanations for a number of results counter to the hypothesized results, and finally some future research questions emerging from these results. In the discussion of the overall model, the model is reviewed and then the major contributions are noted, alongside several questions for future research. The discussion of hypotheses is grouped by levels and then ordered so the significant hypotheses are addressed first. For these variables that were significant, yet with a reversed relationship, potential remedies or alternative relationships are suggested. Then,
the non-significant hypotheses are addressed and options for investigating these variables in future research are suggested.

The Overall Model

This dissertation is the first study to empirically examine factors affecting the brand portfolio expansion strategy (via brand creation or brand acquisition) across a variety of industries. Prior academic research in this area is limited and mostly confined to conceptual frameworks (Doyle, 1990). The conceptual model of this dissertation was based on prior research on brand portfolio expansion, but developed a broader theoretical foundation by drawing on research in a different but conceptually related expansion decision in the strategic management and finance literature – make-or-buy decisions in the expansion to new foreign markets. Based on these related but distinct streams of literature this dissertation outlined an interdisciplinary model of brand portfolio expansion via brand creation or brand acquisition.

The conceptual model considers the impact on the decision to create or acquire a brand by variables at three levels: market-level factors, firm-level factors, and characteristics of a company’s existing brand portfolio in the target markets. The results of the empirical tests of the model suggest that the brand portfolio expansion decision is influenced by market- and company-level factors while characteristics of a company’s brand portfolio did not affect the choice of brand portfolio expansion strategy for the studied sample.

However, potentially even if these characteristics do not affect the expansion decision directly, the existing brand portfolio may affect how well/easily a chosen strategy is implemented (e.g., available synergies, knowledge, etc.). An interesting research question arises if indeed the characteristics of the existing brand portfolio do impact the implementation of the expansion strategy. Do companies with more implementation experience take that into
consideration (i.e. does it affect the expansion choice)? Implementation experience may act as a moderator in this case and testing it would be an interesting undertaking for future research.

**Market Level**

All three market level variables in the model – the target market concentration, competitive intensity (i.e. brand concentration), and market growth rate have a significant effect on the choice of brand portfolio expansion strategy. However, for two variables, market concentration and market growth, the direction of the effect is the opposite of what has been hypothesized in the conceptual model.

First, for Hypothesis 2, the competitive intensity of well-established brands in a category significantly affected the brand portfolio expansion strategy of the companies in the sample. The direction of the effect was as proposed. The companies in the sample had a higher propensity for expansion via brand acquisition when the competitive intensity was high in the target market. This variable also had the strongest influence on the choice between brand creation and brand acquisition.

Next, a significant effect was found for target market concentration on the choice of brand portfolio expansion strategy. But it was opposite in effect from the proposed relationship, which drew upon research on international market entry by Yip (1982) and Hennart and Park (1993). These studies found that a company would prefer brand acquisition as the expansion option when faced with more oligopolistic target markets. The companies included in this sample, however, preferred to enter highly concentrated target markets via brand creation.

The difference in the empirical settings of these studies and the research at hand may have contributed to the opposite direction of the relationships. Yip’s study focused mainly on the industrial products and not on consumer goods as the study at hand does. Karakaya and Stahl
(1989) found significant differences between importance of barriers to entry for industrial and consumer goods markets. Industrial brands often benefit from higher consumer switching costs (Parry and Bass, 1990), which may create further incentive for an acquisition in a highly concentrated industrial market. Thus, the market structure influence on type of entry decision in B2B and B2C markets may differ substantially, and not surprisingly support for the effect opposite to Yip’s prediction was found.

Further, the theoretical support for the hypothesis was also drawn from the work of Hennart and Park and their sample consisted of Japanese firms, while the sample in this study was exclusively U.S. companies. It is plausible to assume that cultural or other differences in the overall business environment could lead to results being in the opposite direction. All in all the results indicate the importance of target market concentration on the choice of brand portfolio expansion strategy; however the direction of this influence has to be studied further.

