This is to certify that the
dissertation entitled

Retail Format Diversification Strategies in Foreign Markets

presented by

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has been accepted towards fulfillment
of the requirements for the

Ph.D. degree in The Department of Advertising, Public Relations, and Retailing

Major Professor's Signature

July 16, 2007

Date

RETAIL FORMAT DIVERSIFICATION STRATEGIES IN FOREIGN MARKETS

By

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A DISSERTATION

Submitted to
Michigan State University
In partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

The Department of Advertising, Public Relations, and Retailing

2007

ABSTRACT

RETAIL FORMAT DIVERSIFICATION STRATEGIES IN FOREIGN MARKETS

By

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Forced to seek out sustainable growth opportunities, retailers are expanding internationally. Extant diversification, resource-based view (RBV), and international entry mode literatures provide us with a theoretical framework to examine retailer foreign market diversification decisions. Our goal is to explain how the influences of compositional and contextual factors impact the diversification strategy and performance relationship.

Taking an intra-industry approach, this dissertation fills several gaps in the literature. First, we look at key diversification decisions (i.e., entry mode and diversification direction) on performance (i.e., market share) of retailer foreign market portfolios. The research finds that greater levels of diversification translate into higher market shares. While both between- and within-segment diversification is associated with positive performance, related diversification generally outperforms unrelated diversification. Contrary to the literature, we did not find a curvilinear relationship between retail format diversification and performance.

Second, we explore the relative efficacy of three entry mode strategies (i.e., joint ventures, wholly-owned subsidiaries, and acquisitions) at the format level. We hypothesize that wholly-owned subsidiaries should perform better than the other entry modes. In our initial analysis, our findings support the literature,

while, in our second analysis, acquisitions outperform the other modes. Mean market share performance for joint ventures falls between wholly-owned subsidiaries and acquisitions.

Third, we look at the performance of six combined diversification strategies. Contrary to the literature (Busija, ONeill, & Zeithaml, 1997; Rumelt, 1982), we find that, on average, related acquisition strategies outperform all other strategy combinations. We develop an argument to explain our results in the context of service marketing.

This dissertation employs a hierarchical linear modeling (HLM) approach to hypothesis testing. This approach aids us in making more nuanced inferences about our relationships, while avoiding common analytical pitfalls, such as aggregation bias and ignoring the influence of higher level factors on key study effects. We show how well the degree and constancy of foreign retail market environments and corporate membership explain variation in foreign business unit (FBU) performance. By pooling information across FBUs and controlling for higher level covariates, we also develop more reliable parameter estimates.

Finally, we discuss the limitations, future research and managerial implications. Our results suggest that some aspects of marketing and economic theories may have limitations in a service marketing context. We also try to provide some key insights from our research for industry managers.

**I would like to dedicate this to my grandmother,
Rita – my friend and travel companion.**

ACKNOWLEDGEMENTS

The doctoral program and this dissertation process has been a long and winding road detouring into a few cul-de-sacs along the way. Honestly, I doubt that I could have made it through this program without the help and guidance of Dr. Brenda Sternquist. She demonstrated how to write an academic manuscript, encouraged me to submit papers to conferences and journals, and gave me advice on how to become a better teacher. My dissertation committee members have also shown a great deal of patience, humor, and support through this process. I would like to thank them – Dr. Linda Good, Dr. Kyoung-Nan Kwon, Dr. S. Tamer Cavusgil, Dr. G. Tomas Hult, and Dr. Yeow Meng Thum.

Encouragement also came in droves from my friends and family. Along the way, I have sent papers to them for comments, ate their food and slept on their couches, and leaned on them for emotional support. They helped me survive the transition from private sector to academia, occasionally reminding me of why I embarked on this journey when it all seemed impossible. Though their lives and priorities keep changing, their support has been unwavering. For that (and many more reasons), I love them.

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CHAPTER I

INTRODUCTION

Multinational corporations (MNCs) are becoming increasingly important players in global markets. The world's 500 largest MNCs drive the globalization process and represent 90% of foreign direct investment (FDI) and control 50% of global trade (Rugman, 2000; 2004). In terms of global retailing, the top 250 companies control almost one-third of the $9 trillion dollar global retail market (Deloitte Touche Tohmatsu, 2006). The complexities in international business operations poses unique challenges and opportunities for MNCs in exploiting existing strengths, while also exploring foreign environments for sources of new capabilities (Ghoshal, 1987; Kogut, 1983; March, 1991). MNCs are particularly motivated to enter foreign markets where they possess specific advantages relative to host country competitors (Dunning, 1980; Hennart, 1982; Teece, 1983). Being exposed to different consumer markets and competitive challenges, MNCs often learn new ways of achieving business objectives and innovating product and service offerings. Achieving a balance between exploitation and exploration of firm capabilities has been linked with success (Penrose, 1959).

The MNC has been conceived as an outcome of internalization processes (Buckley & Casson, 1976; Dunning, 1980; Rugman, 1981) and strategic motivations (Hamel & Prahalad, 1985; Kim & Hwang, 1992; Kogut, 1985) as well as a dynamic organizational knowledge economy (Madhok & Liu, 2006). Recent

extensions to the literature make great strides in identifying unique aspects of the MNC, a special case of the firm, and developing theory around the MNCs' remarkable position of acquiring and utilizing knowledge from diverse international sources (Dunning, 1988). For example, Madhok and Liu (2006) theorize about the roles that subsidiaries, interacting with both the local environment and amongst vertical and other MNC business units, are influenced by and concerned with fundamentally different issues than their parent companies. By drilling down into the various levels and influences of the MNC, scholars have begun to identify structures, strategies, capabilities, and processes *at each level* that contribute to the unique aspects of operating internationally and how these advantages may lead to or hinder performance (e.g., Bartlett & Ghoshal, 1989; Li, 1995; Ricart, Enright, Ghemawat, Hart, & Khanna, 2004).

We adapt a definition of the MNC from Madhok and Liu (2006): "the MNC is both a single organization and a population of organizations, connected somehow to a common legal entity, operating at different levels, but bound by a common managerial vision" (p. 3). There are several important points in this definition. First, organizations exist at multiple levels, each level with distinctive strategies, objectives and performance implications that do not always have exact parallels on other levels (Ginsberg & Venkatraman, 1985). At the highest level, an MNC is considered a knowledge economy in which strategy is formulated to exploit existing knowledge, explore its various operating environments and engage with partners and customers to find new sources of information and knowledge (Amit & Schoemaker, 1993). Because knowledge is

considered the most important intangible asset of a firm (Day, 1994), we are interested in understanding the conditions that would support or limit the development and transfer of knowledge between various parts of the MNC.

Second, at the business level, business units struggle with the question of how to compete in a specific context given existing competitive and industrial conditions (Bourgeois, 1980; Porter, 1987). Certain industries may have specific strategic constructs, sources of synergy, and measures that are not necessarily comparable to other industries (Snow & Hambrick, 1980). Some FBUs can even become important sources of knowledge and other competencies from which other parts of the MNC can learn (Holm & Sharma, 2006). As the scope of corporate activities widens, MNC business units operate in a greater number of heterogeneous competitive environments. In other words, the corporate managers increasingly strategize about operations across diverse environments, whereas business managers are more concerned with local competitive pressures. Consequently, it becomes important to be clear about the distinctions between corporate and business level strategies (Ginsberg & Venkatraman, 1985). For example, a business unit is making strategic decisions to survive and compete within the given industry, whereas the corporation is developing strategies about the overall direction of all the businesses within its portfolio of businesses. Examples of MNC forces could include home office attributes, such as, structure, age, and industry experience as well as internationalization strategies. These factors would affect the amount and flow of knowledge within the MNC economy.

Third, because knowledge and other organizational capabilities can also be developed with an industry or country, the context matters tremendously (Misangyi, Elms, Greckhamer, & Lepine, 2006; Porter, 1990; Rumelt, 1991). Within the international business literature, Toyne & Nigh (1997) note the importance of identifying the appropriate level of analysis and theorize about the boundary conditions they impose on lower hierarchical levels. Yammarino & Dausereau (2004) also urge researchers to consider the most appropriate units and levels of analysis critical to the study of a phenomenon. In our study, we argue that a firm's foreign business units (FBUs) are nested simultaneously within their parent corporation as well as within the foreign retail industries in which they operate. Therefore, industry and corporate factors necessarily have an impact on FBU decision making and performance.

We focus on the strategic resource choices FBU managers make in expanding within a foreign market. This represents a divergence from much of the literature in how we examine diversification. Instead of studying products or foreign market choices, we report on format portfolio development decisions. Because the choice of format is a critical element of retail expansion strategy, we delve into the performance implications of foreign diversification alternatives. Our assumption is that FBU managers make decisions about which resources and activities to pursue to foster development and reinvention of strategic competitive advantages within the local market. In a RBV framework, resources can be conceptualized in terms of services that are either directly or indirectly (i.e., goods) rendered for consumers (Vargo & Lusch, 2004a, 2004b).

With respect to knowledge usage and development, firms have a choice of exploiting existing knowledge or leveraging knowledge of partners or allies. The fundamental question is how to use existing resources and when to purchase others to gain economic rents and avoid losses. Effective and efficient utilization of resources is concerned with the scope, relatedness, and management of ongoing and new activities. Because diversification strategy is critical to issues of resource deployment and management, it represents an important area of study in explaining the differences in MNC business unit performance.

In addition to diversification choices, a key element of international strategy is governance mode (e.g., Buckley & Casson, 1976; Cavusgil, 1980; Dunning, 1980; Johansson & Vahlne, 1977). In the internationalization literature, foreign entry modes can be considered as existing on a continuum from low control to high control (Doherty, 1999). Representative low control modes for service firms include franchising and in-store concessions, while a high control mode is foreign direct investment in the host country (Dunning, 1988). Hybrid modes are types of strategic alliances and joint ventures. The appropriate choice of entry mode is a critical ingredient in foreign market entry strategy[1] (Root, 1994). The consequences of a wrong or sub-optimal choice range from increased transaction costs to business failure.

Mode of diversification refers to the governance mechanism chosen to enter into the new line of activity. Traditional Transaction Cost Analysis (TCA)

[1] Interestingly, Calantone and Zhao (2000) find that while Korean and American managers positively link their firms' performance to issues of control, Japanese managers do not. This opens up the possibility of cross-cultural differences in usage of formal control mechanisms.

predicts that the governance mechanism chosen to enter into a foreign market is determined by the level of asset specificity, environmental uncertainty (i.e., cost of transacting international business) and behavioral uncertainty (i.e., free-riding potential and/or performance ambiguity). In general, when firms have large investments in proprietary assets and uncertainties are high, firms would want to retain greater control over their foreign operations (e.g., Anderson & Gatignon, 1986). As the investments in non-redeployable assets and uncertainties go down, markets become a more efficient means of exchange than firms.

A specific limitation of the diversification literature is the assumption that the firm has to own knowledge to benefit from it. Unlike other areas of management and marketing which explore the value of a partner's knowledge (e.g., Bartlett & Ghoshal, 1989; Granovetter, 1985), the diversification literature assumes that synergies are either created and utilized within the corporation or acquired and brought into the organization. By only considering one end of a governance continuum, extant diversification literature has only uncovered a fraction of the potential strategic combinations. Also, while corporate governance and product diversification choices do not appear to be directly related (Busija et al., 1997), it is unclear whether business unit diversification and governance choices are directly or indirectly related.

External forces influencing firm operations in foreign markets include society, industry and competitors (Cavusgil, Ghauri, & Agarwal, 2002; Lenway & Murtha, 1994; Porter, 1990). Instead of studying external factors that may influence market selection, this study introduces a theoretical contribution by

conceptualizing the multiple moderating roles of institutional forces that affect implementation of business level strategies. We develop an argument that corporate managers must force business units to become more similar (interchangeable) for ease of cross-market coordination and control. In accordance with previous research, when the firm pursues a related diversification strategy and organic growth, the ease in knowledge transfer between business units should enable the realization of actual synergies required for superior performance (Rumelt, 1974). This implies that firms strategize and organize their business units to exploit firm advantages. Concurrently, the host country legal-regulatory environment, industry associations, stock markets, and others also reward firms for being superficially more similar to their competitors (i.e., adhering to industry norms). For example, one explanation for Home Depot's failure in the Chilean market was that the company and its managers did not operate in accordance with Chilean business or social expectations (Bianchi & Arnold, 2004). Thus, corporate and environmental forces have the potential to moderate the relationship between business unit strategy and performance. In summary, business scholars are urged to use a broader lens in identifying the salient factors impacting the relationship of interest (Toyne & Nigh, 1997).

This also suggests that straightforward explanations of diversification and governance strategies may need to be reconsidered. Because competition is a local phenomenon, a firm's ability to adapt to and thrive in local environments may depend upon different strategy combinations. The moderating forces from both the MNC and the local environment are anticipated to affect an FBU's ability

to implement its growth strategy. When implementation is more difficult and/or costly than anticipated, the FBU may be unable to realize actual synergies from resource sharing. The reverse is also possible. Certain strategy-performance relationships can be enhanced by membership within a corporation and/or retail industry. Thus, institutional forces may either suppress or magnify the potential benefits arising from synergies and affect performance.

Our conceptual framework is tested on a sample of the world's largest international retailers. Spurred on by global opportunities, reductions in international information and communication costs, saturation in home markets, and shareholder pressures for growth, many of the world's largest retailers are proactively seeking growth opportunities in foreign markets. For instance, excluding Sam's Clubs, in comparing 2005 to 2006, Wal-Mart's international sales grew by 11.4% and its store network grew by 43%, whereas domestic Wal-Mart sales grew by 9.4% and its store network grew by less than 5% (Wal-Mart, 2006). In addition, the scale of international investments is unparalleled in the history of retailing (Coe, 2004). Despite the enthusiasm for international growth, anecdotal evidence also suggests that retailer performance in international markets is, at best, uneven (Alexander & Quinn, 2002; Burt, Dawson, & Sparks, 2003). Discouraging evidence ranges from Ahold's exit from Latin America (Wrigley & Currah, 2003) and Wal-Mart's recent announcements of its exits from both South Korea and Germany to Boots' stumbles in Japan. There have also been successes, such as Carrefour's storming of the Chinese market and Aldi's

expansion in Europe. We are interested in discovering to what extent retailer diversification strategies can explain performance.

Unfortunately, scant research exists that examines the forces that influence the relationship between diversification strategies and performance of service firms (Nayyar, 1992, 1993b). Attempts to retrofit explanations from the manufacturing sector into the service sector have proven inadequate, given important strategic and structural differences between the sectors (Cortsjens & Cortsjens, 1995; Zeithaml, Parasuraman, & Berry, 1985).

Marketing fast moving consumer goods as opposed to pure services, retailer concerns and opportunities can also been distinguished from other areas of service marketing (Ekeledo & Sivakumar, 1998). Our objective is to gain some insights into how retailer diversification strategies link to their performance in foreign markets; marketing scholars from all disciplines agree about the importance of exploring these relationships (Dunning, 1995).

PROBLEM STATEMENT AND SIGNIFICANCE OF THE STUDY

Due to mixed results in the research and business worlds, retailer internationalization strategy has been identified as an area requiring further study (e.g., Doherty, 1999; Pelligrini, 1994; Sternquist, 1997a). This study investigates a critical sub-component of retailer business unit strategy – diversification choice. The objectives of this study are to propose a conceptual framework to explain the relationship between *ex post* business level diversification and governance decisions and performance. Using a multi-level model, institutional forces (i.e.,

corporate and country) will be proposed and tested for relative strength and importance on FBU strategy-performance outcomes. Diversification theory (i.e., resource based view) and Transaction Cost Analysis provide the theoretical foundations for our examination of this topic.

We theorize about the way in which FBUs expand *within host country markets*. This perspective differs from traditional international diversification strategy, which refers to corporate expansion *across national borders* into different consumer markets (Hitt, Hoskisson, & Kim, 1997). While international diversification literature is an important part of the strategic management literature, by focusing on the firm's scope of diversification, it generally treats all businesses alike and ignores distinctive country strategies and performance. As a consequence, the international diversification literature can erroneously attribute corporate success to aggregated FBU performance when the results may be due to a handful of extremely successful FBUs.

The research questions pertain to the following areas: a) understanding the direct linkages between *ex post* diversification and governance choices and foreign market performance; b) considering how combinations of diversification-governance choices may influence foreign market performance; and, c) identifying contextual influences that affect the relationship between strategy decisions and foreign market performance. By exploring the strategy-performance link within foreign market operations, we hope to uncover successful strategies across nations and corporations. Moreover, we separate levels of analysis (i.e., FBU vs. corporation/country) for the purposes of

advancing retailing theory and accounting for and attributing sources of variance between levels. Our purpose is to advance business unit strategy in order to provide retailers with useful information to consider in making internationalization decisions.

The rest of the dissertation is organized as follows. In Chapter II, we offer a comprehensive literature review of the extant literature, synthesize our findings, and develop our hypotheses. In Chapter III, we discuss our methodology, providing a summary of our data, analytical techniques and models. Chapter IV contains our results with a discussion of our findings. Chapter V concludes with an interpretation and implications of our findings and a discussion of the study's limitations, future research and conclusions.

CHAPTER II

LITERATURE REVIEW

In this chapter, we provide a synthesis of the literature, develop our hypotheses and present the conceptual framework. Our objective is to explore performance consequences of international retail expansion strategies.

Expansion is a primary business objective for retailers. Firms pursue new market opportunities wherever available at home and/or abroad. In pursuing market opportunities, corporations seek to leverage proprietary and other resources and capabilities in order to create synergies between existing and new resources (Dunning, 1980; Rumelt, 1974). These synergies are often expressed in the form of economies of scope, scale and learning (Kogut, 1985). By sharing core competencies across business units, firms can outperform their competitors and identify new business opportunities (Burgelman & Doz, 2001; Hamel & Prahalad, 1990).

International expansion can be costly. Business risks associated with operating in a foreign environment (e.g., country risk) tend to be higher than domestic expansion. Currency exchange rate fluctuations or risks of appropriation of property represent some of the risks. Environmental uncertainties due to lack of business experience or cultural differences can increase operational costs (Johanson & Vahlne, 1977; Kogut & Singh, 1988). In contrast, by spreading the activities across different geographic regions, firms can reduce their business risk (Kim, Hwang, & Burgers, 1993).

In the proceeding section, we discuss salient elements of diversification strategy. Synthesizing and building upon extant literature, we develop our hypotheses. Our objective is to examine *ex post* foreign market diversification decisions, while accounting for the differences between corporations and host country environments that may affect strategic implementation.

DIVERSIFICATION STRATEGY

Farjoun (2002) refers to strategy as a posture, noting two main types of postures -- "*position* (e.g., differentiation strategy) and *scope* (e.g., vertical integration)" (p.563). We follow Ramanujam and Varadarajan's (1989) argument that these two types of postures are actually two key elements of corporate diversification strategy. After the expansion decision has been made, position and scope jointly determine how the strategy will be implemented in the host country.

Diversification refers to "the entry of a firm or business unit into new lines of activity entailing changes in its administrative structure, system, and other management processes" (Ramanujam & Varadarajan, 1989, p. 525). Within the diversification literature, several explanations have been put forth that examine how, why, and where firms diversify (See Datta, Rajagopalan, & Rasheed, 1991; Hoskisson & Hitt, 1990; Ramanujam & Varadarajan, 1989 for excellent reviews). Theoretical foundations applied to these questions include industrial organization paradigms (e.g., Schmalensee, 1985), agency theory (e.g., Jensen & Meckling, 1976; Trautwein, 1990), resource-based view (e.g., Rumelt, 1974), resource dependence theory (e.g., Pfeffer & Salancik, 1978), dominant logic (e.g., Bettis &

Prahalad, 1995) and finance theory (e.g., Lubatkin & O'Neill, 1987). Common propositions of these studies are that when a firm pursues a related diversification strategy, superior performance results from internal ownership. Conversely, when a firm pursues an unrelated diversification strategy, superior performance results from acquisitions. The underlying premise for these propositions is that if causal ambiguity is low enough and absorptive capacity is high enough, the costs of transferring information within the firm will be lower than potential cost advantages of buying the knowledge (Madhok & Liu, 2006; Sharma, 1998).

For long-term survival and performance, corporations need to create a balance between exploration and exploitation activities to continuously bolster and renew their capabilities (Ansoff, 1969; Madhok, 1997). An implicit assumption in this literature is that continuous learning enables firms to develop knowledge capabilities required to provide products and services desired by customers. Strategy literature centers on exploitation of existing resources as the primary reason to diversify (i.e., related diversification), while finance literature focuses on whether building diverse corporate portfolios can reduce overall business risk (i.e., unrelated diversification). However, one could also argue that unrelated diversification can be treated as an exploration activity since the firm is experimenting in a new line of business or customer group. For example, by virtue of crossing national borders, firms expose themselves to new sources of information and customer groups. Furthermore, within the same firm, a combination of different diversification strategies may achieve a balancing

objective in order to maintain and renew sources of competitive advantage over time. Our purpose is to explicate the manner in which the dual exploration-exploitation goals are achieved by allowing for different combinations of strategies.

Direction of diversification

The *direction in diversification* refers to a modification of the business to meet the needs of targeted customer group(s) (Abell, 1980). Much of the diversification literature measures diversification by the product-market proliferation choices. But firms often have difficulty satisfying customer groups with divergent product needs. For example, Carroll and Swaminathan (1992) observe the challenges of beer producers trying to switch from mass production and distribution of light beer to volume premium beer. Because brewers had previously invested their resources in a significantly different market (e.g., light beer), they did not have the capabilities necessary to win in the premium beer business. Aside from manufacturing issues, marketing issues varied significantly different between the two businesses. This result is similar to Dupont's situation in the early 20th century where differences between two markets reduced some of the manufacturing economy of scale benefits (Chandler, 1990).

Some retailers have shown a tendency to stick with what they know. Wrigley (2000) describes Sainsbury's US diversification strategy that tended to "rely on exporting core capabilities, such as merchandising, logistics, systems and store development competencies, of the UK home office to its US businesses" (p. 904). Although businesses appear to be fairly similar, strategic

capabilities are only transferable to other businesses that have the similar core operating principles and customer group characteristics.

Typically dealing with thousands of SKUs, retailer diversification strategy is not necessarily comprehensible at the product level[2]. But, at the format level where customer service level expectations are widely defined by format type, firms tend to adhere to these expectations. Subsequently, each format offers a distinctive retail mix (Colla, 2004). Within mass market retailing, firms that are geared toward one end of a value/price continuum, which emphasizes high volume, limited assortment and low price, should have substantial difficulties shifting their business operations toward the companies on the mid to high end of the value/price continuum, which emphasizes lower volumes, wider assortment and variety and higher prices (Levy & Weitz, 2007). Each format offers distinctive functionality for differentiated customer groups and requires specialized resources in order to compete effectively with other formats (i.e., inter-type competition). This makes the choice of how to diversify particularly important for retailers.

Related diversification is a means by which firms modify and expand their business to offer new functionality to existing customers or to capture new customers. Firms tend to move into related areas of a business segment with the intention of leveraging their unique resources in new markets by developing economies of scale, scope and knowledge (Chandler, 1990; Teece, 1980). While

[2] This conceptualization contrasts with Ansoff's (1988) depiction of firm strategy in which he urges business managers not to over-emphasize customer needs relative to existing product needs. He illustrates the dangers of too much customer focus by speculating that individual customer needs could probably not be met for food and TVs in the same retail store because these two products have such different customer markets (p.77).

resources are defined as all assets, specific processes and knowledge are required by firm managers to design and implement efficient and effective strategies (Daft, 1982)

Cross-exploitation of excess resources supplies one rationale for diversification direction decisions. Because firms are concerned with the most efficient use of excess capacity (Chandler, 1990; Montgomery & Wernerfelt, 1988), diversification strategies create opportunities to fully utilize slack resources in existing and new markets. For example, an excess capacity of human expertise provides an important motive for diversification (Farjoun, 1994). Benefits accrue when resources are shared across business units. Ansoff (1969) argues that synergy can be manifested through joint usage of common skills and facilities as well as through new applications/activities created with complementary skills. By strategizing about connections between related resources, other applications or synergies[3] may be uncovered and the costs of utilizing these joint resources may be reduced (Li & Greenwood, 2004). At the same time, firms not following a diversification strategy should not be able to access the resource at a similar or lower cost than the diversified company (Markides & Williamson, 1996; Porter, 1987). This efficiency argument is geared towards achieving the maximum productivity from the corporation's assets relative to the market.

Drawing from resource-based view, the synergy creation hypothesis complements the cross-exploitation explanation. Synergies are created when

[3] Critics argue that by treating potential synergies as actual synergies, causal attributions become difficult to support in part due to a tautology created by examining constructs that are defined in terms of related outcomes (Nayyar 1992; Tanriverdi and Venkatraman 2005).

resources are combined to produce an effect greater than either resource alone could create. Sometimes referred to as core competencies (Hamel & Prahalad, 1990) or dynamic capabilities (e.g., Eisenhardt & Martin, 2000), these higher-order resources produce synergies by inducing interdependencies between critical resources, particularly knowledge. Knowledge can be embedded in products/process technologies, individuals, or organizations (Robins & Wiersema, 1995).

We focus on organizational knowledge. Through usage in problem-solving and socialization processes, individuals utilize their skills to create an organized body of knowledge that is unique to the firm (Nelson & Winter, 1982). For example, firms are able to codify their operational know-how and host country market information into routines, decision support systems, and other processes (Morgan, Zou, Vorhies, & Katsikeas, 2003). However, the more tacit and complex the knowledge, the more difficult it is to codify into organizational routines and transfer within the corporation (Szulanski, 1996). Organizational routines are integrated within the firm to create unique firm capabilities which when utilized lead to valuable outcomes (Makadok, 2001). In part, stores of organizational knowledge are utilized in the formulation of organizational strategy (Crossan & Berdrow, 2003; Mintzberg, Ahlstrand, & Lampel, 1998). Therefore, the unique capabilities being utilized in diversified companies should create both revenue-generating and cost-reducing opportunities, translating into higher profits.

Economies of scope and potential synergies are the primary benefits arising from diversification choices (Penrose, 1959; Teece, 1982). In retailing, economies of scale come through handling large volumes of products at lower unit costs, while economies of scope arise by distributing large numbers of similar national brand and/or store brand product lines through common warehousing and/or distribution facilities (Chandler, 1990). Economies of scope are also accumulated to the extent that firm's can coordinate the access and flow of knowledge across and within business units. While economies of scope are sometimes observable, the resources that create these economies are not necessarily tangible. For instance, more visible aspects of retail management expertise can be transferred abroad in a wide range of manifestations, including store formats, in-store design, supply chain management systems and customer service innovations. But Coe (2004) argues that more opaque knowledge capabilities of retailers tend to be embedded in back office operations. Because knowledge is an unobservable asset, competitors have difficulty imitating and/or duplicating assets (Barney, 1991; Wernerfelt, 1995). Causal ambiguity also restricts competitors' ability to understand a sequence of events or actions required to yield similar results (Dierickx & Cool, 1989; Grant, 1996). Since strategic resources are rare, inimitable, valuable, and non-substitutable, and can be used to create competitive business strategies (Peteraf, 1993; Wernerfelt, 1984), knowledge represents a long-term potential advantage and source of abnormal returns and profit (Barney, 1991).

As compared to related divisions in different countries, related businesses within the same country can more easily combine marketing activities (i.e., logistics, advertising, distribution, etc.), allowing units within the same country to develop economies of scale and scope (Chandler, 1990; Davis, Robinson, Pearce II, & Park, 1992). For example, building up overlapping networks of retail outlets creates the opportunities to reduce in-bound and out-bound (i.e., reverse logistics) transportation costs and extract media discounts. Doherty (1999) argues that retailers possess important intangible capabilities in the form of formats and managerial technology. In addition, synergies can also be transported across national borders. For instance, expatriate staff can import their expertise to the host country operations (Farjoun, 1994). Firms primarily pursuing related diversification are able to realize horizontal synergies across their businesses that lead to reduced costs, increased margins, and higher profitability (Porter, 1985).

Primarily based on the manufacturing sector, empirical support for related diversification-performance relationship has been mixed (Hoskisson and Hitt 1990; Ramnujam and Varadarajan 1989), theory suggests that there should be a positive relationship. Firms pursuing related diversification strategies should outperform firms with unrelated diversification strategies (Bettis & Hall, 1982; Markides & Williamson, 1994; Miller, 2004; Montgomery & Wernerfelt, 1988; Palepu, 1985; Rumelt, 1974). Within the corporation, firms can leverage resource complementarities to improve performance (Milgrom & Roberts, 1995). Higher

firm growth rates are also associated with related diversification strategies (Jacquemin & Berry, 1979).

Some researchers find a non-significant relationship between diversification and performance (Bettis & Hall, 1982; Christensen & Montgomery, 1981). For example, in dividing their sample between related and unrelated diversifiers, Amit & Livnat (1988) do not find significant differences in performance between companies employing different strategies. Bergh (1995) demonstrates that some longitudinal research was conducted without regard to violations of statistical assumptions or modeling, which have resulted in potentially erroneous findings. For example, he finds no relationship between diversification and performance after correcting for statistical violations, but also finds some evidence of changes in the relationship over time from negative to positive. Finally, other researchers observe a negative relationship between diversification and performance. In a simulation study of diversification moves, Gary (2005) shows that a higher degree of asset relatedness may negatively impact performance when firms make inadequate investments in shared resources and overstretched resources.

But it is unclear whether these results hold in a foreign market context. FBUs may not be able to capture the same synergies as domestic businesses. For example, when examining performance differences in MNCs, Palich, Cardinal, & Miller (2000) do not find a difference between product-related and unrelated diversifiers. However, Geringer, Beamish and daCosta (1989) find that MNEs that have a higher degree of internationalization experience and leverage

related products outperform MNEs operating in fewer markets with unrelated products. In addition, Nayyar (1992) finds that focus on customer segments leads to greater performance in service firms, whereas focus on internal capabilities or geographic regions does not improve performance. But Nayyar tests his hypotheses on a range of service industries and services[4]. Industry effects are known to confound corporate effects (Rumelt, 1991). In summary, theory needs to be tested at the FBU level.

Unrelated diversification refers to entry into completely different businesses than the firm's core business. This can be achieved through entering into completely unrelated business in the same industry, sector, or through vertical integration. Unrelated diversification offers another opportunity for retailers to expand into new lines of business. By exploring new lines of business, firms are exposed to new sources of information. This creates learning opportunities, which help develop a greater store of knowledge and can lead to the development of new capabilities (March, 1991). Moreover, different sources and types of information may also spark organizational innovations (Madhok, 1997; Nelson & Winter, 1982). These innovations may provide the basis for new or renewed sources of sustainable competitive advantage (Barney, 1991).

The costs of unrelated diversification have also been discussed in the literature. When a firm has no previous experience in a line of business, upfront

[4] In Nayyar (1993), information asymmetries are found to have a differential impact for experience and search products. Economies of scope are found to be positively associated with search services (e.g. retailing) as opposed to experience services. In addition, the CEOs are the informants for the survey. It is questionable whether they possess the depth of information and knowledge to comment on fairly detailed and specific operational matters. Finally, international diversification was tested at the regional, not country level, raising questions about the appropriate level of aggregation.

investments in learning about market operations can be costly. Firms may also need to transfer or acquire capable personnel to guide market entry, representing opportunity costs of managerial time and effort. Finally, performance outcomes are less certain.

In the management literature, extensive diversity is considered an inferior strategy to a more focused strategy (e.g., Rumelt, 1982). Some studies contradict these findings by providing evidence of domestic companies that manage to perform adequately and survive, despite the jump into unrelated products (Leontiades, 1986; Ramanujam & Varadarajan, 1989). Several explanations have been put forth in the literature. First, as R&D investment and technology diversity increase, diversified firms outperform undiversified firms (Miller, 2006). Second, failures in external markets may also create opportunities for economies of internal capital markets in some environments (Williamson, 1985). This assumes that firms' internal resources are more efficient than the market under certain conditions. Third, managers who are exposed to different kinds of challenges may be more adaptable than managers who never face any challenges. For instance, management teams that are equipped to handle high administrative complexity and closely attend to capital allocation and use decisions have been known to outperform competitors (Dundas & Richardson, 1982). Moreover, bureaucratic costs are also posited to be the lowest for unrelated diversifiers, who do not need to engage in the same level of intra-firm coordination and cooperation as related diversifiers (Jones & Hill, 1988). Thus, high diversity may not necessarily be a sub-optimal strategy in all contexts.

But the international context certainly complicates the management task. Subsidiary failure rates tend to be higher when pursuing diversified products in foreign markets (Bane & Neubauer, 1981). Compounding uncertainties associated with foreign market entries, firms that pursue diverse products decrease their potential for survival (Li, 1995). Consequently, unrelated businesses tend to be first on the chopping block when the firm is under severe pressure from foreign competitors in order to best utilize finite managerial capacity (Bowen & Wiersema, 2005).

Vertical integration is another form of unrelated diversification. For retailers, backward integration into distribution services and/or manufacturing represent the primary opportunities for unrelated diversification. Diversification strategies are typically undertaken because managers perceive performance benefits (i.e., cost minimization and/or value creation) in extending their investments in their supply chains. *Backward integration* of distribution services and/or manufacturing is a way to diversify away systematic business risk in uncertain environments as well as to provide a platform for ensuring stable supplies for retail operations. For instance, in developing economies, Aldi tends to purchase or lease warehousing/distribution facilities first, and then expands its outlets based upon the capacity of distribution center (e.g., 50-100 outlets per distribution center). This suggests that inefficiencies or failures in the supply and distribution markets induce certain retailers to integrate these functions to reduce overall transaction costs. However, because operating a distribution center requires specialized management skills that are different from retail operations,

firms must either hire experienced managers at a premium or invest in management training to derive similar productivity benefits associated with their core business. Arguably, by developing private label programs and investing in product design staff and outsourcing manufacturing, retailers are also engaging in a form of backward integration. While firms may be willing to invest in human and physical resources in order to enter a market, by taking on another role in the supply chain, on average, their fixed cost structure should be higher than for retailers pursing a related diversification strategy. In turn, the expected payoffs of unrelated diversification should come in terms of higher margins and profits relative to related diversification.

Several factors limit the potential benefits of diversification. Foreign subsidiaries that diversify into product areas that are different from their parents have lower long-term survival rates (Li, 1995). Spatial dispersion, the extent of differences between businesses within a corporation, and the complexities of coordinating activities in a large portfolio can increase marginal management costs (Bergh & Lawless, 1998). As businesses and activities become more diffuse, information processing capabilities become strained, increasing the costs of internal governance (Tallman & Li, 1996). Jones and Hill (1988) also argue that the bureaucratic costs associated with coordination and cooperation can be higher for related diversifiers relative to unrelated diversifiers due to increasing agency costs associated with resource sharing and joint production as corporations grow. Rugman and Verbeke (2005) also argue that MNCs succeed only when they have the ability to adapt the firm's specific advantages to the

requirements and opportunities present in the host country. Moreover, they argue that adaptation is less costly in home regions versus outside the MNC's home region. As the costs of coordinating activities within the firm rise, the potential benefits of diversification are nullified. Thus, although the empirical evidence suggests that, on average, related diversifiers should outperform unrelated diversifiers, Varadarajan & Ramanujam (1987) caution that this may not be a prescription for every type of firm.

Yet others argue that there is a curvilinear relationship between degree of diversification and performance (e.g., Markides & Williamson, 1996). Ansoff (1969) traces product-market life-cycle curves, arguing that strategic diversification decisions can help firms stimulate and expand demand in existing and new markets. Peteraf (1993) outlines the economic arguments for why firms may face optimal levels of diversification, depending upon the specificity of their resources and the resultant range of strategic options possessed. The argument is that beyond this optimal level, firms should face diminishing economic rents as they enter additional product markets. Combining product life cycle curves and optimal points of diversification on rents, firm performance should initially increase with higher levels of diversification. At some mid-point in the extent of diversification, performance will peak and then begin to decline.

Mixed empirical results also suggest limits to diversification. In a meta-analysis exploring some of the divergent findings in cross-sectional studies, Palich et al. (2000) find a curvilinear relationship in product diversification and performance. These studies suggest that diversification helps to a point, and then

the costs of diversification become higher than the realizable benefits. In studying corporate refocusing, Markides (1992) finds that firms can diversify beyond an optimal point, after which they see positive, but declining marginal returns. Declining returns often prompt firms to disengage in parts of their business that are distant from their core competencies. Gary (2005) provides some evidence about how shared corporate resources may become overstretched at a certain point leading to the lack of value creation, particularly if investments in these shared resources are not maintained adequately. But it is unclear whether the curvilinear relationship would hold in a customer segment and/or retailing context.

Hypothesis1: At lower levels of diversification, FBU performance should increase. At middle to high levels of diversification, FBU performance will peak and then begin to decline.

Governance

Governance decisions represent a critical element in business strategy. Mode of diversification refers to the governance mechanism chosen to enter into the new line of activity. Firms choose the most efficient mode to protect their specific assets in the presence of environmental and behavioral uncertainties (Williamson, 1985). The range of control mechanisms run from the low control mode (i.e., market) to high control mode (i.e., hierarchy) with hybrid choices of licensing, franchising and joint ventures.

Management of a particular mode may also represent a unique capability (Barkema, Shenkar, Vermeulen, & Bell, 1997). For example, Carrefour's

President of China Operations, noted the firm's expertise in organic (wholly-owned subsidiaries) growth, and made a distinctive departure from past strategy to institute an expansion place that features mergers and acquisitions (M&A) (Child, 2006). In summary, firms can build expertise in managing governance modes.

Service firms have a range of international entry mode choices and international business strategies. Arguably, services have the same basic set of entry mode choices as manufacturers (Erramilli & Rao, 1993). Agarwal and Ramaswami (1992) argue that hard services have the same type of entry mode choices as manufactured goods. Critics would argue that services have a constrained choice set because of necessity of physical presence (e.g., export not an option) (Ekeledo & Sivakumar, 1998). Further, it is unclear whether mode choices are stable. Burt (1991) shows that in the European grocery sector, firms tend to stick to the same modes, whereas Picot-Coupey (2006) documents variations in mode choices in the French clothing and accessories sector. Firms also have an opportunity to learn from their experience. Lu (2002) finds that previous entry modes influence future entry mode decisions. In the service sector, businesses appear to prefer high default modes, such as subsidiary ownership, instead of a market default assumed for manufacturers (Doherty, 1999; Erramilli & Rao, 1993).

Once made, governance decisions are difficult to change and erroneous controls are costly to manage (Williamson, 1996). But, on balance, normative prescriptions found in the TCA-based literature on entry mode choice appear to

lead to higher performance (Brouthers, 2002). However, these mode choices only represent a component of diversification strategy.

Entry mode is often underplayed in much of the strategic diversification research (Datta et al., 1991; Hoskisson & Hitt, 1990). Earlier work on diversification put a considerable amount of focus on M&A. Within the foreign market context, this process exists when a foreign firm acquires its actual and/or potential competitors. Within an organizational learning framework, both acquisitions and joint ventures can be viewed as opportunities for exploration in which firms attempt to learn from the experiences of others (Slater & Narver, 1995). Within efficiency motives cited for M&A, Trautwein (1990) highlights financial, organizational and/or managerial synergies that are presumed to result from M&A activities. As such, M&A's are enacted to gain access and control of another firm's resources and capabilities in anticipation of the creation of new and/or expanded synergies with an acquirer's existing capabilities.

Much of the diversification literature focuses on mergers and acquisitions and organic growth options. Because diversification is fundamentally about how to share internal capabilities to create synergies between internal businesses or products, full control modes have been emphasized in the literature. In part, this is because competencies are considered difficult and costly to transfer. However, Lord and Ranft (2000) find that managerial incentives tied to corporate performance encourages transfers of local market knowledge from other divisions already operating in the host country to a newly-entering division. In addition, Tanriverdi and Venkatraman (2005) conceptualize how multi-business

firms can utilize their production cost synergies generated from several kinds of knowledge relatedness (i.e., about internal products, external products, customers, risk and investment, and alliance management) to create value synergies leading to greater firm performance[5].

Empirical research is equivocal. Stock market analysts and investors tend to positively value mergers, although, on balance, the acquired company's shareholders seem to gain significantly more than the acquirer's shareholders (Caves, 1989; Ravenscraft & Scherer, 1987)[6]. Often measuring short-term event windows, long-term performance is not considered, despite the assumption that synergies require time to bear fruit (Woodcock, Beamish, & Makino, 1994). Other researchers demonstrate that acquisitions do not result in increased profitability for the acquiring firm (Fowler & Schmidt, 1989; Herman & Lowenstein, 1988; Rumelt, 1986). Merged firms are often unable to realize the synergies envisioned in the pre-M&A process due to unanticipated integration challenges (Tanriverdi & Venkatraman, 2005). For instance, divergent organizational cultures make lines of communication and coordination less effective than required for synergy creation (Chatterjee & Blocher, 1992). But, it is unclear whether M&A strategies may work better for some industries as compared to others. Since retailers often choose M&A as a favored form of

[5] Interestingly, the authors acknowledge the importance of alliances in generating synergies; yet they only refer to the management of these alliances as the important knowledge component (i.e., staying within the borders of the firm). In other words, they stop short of recognizing knowledge (or other) complementarities may reside within the alliance partner.

[6] But these findings should taken with some caution. A potential limitation in extending these findings in an international context is that a fundamental assumption in the finance studies is a competitive capital markets, which may not necessarily exist in all emerging markets.

governance, it is important to determine whether M&A is an effective strategy within this industry in a foreign market context.

However, there is evidence that corporations do not consistently follow "pure" diversification strategies across their FBUs (i.e., either all organic growth or acquisition) (Lamont & Anderson, 1985). In other words, managers assess the best mode given internal and external factors. Moreover, firms pursuing mixed strategies perform no worse than firms following "pure" strategies (Lamont & Anderson, 1985).

Either by regulatory design or by choice, firms may also choose to enter into hybrid governance forms. Hybrid forms represent a mid-point on the governance continuum between wholly-owned subsidiaries and the market (Williamson, 1985). Since synergies are tradeable (Kay, 1982), firms can purchase access to knowledge and knowledge-based resources through alliances and partnerships (Markides & Williamson, 1996; Simon, 1991). Over time, firms acquire knowledge from their partnerships and this knowledge becomes a potential source of synergy (Tanriverdi & Venkatraman, 2005). For example, franchise networks demonstrate the value of external partners to adapt to diverse markets, provide learning opportunities, and achieve greater returns for the organization (Sorenson & Sorenson, 2001). Hybrid governance forms are chosen when: a) firms have a resource deficiency, b) suitable partners are available, and c) when the firm trusts that either the partner does not have the ability to acquire its core resources and/or would not act opportunistically (Woodcock et al., 1994). In sum, firms utilize hybrid modes with the intention of

combining complementary capabilities in an effort to generate new competencies, solve resource deficiency challenges, and potentially develop new applications from these capabilities (Teece, Pisano, & Shuen, 1997; Woodcock et al., 1994).

Although joint ventures also represent a common expansion strategy for retailers, scant research exists on this governance strategy (Palmer, 2006). When retailers are legally obliged, lack an important resource, or a host country partner has a high value asset specific to its particular national market, multinational retailers may choose to enter into a joint venture with the local partner (Hennart, 1988). For example, multinational retailers may not have access to the best locations, which are controlled by local or other foreign competitors. Potentially attractive partners can also augment weak or non-existent MNC capabilities (Mowery, Oxley, & Silverman, 1996). This can provide invaluable assistance since one of the largest costs of entry is the investment in knowledge about the local market (Greve, 1996). Barkema et al. (1997) find that firms can incrementally learn from their international joint venture experience as long as their foreign operations are related to their core business. Since acquisition, absorption and integration of "unfamiliar" information is a costly and gradual process, which may put the firm at a competitive disadvantage in the new market relative to existing competitors (Penrose, 1980), foreign partners with complementary knowledge enables firms to pursue internationalization. Furthermore, Palmer and Owens (2006) argue that joint ventures may be an

attractive governance mechanism precisely because it is a lower level commitment of resources as compared to organic growth strategies.

The dangers of partnership must also be mentioned. By engaging in business activities with a partner, one side may appropriate a disproportionate share of quasi-rents by discovering the other side's knowledge over time (Baum, Calabrese, & Silverman, 2000; Cohen & Levinthal, 1990). Studying alliances in North America, Europe and Asia, Dussauge, Garrette and Mitchell (2000) find that alliances in which partners contribute complementary capabilities result in higher levels of learning and capability acquisition as well as higher probabilities of partner takeover or reorganization than in alliances in which partners possess similar capabilities. Without systems for protecting trade secrets, these same partners may also become future competitors. Another potential hazard is multiple, key stakeholders. The FBU may experience potentially conflicting demands from its owners that may be detrimental to its efficiency and effectiveness (Prahalad & Doz, 1987). In summary, by sharing control and trade secrets with another business, foreign retailers also face some risks.

Numerous authors have studied the performance benefits associated with various entry modes (e.g., Erramilli & Rao, 1993; Woodcock et al., 1994). Eramilli and Rao (1993) propose that the default mode of service firms is ownership. This is due to the nature of the intangible assets producing the monopolistic advantages that motivate firms to internationalize. The difficulties in codifying and transferring (intangible) knowledge also create the need for internalization because licensing through market transactions involves high

costs. However, Beamish & Banks (1987) argue that trusting joint venture partners can outperform wholly-owned subsidiaries. In addition, controlling for product diversification in a domestic context, Simmonds (1990) finds that new ventures outperform acquisitions. In a study of Japanese entrants into the U.S. market, Woodcock et al. (1994) find that new ventures outperform joint ventures, but that joint ventures outperform acquisitions. Moreover, Li and Guisinger (1991) find that joint ventures experience failure rates at a level between the more successful new ventures and less successful acquisitions. In summary, the evidence seems to suggest that wholly-owned subsidiaries should outperform joint ventures, but that joint ventures should outperform acquisitions.