Apart from theoretical explanations for the observed tendency to enter target markets with a high market concentration via internal brand creation, an important context factor may play a critical role: even if brand acquisition was the preferable expansion choice, legal considerations may have prevented a company from taking that route. U.S. antitrust regulation seeks to limit the market power of any one company. Antitrust authorities consider the market power of a company too high if the Herfindahl index is above 0.18 (refer to the Horizontal Merger Guidelines issued by the U.S. Department of Justice and the Federal Trade Commission § 1.51). For example, last summer antitrust regulators did not allow Google to acquire Yahoo. An attempt of Staples Inc. to buy Office Depot Inc. in 1997 was also blocked successfully by the regulators. In 2005, although Procter & Gamble Co. was able to complete the acquisition of Gillette, to do so P&G had to sell Right Guard deodorant brand, SpinBrush battery-powered
toothbrushes and Gillette's Rembrandt line of teeth whiteners. A company that grows via acquisition attracts the scrutiny of the antitrust regulators, risking an unfavorable official ruling that could undermines the company’s effort to expand in the target market. Internal brand creation, however, does not immediately trigger a review by antitrust authorities.

Hypothesis 3 proposed that a company would choose to expand via brand acquisition rather than brand creation in faster growing markets to benefit from expansion velocity. The empirical test found significant support for an effect in the opposite direction. Practically, it may be very difficult to find a brand to acquire in a rapidly growing market and the costs of such an acquisition might be prohibitively high. On the contrary, if an acquirer sees potential in rejuvenating a brand in a stagnant market an acquisition might be more feasible. The conceptual model developed in this research did not consider the availability of brands for acquisition. The feasibility of a brand acquisition may also be affected by factors related to the implementation of such a strategy (e.g., hostile vs. friendly acquisition). However, such factors may also play a role in the decision, because they affect the attractiveness of expanding via brand acquisition. The nature of a potential acquisition, for example, would play a role because the transaction costs for a hostile acquisition are much higher (Schnitzer, 1996).

This dissertation highlights the relevance of market level factors for the choice of brand portfolio expansion strategy. Additional theoretical and empirical work is necessary to better understand the influence of market level factors as well as potential contingency factors. In addition to market level factors, this dissertation found support for the effect of two firm level factors on the choice of brand portfolio expansion strategy: the human resource capacity and the financial leverage of a firm.
Firm Level

Hypothesis 8 proposed that more highly leveraged firms are more likely to expand via brand acquisition. The empirical test of the relationship between financial leverage and brand expansion strategy provides support for the opposite effect of financial leverage. A higher degree of financial leverage increased the probability that a company engages in internal brand creation rather than external acquisition. The motivation of Hypothesis 8 suggested that highly leveraged firms would prefer external acquisition because they would find it more difficult and costly to obtain the necessary financial resources for internal brand creation. Contrary to expectations, a high level of financial leverage did not seem to undermine the ability to finance internal brand creation for the companies included in the sample. On the contrary in this research the opposite hypothesis was supported, and highly leveraged firms preferred brand creation.

Recent research provides support for similar findings. For example, although Morellec and Zhdanov (2008) did not directly test the same relations, in their analysis of 1,926 takeover transactions they found that “a bidder with the lower leverage is likely to win in a takeover contest” (p.573), and on average winning bidders are underleveraged prior to takeover by 6-7 percent. In the same vein, Clayton and Ravid (2002) found empirical support for the prediction that firms with higher leverage are likely to lose bidding contests. Thus, supporting the finding of this research and contrary to the logic of H8, the hypothesis that ‘the lower the financial leverage of the firm the higher the probability that it will prefer brand acquisition as a strategy for brand portfolio expansion’ should be tested in further research on brand portfolio expansion.

This study found no support for a relationship between firm specific knowledge and resources and the choice of brand portfolio expansion strategy: prior acquisition experience, HR capacity, existing marketing experience, and a company’s research and development productivity
had no significant relationship with the propensity to choose one expansion strategy over another.

Hypothesis 7 proposed that the level of a company’s human resource capacity is negatively related to the propensity to use brand acquisition as the brand portfolio expansion strategy. Although this hypothesis is not significant in the overall model, it is significant in the univariate and block models, and thus is discussed in more details than the other non-significant variables. The theoretical argument was that a company’s existing human resource capacity limits its potential rate of organic growth, because there is a “physical maximum to the number of things any individual or group of individuals can do” (Penrose, 1959). Thus, companies with a low human resource capacity are more likely to acquire a brand than to create one. The results of the empirical test of this hypothesis do not support this argument. This study finds no relationship between the level of human resource capacity and the propensity to choose brand acquisition as the expansion strategy.