Why would one mode outperform another? While most foreign entry mode research focuses on *ex ante* costs that may determine mode choices (e.g., selection costs), few entry mode studies focus on *ex post* costs associated with operating FBUs after the mode selection is made. Woodcock, Beamish and Makino (1994) explain the performance differences in terms of the costs associated with each entry mode. The authors make an argument that new (organic) ventures have low costs of procuring additional resources as well as low ownership and control cost. The new venture utilizes existing resources required for success in the new market and appoints managers, who understand and can operate effectively within the firm's culture and bureaucracy. In contrast, acquisitions have high levels of both costs since, despite aggressively optimistic assumptions to the contrary, acquired firms rarely integrate flawlessly with the acquirer, severely limiting the realization of synergies, often creating resource

redundancies (Chatterjee, 1990) and complicating management control tasks. Joint ventures are posited to have medium procurement and high ownership/control costs. Although both firms must pay for the acquired complementary resources, the confusion and difficulties created by multiple stakeholders with potentially conflicting goals makes the costs of ownership and control higher than wholly-owned subsidiaries. For both acquisitions and joint ventures, if the rationale for purchasing synergies is the primary reason, managing heretofore unknown businesses should increase the costs of control. Efficiency arguments suggest that total costs should be the highest for acquisitions, all else equal.

Retail internationalization literature suggests that mergers and acquisitions represent the most common modes of entry for international retailers into key emerging markets in Latin America, Asia and Eastern Europe (Coe, 2004). In part, this is attributed to limitations in some countries imposed upon organic expansion of large-scale formats, which forces retailers to choose other means to expand. Firms tend to prefer acquisitions when partners with salient capabilities are not willing to risk sharing their source of advantage with an outside partner (Woodcock et al., 1994). Large-scale retailers with core capabilities that tend to be in the form of back office functions and supply chain partnerships may be less willing to risk the sources of their advantage by engaging in joint ventures. But the findings on performance of post-acquisitions and synergy sharing are disappointing (Caves, 1989). For instance, Chatterjee (1990) finds that, instead of synergies, acquisitions create redundancies, increasing the costs of intra-firm

coordination. This may help to explain why retailer internationalization results are often disappointing.

Hypothesis 2: In foreign markets, wholly-owned subsidiaries should outperform joint ventures, which should outperform acquisitions.

Previous diversification researchers studied groups of businesses following similar strategies and examined their performance (e.g., Busija et al., 1997). We extend this idea by looking at firms that utilize similar strategic diversification configurations (e.g., direction and mode) and examining how these configurations lead to performance.

By expanding the governance continuum, interesting possibilities arise in terms of interactions between governance and direction of diversity. The underlying assumption is that we have three sources of risk with which to contend: 1) the risk of not competently competing in areas unrelated to the corporation's core competencies, 2) the risk of not effectively managing with unfamiliar governance modes, and 3) foreign market operational risks. By not leveraging existing resources, the FBU misses the opportunity to create synergies, such as economies of scope, among their businesses. The lack of interdependence between businesses creates a weakness relative to other firms that are able to leverage their excess resources across business. Additionally, given that managers tend to possess imperfect information and analyses about foreign markets and partners (Aharoni, 1966; Kobrin, 1982), the risk of employing low control modes increases. Furthermore, there is an interaction effect between governance and diversification strategies. We would expect that FBUs pursing

related markets with organic growth should be the highest performers. Busija et al. (1997) provide some evidence that firms pursuing related-constrained diversification strategies and internal growth outperformed other strategy mix types. At the other end, due to the multiple sources of risk, we would expect the lowest outcomes to be associated with unrelated diversification strategies with acquisition. In a study of large U.S. firm acquisitions, Porter (1987) finds that three out of four unrelated acquisitions failed. The costs of absorbing another entity with its own organizational culture and trying to manage a new line of business should be a lethal combination. Finally, there is evidence that joint ventures may work well in both related and unrelated diversification. On one hand, the corporation could be buying access to complementary synergies held by its partner. On the other hand, parents may be able to manage and share its resources in a joint venture that operates in its line of business.

Hypothesis 3: Related diversifiers that expand via organic growth should outperform all other strategy mixes. Conversely, we expect that unrelated diversifiers that expand via partnership or acquisitions to be the lowest performers.

When we consider the effectiveness of diversification decisions at the domestic level across nations, forces that would impede or strengthen the local level implementation of these decisions would be of interest. In retailing, competition is primarily a local phenomenon (Porter, 1987). Although multi-market competition has been discussed in the literature (Fuentelsaz & Gomez, 2006), for a largely location-bound retailing function this appears to be less relevant. This has important implications in studying the strategy-performance

relationship. First, theory and measurement should take into account multiple levels of analysis (Klein, Dansereau, & Hall, 1994; Mishra, Heide, & Cort, 1998). The competition takes place in host country markets, which have important contextual variations that may affect the implementation of the diversification strategies across nations. In addition, the firm's overall international diversification strategy should be treated as a portfolio of its country market strategies. In other words, the firm's foreign portfolio consists of individual market operations, each influenced by varying levels of institutional factors. If we are to avoid bias in our parameter estimates and inaccurate interpretations from our models, we need to separate the foreign business unit (FBU) country strategy from the corporate and national factors. Theoretically, corporate and national conditions are more appropriately considered moderators of the relationship between strategy and performance as they hinder/help the implementation of the diversification strategy.

In summary, we hypothesize about within-country/corporate group and format performance. Our first hypothesis addresses the limitations of diversification strategy. After initial gains from diversifying operations, retailers should see a plateau and drop off of performance outcomes. Our second hypothesis relates to the relative efficacy of separate governance modes, predicting WOS outperforming joint ventures and acquisitions. Finally, our third hypothesis looks at the relative efficacy of six diversification strategy combinations.

CHAPTER III

METHODOLOGY

In this section, we discuss our key variables, sampling, and research method. Our construct operationalizations are defined and measures described. Descriptive Statistics of our key variables are contained in Appendix A. Our sampling plan is outlined. Finally, we describe the analytical tools and procedures, supporting hypothesis testing.

KEY VARIABLES

Our choice of key variables to test our hypotheses was guided by four criteria. First, within the MNC research context, these measures represent important constructs for our model. Second, we are guided by the extant business literature. Third, we expect to find significant differences between the retailers and countries on the selected variables. Finally, we have reason to believe that relationships between constructs should exist.

Endogenous Variable

Previous studies of country, industry and firm affects on business performance have used various financial (e.g., ROA, ROS, profitability) and strategic (e.g., market share) measures (Mascarenhas, 1992; McGahan & Porter, 1997; Rumelt, 1991; Schmalensee, 1985). While Schmalensee (1985) throws down the gauntlet in support of the I-O view that industry structure drives firm performance (via firm conduct), more recent studies, such as Rumelt (1991),

provide convincing arguments and evidence suggesting that business-level effects are much more important than industry factors in explaining variance in firm performance. In studying the performance of foreign affiliates, Makino, Isobe, & Chan (2004) find that foreign affiliate and corporate effects explain the most variability in performance, but that country and industry affects also help explain performance, particularly in developing country contexts. Moreover, the authors find significant interaction effects between industry and country.

Two main difficulties in using this measure in an FBU-performance context stem from differences in national accounting systems and structural differences between industries and across countries[7]. We control for the second problem by limiting our examination to the retail industry. The first problem can only be addressed by finding another performance measure. The one measure that exists across countries, firms, and formats is market share. Absolute market share is appropriate in studying a single industry because the sum of shares would equal to 100% and the range would be between 0 to 100%. Several variants of market share can be tested, such as unit vs. sales figures, and single year vs. multi-year average. Szymanski et al. (1993) find that single year estimates of market share elasticity tend to be lower than multiple-year averages. In addition, the authors note that depending upon industry and product category, price (unit) measures may not produce similar results, but they did not have enough data to test potential moderating effects. Moreover, we use an outcome variable that proceeded in time data collected for the exogenous variables.

[7] Other approaches to modeling format relationships are to create binomial or trinomial choice models, examine store patronage, or household expenditures (e.g., Fox, Montgomery and Lodish 2004; Goldman, Ramasaswami and Krider 2002; Morganosky 1997).

Because the effects of diversification decisions would not be immediate, it is prudent to allow for the passage of time into the model. Although temporal separation between independent and dependent variables does not signify causality, it is a necessary condition for drawing inferences. We also test the time-invariance of our variables by testing the models with a dependent variable from the next year. For example, if we are testing performance in 2003 related to strategy choices in 2002, we will also test the final model against performance in 2004. For the covariates, this helps provide information about the lasting impact of specific strategic and structural characteristics. In summary, we can test market share using multiple measures to determine whether the temporal nature or unit of our measures create differences in the parameter estimates.

Critics of a market share performance measure note contradictory findings on the relationship between market share and profitability and suggest that the relationship is a measurement artifact (e.g., Jacobson & Aacker, 1985). In a meta-analysis of the market share-profitability relationship, Szymanski, Bhaaradwaj and Varadarajan (1993) find a positive relationship, but also show significant moderators, such as specification errors, sample characteristics, and measurement characteristics. Using a multilevel model on retail specific data corrects for some of these issues. Ultimately, their analysis did not find definitive evidence disproving the positive relationship.

One of the criticisms of the diversification literature is that many of the previous studies have not fully specified their models, creating uncertainties about the generalizability and validity of the body of work (Datta et al., 1991). We

attempt to identify variables at the FBU, corporate and country level that may impact market share and may potentially also impact the diversification decision.

FBU Level Exogenous Variables

Diversification is measured by an entropy measure for the current retail operations of corporations by country. We adapt the Jacquemin-Berry entropy index by categorizing retail formats using the U.S. Census Bureau's 6-Digit NAICS Code system. Because we are studying intra-industry diversification, we need a finer grained approach to differentiate between businesses. According to Palepu (1985), the entropy measure is directly adapted to the text found on pages 14-15. In general, total diversification scores range from 0 (no diversification) to approximately 3 (high diversification) (Bergh, 1995, p. 1698).

Operational definitions of *governance modes* are designed to keep the modes conceptually distinct[8]. Wholly-owned subsidiaries are financed, owned, and operated by one parent firm from the beginning of its existence. This is sometimes referred to as "organic" growth. Acquisitions are defined as local companies where more than 50% equity was purchased by the foreign corporation. Joint ventures (JVs) are defined as new entities created, owned, and operated by more than one parent. JVs are not necessarily assumed to be 'balanced', whereby there is a perfect sharing of resources among the owners.

[8] In an interesting test of endogeneity in entry mode choice, Shaver (1998) shows that firms actually select entry modes based upon their assessment of observable and unobservable capabilities and expected performance outcomes. In contradiction to the entry mode literature, he refutes the notion that one type of entry mode is necessarily better than another (e.g., organic growth vs. acquisition) based upon observable capabilities.

The JV partners must include at least one foreign corporation, but other partners can be either foreign or domestic.

Other FBU level covariates are the *size of operations* within the country, *format* types, *and age. Size of operations* relates to total number of outlets, while *formats (i.e., hypermarkets, supermarkets, convenience stores, and discount stores)* are operationalized as dummy variables. *In-country experience* (i.e., age) refers to the number of years that the format has been operating in the host country. Two other dummy variables will be used. The *dominant business* of the FBU refers to the business that brings the highest percentage of sales within a specific country. *Relatedness* refers to the membership in the dominant segment for an FBU in a specific country. It is not assumed that the dominant business in a foreign country has to be the dominant business in the home country, but this is considered likely.

Corporate Level Characteristics

RBV posits that resources and capabilities are heterogeneously distributed across firms and long lasting (Barney, 2001). Thus, we need to look at important knowledge capabilities in the parent organization as well as how these capabilities may be transferred to the FBUs.

Level of Centralization is an important structural factor influencing the implementation of FBU strategy. The Resource Based View (RBV) argument hinges on the assumption that information is passed between business units coordinated by corporate managers. In other words, corporate managers can

manage the vertical information flows necessary to recognize and realize synergies across FBUs. Gupta and Govindarajan (1986) argue that the effectiveness in which linkages between business units is managed will affect the potential realization of corporate synergies. Subsidiaries of MNCs have common reporting standards and are periodically audited (and rewarded) for compliance to these standards. Reuer and Leiblein (2000) show that management systems moderate the relationship between international investments and organizational downside risk. Corporate policies of maintaining the appropriate levels of organizational slack before and after a diversification move is an important factor in fully realizing synergies of shared resources leading to business unit success (Gary, 2005). Moreover, organizations with centralized decision-making and funding should exert a stronger influence on local operations than decentralized organizations (Scott & Meyer, 1983). Synergy transfer requires a sufficient degree of centralized management systems and control in order to function. Although some fairly decentralized companies can employ knowledge management systems similar to Ahold's, corporate synergy creation and transfer is still assumed to be weaker for decentralized companies. A dummy variable will be constructed from the corporate reports and Euromonitor reports to distinguish between centralized and decentralized firms.

International Experience (i.e., international diversification) represents a source of knowledge on how to conduct business overseas. Operating in diverse environments decreases the firm's liability of foreignness by providing exposure about constituent aspects of the environment and how they may affect

implementation (Hymer, 1976; Zaheer, 1995). Moreover, the ability to manage across diverse cultures can aid in the development of new capabilities (Barkema, Bell, & Pennings, 1996). These new capabilities can be used to compete more effectively against local competitors (Delios & Beamish, 2001) and develop new market positions (Greve, 1996). Finally, more internationally experienced firms are influenced less by institutional forces. Experienced firms may learn how to select more favorable environments by knowing which institutional hazards to avoid (Henisz & Delios, 2001).

The measure of international experience needs to account for the potential of differences in effects with varying levels of time, i.e., potential curvilinearity. Although the moderating effects have not been studied, the cognitive limitations argument could be applied also for managing across many different countries. In other words, the benefits of international experience should decline after a point. This would indicate to an inverted 'U' shaped effect.

Firm size moderates the relationship between degree of diversification and performance (Jahera, Lloyd, & Page, 1987). Firm size is measured by the number of employees worldwide. Size positively affects the types of modes firms can choose, but may also encourage managers to take more risks than if they were making decisions for a resource-constrained firm (Morck, Schleifer, & Vishny, 1990).

Country Level Characteristics

To counter arguments that diversification performance is only an artifact of market or industry factors, we need to include four important covariates. First, we should introduce *industry concentration* ratio to determine whether there are a few companies controlling the market. A four-firm concentration ratio captures the percentage of sales controlled by the four largest firms in the retail industry. High concentration implies potential barriers to entry for new firms. There is some speculation that larger formats might be in a position to grab higher market share in countries with fragmented retail markets (Colla, 2004). Second, higher *market growth* may attract more firms into the country. To make sure that our results are not due to industry artifacts, we need to control for the differences between different market environments. *Format Size* is measured by the total number of outlets within a format for a country, where as *Retail Employment* relates to the total number of people employed in the retail sector.

Table 1: Data Coding

Code	Operationalization
FBU	
Diversification	$DT = \sum_{i=1} P_i(1/P_i) = DR + DU$ *where* P_i is the share of the ith format in the total sales of the firm in country j and the expression represents a weighted average of the shares of the formats, with the weight for each format being the logarithm of the inverse of its share. $DR_j = \sum_{i \in j} P_i^j \ln(1/P_i^j)$ P_i^j is the share of format i of segment j in the total sales of the group. Let DR_j be the related diversification derived from operating several formats within an industry segment j. In addition, we assume that N formats aggregate into M industry segments whereby N≥M. Relatedness: $DR = \sum_{j=1}^{M} DR_j P^j$ DR is the weighted average of the related diversification within all M groups. Unrelatedness: $DU = \sum_{j=1}^{M} P^j \ln(1/P^j)$ *DU* is a measure of unrelated diversification, which represents a weighted average of group shares. NAICS classification codes are used to define formats and industry segments. NAICS at the four-digit level are treated as industry segments, whereas NAICS codes at the 6 digit level reflect retail formats.
Diversification Strategy	Dummy variables for related wholly-owned subsidiaries, related joint ventures, related acquisitions, unrelated wholly-owned subsidiaries, unrelated joint ventures

Cont'd Table 1

Governance	Dummy variables for wholly-owned subsidiaries, joint ventures, acquisitions
Selling Area	Total sales area (1,000 sq. meters)
Dominant Business	Dummy variable: Largest sales in country -- 1)Yes 0) No
Related Business	Dummy variable: 1) If related to dominant business 0) Not related
In-Country Experience	(2002- in-country start point) + 1
Format	Dummy variables for hypermarket, supermarket, soft discounter, hard discounter, convenience store
Outlets	Number of outlets/type by year in thousand
Retail Market Share	Total Sales for FBU as a percentage of total retail market sales
Corporation	
Retail Experience	Number of years operating retail outlets
Centralization	Dummy variable: 1)Yes 0) No
International Diversification	Number of countries with retail operations
Size	Total number of employees (in thousands)
Outlets	Total number of retail outlets
Country	
Emerging Market	Dummy variable: 1)Yes 0) No
Labor Market Size	Total retail employment (in thousands)
Retail Outlets	Total number of retail outlets

SAMPLE

This study considers the diversification choices of multinational food retailers. This group is appealing for several reasons. First, food retailers represent almost 60% of the world's largest retailers and market their products via a range of formats (Deloitte 2006). In addition, to avoid large variations in product categories and markets, potential confounds, this allows us to define our sample on the basis of a common market.

Second, although intra-industry diversification studies are rare (Li and Greenwood 2004), we follow previous research that considers organizations in an industry as constituting a population (Hannan & Freeman, 1987). Moreover, we argue that MNC food retailers represent an important sub-population in which members possess similar strategic advantages and compete for similar resources in the environment. By doing so, we avoid some of the commonly stated methodological shortcomings in conventional diversification literature associated with cross-sectional studies, such as inappropriate pooling (Bass, Cattin, & Wittink, 1977) and wide variation in resource bases or investments between sectors (Bettis & Hall, 1982). This is particularly true in previous diversification studies that often exclude service industries in their samples (Nayyar, 1992).

Third, although global retail diversification is an under-researched topic, MNC retailers represent a growing presence and power in every developed and many emerging markets (Doherty, 1999). In the 2006 Fortune 500 list, Wal-Mart is the second largest U.S. company after Exxon-Mobile with 97 other specialty,

general merchandisers, and food & drug retailers represented[9]. However, little research exists on how service-based MNC strategies function in an international context as opposed to a domestic, manufacturing context.

In explaining how retailers begin to achieve customer loyalty, Cortsjens & Cortsjens (1995) elucidate the four major differences between manufacturers and retailers. First, most fast-moving consumer goods (FMCG) retailers are bound to their various locations. For bricks-and-mortar retailers, the circumference around each location defines both the majority of their customers and their competitors. Second, manufacturers have traditionally been able to generate cost synergies across product brands, while this is a challenge for retailers. Related diversification of retail formats is one avenue retailers can take to attain some synergies from their operational know-how, private labels, and/or exclusive rights to manufacturer brands. Third, retailers typically have high fixed costs and low margins, whereas FMCG manufacturers have lower fixed costs and higher margins. Consequently, as opposed to manufacturers, traditional retailers are more focused on sales volume and pricing to make the difference in their profitability. Understanding how to get optimal retail mixes for many different environments is one of retailers' biggest challenges. Fourth, pricing strategy can influence consumer perceptions about the competitiveness and value of the store. Consumer perceptions are influenced by many factors and are not constant across national borders (Cortstjens, Corstjens, & Lal, 1995).

[9] www.fortune500.com

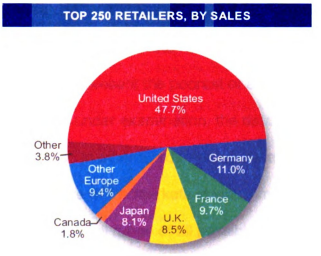
Since we are concerned with retailing, our approach is to consider only the foreign market operations of retailers, as opposed to a broader cross-sectional study of many sectors. We describe these FBU's in two ways. First, we aggregate FBUs for a particular firm in a country to test group-level hypotheses on diversification. If a group operates four formats, its total diversification score captures and weighs relative contributions of each format. The outcomes studied become diversification strategies across countries and corporations. Second, we look at each FBU with respect to the entry mode chosen for each format in a country. In this case, we use a relatedness measure to capture diversification within and away from the dominant industry segment for that FBU. We are interested in being able to sort out the entry mode-performance relationship, controlling for other effects. Finally, we test the relative efficacy of six format diversification strategies, controlling for important covariates.

To test the proposed models, we gather secondary data from several sources. Our primary source of data is from Euromonitor, which has detailed information about 85 global retailers operating in 52 countries. Euromonitor uses a combination of surveys and national statistics to derive their databases. These retailers typically represent the largest retailers in the country. We also supplement our Euromonitor data with corporate annual reports, MINTEL and GMID, as necessary and when available.

Our sample is drawn from Deloitte Touche Tomatsu's 250 Global Powers in Retailing 2005. Since 104 firms on this list do not have an international presence, our sample reduces to 146 firms. Of these 146 firms, Euromonitor has

information on at least 29 global corporations that sell food internationally. Our observations are the business level entities of these global retailers in the countries in which they operate. Within a country, a corporation may have multiple brands, started at different times. Thus, our sample should contain a range of business units established at different times.

Figure 1: Breakdown of Global Retailers



Source: Global Powers of Retailing 2005

Some authors argue that archival industry data is inappropriate for use in measuring strategic competitive advantages. For example, Levitas and Chi (2002) argue that measurable tacit data quickly dissipates in an informed marketplace, thus observable data cannot represent strategic competitive advantages. However, Rouse and Daellenbach (2002) counter that just because some tacit knowledge can be known and measured does not infer that others could reproduce the multiple capabilities required to achieve the knowledge.

While we are cognizant of potential limitations of archival industry data, we believe that the data are reasonable proxies for our constructs.

Because accurate global retail data are difficult to collect, we were limited in the number of countries included in the Euromonitor database. Of general concern in a limited dataset is whether we would have a truncated data problem. This is a specific kind of missing data problem when both exogenous and endogenous variables are missing. For example, none of the countries in the study would be considered for the United Nation's Least Developed Countries Fund. Instead, our sample over-represents the richest countries and the largest emerging markets and does not represent the poorest or smallest countries at all. But given the expansion policies under examination, the dataset offers a range of realistic investment destinations. In other words, our countries are systematically sampled and highly representative of the markets in which multinational retailers operate. Thus, for our purposes, a full range of all possible countries is not necessarily desirable. Adding countries to the sample that are not considered likely investment choices for our corporations would pull our parameter estimates away from their true mean, creating the backdrop for flawed inferences and policy recommendations. Our sample represents the most likely range of countries in which MNCs reasonably invest with few exceptions or omissions.

METHODS

Conceptual Advantages

Within the extant research, there is a rich history of conceptualizing multi-level influences in a variety of contexts and fields. In education, Lee and Bryk (1989) examine whether Catholic schools provide a more socially equitable distribution of school achievement than public schools. In human resource management, McComb, Barringer and Bourne (2004) demonstrate how individual, work and organizational factors influence employee job-related attitudes and behaviors. In management, Dranove, Peterof, and Shanley (1998) develop multilevel theory and testing to prove the existence of strategic groups. Addressing criticisms of single level models, data were chosen to provide clarity in isolating the relative compositional and contextual effects that influence retailer FBU performance (e.g., Duncan, Jones, & Moon, 1998).

Analytical Refinements

Heeding calls for multilevel research from diverse literatures (Klein et al., 1994; Madhok & Liu, 2006; Palmer & Owens, 2006; Rumelt, 1991) and driven by theoretical concerns, methodological issues are also addressed. Because we are considering FBUs partially nested within firms and countries, our study requires a flexible multivariate tool that can adjust for dependencies in the data. In addition, Hierarchical Linear Modeling (HLM) tools can provide us with richer information about specific corporate and country means and slopes within and between markets by allowing country and corporate factors to vary (i.e., instead of being

fixed). Instead of summarizing the performance of all corporations in the sample within one mean, we estimate separate means for each corporation. These estimates are weighted by the amount of information we possess for each corporation. In other words, instead of one market share mean for all corporations with a wide standard error, we have specific means for each corporation that vary according to the number of observations we have for the corporation[10]. In weighting individual corporate means by their precision, HLM models represent a significant improvement upon conventional approaches to linear modeling techniques that aggregate the behaviors of individual corporations.

Biased estimates of parameters and standard errors result from not considering differences in units of analysis and dependencies in the data (Raudenbush & Bryk, 2002a). This potentially changes interpretations of the evidence in the hypothesis testing stage. In addition, we can explore unique business level strategies impact on performance, adjusting for salient characteristics of business units, corporations and countries. Aggregation bias is a serious concern. Simply pooling data from all FBUs in all corporations and countries would likely produce an uninterpretable estimate, which is a blend of many contributive factors. Thus, a study of FBU must account for heterogeneity across corporations and countries. Another benefit arises in using FBU level data. By classifying our observations by country and corporation, both geo-social and organizational effects are considered.

[10] According to statistical principles, if we only have one observation for a corporation, our mean scores are less precise than if we have 30 observations for that corporation.

Given the risk that we may not have enough information to use a cross-classified model, we can collapse our model and consider country and corporate effects separately. While this does not allow us to directly compare the relative contributions of corporate and country contexts, it does represent an improvement on traditional linear modeling techniques. Thus, our model represents a more realistic framework to study the degree to which compositional (i.e., corporate) and contextual (i.e., country) factors explain the variation in FBU performance (Zaccarin & Rivellini, 2002). By pooling information across FBUs and controlling for country and/or corporate effects, we can develop more reliable parameter estimates (Hahn & Doh, 2006). By using more powerful tools, we can study retailing at a deeper level, gaining more information about how business units operate.

Despite its usefulness, hierarchical linear modeling techniques are rarely used in international marketing research. In a survey of international business journals, Hult, Ketchen, Jr., Griffith, Finnegan, Gonzalez-Padron, Harmancioglu, Huang, Talay and Cavusgil (2007) find that less than 2% of the international business articles employed multi-level data analysis techniques. However, variance components tools have a relatively long tradition in the strategic management literature, in part as a direct result of trying to account for multi-level effects in the diversification research (Rumelt, 1991). Despite this history, multi-level models have not yet become well known in business research. This study uses cross-nested and Two-Level HLM frameworks in order to more realistically model our phenomenon of interest and to isolate the unique compositional and

contextual forces influencing FBU performance. To our knowledge, multi-level modeling remains rare in the marketing literature and cross-classified models are not yet used.

By concentrating on one industry, this study will mitigate a complication typical to cross-industry studies, which is that the heterogeneity of industry structures makes it difficult to compare variance components among firms across industries (Rumelt, 1991, p. 168). Although questions arise about the time-invariance of diversification models, we also consider how to test this issue. By using market share information from two subsequent years, we explore the temporal nature of our key relationships. To our knowledge, there are no empirical studies in the international marketing literature that examine how firm and country factors influence the relationship between FBU factors and performance in a multi-level framework.

MODELS

Random effects models are more flexible than classical analyses of variance in that they have the ability to handle unbalanced data, covariance components, and discrete as well as continuous covariates at multiple levels (Raudenbush, 1993). In addition, HLM is more appropriate than other regression based techniques because of the nested nature of the data. Retailer FBUs are cross-nested within the corporations and the countries in which they operate. Although FBUs of the same company share the same parent, they also need to adapt to forces within the local retail market. We can also model the nesting

within either of these contexts separately, and it would be an improvement upon traditional models.

We begin with a One-Way ANOVA with Random Effects to illustrate the basic difference between this class of models and conventional, Ordinary Least Squares (OLS) approaches. We start with this model, so that we can establish the basis for embarking down this analytical path. In our model, this represents the base model. At level one of the model, $Y_{ij} = \beta_{0j} + r_{ij}$ where $r_{ij} \sim N(0,\sigma^2)$ for i=1,..., n_j FBUs in corporation j, and j=1...34 corporations. The σ^2 represents the FBU-Level variance. At level two, or the corporate level, β_{0j} provides a benchmark of the average market share value for each corporation, which is composed of the grand-mean for all corporations (γ_{00}) and random error (u_{0j}). Thus, the basic model has a fixed effect (i.e., the grand-mean) and two random effects at the FBU and corporate levels. In contrast to the One-Way ANOVA with Fixed Effects, this model partitions variance between the two levels.

From this base model, researchers can choose whether to model the second level more fully in terms of moderating factors to explain both the intercept and/or slope terms as well as whether to allow slope coefficients to vary. The modeling decisions are based upon theory and data specifications.

We chose to test the influence on FBUs of being nested in countries and corporations separately[11]. We employ a Two-Level HLM. We free the mean to

[11] We attempted to use a cross-classified model to determine the relative contributions of compositional and contextual effects. While this model best fits our conceptualization, our data was too sparse data for reliable usage of this analytical tool.

vary across corporations, but fix our slope coefficients. In fixing our slopes, we show our expectation that the moderation effect is the same across corporations. In sum, we are modeling the impact of higher level factors influence on the means and relationships at the FBU level.

The General Model

Level 1: FBU Level

$$Y_{ij} = \beta_{0j} + \beta_{1j}X_{1ij} + \beta_{2j}X_{2ij} + \ldots + \beta_{Qj}X_{Qij} + r_{ij}$$

Y_{ij} is the performance of each FBU i in country or corporation j;

β_{qj} is the mean performance across countries or corporations (β_{0j}) and regression coefficients relating X_{ij} to Y_{ij} for cell i

X_{qij} are the FBU level strategies or characteristics for group j in cell i

r_{ij} is the within-cell random effect, i.e., the deviation of FBU ij's performance from the FBU mean.

σ^2 is the within-cell variance of r_{ij}

i =1,..., n_j FBU within cell ij;

j=1,..., J= the number of countries or corporations, depending upon the model

Level 2 Country or Corporate Effect

$$\beta_{qj} = \gamma_{q0} + \gamma_{q1}W_{1j} + \gamma_{q2}W_{2j} + \ldots + \gamma_{qS_q}W_{S_qj} + u_{qj}$$

γ_{00} is the model intercept, E(γ_{q0}) when all the explanatory values are zero

W_{pk} is the characteristic or strategy effect on the distribution of outcomes within country or corporation j

u_{qj} is the random effect associated within country or corporation j

CENTERING

A choice of centering of predictors helps determine the intercept term for each set of relationships in our model. The primary reason is that, without

centering, the intercept is an average value of the outcome variable when the predictor is zero, which may not make sense (Luke 2004). At Level 1, we do not center our data because a diversification score of zero is meaningful in diversification research. For example, Aldi and Lidl typically do not deviate from their hard discounter format, which would give them diversification scores of zero for sticking to one format. At Level 2, we use grand-meaning centering for ease of use and interpretation (Raudenbush & Bryk, 2002b). This means that we would interpret our results as deviations from the grand means of all FBUs.

HYPOTHESIS TESTING

We test the specific relationships utilizing the general models above and using Maximum Likelihood Estimation. Our investigations require access to SPSS 15.0 and HLM 6.0 to perform the statistical analyses. Given the specific research questions asked and degree of freedom constraints, at a minimum, three separate models need to be constructed. Furthermore, individual parameter estimates can be adjusted with Bayesian shrinkage methods.

The key relationships are tested with the control variables added incrementally. The Level-1 model is built first with ML deviance statistics examined to see if model improvement occurs with the introduction of the latest variable. Since we have greater than 30 observations at the higher levels, ML estimates should produce similar results to REML. In addition, we provide a diagnosis of the data visa vie HLM assumptions about errors and random effects. For instance, Boxplots, Scatterplots and Q-Q Plots at each level should be

examined to determine whether there are any transformations required or any abnormalities in the data structure (Luke, 2004).

For the first hypothesis, we examine the aggregated diversification-performance relationship for FBU_i in $corporation_j$ or $country_j$. FBU consists of all entities operating in a specific country for a particular corporation. We test a squared diversification term to determine if there is a curvilinear (inverted U) relationship. If there is a positive main term and a negative squared term, this indicates the presence of curvilinearity. FBU level covariates include the number of governance modes and total number of outlets. While we have no theoretical justification for predicting the direction of the governance covariate, we expect to see a negative relationship between total number of modes and market share due to the increasing difficulty in trying to control different modes. We also expect to see a positive relationship between network size (i.e., total number of outlets) and market share. The corporate level control variables are experience, size, and centralization. We would expect to see a positive relationship between experience, size and centralization on Level-1 means and relationships. All three variables will be tested to see whether they explain the variance in the intercept and diversification parameters. At the country level, industry growth and concentration are the covariates expected to affect the intercept and diversification terms.

For the second hypothesis, we examine each FBU format in country and/or corporate contexts. We are interested in whether particular control modes are associated with higher performance. We also need to control for format

(type) differences, dominant business within the country, and whether the particular entity is related to the dominant business. The corporate level control variables are experience, size, and centralization. We would expect to see a positive relationship between experience, size and centralization on Level-1 means and relationships. All three variables are tested to see whether they explain the variance in the FBU Level parameters. At the country level, industry growth, format size, and industry concentration are the covariates expected to affect the FBU level terms. We expect to see a positive relationship between experience, size and centralization on means and slopes.

For the third hypothesis, we examine six diversification strategy-performance relationships. FBUs consist of all formats operating in a specific country for a particular corporation. We also create a profile for the FBU by looking at the dominant governance mode along with the diversification strategy. The corporate level control variables are experience, size, and centralization. All three variables are tested to see whether they explain the variance in the intercept and diversification parameters. At the country level, industry growth and concentration are the covariates expected to affect the intercept and diversification terms.

For each hypothesis we have estimations of the FBU, corporation or country effects. The significant value in partitioning the variances is to show the relative contribution in explaining variance in the dependent variable for each level of the model. Graphical presentations of the results are used to illustrate the relationships.

CHAPTER IV

RESULTS AND DISCUSSION

In this section, we report our findings from the statistical analyses and discuss our finding in the context of our theoretical model. Our results from the statistical analyses are described below. The first section will report descriptive statistics and correlations. The second section will be broken down by the analyses related to each hypothesis. The last section summarizes our results.

THE SAMPLE

In Appendix A, we show the descriptive statistics, histograms, and bivariate correlations for our sample. We have collected data on 351 format observations belonging to197 FBUs. In turn, these FBUs belong to 34 corporations and operate in the 49 countries in Tables 2 and 3. Because we were using Euromonitor data, we did not capture foreign operations of these corporations that operated outside of the 52 countries covered. However, we believe that the countries studied represent the most likely foreign market expansion targets of international retailers.

Table 2: Corporations in the Sample

Corporation	Country of Origin
Aeon	Japan
Ahold	The Netherlands
Aldi Einkauf (Aldi)	Germany
Auchan	France
Axfood	Sweden
Carrefour	France
Casino	France
Colruyt	Belgium
Cora (Louis Delhaize)	France
Costco	USA
Daiei	Japan
Dairy Farm International	Hong Kong
Delhaize Le Lion	Belgium
Foodland	Australia
Globus Handelshof	Germany
Grupo Gigante	Mexico
H.E. Butt	USA
Ito-Yokado	Japan
J Sainsbury	UK
Lidl & Schwarz	Germany
Metcash	South Africa
Metro	Germany
Modelo Continente	Portugal
Pick N Pay	South Africa
Rewe	Germany
Safeway	USA
Seiyu	Japan
Shoprite	South Africa
SHV Netherlands	The Netherlands
Tengelmann	Germany
Tesco	UK
Uny	Japan
Wal-Mart	USA
Whole Foods	USA

Table 3: Countries in the Sample

Countries	
Argentina	Mexico
Australia	Morocco
Austria	Netherlands
Belgium	New Zealand
Brazil	Norway
Bulgaria	Philippines
Canada	Poland
Chile	Portugal
China	Romania
Colombia	Russia
Czech Republic	Singapore
Denmark	Slovakia
Egypt	South Africa
Finland	South Korea
France	Spain
Germany	Sweden
Greece	Switzerland
Hong Kong	Taiwan
Hungary	Thailand
India	Turkey
Indonesia	UK
Ireland	Ukraine
Italy	US
Japan	Venezuela
Malaysia	Vietnam

We checked the distributional assumptions for both the aggregated-by-country-and-company set and the disaggregated business segment data sets. Appendix B contains ANCOVAs with Random Effects and relevant information for each hypothesis. We broke down the diversification total into its two component parts of related and unrelated diversification.

There are two main data transformations required before analysis. The first transformation is the logarithm and square-root transformations for the

independent and dependent variables that exhibit signs of severe non-normality. The second issue relates to collinearity problems caused by including variations of the same measure in the model. Because we hypothesize a curvilinear relationship and have chosen a polynomial model to test the relationship, we need to create a second order diversification term that is not severely collinear with the first order term. We employ a mean differencing technique where we replace our variable with a difference score. For example, if we have $Y = \beta_0 + \beta_1 x + \beta_2 x^2 + \varepsilon$ and a sample size of n, we would let $\bar{x} = n^{-1} \sum_i x_i$ and define $z = x_i - \bar{x}$. When we substitute the z's for the x's, the second order terms become orthogonal to the first order terms. As a result, we still have a moderate and significant correlation between the variables ($\rho = .765$), as opposed to nearly perfect correlations. But the consequences of not making these changes can include inflated standard errors and unstable parameter estimates (Wooldridge, 2003).

The next section examines the results of our analyses. Each hypothesis is introduced by a summary of results followed by an interpretation of the findings. The section ends with a discussion of our results.

Hypothesis 1

Hypothesis1: At lower levels of diversification, FBU performance should increase. At middle to high levels of diversification, FBU performance will peak and then begin to decline.

The first hypothesis concerns the overall impact of diversification strategy choices on international retailers' foreign market performance. In electing to

diversify operations, FBUs are leveraging slack resources and capabilities and/or exploring opportunities to learn about new forms of retailing[12]. When retailers use their existing resources more efficiently and/or innovate to meet customer demand more effectively, we expect them to gain higher market shares. While a certain level of diversification is presumed to boost FBU performance, we expect to see a tapering off of performance benefits from pursing diverse retail business opportunities. Since management capabilities are not limitless, retailers may hit a performance ceiling from juggling too many dissimilar operations and resources get stretched too thin. We explore this notion in the analyses below, controlling for potential corporate and country influences that will influence our FBU parameters. In short, we find no evidence of a curvilinear relationship between diversification and market share in our models. Hypothesis 1 is not supported.

Corporate Effects

In our baseline model, the first analysis answers a simple question: For the sample of 197 FBUs, how much do FBUs vary in their mean market share? We ran a One-Way ANOVA with Random Effects to estimate the mean for each corporation, find the average of these averages, and the amount of variation between FBUs. The grand-mean corporate retail market share, $\hat{\gamma}_{00}$, is from .33% to 1.03%. In other words, without looking at individual corporations, we can say that the average FBU market share performance is less than 1% of the total retail market.

[12] An alternative explanation could be that retailers are having difficulties competing in their home markets, exemplified by Japanese retailers expansion into Hong Kong (Sternquist, 1997b).

In addition, we find that there is significant variation of corporate means, β_{0j}, around the grand mean, $\hat{\gamma}_{00}$ ($\chi^2 = 80.09929, df = 32, p < .001$). The estimated variability in these corporate means is .46457 with corporate total market share means ranging between 0% and 2.02%. The intraclass correlation indicates that about 18% of the variance in market share is between corporations.

Models 1 and 2 attempt to clarify the Level 1 (FBU) model. In Model 1, our aim is to test the curvilinearity hypothesis, using a polynomial model. Both diversification variables are difference scores to remedy multicollinearity problems between the two variables. The first is the mean difference of total diversification for the FBU, while the second is the mean difference score squared. We find that the directions of the variables change, as would be expected in an inverse U-shaped model. However, the squared term is not significant. When we examine the correlations between the two terms, we see that they are moderately high, but below .7. When we check for potential curvilinear patterns in the Q-Q plot of the Level 1 residuals of the final model, the majority of the values lie on or very close to a straight line. In sum, we reject Hypothesis 1 that there is a curvilinear relationship between diversification and performance. The model results are in Table 4, while explanations are contained in Appendix C.

Table 4: Diversification-Performance Relationship with Corporate Effects

	Base Model	+DT	+DT2	+Outlets	+ID	+Exp	+Outlet	+Corp Size
Fixed Effects								
Average Corporate Retail Market Share, $\hat{\beta}_{0j}$								
Mean market share, $\hat{\gamma}_{00}$	-.3833[a]	-.898547	-.3387[b]	-1.7412[a]	-1.7895[a]	-1.9085[a]	-2.3376[a]	-2.3659[a]
International Diversification, $\hat{\gamma}_{01}$					.0469[a]	.0481[a]	.0930[a]	.0636[a]
Corporate Size, $\hat{\gamma}_{02}$								.3752[a]
Total Diversification, $\hat{\beta}_{1j}$								
Diversification Mean, $\hat{\gamma}_{10}$		1.902056	2.1679[ad]	1.2865[a]	1.3070[a]	1.2459[a]	1.1307[a]	1.1704[a]
Retail Experience, $\hat{\gamma}_{11}$						.0174[a]	.0191[a]	.0170[a]
Diversification Squared, $\hat{\beta}_{2j}$								
Mean Square Diversification, $\hat{\gamma}_{20}$			-.4985[d]					
Number of Outlets, $\hat{\beta}_{3j}$								
Mean Outlets, $\hat{\gamma}_{30}$				.2444[a]	.2293[a]	.2483[a]	.4078[a]	.4051[a]
Total Outlets, $\hat{\gamma}_{30}$							-.1215[a]	-.1293[a]
Random Components								
Level 1 effect, σ^2	2.1162	1.6241	1.6201	1.4608	1.4731	1.3685	1.3166	1.3464
Corporate Level variation	.4646	.46410	.4555	.6143	.4191	.5959	.4646	.2559
Deviance	727.8149	679.6971[c]	678.9469	665.4983[c]	660.4060[c]	653.3012[c]	641.8854[c]	636.7203[c]
# Parameters	3	4	5	5	6	7	8	9

[a]Significant at p<.05, [b]Significant at p<.10, [c]Model comparison to previous model is significant at p<.05 [d] This variable is deviated from the mean.

Final Model

$$LNMKT03_{ij} = \gamma_{00} + \gamma_{01}*(INTDIV02_j - \overline{INTDIV02}_.) + \gamma_{02}*(LNSIZE_j - \overline{LNSIZE}_.) + \gamma_{10}*DT02_{ij} + \gamma_{11}*(EXPCONT_j - \overline{EXPCONT}_.)*DT02_{ij} + \gamma_{20}*LNTLOUT0_{ij} + \gamma_{21}*(LNOUT02_j - \overline{LNOUT02}_.)*LNTLOUT0_{ij} + u_{0j} + r_{ij}$$

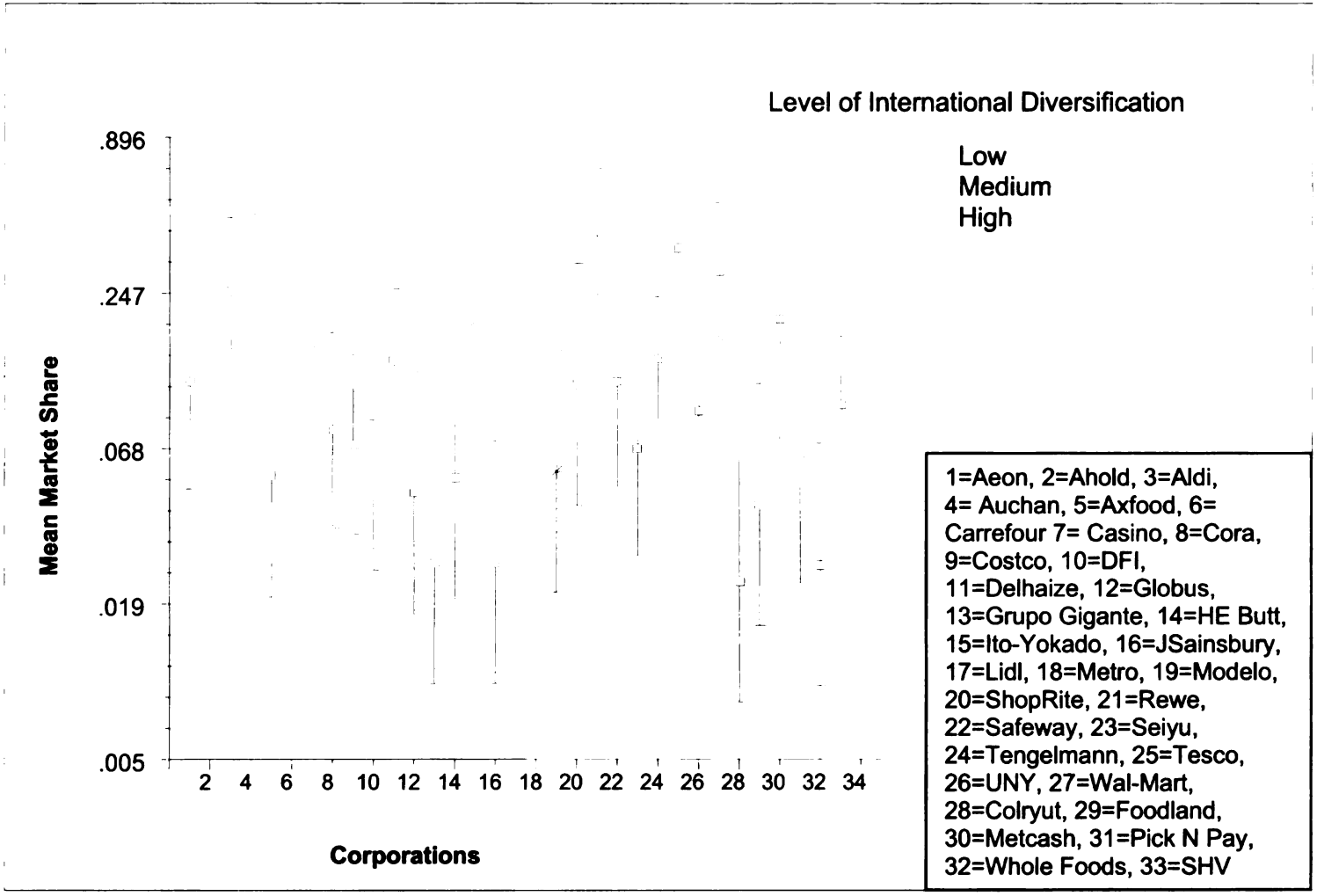
In the models above, we looked at the effect of the covariates on the relationships of FBU variables (i.e., total diversification, FBU size) on market share. Next we turn to the impact of covariates on the intercept. In model, the intercepts represent mean corporate market shares. The final model adds the corporation's size, namely the total number of employees worldwide, as an additional explanatory variable for the intercept. In this model, we assume that corporate size has the same effect across corporations. Does corporate size significantly predict the mean market share? First, examining the intercept, we see a significant relationship ($\hat{\gamma}_{00} = -2.3659, t = -8.405$). We also observe a positive association between international diversification and mean market share ($\hat{\gamma}_{10} = .063623, t = 2.942$). Corporate size also has a positive association with mean market share ($\hat{\gamma}_{10} = .375175, t = 2.524$), controlling for other FBU and corporate factors. The residual variance between the Base Model ($\tau_{00} = .4647$) and this model ($\tau_{00} = .25587$) is lower. In other words, we explained 45% of the true between-corporation variance in market share by adding four corporate variables. Controlling for international diversification status, the range of plausible values for mean market share is 0% to 1.43%. Even after controlling

for the effects of international diversification, corporations still vary significantly in their mean market shares ($\chi^2 = 79.69298, df = 30, p < .001$), meaning that other variables can help explain variation between corporations.