Rather than refuting the basic theoretical argument focusing on the limits of organic growth, shortcomings in the theoretical development and operationalization of the hypothesis should be considered. The general human resource capacity of a company may only have a rather indirect effect on the choice of brand portfolio expansion strategy; especially because the size of an organization (as reflected in its human resource capacity) has important correlates that in themselves would affect the choice between internal creations versus acquisitions. Larger companies may, for example, have easier access to financial resources to finance an external acquisition. Rather than the overall human resource capacity of an organization, the endowment with specialist human resources that is most relevant for a brand portfolio expansion strategy may play a far more critical role for the choice of expansion strategy. The size of a company’s
marketing department, or even more specifically the range of individuals dedicated to brand portfolio management, would be a more appropriate focus of the investigation. This dissertation, however, focused on the overall human resource capacity of an organization. In part, this focus was chosen due to limitations arising from the availability of empirical data. Future research probing the role of human resource capacity further, may advance in two directions: it could further investigate the role of overall human resource capacity, taking into consideration the potentially confounding effect of the correlates of company size. A separate and potentially more interesting research focus may be the effect of the level of a company’s human resource capacity in a directly related area such as the marketing function on the choice of brand portfolio expansion strategy.

Contrary to Hypothesis 4, a company’s previous experience with brand acquisitions did not create the propensity to favor brand acquisitions in the future. This study did not take into consideration any contingency factors that may moderate the effect of prior acquisition experience. For example, research on organizational learning (Greve, 2002) has shown that companies repeat strategic choices that become associated with positive performance outcomes. Prior acquisition experience may only lead to subsequent expansion via acquisition if the initial experience with this expansion strategy is favorable. The design of this study does not provide the opportunity to probe for the influence of feedback effects on the propensity to repeatedly use brand acquisition as the preferred expansion strategy.

The lack of support for an effect of marketing experience or research and development productivity, as proposed by H5 and H6 respectively, is surprising. Potentially, marketing experience is imperative for undertaking either one of the two strategies. Thus, the level of marketing experience may affect the decision to engage in brand portfolio expansion, rather than
influence the choice between the two available options. The effect of research and development productivity on the propensity of the firm to create or acquire a brand is also found to be non-significant. In this case, the operationalization of the variable may be problematic. Using direct R&D expenses to represent research and development productivity was found to be unfeasible due to different accounting approaches for R&D expenses: R&D expenses can be capitalized or they can be expensed in the period in which they are incurred. In some situations a company may even use a combination of the two approaches. Each of these approaches would lead to a different result when testing for a relationship between R&D productivity and choice of brand portfolio expansion strategy. Given the latitude that U.S. firms have with regard to reporting R&D expenses, only 50 percent of the companies in the sample had a nonzero entry for R&D expenses on their income statement. Due to this challenge, an alternative measure of R&D productivity was developed and additional analyses performed. The number of patents registered by a company relative to its sales was used as a proxy for R&D productivity. The result was that R&D productivity had no significant effect on the choice of expansion strategy. The measure of R&D productivity used in this research, in spite of being an improvement over R&D expenditures, also had shortcomings. First, not all R&D activities result in patents, and thus the measure may be understating the actual R&D productivity of a company. Second, it takes time to register a patent and thus there may be a lag between the registration of a patent and the revenue it helped to earn. Thus, while theoretically a higher R&D productivity should influence a company’s propensity to create a brand, to be able to test this assertion a better measure of R&D productivity must be developed.
Portfolio Level