The EB estimates of corporate market share means indicate that the mean values are fairly numerically close, but that there are noticeable differences within the corporate ranges. The only remaining issue is the slightly different way of treating corporations with only one or two FBUs as compared to corporations with many more FBUS. The precision of the estimates in predicting a mean with a small number of FBUs is probably lower than the precision of the estimates for corporations with a large number of FBUs. In this sample, the international diversifiers tend to have higher market shares than most other corporations.

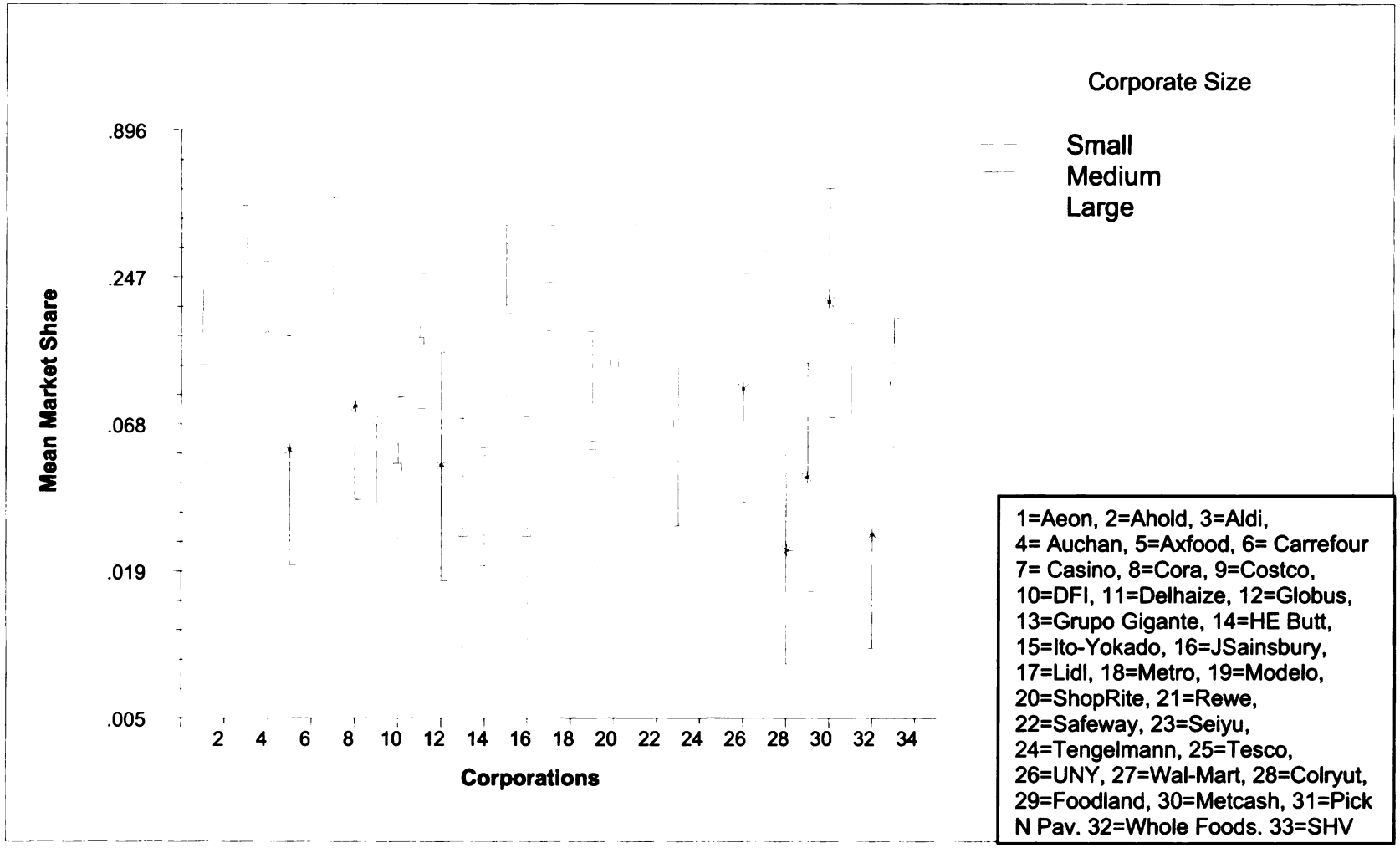
First, we look at the influence of international diversification on market share means. This shows us that seven firms with the higher levels of international diversification (e.g. Ahold, Auchan, Carrefour, Casino, Ito-Yokado, Lidl & Schwarz, and Metro) tend to have higher FBU means, on average, than many other firms in the sample. In Figure 2, after controlling for FBU and corporate size and within-country diversification, Carrefour has the highest mean market share of 2.62% and Colruyt has the lowest mean market share of .008%.

Figure 2: International Diversification on Mean Corporate Market Share



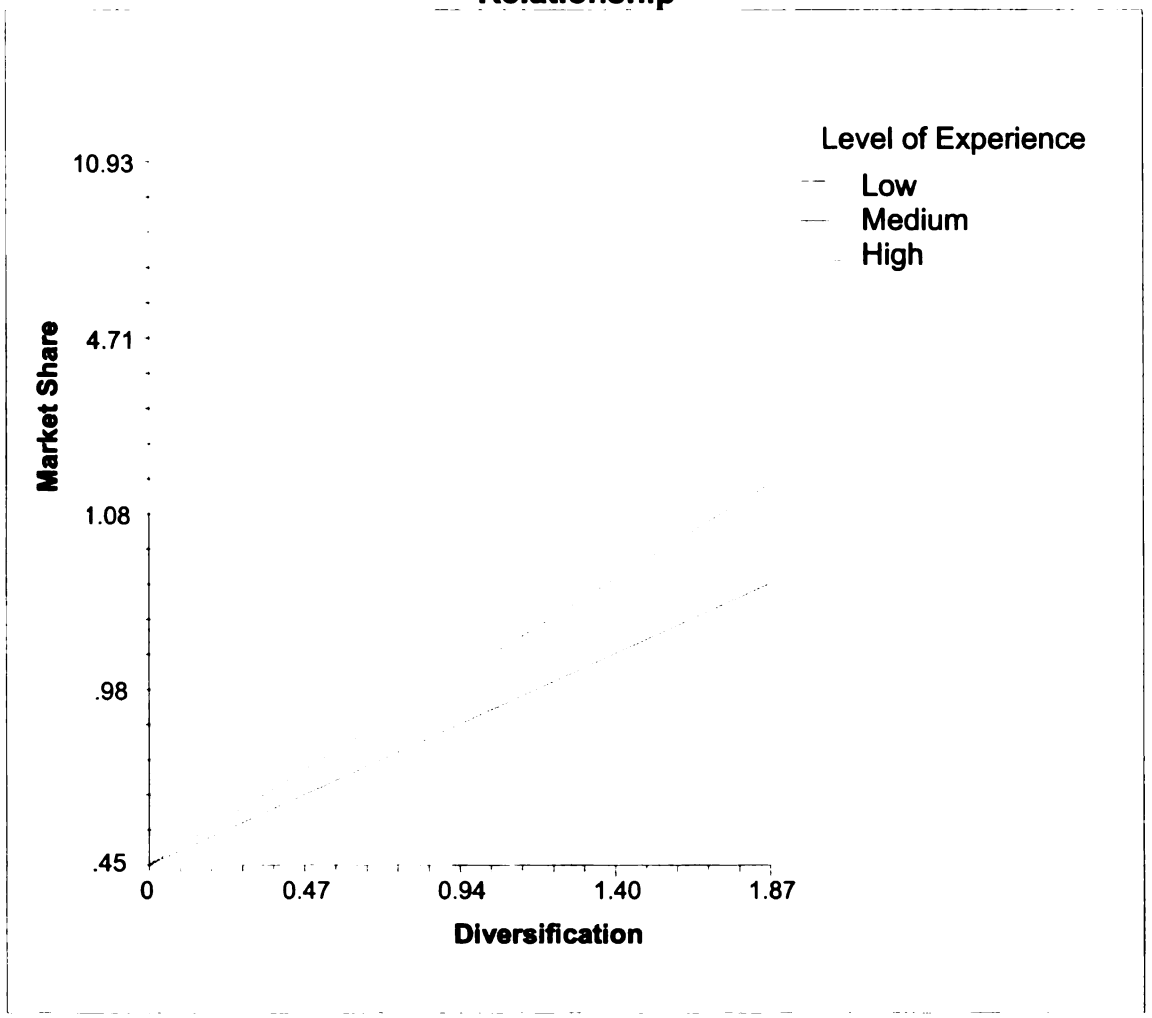
This is also the case with the impact of the corporations with the largest number of employees. Ahold, Auchan, Metro, Rewe, Safeway, Tengelmann, Tesco and Wal-Mart exhibit higher mean market shares. Some of the confidence intervals between the smallest and largest corporations do not overlap. In Figure 3, after controlling for FBU size, international and within-country diversification, Carrefour still has the highest mean market share of 2.62%, while Whole Foods has the lowest mean market share of .012%.

Figure 3: Corporate Size on Mean Corporate Market Share



Does corporate retail experience significantly predict diversification slopes? We might expect more experienced corporations to be better at formulating and implementing diversification strategies in their local operations. This expertise would be expressed in positive, steeper slopes, reflecting better results from each step towards greater diversity in their local portfolios relative to less experienced corporations. First, we see a significant, positive relationship between diversification and performance ($\hat{\gamma}_{10} = 1.245926, t = 4.385$). Next we observe that the effect from operating in the retail industry magnifies the relationship between diversification and market share ($\hat{\gamma}_{11} = .017352, t = 2.798$). For example, if Wal-Mart has an average diversification score of 1.25, a one unit change in diversification will result in a market share increase of 3.49%. When each additional year of experience has an impact of a .02 on the diversification, a one unit change in diversification results in a 3.55% increase in market share.

Figure 4: Corporate Experience on Diversification-Market Share Relationship



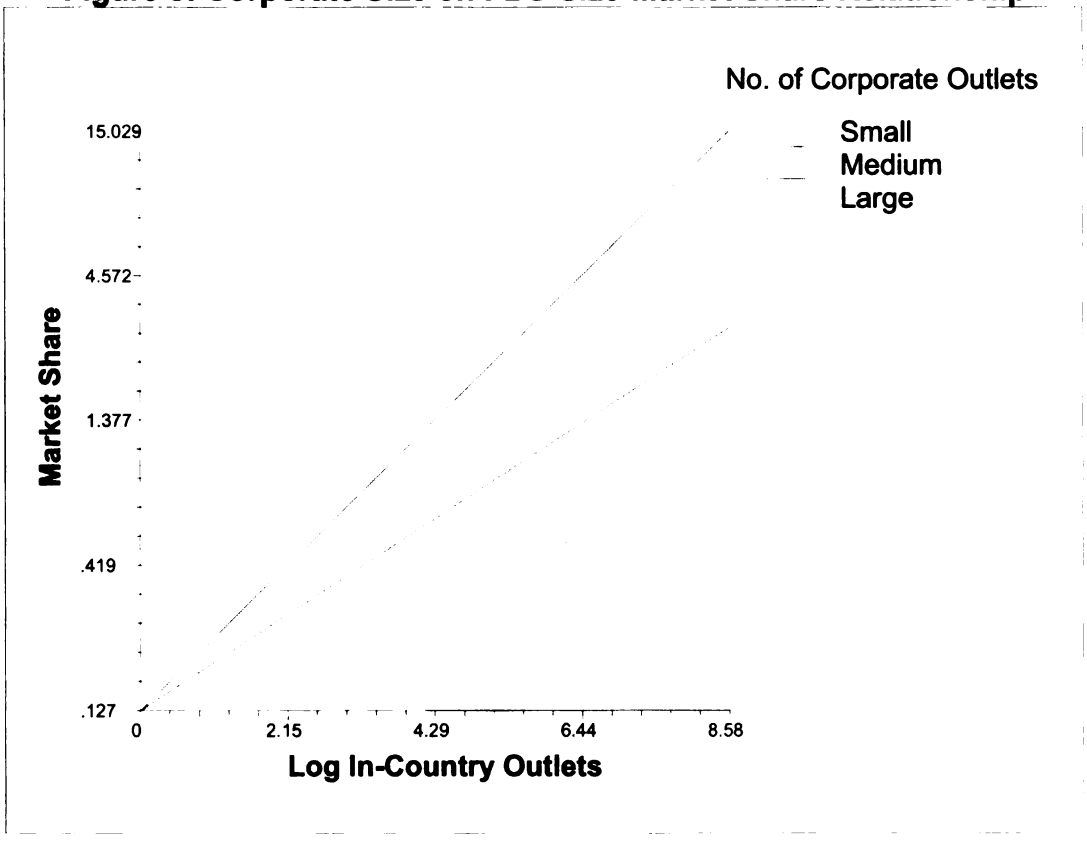
Grouping our retailers into three experience groups (low, medium, and high), the Figure 4 above reveals an interesting difference in the relationship between FBU diversification strategy and market share. Essentially, the oldest companies are able to translate their lessons gained through the years into significantly more robust diversification strategies, which are associated with greater market shares. For example, looking at the range in market shares for Ahold, the company attains its lowest mean market share of .73% for undiversified operations and 16.6% for its most diversified operations in Sweden,

holding other FBU and corporate variables constant. In contrast, Cora has a mean market share of about .7%, holding other FBU and corporate variables constant. This evidence supports the notion that experiential learning developed through years of retail operations creates a knowledge base that is vertically transmitted to FBUs. This knowledge aids in FBU diversification strategy formulation and implementation, resulting in higher performance. The gap between the two lesser-experienced groups and the highest experience group suggests that there is a specific amount or range of time that must pass before the experience coalesces into a capability.

The slopes and magnitudes are more similar between the mid- and low-experience groups than the oldest group of companies. Why? When we go back to the experience variable histograms, we see a drop-off in companies, which could suggest a survival threshold or a sampling artifact. In other words, only those chains that absorb and learn from their operational lessons survive past the 50 year mark of operations. For example, we see a break between the establishment of retail operations between Aldi (1948) and Lidl & Schwarz (1930), roughly in line with the years between the Great Depression and the end of World War II (WWII). Supporting Delios & Beamish (2001), continued existence after WWII and exposure to extreme changes in retail conditions during that time period prepares managers to formulate sound diversification strategies and equips companies to compete more effectively in local markets. Perhaps more importantly, with more market selection experience, older firms are able to recognize more favorable institutional environments (Henisz & Delios, 2001).

In this model, we assume that total outlet size has the same effect across corporations. Does corporate outlet size significantly affect the relationship between chain size and market share? First, examining the mean outlet size, we see a significant relationship ($\hat{\gamma}_{20} = .407786, t = 5.364$). Next, in Figure 5, we turn to the effect that operating in the retail industry magnifies the relationship between the FBU's relationship between corporate outlets and market share ($\hat{\gamma}_{21} = -.121471, t = -3.454$), controlling for other FBU and corporate factors. In effect, the positive relationship between FBU chain size and market share becomes weaker in larger corporations.

Figure 5: Corporate Size on FBU Size-Market Share Relationship



A possible explanation is that large companies over-emphasize network size as an indicator of efficiency and success. This would create a situation where FBU managers would be encouraged to expand the number of outlets at the expense of a more cautious growth strategy. Makro and Costco, both warehouse clubs, have the steepest slopes, whereas a diverse group of companies such as Rewe, Aldi, Ito-Yokado, and Tengelmann have the flattest slopes. This suggests that, at least at the high end, format type may be influencing the results. In other words, larger format retailers would naturally have fewer outlets than smaller ones, such as convenience stores. Because the two warehouse clubs have the steepest outlet-share slopes, it is likely that that a simple count of outlets without controlling for square footage or retail format or specific retailers may be distorting our findings.

In testing the time-invariance of the final model, we re-ran the analysis with market share for the same companies in 2004. In these tests, we continue to use independent variables from 2002, so the results give some indication of the lasting effects of the FBU strategies and characteristics as well as industry characteristics on future FBU performance. This reduced the number of useable observations to 184. Since the magnitudes and directionality of the parameter coefficients are similar, and the parameters are significant, suggesting that FBU portfolio strategies and industry factors do not change outcomes in the near term.

Country Effects

We re-tested the first hypothesis about a curvilinear relationship between diversification and market share. We ran a One-Way ANOVA with Random Effects to estimate the amount of variation between FBUs and countries. The grand-mean retail market share, $\hat{\gamma}_{00}$, is from .52% to 1.17%, which indicates a range in average market share levels among countries. In addition, we find that there is significant variation of country means, β_{0j}, around the grand mean, $\hat{\gamma}_{00}$ ($\chi^2 = 140.50599, df = 48, p < .001$). The estimated variability in these means is .75471 with retail market share means ranging between 0% and 2.55%. The intraclass correlation indicates that about 31% of the variance in market share is between countries.

Models 1 through 4 clarify the Level 1 (FBU) model. In Model 1, our aim is to re-test the curvilinearity hypothesis, using a polynomial model. We find that the directions of the variables change, as predicted. However, the squared term is not significant. As with the corporate model, we reject Hypothesis 1, indicating that we find no evidence of a curvilinear relationship between diversification and market share.

Table 5: Diversification-Performance Relationship with Country Effects

	Base Model	+DT2	+DT	+Outlet	+Emerge	+Size	+Emerge
Fixed Effects							
Average Retail Market Share, $\hat{\beta}_{0j}$							
$\hat{\gamma}_{00}$	-.1670	-.1181	-.6020[a]	-1.5695[a]	-1.9458[a]	-2.1239[a]	-2.7027[a]
Emerging Market, $\hat{\gamma}_{01}$					.5128[b]	.6378[a]	1.6731[a]
Size, $\hat{\gamma}_{02}$						-.3036[a]	-.2971[a]
Total Diversification[e], $\hat{\beta}_{1j}$							
Diversification Mean, $\hat{\gamma}_{10}$		1.8874[a]	1.7363[a]	1.0008[a]	.9615[a]	.9761[a]	1.1111[a]
Diversification Squared, $\hat{\beta}_{2j}$							
Mean Square Diversification, $\hat{\gamma}_{20}$		-.2817					
Number of Outlets, $\hat{\beta}_{3j}$							
Mean Outlets, $\hat{\gamma}_{30}$				.3102[a]	.3362[a]	.3562[a]	.4711[a]
Emerging Market, $\hat{\gamma}_{30}$							-.2818[a]
Random Components							
Level 1							
Within FBU variation, σ^2	1.6954	1.3604	1.3591	1.1091	1.1117	1.1067	1.0414
Level 2							
Intercept	.7547	.5749	.5835	.7643	.6974	.3482	.3866
Deviance	708.0295	663.1738	663.4315[c]	637.9768[c]	635.2254[d]	614.6702[c]	607.9862[c]
# Parameters	3	5	4	5	6	7	8

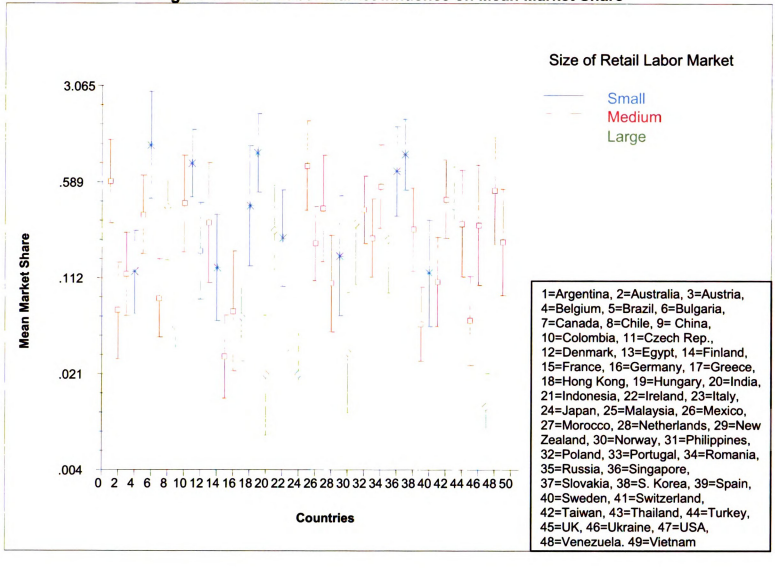
[a] Significant at p<.05, [b] Significant at p<.10, [c] Model comparison to previous model is significant at p<.05, [d] Model comparison to previous model is significant at p<.10 [e] Switch to raw DT variable after testing for curvilinearity

Final Model

$$LNMKT03_{ij} = \gamma_{00} + \gamma_{01}*EMERGE_j + \gamma_{02}*(LNEMPLOY_j - \overline{LNEMPLOY}_.) + \gamma_{10}*DT02_{ij} + \gamma_{20}*LNTLOUT0_{ij} + \gamma_{21}*EMERGE_j*LNTLOUT0_{ij} + u_{0j} + r_{ij}$$

An inspection of the EB intercepts finds a fairly wide range in confidence intervals for market share means between countries. For clarity, we identify countries by their membership in the smallest, average and largest size retail markets (i.e., retail labor market size). In Figure 6, some of the larger markets tend to have lower mean value ranges than the other groups. India, Italy, Japan, Norway, and the United States have low mean FBU values. It may mean that foreign retailers have a particularly hard time winning market share for a variety of reasons, including barriers to entry (i.e., India) or strong domestic food retailers (i.e., Italy, US). When foreign companies do not have a strategic competitive advantage relative to domestic competitors, internalization theory suggests that they re-consider entering the market (Dunning, 1980; Salmon & Tordjman, 1989). In emerging markets, when barriers to entry and competition are eased, we would anticipate market share means to rise, as international retailers begin to enter the country. As for larger, more sophisticated retail markets, there are no theoretical reasons to expect mean market shares to rise, all things equal.

Figure 6: Retail Labor Market Influence on Mean Market Share



Finally, in Figure 7, we look at the EB confidence intervals for the emerging market-mean market share relationship. We can see that foreign retailers are able to capture, on average, higher markets shares than in developed retail markets. Supporting Dunning (1988), foreign retailers enter markets in which they possess an advantage over domestic competitors. Given the greater sophistication in and exposure to a greater number of merchandising management techniques in more advanced retail markets, these advantages allow foreign retailers to garner a larger piece of the local foreign markets. Also, the absolute sizes of these markets tend to be smaller than developed markets. Not surprisingly, India and China have lower means than the other emerging markets. The toughest developed market for foreign retailers is the United States. Again, not surprising, given the number of foreign retail failures in the highly competitive US market.

Figure 7: Level of Development Impact on Mean Market Share

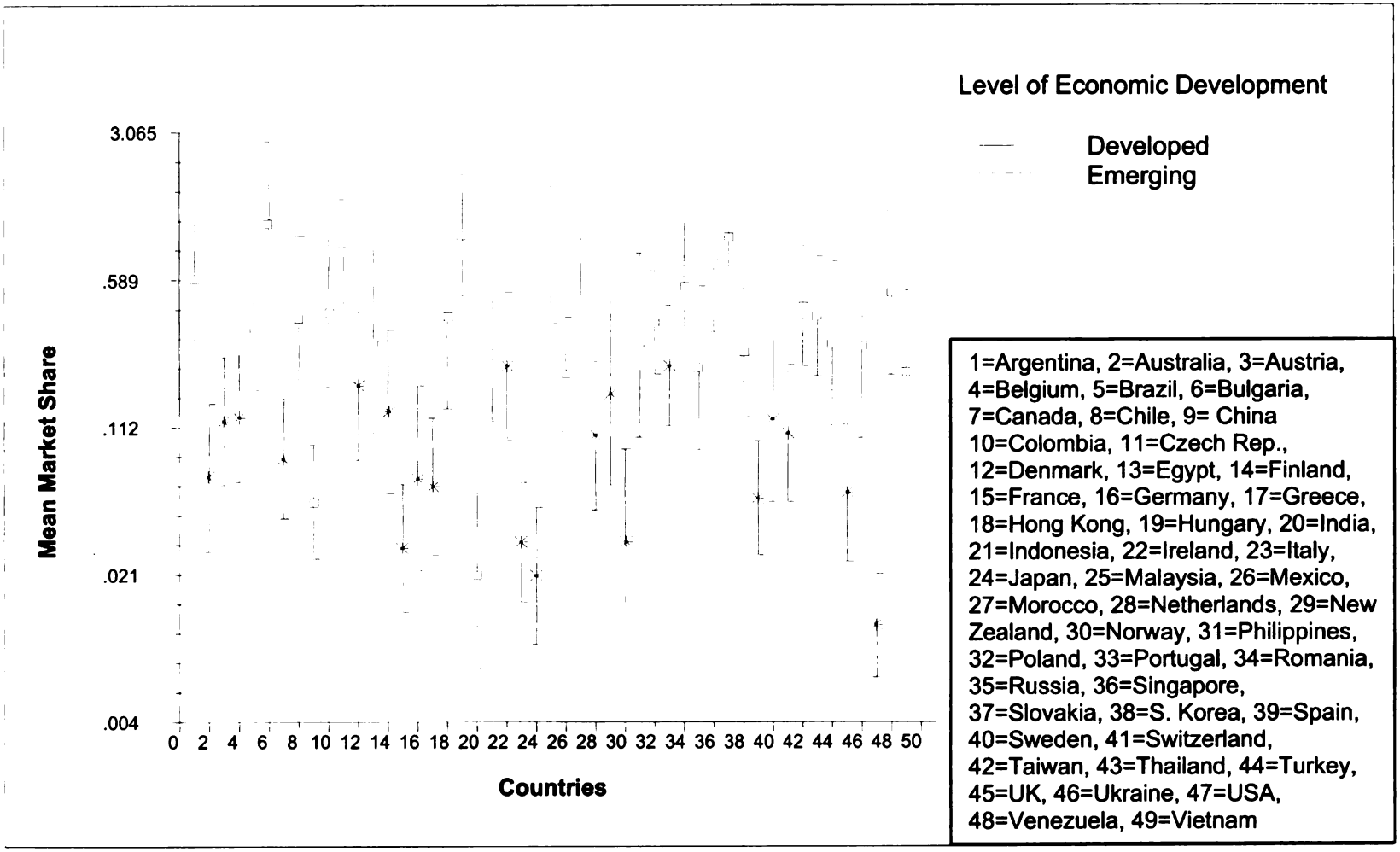
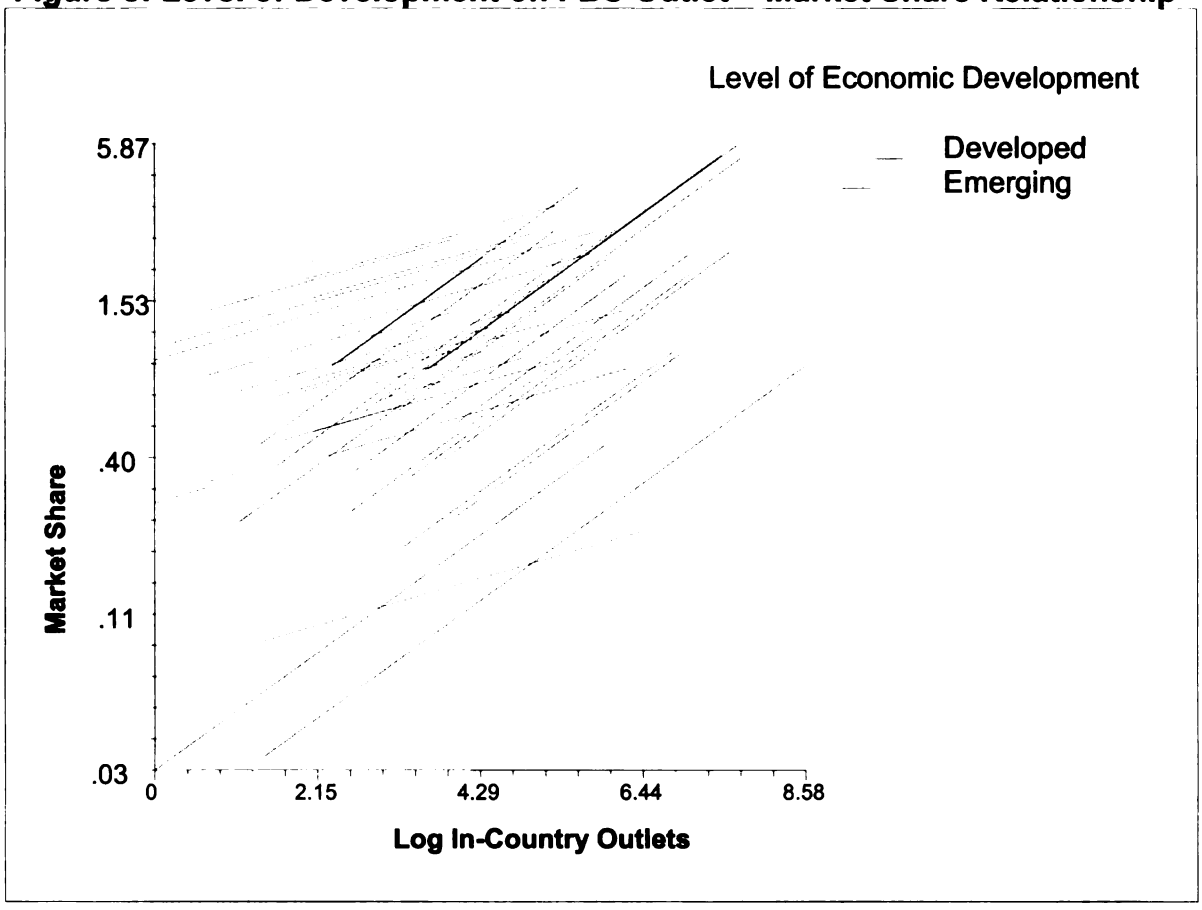


Figure 8 illustrates the impact of emerging market status in the country as an explanatory variable for the size of their local operations. In this model, we assume that being an emerging market has the same moderating effect across countries in that, on average, emerging markets are likely to have less developed chains. Does a country's level of development significantly predict the relationship between chain size and market share? Essentially, we want to know whether a retailer's capital expense for expanding a store network yields similar market share results across the world. First, examining the outlet mean, we see a significant positive relationship ($\hat{\gamma}_{20} = .4711, t = 6.787$). In Figure 8, we turn to the effect from operating in an emerging retail industry weakens the positive association between chain size and market share ($\hat{\gamma}_{21} = -.2818, t = -2.829$), controlling for other country factors. For further evidence, we examine a graph representing all the countries in the sample.

Figure 8: Level of Development on FBU Outlet – Market Share Relationship



In every case, the slopes of the emerging markets relationships between chain size and market share is suppressed relative to the chain size-market share slopes of the developed countries. FBUs operating in emerging markets do not get the same boost in market share from possessing large chains as in developed retail markets. A possible explanation for this is in the retailing and logistics literatures.

The efficiency of the technological environment is critical to success of the retail sector (Sternquist, 2007). The technological environment relates to a country's information, communications, energy, and transportation infrastructures. Of particular importance for retailers is the efficiency of the logistics infrastructure because it directly impacts their operational costs. At the

firm level, logistics costs represent the costs associated with managing the flow of information, products and services within the supply chain. For retailers, superior logistics capability is considered a sustainable competitive advantage (Levy & Weitz, 2006).

At the national level, logistics costs represent the systemic ease at which products, services and information flow within and between industries. Logistics scholars have been developing estimation methods that will predict the market potential of logistics services. Using different data inputs, early works concentrate on estimating U.S. logistics costs as a function of transportation, inventory carrying costs and administrative costs (Delaney & Wilson, 2002; Heskett, Glaskowsky, & Ivie, 1973). Expanding the scope of inquiry from the United States to global logistics issues, Bowersox (1992) estimated logistics costs as a function of GDP, government sector product, industrial sector product, and total trade ratio. Extending this research, a number of studies using neural networks estimation to calculate national logistics costs have come from Bowersox and his colleagues (Bowersox & Calantone, 1998; Rodrigues, Bowersox, & Calantone, 2005). The authors use domestic and global trade data, transportation infrastructure, and controls for country characteristics and location to estimate national logistics expenditures (Rodrigues et al., 2005). In support of Rodriques and colleagues (2005), we find that logistics expenditures are significantly different between countries and that emerging markets have much higher logistics costs than developed markets.

The residual variance is reduced between the base model ($\tau_{00} = .75471$) and the final model decreases ($\tau_{00} = .3866$). By adding all three country level variables, we explained 48.6% of the true between-country variance in market share, or slightly less variance than in Model 5. Controlling for retail market size and level of development, the range of plausible values for mean market share is 0% to 1.29%. Even after controlling for the Level 2 effects, countries still vary significantly in their mean market share ($\chi^2 = 124.91936, df = 46, p < .001$).

In testing the time-invariance of the final model, we re-ran the analysis with market share for the same companies in 2004. This reduced the number of useable observations to 184. The magnitudes and directionality of the parameter coefficients are similar, and the parameters are significant.

Discussion of Hypothesis 1 Findings

To summarize, we have rejected the curvilinearity hypothesis in both the corporate and country models. Theory suggests inherent cognitive limitations of managers with respect to their absorption and processing of information for optimal expansion decision-making (Nayyar, 1993a). Positive diminishing marginal returns have been associated with firms that stray too far away from their core competencies (Markides, 1992). Our findings do not indicate limitations to managers' ability to successfully traverse expansion decisions. A possible reason is that much of the previous research is based on manufacturing samples, as opposed to service firms. For example, Palich et al. (2000) state that focused firms cannot benefit from economies of scope. Yet for retailers, the

source of scope economies primarily lay in distributing large quantities of goods through common warehousing and/or distribution facilities (Chandler, 1990). From this perspective, even undiversified retailers, such as Lidl or CostCo, possess economies of scope.

Yet diversification does have its benefits. Our findings suggest that an average retailer can double its market share with one unit change in level of total diversification. Moreover, related diversification seems to yield the highest performance. Diversification within the most successful segment tends to outperform between segment diversification. Undiversified firms can also survive the jump into unknown formats. Lower coordination and cooperation costs associated with unrelated diversifiers help them achieve profitability (Leontiades, 1986; Varadarajan & Ramanujam, 1987). FBUs may also be willing to tolerate lower market shares with the hopes of creating learning opportunities to support innovation with the potential to lead to sustainable competitive advantages (Barney, 1991; March, 1991; Nelson & Winter, 1982).

In exploring how diversification helps retailers perform, we need to look at the directional patterns (i.e., within segment vs. between segment diversification). In Appendix B, we provide models that decompose the diversification measures into related and unrelated diversification. Some researchers argue that MNCs do not experience performance differences from different diversification strategies (e.g., Palich et al., 2000). Our findings show that FBU outcomes vary significantly between related and unrelated diversification strategies. The difference between related and unrelated diversification can be viewed as "the

relative distance between the knowledge need to operate in the new domain and the degree of knowledge available in the current domain" (Kazanjian & Drazin, 1987, p. 347). Supporting the relatedness explanation, we find that intra-segment diversification strategies yield relatively higher performance than inter-segment diversification strategies. Cross-exploitation of resources within FBUs allows firms to more efficiently utilize FBU resources. Moreover, firms benefit by generating and sharing operational synergies via expansion into markets that serve similar customers and/or utilize similar business models. Because this accumulating organizational knowledge is unobservable, competitors struggle to imitate successful systems and strategies (Barney, 1991; Dierickx & Cool, 1989; Wernerfelt, 1995). Furthermore, in multi-business firms, economies of scale, scope and knowledge can be distributed within the network. In summary, FBUs are able to effectively utilize their higher-order resources to produce synergies leading to superior outcomes.

It turns out that unrelated diversification is good for retail FBUs, too. In foreign markets, retailers are exposed to different customer expectations and industry conditions that may necessitate a shift into heretofore unknown segments for survival. Retailers may also seize the opportunity to expose themselves to new kinds of retail businesses without having to suffer intense scrutiny of their home markets. The learning opportunity can either be bought through acquisitions or joint ventures, or created from scratch in a new venture. Our models suggest an overall positive benefit from unrelated diversification in foreign markets, albeit a less beneficial one compared to related diversification.

This lends some veracity to studies suggesting that corporations can achieve reasonable performance and can even survive entrées into unknown territories (Leontiades, 1986; Ramanujam & Varadarajan, 1989; Ramanujam, 1989).

In addition to providing support for the association between diversification and performance, we also explore and control for important contextual influences on this relationship. First, we find that FBU market share means are highest for retailers with the greatest levels of international diversification and retailing experience. Geringer et al. (1989) provide evidence that diverse information sources from higher levels of international diversification aids knowledge creation and organizational flexibility to boost MNC performance. Over time retailers also create intangible organizational capabilities (Doherty, 1999). On average, higher levels of international diversification and retailing experience better equips retailers for success in foreign markets.

In our corporate model, we also find that a corporation's level of retail experience magnifies the FBU diversification-market share relationship. Older firms seem to have a much easier time than other firms in translating their diversification activities into successful performance. Long-term exposure to and lessons learned from changes in retail practices and evolving, diverse consumer preferences appears to be filtering down to the foreign FBUs, even after controlling for corporate size and international diversification experience. This suggests that a diversification competency is developed over time as managers gain experience in making complex resource allocation decisions, supporting

Dundas & Richardson (1982). This knowledge also seems to have a lasting impact on FBU performance.

Belonging to a larger corporation has its downsides, too. We find that large companies dampen the FBU size-performance relationship. A possible explanation is that larger firms over-emphasize outlet growth at the expense of more controlled growth or focus on other kinds of performance indicators.

Retail labor market size and level of development influence FBU operations. Large retail markets adversely impact FBU mean market shares. There are three explanations for this result. First, in many of the larger labor markets, specific industry restrictions were made upon foreign retailers for the protection of local retailers. For instance, large-scale retailing laws specific target and limit expansion of foreign companies with expertise in larger formats. However, not all large markets have such restrictions. Also, domestic competitors may simply be stronger than anticipated. When retailers do not possess advantages over local retailers, the "liability of foreignness" hypothesis predicts poor performance (Hymer, 1976; Zaheer, 1995). In either case, large retail labor markets may be a proxy for difficult retail environments. Finally, in relatively large markets, smaller market shares may translate into greater absolute sales than larger market shares in small markets.

Level of development also affects FBU operations. FBUs in emerging markets have higher mean market shares than FBUs in developed countries. But, FBUs in emerging markets tend to achieve lower outcomes per outlet than in developed markets. This finding indicates inefficiencies in chain retailing in

emerging markets. Because the technical environment is an important precondition of retail success (Sternquist, 2007), Rodrigues et al.'s (2005) findings that emerging markets have significantly higher logistics costs gives some support for our results.

Hypothesis 2

Hypothesis 2: In foreign markets, wholly-owned subsidiaries should outperform joint ventures, which should outperform acquisitions.

Hypothesis 2 asks the question of whether one governance mode leads to superior performance over another. The control choices taken by retailers are driven by retailer assumptions about the foreign market environment, assessment of behavioral uncertainty, and need to protect its secrets, and government policy (Anderson & Gatignon, 1986; Sternquist, 2007; Williamson, 1985). We predict that wholly owned subsidiaries should perform the best and acquisitions the worst. Joint ventures are presupposed to perform between these modes. To clarify, we coded governance modes as the initial mode upon entering the country. Since a large percentage of retailers grow using multiple modes, this was the most straightforward measure of the retailers' desire for level of control over local operations.

In the next series of analyses, we use a disaggregated data set. While the first hypothesis is tested using a summary of FBU activities within a country, the second and third hypotheses require a disaggregation of the data at the format level. Thus, each observation reflects the characteristics of a particular firm's

format-level activities within a specific country. Since retailers often operate multiple fascia within a country and format, store brands are summarized at the format level.

Corporate Effects

After developing the format level model, we progressively incorporate country level explanatory variables, namely centralization status and international diversification. All Level 2 (i.e., country or corporate) variables are grand-mean centered to facilitate interpretation. In summary, we are trying to explain why some corporations may have higher mean market shares than others and why the magnitude of the relationship between certain format characteristics and market share may strengthen or weaken.

Final Model

$$\begin{aligned} LNMKT03_{ij} = {} & \gamma_{00} + \gamma_{01}*CENTRAL_j + \gamma_{10}*RWOS_{ij} + \gamma_{20}*JV_{ij} + \gamma_{21}*(INTDIV02_j - \overline{INTDIV02_.})*JV_{ij} \\ & + \gamma_{30}*HYPER_{ij} + \gamma_{40}*SUPERMKT_{ij} + \gamma_{50}*LNEXP02_{ij} + u_{0j} + r_{ij} \end{aligned}$$

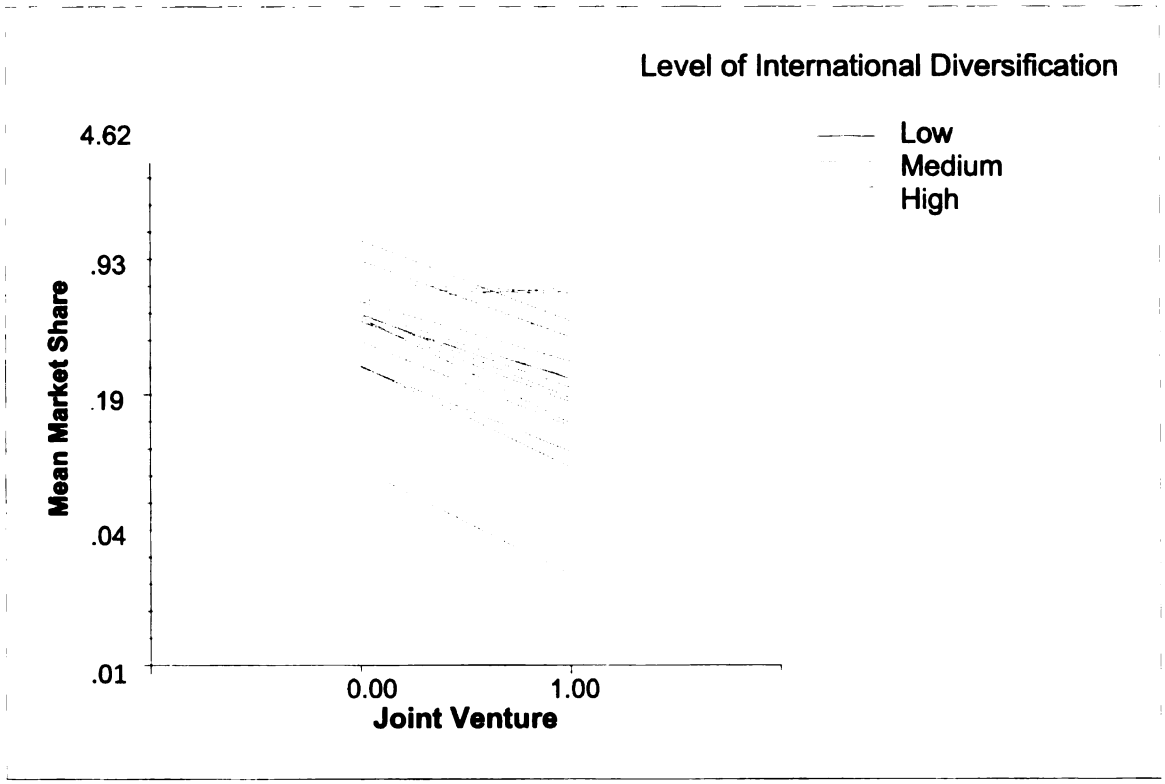
Centralized corporations may have a positive effect on mean market share for acquisitions and UWOS. By adding an explanatory variable to the equation at Level 2, we change the meaning of the residual, u_{0j} and make the variance, τ_{00}, a conditional variance of average corporate format market share after controlling for centralization and international diversification. We observe a significant negative association between centralization ($\hat{\gamma}_{01} = -.748509, t = -2.221$) and mean market share for acquisitions and UWOS. Using corporate centralization

as a proxy for information sharing, this implies that the level of knowledge sharing is too low, cross-cultural communications are poor, and/or the knowledge is not suitably useful for the specific operation to realize synergies in the average acquisition or UWOS. Linkages between the FBUs and the parent company are too weak to facilitate transfer of appropriate information to help the FBU undertake successful activities to gain market share as opposed to being focused on meeting the administrative and reporting needs of the MNC (Gupta & Govindarajan, 1986). Another explanation is that since the centralized parent, exerting a stronger influence than a decentralized parent (Scott & Meyer, 1983), may not have strong capabilities or understanding of the technical or local nature of the FBU's marketplace, rendering their guidance unsatisfactory. Finally, even though a corporation is centralized in its home market, its foreign operations may be decentralized or regionally managed.