Although the portfolio level variables did not contribute to the explanatory power of the model, there is a strong theoretical reason to believe that these variables do indeed have an effect on the brand portfolio expansion method, and availability of brand level data from a different source may allow for a different operationalization of the portfolio level variables and hopefully identify a significant relationship. For example, Brand Portfolio Diversification was measured as the total number of product categories in the AdSpender database. Given the need to aggregate advertising expenditures across variants of the brand name and even promotional campaigns, the reliability of this value is somewhat suspect, although it was the most detailed measure available. If more reliable brand level data was available then a more appropriate measure might have been the number of brands constituting a specific percentage of the firm’s activity (e.g., 90 percent). In this way very small brands could be identified and not allowed to potentially inflate the firm’s value. Likewise, for the second brand portfolio variable, Brand Portfolio Depth, it would be beneficial to know the total number of brands in a category so as to allow representing the relative depth for the category among companies. To refine these measures in future research, researches may consider using proprietary databases that offer more detailed brand level information (e.g. Wiles, Morgan and Rego, 2009). The budget limitations of this research did not allow access to these proprietary datasets.
CHAPTER 6: CONCLUSIONS

This dissertation was undertaken with the objective of developing and testing a conceptual model that explicates the choice between brand creation and brand acquisition as alternatives for brand portfolio expansion. Given the lack of extant research on the topic, it was deemed a natural complement to the more widespread study of brand extensions. The following sections detail the expected contributions from this research, discuss some limitations encountered in the research process, and then conclude with some directions for further research.

Contributions to the Literature

Three levels of factors (market, firm and brand portfolio) were identified as potentially influential for the choice between the two brand portfolio expansion strategies of brand acquisition and brand creation. In exploring this question, several contributions have been made. The first involves the review and identification of multiple options for data sources used to measure both brand acquisitions and creations. No prior research has enumerated the options available and addressed their advantages and shortcomings. While not used in this research, other researchers may find approaches to utilize these data sources and extend the scope of available information. Given the experience faced by this researcher, a major hurdle is a systematic process for identifying these two brand expansion activities since there is no formalized or systematic means of reporting under current information disclosure regulations. This does not mean, however, that these activities cannot be identified given continued efforts by researchers.

Second, the results of the empirical test provide support for the influence of factors at two of the broad levels in the conceptual model -- the market and firm levels. Overall, four of the eight hypothesized variables at these two levels had a significant effect on the choice of brand
portfolio expansion option. Specifically, Market Concentration, Competitive Intensity, target Market Growth, and company’s Financial Leverage seem to influence the choice of brand portfolio expansion strategy. The statistical tests revealed that Competitive Intensity of the target market has by far the strongest effect on the choice of brand portfolio expansion strategy. The other three significant variables had effects that were relatively equal in magnitude; however, these effects were in the opposite directions to ones proposed by the theory.

Limitations

One limitation of the study was the lack of theoretical support for the impact of contextual variables on the model. In this research, these contextual variables relate to the “practical” issues faced by firms in the marketplace, such as current financial practices or regulatory practices. In reviewing the results, especially those that were significant but counter to the hypothesized direction, these contextual issues could have substantial effects that were not accounted for in the conceptual model or the nature of the data. First, the research on make-or-buy decision was used as a theoretical foundation for the hypotheses of this dissertation. Research on make-or-buy decision has been applied predominantly to analyze the choice of mode in international market entry. Thus, the theoretical underpinnings were tested in quite different settings (e.g. foreign country). The firms in this research experienced a quite different market context, since they were uniquely U.S. firms entering new and sometimes quite familiar market segments. While the make or buy decision is an appropriate conceptual base, accommodations or modifications for these types of market factors may be required. A second type of practical consideration (e.g. antitrust regulations) may also explain the contrary findings. Again, research has not examined how the make or buy decision is impacted by these specific factors, although research in other associated areas has found it may create contrary findings.
Data availability was found to be challenging, especially in gaining access to brand level information. Given these constraints, the best available information was used in constructing the measures. However, a fairly recent development may benefit future research. New financial regulation requiring reporting of brand level information on companies’ financial statements was introduced in 2001. Currently, this regulation is not fully enforced. However, as public scrutiny increases and enforcement is increased companies can be expected to become more diligent in reporting brand level results. This change will allow researchers to have better and more reliable access to brand level information of publicly traded U.S. companies. This will enable the construction of better measures for operationalizing brand level variables (e.g. brand sales).

Future Research

The findings demonstrate that the model is not specific to the industry or size of a company brand portfolio, the effect of these variables was not significant.

As more research efforts like this address the problem, researchers may extend or refine these sources to provide more accurate and reliable data given the range of available sources. Moreover, researchers may find the usefulness in establishing a repository with information on these activities with access to researchers interested in this issue.