In Figure 9, we find a slightly positive influence on the joint venture-market share relationship ($\hat{\gamma}_{21} = .049568, t = 2.198$) via the firm's international diversification experience. In other words, some more internationally savvy firms may be able to manage joint ventures better than less internationally experienced firms. However, we see a fairly wide range in slopes for the experienced international operators. These differences may reflect many things. First, we notice that the joint venture deals include both related and unrelated businesses. Noticeably, we find no instances of a UJV in a country when there is no RJV also present. In other words, those UJVs would not exist if the RJVs were not part of a

larger joint venture arrangement. It is unknown (but probable) that the UJVs represent a format in which the host country partner has some experience.

Figure 9: International Diversification on JV-Market Share Relationship



Second, there were almost seven times more JV businesses in emerging markets than in developed markets. To a degree, this may reflect specific laws or business requiring joint venture partners. For instance, in 2002, both Ahold and Casino have joint ventures in Argentina, which places restrictions on larger scale formats, so joint ventures may help them maneuver the local legal and regulatory environment. Finally, the three companies that have slightly positive slopes are Ahold, Carrefour and Metro. These corporations operate in more than 25 countries worldwide, representing some of the most prolific international retailers in the world. But they are not necessarily the ones that have the most joint

ventures. This lends some credence to the notion that firms operating in many diverse environments may possess a specific international capability, which may be more important than a specific mode management capability (Barkema et al., 1996).

The general tendency for non-joint ventures to have higher market shares is evident. Firms with more diversification appear to exhibit higher market shares than less diversified firms. This group of more diversified firms also exhibits a wider range of slopes than the less diversified firms with three corporations even having slightly positive slopes for their joint ventures. This suggests that some experienced corporations are better than others at sharing control of their international operations with another company.

The residual variance decreases from Model 5 ($\tau_{00} = .81083$) to Model 6 ($\tau_{00} = .50324$) to Model 7 ($\tau_{00} = .48647$). Controlling for centralization and international diversification, the range of plausible values for mean market share is 0% to 1.59%. In other words, we explained 40% of the true between-corporation variance in market share by adding the centralization and international diversification variables. Even after controlling for centralization and international diversification effects, corporations still vary significantly in their mean format market shares ($\chi^2 = 88.52853, df = 32, p < .001$).

In testing the time-invariance of the final model, we re-ran the analysis with market share for the same companies in 2004. This reduced the number of useable observations to 334. The reliability of the corporate means to predict the grand-mean is near zero($\lambda = .008$), though the magnitudes and directionality of

the parameter coefficients are similar. In the final model, international diversification is not significant, suggesting that medium-term format performance does not continue to be affected by the corporation's international diversification strategy. Likewise, 2004 format performance appears to be unaffected by the state of corporate centralization. We have to revert back to the full level 1 model with random effects to get a model mean similar and significant parameters. This suggests that prior corporate effects' influence on FBU performance fade over time.

Table 6: Format Governance Performance with Corporate Level Effects

	Base Model	+JV	+RWOS	+Hyper	+Super	+Experience	+Central	+ID
Fixed Effects								
Intercept, $\hat{\beta}_{0j}$								
Mean, $\hat{\gamma}_{00}$	-.9427[a]	-.7539[a]	-.9961[a]	-1.0900[a]	-1.3860[a]	-1.9722[a]	-1.4513[a]	-1.4786[a]
Centralized Company, $\hat{\gamma}_{01}$							-.8541[a]	-.7485[a]
Joint Venture, $\hat{\beta}_{1j}$								
Joint Venture Mean, $\hat{\gamma}_{10}$		-.7941[a]	-.6168[a]	-.6772[a]	-.6329[a]	-.5674[a]	-.5496[a]	-.9270[a]
International Diversification, $\hat{\gamma}_{11}$								.049568[a]
Related Wholly Owned Subsidiary, $\hat{\beta}_{2j}$								
Mean, $\hat{\gamma}_{20}$			.4720[a]	.3954[b]	.4742[a]	.5259[a]	. 5207[a]	.5090[a]
Hypermarket, $\hat{\beta}_{3j}$								
Mean, $\hat{\gamma}_{30}$				.5684[a]	.7990[a]	.9204[a]	.8932[a]	.8504[a]
Supermarket, $\hat{\beta}_{4j}$								
Mean, $\hat{\gamma}_{40}$					.6182[a]	. 6030[a]	.5805[b]	.5382[b]
In-Country Experience $\hat{\beta}_{5j}$								
Mean Experience $\hat{\gamma}_{50}$						.2691[a]	.2671[a]	.2969[b]
Random Components								
Level 1								
Within FBU variation, σ^2	2.6202	2.7251	2.4705	2.4129	2.3634	2.1989	2.2223	2.1931
Level 2								
Intercept	.3107	.2438	.3815	.3963	.6116	.8108	.5032	.4865

Cont'd Table 6

Deviance	1329.4534	1317.8898[c]	1313.0879[c]	1304.8237[c]	1299.5309[c]	1297.5235[c]	1282.6366[c]	1243.2814[c]
# Parameters	3	4	5	6	7	8	9	10

[a]Significant at p<.05, [b]Significant at p<.10, [c]Model comparison to previous model is significant at p<.05

Country Effects

In the next section, we are looking at potential impact of country level variables to explain the relationship that governance mechanisms may have on format level performance. In the previous corporate model, we were able to identify significant corporate covariates that impact format operations in foreign markets. In this analysis, we look at the impact of FBUs starting business in a particular format by buying retail chains outright or acquiring more than 50% of an existing chain.

Unlike the previous model, RWOS and JV were not significant variables. Therefore, we test the hypothesis from the presumed least effective governance mode – i.e., acquisitions (ACQ). In our first series of models, we are looking at the corporate level effects on format level characteristics and strategies, and performance (Table 6). Models 1 through 5 clarify the Level 1 (FBU) model. In Model 1, we establish the significance of the governance parameter $(\hat{\gamma}_{10} = .297136, t = 1.658)$.

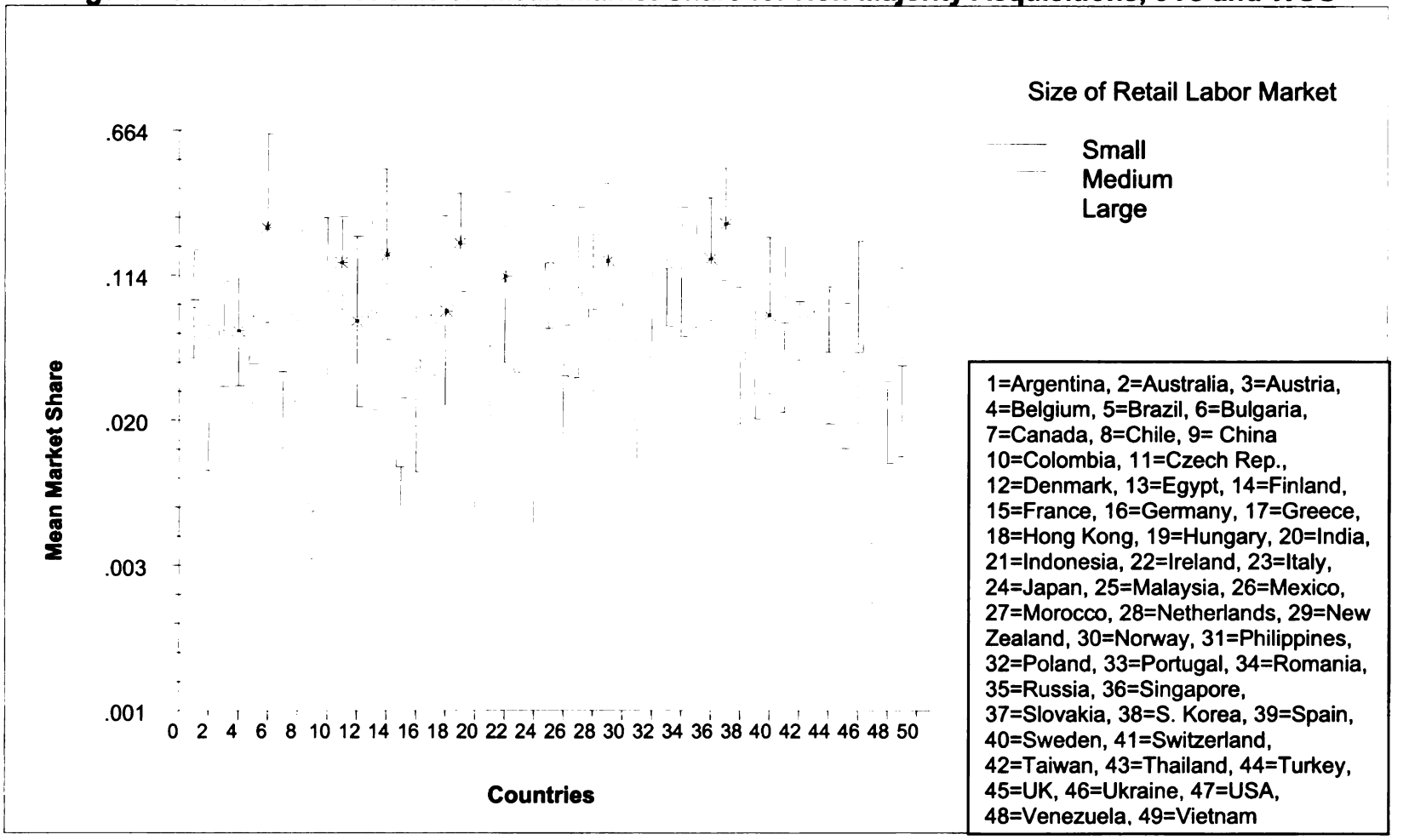
In models 6-7, we progressively incorporate country level explanatory variables, namely the size of the retail labor market and level of industry concentration. All Level 2 variables are grand-mean centered to facilitate interpretation. In summary, we are trying to explain why formats in some countries may have higher mean market shares than others and why the magnitude of the relationship between certain format characteristics/strategies and market share may strengthen or weaken.

Final Model

$$LNMKT03_{ij} = \gamma_{00} + \gamma_{01}*(LNEMPLOY_j - \overline{LNEMPLOY}_.) + \gamma_{10}*DOM02_{ij} + \gamma_{20}*RELTD02_{ij} + \gamma_{30}*ACQMORE_{ij} + \gamma_{40}*LNEXP02_{ij} + \gamma_{50}*LNOUT02_{ij} + \gamma_{51}*(SQRTCONC_j - \overline{SQRTCONC}_.)*LNOUT02_{ij} + u_{0j} + r_{ij}$$

We predict that the size of the retail labor market may have an effect on a format's mean market share. By adding an explanatory variable to the equation at Level 2, we change the meaning of the residual, u_{0j} and make the variance, τ_{00}, a conditional variance of average corporate market share after controlling for labor market size and industry concentration. We observe a significant negative association between labor market size ($\hat{\gamma}_{01} = -.277542, t = -4.054$) and mean market share.

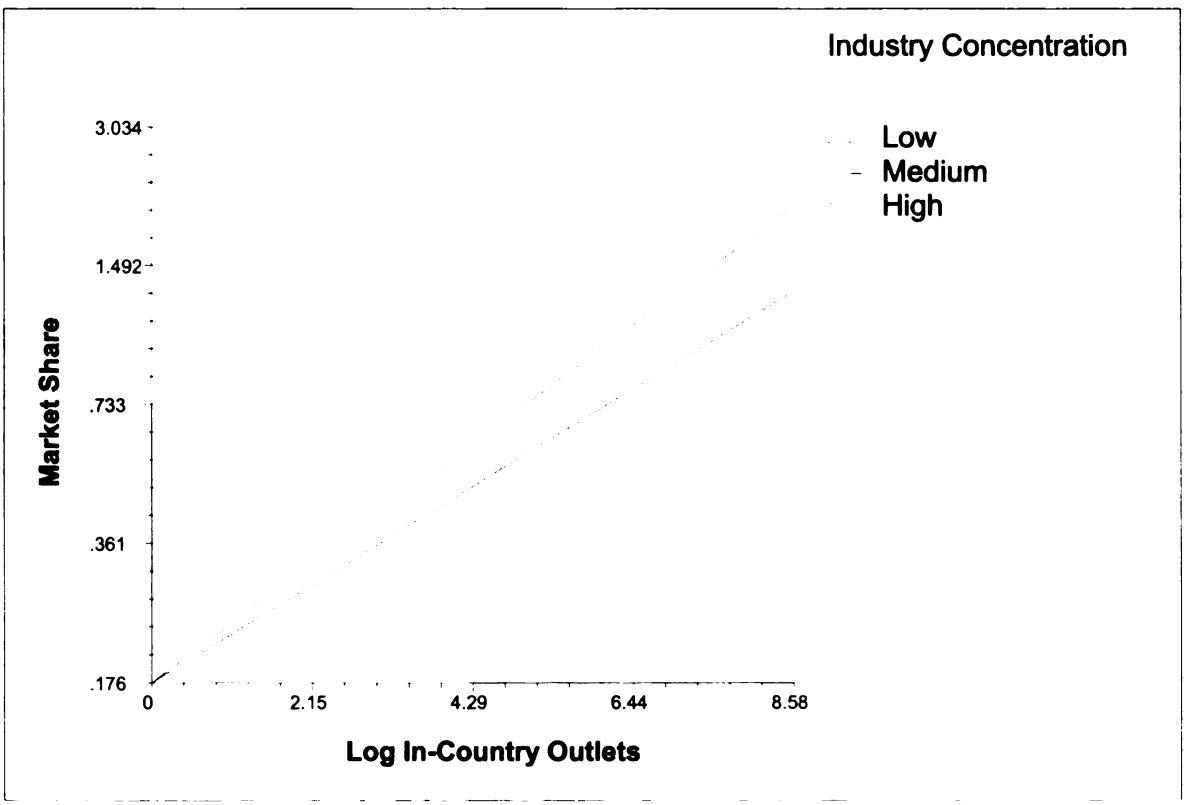
Figure 10: Labor Market Size on Mean Market Share for Non-Majority Acquisitions, JVs and WOS



Perhaps not surprisingly, the biggest labor markets India, China and the United States represent the lowest data ranges with FBU mean market shares for entry modes other than majority acquisitions of less than .01%. The highest mean market shares (around .06%) for the small countries are in diverse European markets, such as Bulgaria and Finland.

We also find a slightly positive influence on the chain size-market share relationship ($\hat{\gamma}_{21} = .054136, t = 1.871$) due to industry concentration. In other words, more concentrated markets tend to magnify the relationship between chain size and market share. The graph below shows country level detail on this relationship.

Figure 11: Industry Concentration on Chain Size-Market Share Relationship



Industry structure effects business performance, which supports the literature (e.g., Rumelt, 1991; Schmalensee, 1985). The graph above illustrates that formats in more concentrated markets tend to have a stronger market share impact from having more outlets relative to FBUs operating formats with smaller chains. Examples of the least concentrated markets include China and India, while highly concentrated markets include Northern European countries. While highly concentrated markets can potentially represent a barrier to market entry, these can also be the markets in which retailers can use premium pricing policies and achieve higher profits (Cotterill & Haller, 1992). We are looking at corporations that already made the decision to enter despite the visible consolidation of market power amongst the four largest incumbents. In some cases, international retailers are the "incumbents". For example, in the Czech Republic, Ahold, Rewe, Kaufland, and Tesco are the largest chains. One explanation is that corporations choose to enter highly concentrated markets only when they have a distinctive advantage relative to the top four competitors – domestic or foreign. In this pricing environment, unique retailing capabilities should translate into relatively higher margins and higher profits (Levy & Weitz, 2007). Because we controlled for governance mode, membership in the dominant segment, and in-country experience, we can say that these cross-level effects are specific to network size.

The residual variance decreases from Model 5 ($\tau_{00} = 1.08165$) to Model 6 ($\tau_{00} = .63243$) to Model 7 ($\tau_{00} = .62218$). Controlling for industry concentration and market size, the range of plausible values for mean market share is 0% to

1.60%. In other words, we explained 42.5% of the true between-country variance in market share by adding the Level 2 covariates. Even after controlling for centralization and international diversification effects, corporations still vary significantly in their mean format market shares ($\chi^2 = 188.87164, df = 47, p < .001$). In other words, average market shares for foreign chains still show considerable variation after we control for size and international experience.

In testing the time-invariance of the final model, we re-ran the analysis with market share for the same companies in 2004. This reduced the number of useable observations to 334. The magnitudes and directionality of the parameter coefficients are similar and significant with the exception of the industry concentration effect. In the final model, 2002 industry concentration is not significant, suggesting that medium-term format performance does not continue to be affected by previous industry concentrations. By entering, foreign retailers offer local consumers one more choice. Some formats are so different from any other existing formats, they can create consumer demand by offering different or less expensive products (i.e., make the pie larger), particularly in growing economies. In most cases, in the act of entering, the foreign retailer is diluting the market power of retail leaders. Before making the entry decision, retailers need to assess whether they have the distinctiveness or size to change the industry in some fundamental ways. For instance, we have seen large international retailers, such as Carrefour or Wal-Mart, enter large emerging markets and have the buying power to change competitive dynamics. This

suggests that some prior national effects' influence on FBU performance fade over time, while other structural factors may have a longer lasting impact (or do not change very quickly). Retailers need to assess whether their strategic competitive advantages can help them re-write the local rules of competition to nullify the impact of certain industry structures.

Table 7: Format Governance Performance with Country Level Effects

	Base Model	+ACQ	+DOM	+Related	+Exper	+Outlet	+LaborMkt	+Conc
Fixed Effects								
Intercept, $\hat{\beta}_{0j}$								
Mean, $\hat{\gamma}_{00}$	-.7749[a]	-.8755[a]	-1.5345[a]	-1.7535[a]	-1.9735[a]	-3.0086[a]	-2.9869[a]	-2.9564[a]
Retail Employment, $\hat{\gamma}_{02}$							-.3204[a]	-.2775[a]
Chain Acquisitions, $\hat{\beta}_{1j}$								
Acquisition Mean, $\hat{\gamma}_{10}$		.2971[b]	.3326[b]	.3643[a]	.3627[a]	.2750[b]	.2686[b]	.2454
Dominant Business, $\hat{\beta}_{2j}$								
Dominant Mean, $\hat{\gamma}_{20}$			.9675[a]	1.1758[a]	1.1369[a]	1.0854[a]	1.0492[a]	1.0383[a]
Related Business, $\hat{\beta}_{3j}$								
Related Mean, $\hat{\gamma}_{30}$				.7171[a]	.7497[a]	.7629[a]	.7760[a]	.7622[a]
In-Country Experience, $\hat{\beta}_{4j}$								

Cont'd Table 7

Mean Experience, $\hat{\gamma}_{40}$					.0267[a]	.2312[a]	.2203[a]	.2178[a]
Total Outlets, $\hat{\beta}_{5j}$								
Mean Outlets $\hat{\gamma}_{50}$						.2918[a]	.2928[a]	.2764[a]
Industry Concentration, $\hat{\gamma}_{51}$								.0541[b]
Random Components								
Level 1								
Within FBU variation, σ^2	2.1872	2.1711	1.9314	1.8900	1.8218	1.7476	1.5196	1.5049
Level 2								
Intercept	.7110	.7027	.8625	.8649	.9238	1.0107	.6324	.6222
Deviance	1328.4177	1325.6787[c]	1287.7669[c]	1281.01165[c]	1271.7268[c]	1261.8795[c]	1148.8533[c]	1145.3697[c]
# Parameters	3	4	5	6	7	8	9	10

[a]Significant at p<.05, [b]Significant at p<.10, [c]Model comparison to previous model is significant at p<.05

Discussion of Hypothesis 2 Findings

The corporate and country models testing Hypothesis 2 reveal mixed results. In the corporate models, we see the predicted ordering of performance is supported – wholly-owned subsidiaries have the highest performance, acquisitions the worst, and joint ventures in between the two. In contrast, in the country model, acquisitions have a higher performance than the intercept, which presumably captures the RWOS and JV modes. This means that after controlling for membership in the dominant segment, size, and local age, we are left with a better result for acquisitions than the other modes. This contradicts theoretical predictions that in *ex post* expansion WOS should outperform other entry modes due to relative ease of cross-market coordination and collaboration. Fluid knowledge flows within the MNC should enable FBUs to realize synergies between strategic resources for higher performance, supporting Rumelt (1974). Differing covariates may partially explain the varying results. By definition the dominant and related covariates captured the most successful formats, which may also be correlated with some of the governance terms and the dependent variable. Format dominance is significantly correlated with RWOS ($\rho = .318$) and market share 2003 ($\rho = .213$). This is consistent with the prediction that retailers internalize their transactions to protect their strategic assets (Dunning, 1980). We also see that the contextual variables have varying influences on retail performance over time. Some strategic and structural factors have long lasting implications, while others do not. In summary, our two sets of analyses provide seemingly contradictory results.

In the corporate model, joint venture performance surpasses UWOS and acquisition entry modes, but exhibits smaller outcomes than RWOS. We also find some evidence that international diversification experience strengthens the relationship between JV and performance. In starting new joint ventures, both partners face information asymmetries and can have similar responses to opportunistic behavior of the other partner (Axelrod, 1984; Woodcock et al., 1994).