One possible alternative is to explore how these issues could be overcome, if at all, through the use of primary data sources, where these contextual issues could be quantified in terms of their perceived impact. If these contextual factors could be operationalized, then their moderating effect could be empirically examined.

Future research may also take advantage of alternative measures for the market level variables. In this research, media expenditure data was used to measure ‘voice of the firm’ in the market. An alternative measures for the market level variables can be based on brand sales,
rather than on media expenditures. Verifying the results of this study using brand sales data as it becomes available would be an important venue for future research. Second, using information offered by proprietary data sources or/and conducting qualitative research with brand managers and marketing executives will provide a better understanding of the decision regarding brand portfolio expansion choices.
REFERENCES


________________________(2004), Brand portfolio strategy: creating relevance, differentiation, energy, leverage, and clarity, New York : Free Press.


## APPENDIX: CORRELATION TABLE

Table 16 Correlations Among Independent Variables

<table>
<thead>
<tr>
<th></th>
<th>H1- Market Concentration</th>
<th>H2- Compet Intensity</th>
<th>H3- Market Growth</th>
<th>H4- Acquisition Experience</th>
<th>H5- Marketing Experience</th>
<th>H6- R&amp;D Productiv.</th>
<th>H7- HR Capacity</th>
<th>H8- Financial Leverage</th>
<th>H9- Br.Portf Diversif</th>
<th>H10- Pr.Cat Depth</th>
<th>Control Industry</th>
<th>Control #Brands Total</th>
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<td></td>
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</tr>
<tr>
<td>H2- Competitive Intensity</td>
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</tr>
<tr>
<td>H3- Market Growth</td>
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<td>.175</td>
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<td>H4- Acquisition Experience</td>
<td>-.094</td>
<td>-.124</td>
<td>-.277**</td>
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<td>H5- Marketing Experience</td>
<td>.395**</td>
<td>.396**</td>
<td>.254**</td>
<td>-.228*</td>
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<tr>
<td>H6- R&amp;D Productivity</td>
<td>.048</td>
<td>.088</td>
<td>-.045</td>
<td>-.085</td>
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<tr>
<td>H7- HR Capacity</td>
<td>-.276**</td>
<td>-.178*</td>
<td>-.134</td>
<td>-.002</td>
<td>-.332**</td>
<td>-.337**</td>
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<td>H8- Financial Leverage</td>
<td>.171</td>
<td>.169</td>
<td>-.253**</td>
<td>.338**</td>
<td>-.067</td>
<td>-.233**</td>
<td>.075</td>
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<td>H9- Br.PortfolioDiversification</td>
<td>-.006</td>
<td>.021</td>
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<td>-.239**</td>
<td>.125</td>
<td>-.137</td>
<td>-.212*</td>
<td>-.316**</td>
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<td>H10- Prod. Category Depth</td>
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<td>-.384**</td>
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<td>-.128</td>
<td>-.097</td>
<td>-.093</td>
<td>-.084</td>
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<td>Control1-Industry</td>
<td>.570**</td>
<td>.300**</td>
<td>-.073</td>
<td>.106</td>
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<td>-.140</td>
<td>-.162</td>
<td>.304**</td>
<td>-.305**</td>
<td>.027</td>
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<td>Control2-Total# of Brands</td>
<td>.214*</td>
<td>.115</td>
<td>.274**</td>
<td>-.233**</td>
<td>.182*</td>
<td>-.230**</td>
<td>-.279**</td>
<td>-.229*</td>
<td>.849**</td>
<td>.001</td>
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</table>

**Note:** The table shows the correlation coefficients between different variables. The significance levels are indicated by the symbols * (p < 0.05) and ** (p < 0.01).
VITA

Yana Kuzmina is a doctoral candidate in the Department of Marketing, E.J. Ourso College of Business, Louisiana State University (LSU). She received a Bachelor of Science degree at Moscow State Technical University in Moscow, Russia, in 2001 and a Master of Business Administration (MBA) at Southeast Missouri State University in 2004. Ms. Kuzmina has presented her research at national and international academic conferences. Her research interests include marketing strategy, brand management and corporate social responsibility.