Some caution should be taken with the results. The variation in performance amongst the companies using JVs could either point to a governance competency or simply reflect imposed partnerships by host country governments. Some companies may possess a specific competency in managing joint ventures, while other companies may just be forced to accept joint venture partners in certain restricted countries. China and Russia, for much of the 1990's, required foreign companies to engage with domestic partners in order to enter the market. Our analysis does not allow us to differentiate between these two cases.

Mixed results for the acquisition mode muddy the interpretability of the findings. In the corporate model, ACQ underperforms all others. Moreover, this result was exacerbated when the parent was centralized. In contrast, the country model shows ACQ outperforming the other modes combined. This finding seems more reliable given covariates for labor market size and membership in the dominant segment. In other words, holding market size and most important segment constant, acquisitions perform better than other modes.

To understand why the analyses might reveal these results, we go back to the literature. Traditionally, the assumption is that mode decisions are difficult and costly to change (Williamson, 1985). Though this may be true, it may not be as relevant in the context of multi-business retailing. Wal-Mart's purchase of a stake in Seiyu in Japan illustrates the point. In 2002, Wal-Mart initially purchased a 6.1% stake in the Japanese company and increased its stake to 53.3% by 2005 after Seiyu met performance benchmarks. Moreover, because the first move into a format may have been one mode, this does not preclude expansion via other modes. For instance, Ahold practices "strategic infilling" to build up its store networks when necessary for efficiency gains (Elshof, 2005). Firms also make shifts over time in their preference of entry modes (Lu, 2002). In other words, mode preference may be less stable – even within the same corporation or country – than is presumed. Though some retailers, such as hard discounters Aldi and Lidl do tend to stick to one mode (e.g., WOS), others do not. In short, firms do not necessarily utilize the same mode consistently, supporting Lamont & Anderson (1985).

Finally, market structure variables influence our results. Larger labor markets are associated with smaller format mean market shares, after controlling for dominant segments, in-country experience and chain size. In addition, retail market concentration magnifies the chain size – market share relationship. In support of Cotterill and Haller (1992), retailers choose to enter concentrated markets to attain premium prices and profits from their competitive resources.

It may be instructive to challenge whether we should be looking at governance mode and direction separately for multi-business operations, such as retailing. As suggested by Ramanujam & Varadarajan (1989), it appears to be more instructive to look at the joint decisions that make up diversification strategy, i.e. scope and position. Though they may not be made by the same people, these decisions are made simultaneously in the expansion process. When only one element is considered, we may be misrepresenting diversification strategy. In addition, because we know that FBUs are adjusting their strategies on a format-by-format basis, we have an opportunity to dig deeper into the relationship between FBU diversification and its associated performance outcomes.

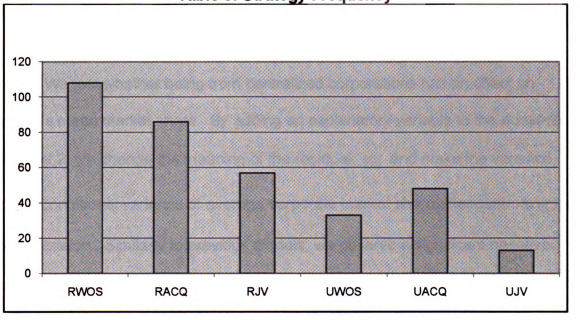
Hypothesis 3

Hypothesis 3: Related diversifiers that expand via organic growth should outperform all other strategy mixes. Conversely, we expect that unrelated diversifiers that expand via partnership or acquisitions to be the lowest performers.

The final hypothesis relates to the relative efficacy of six key diversification strategies (i.e, related/unrelated and 3 governance modes) on format performance. We predict that related diversifiers of all types should outperform unrelated diversifiers. In Table 8, we observe two things. First, in our sample, retailers use related diversification strategies more than unrelated strategies. Second, we are not seeing the expected frequency of pairs that one might expect. For example, retailers use UACQ almost as often as RJVs. We conduct

several analyses to test the impact of these strategies on performance and discuss the findings below.

Table 8: Strategy Frequency



Corporate Effects

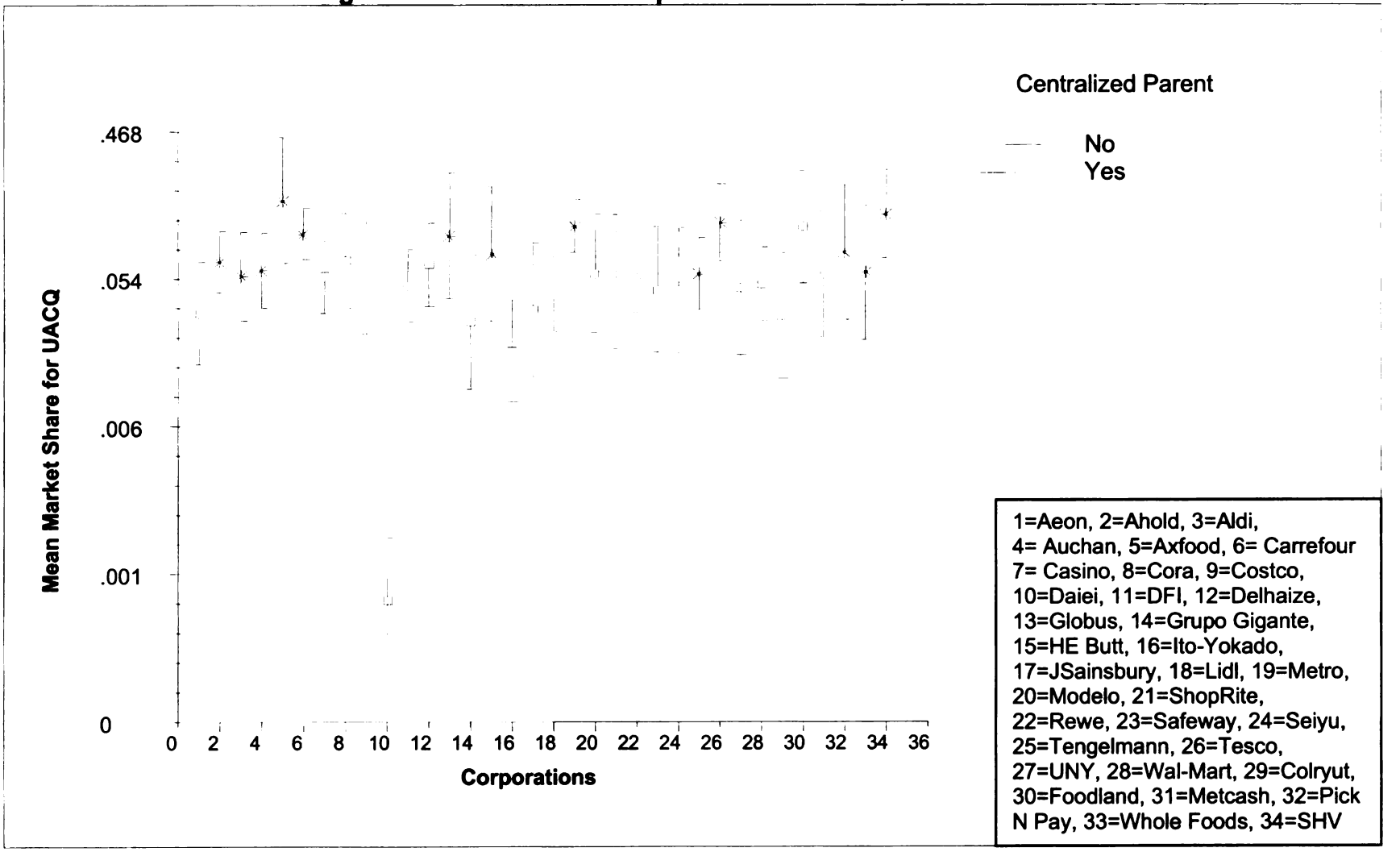
In the next series of models, we attempt to clarify the variability of the regression equations across corporations. Our Level-1 model remains the same as model 5. In models 6-7, we progressively incorporate corporate level explanatory variables, namely centralization status and corporate size (i.e., total selling area).

Final Model

$$\begin{aligned}\text{LNMKT03}_{ij} = {} & \gamma_{00} + \gamma_{01}*\text{CENTRAL}_j + \gamma_{02}*(\text{SELLAREA}_j - \overline{\text{SELLAREA}_.}) + \gamma_{10}*\text{RWOS}_{ij} + \gamma_{20}*\text{RJV}_{ij} \\ & + \gamma_{30}*\text{RACQ}_{ij} + \gamma_{40}*\text{UNWOS}_{ij} + \gamma_{50}*\text{UNJV}_{ij} + \gamma_{60}*\text{HYPER}_{ij} + \gamma_{70}*\text{SUPERMKT}_{ij} \\ & + \gamma_{80}*\text{CONVENIE}_{ij} + \gamma_{90}*\text{DISCOUNT}_{ij} + \gamma_{100}*\text{LNOUT02}_{ij} + u_{0j} + r_{ij}\end{aligned}$$

We test whether being from centralized corporations has an effect on format's mean market share. By adding an explanatory variable to the equation at Level 2, we change the meaning of the residual, u_{0j} and make the variance, τ_{00}, a conditional variance of average corporate market share after controlling for centralization. Similarly to previous models, we observe a significant negative association between centralization ($\hat{\gamma}_{01} = -.870249, t = -2.280$) and mean market share in Figure 12. The residual variance between corporations is $\tau_{00} = .78834$. A range of plausible values for corporate means is between 0% and 1.82%. Further we explain 18.48% of the true between-corporation variance in market share by adding the centralization covariate. Again the Daiei formats are behaving significantly differently from the rest of the formats. The company's operations are atypically small and generate too little market share, as compared to other firms' foreign retailing operations. In general, decentralized companies have higher mean market shares than centralized companies.

Figure 12: Centralization Impact on Mean UACQ Market Share



In the final model, we add a corporate size covariate (e.g., total selling area). We observe a significant negative association between centralization ($\hat{\gamma}_{01} = -.573722, t = -2.066$) and corporate size ($\hat{\gamma}_{02} = -.000016, t = -4.110$) and mean market share. The residual variance between countries is $\tau_{00} = .29153$. A range of plausible values for corporate market share means is between 0% and 1.15%. The model explains 63% of the true between-corporation variance in market share.

By the last two models, the relative magnitudes of the governance variables stabilized to the following ordering: RWOS>RACQ>RJV>UWOS>UJV>UACQ. Although the ordering reversed between RWOS and RACQ by the final model, the surprise is that RJV does not outperform an RACQ in any of the models. In fact, in the final two models with Level 2 covariates, UWOS and RJV parameters have similar magnitudes and directions. Although the UWOS is not significant, even if the true value is zero, this suggests that some companies may find it almost as difficult to have a partner in a known business as to start a greenfield investment in an unrelated format.

In testing the time-invariance of the final model, we re-ran the analysis with market share for the same companies in 2004. This reduced the number of useable observations to 327. The magnitudes and directionality of the parameter coefficients are similar. In the final model, selling area is not significant, suggesting that medium-term format performance does not continue to be affected by the corporation's global size. We have to revert back to Model 6, with only the centralization effect with similarly significant parameters. This suggests that prior corporate size effects cease to influence FBU performance over time.

Table 9: Format-Level Diversification Strategy with Corporate Effects

	Base Model	+Hyper	+Super	+Conven	+Disc	+Outlet	+Central	+Size
Fixed Effects								
Intercept, $\hat{\beta}_{0j}$								
Average Market Size, $\hat{\gamma}_{00}$	-1.6379[a]	-1.6232[a]	-1.8738[a]	-1.7167[a]	-1.8125[a]	-2.4075[a]	-2.5695[a]	-2.3670[a]
Centralized Company, $\hat{\gamma}_{01}$							-.8703[a]	-.5737[a]
Corporate Size, $\hat{\gamma}_{02}$								-.000016[a]
Related Wholly Owned Subsidiary, $\hat{\beta}_{1j}$								
RWOS Mean, $\hat{\gamma}_{10}$	1.0264[a]	.9117[a]	.9508[a]	.9414[a]	.8686[a]	.9363[a]	1.0586[a]	.9569[a]
Related Joint Venture, $\hat{\beta}_{2j}$								
RJV Mean, $\hat{\gamma}_{20}$	.1477	.0300	.0534	.0573	.0018	.0926	.3030	.2976
Related Acquisition, $\hat{\beta}_{3j}$								
RACQ Mean, $\hat{\gamma}_{30}$	1.0887[a]	.9800[a]	.9398[a]	.9875[a]	.9415[a]	.9504[a]	.7889[a]	.8043[a]
Unrelated Wholly Owned Subsidiary, $\hat{\beta}_{4j}$								
UWOS Mean, $\hat{\gamma}_{40}$	.06873	.0564	.0082	.0355	.0249	.0019	.2704	.2746
Unrelated Joint Venture $\hat{\beta}_{5j}$								
UJV Mean, $\hat{\gamma}_{50}$	-1.1296[a]	-1.2074[a]	-1.2090[a]	-1.2247[a]	-1.2320[a]	-1.1946[a]	-1.0111	-1.0748[a]

Cont'd Table 9

Hypermarket, $\hat{\beta}_{6j}$								
Hypermarket Mean, $\hat{\gamma}_{60}$		.3577[b]	.5806[a]	.4269[b]	.5972[a]	.7174[a]	.9010[a]	.9676[a]
Supermarket $\hat{\beta}_{7j}$								
Supermarket Mean, $\hat{\gamma}_{70}$			.5926[a]	.4258[b]	.5825[a]	.5875[a]	.2691	.2418
Convenience Store $\hat{\beta}_{8j}$								
Convenience $\hat{\gamma}_{80}$				-.8396[a]	-.6963[b]	-.6423	-1.0107[a]	-1.0828[a]
Soft Discounter, $\hat{\beta}_{9j}$								
Discounter Mean, $\hat{\gamma}_{90}$					.6023[b]	.5702	.3244	.4031
Format Size, $\hat{\beta}_{10j}$								
Format Size Mean, $\hat{\gamma}_{100}$						.2693[a]	.3677[a]	.3479[a]
Random Components								
Level 1								
Within FBU variation, σ^2	2.2032	2.1848	2.1073	2.0981	2.0669	1.4014	1.7096	1.7360
Level 2								
Intercept	.64456	.64094	.83286	.71547	.78637	.96708	.78834	.29153
Deviance	1284.8742	1282.0356[d]	1275.690 9[c]	1271.113 3[c]	1268.227 2[d]	1222.324 3[c]	1167.678 7[c]	1153.515 0[c]
# Parameters	8	9	10	11	12	13	14	15

[a] Significant at p<.05, [b] Significant at p<.10, [c] Model comparison to previous model is significant at p<.05, [d] Model comparison to previous model is significant at p<.10

Country Effects

The next series of analyses models country-level effects on FBU format operations. The Base Model to Model 5 clarify the Level 1 (FBU) model. Our Base Model includes five of the six governance pairs. We find that parameters for RWOS ($\hat{\gamma}_{10} = .701736, t = 2.87$), RJV ($\hat{\gamma}_{20} = .541675, t = 1.881$) RACQ ($\hat{\gamma}_{30} = 1.154387, t = 4.690$) and UJV ($\hat{\gamma}_{50} = -.774334, t = -1.702$) are significant, while the parameter UWOS is not significant. The directions for each of the related/unrelated variables are as expected, but the magnitudes are not. In this model, estimated mean market shares are RACQ>RWOS>RJV and the superior performance from being an RACQ does not change in our country analyses.

In the next series of models, we attempt to clarify the variability of the regression equations across countries. Our Level-1 model remains the same as model 5. In models 6-7, we progressively incorporate country level explanatory variables, namely retail labor market size and retail market size (i.e., total selling area).

Final Model

$$\begin{aligned} LNMKT03_{ij} = {} & \gamma_{00} + \gamma_{01}*(LNEMPLOY_{j} - \overline{LNEMPLOY}_{.}) + \gamma_{10}*RWOS_{ij} + \gamma_{20}*RJV_{ij} + \gamma_{30}*RACQ_{ij} \\ & + \gamma_{40}*UNWOS_{ij} + \gamma_{50}*UNJV_{ij} + \gamma_{60}*HYPER_{ij} + \gamma_{70}*SUPERMKT_{ij} + \\ & \gamma_{80}*CONVENIE_{ij} + \gamma_{90}*DISCOUNT_{ij} + \gamma_{100}*LNOUT02_{ij} + \\ & \gamma_{101}*(LNRETAIL_{j} - \overline{LNRETAIL}_{.})*LNOUT02_{ij} + u_{0j} + r_{ij} \end{aligned}$$

In Figure 13, the size of the retail market labor force may have an effect on format's mean market share. Similarly to previous models, we observe a significant negative association between retail labor market size ($\hat{\gamma}_{01} = -.270479, t = -4.226$) and mean market share. The residual variance between countries is $\tau_{00} = .61858$. A range of plausible values for format means is between 0% and 1.59%. Further we explain about 41% of the true between-country variance in market share by adding the labor market size covariate.

In the final model, we add a corporate size covariate (e.g., total selling area). We observe that corporate size ($\hat{\gamma}_{02} = -.072936, t = -3.042$) has a dampening effect on the relationship between a format's chain size and retail market share.

Figure 13: Retail Market Size Impact on Format Size-Market Share Relationship

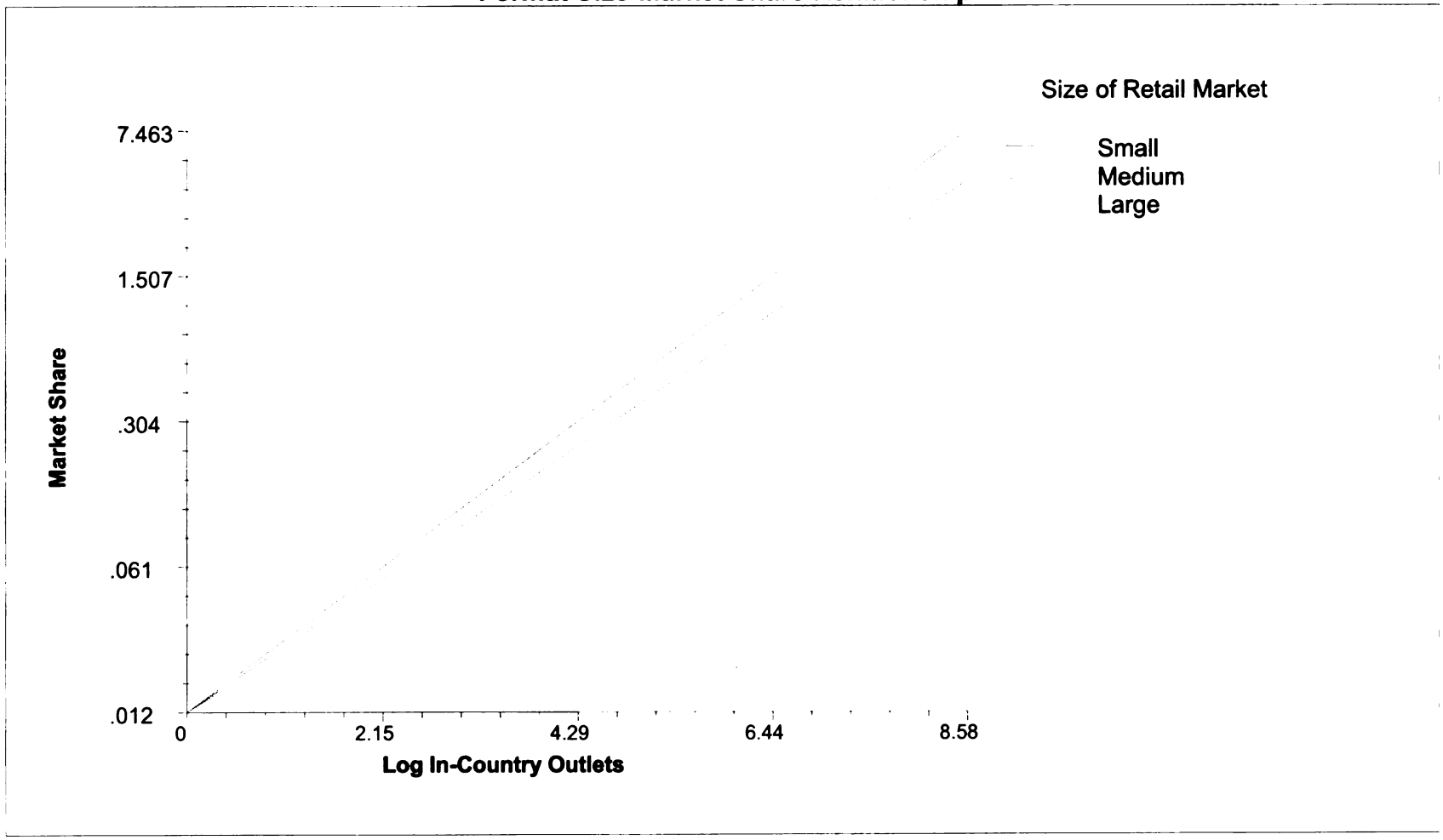


Table 10: Format-Level Diversification Strategy with Country Effects

	Base Model	+Hyper	+Super	+Conv	+Disc	+Outlet	+LbrMkt	+MktSize
Fixed Effects								
Intercept, $\hat{\beta}_{0j}$								
Average Market Size, $\hat{\gamma}_{00}$	-1.3229[a]	-1.3407[a]	-1.5290[a]	-1.3890[a]	-1.4559[a]	-2.9723[a]	-3.0152[a]	-3.0958[a]
Labor Market Size, $\hat{\gamma}_{01}$							-.2705[a]	-.2715[a]
Related Wholly Owned Subsidiary, $\hat{\beta}_{1j}$								
RWOS Mean, $\hat{\gamma}_{10}$	.7017[a]	.6119[a]	.7019[a]	.6337[a]	.6065[a]	.6841[a]	.7412[a]	.6835[a]
Related Joint Venture, $\hat{\beta}_{2j}$								
RJV Mean, $\hat{\gamma}_{20}$	.5417[b]	.4221	.4844[b]	.4266	.4103	.8213[a]	.7601[a]	.9066[a]
Related Acquisition, $\hat{\beta}_{3j}$								
RACQ Mean, $\hat{\gamma}_{30}$	1.1544[a]	1.0365[a]	1.0262[a]	1.0146[a]	.9974[a]	.9783[a]	.9335[a]	.9922[a]
Unrelated Wholly Owned Subsidiary, $\hat{\beta}_{4j}$								
UWOS Mean, $\hat{\gamma}_{40}$	-.3019	-.2766	-.2619	-.3083	-.2784	.1560	.1305	.1764
Unrelated Joint Venture $\hat{\beta}_{5j}$								
UJV Mean, $\hat{\gamma}_{50}$	-.7743[b]	-.4194	-.9173[a]	-.9531[a]	-.9419[a]	-.6484[b]	-.2806	-.3884
Hypermarket, $\hat{\beta}_{6j}$								
Hypermarket Mean, $\hat{\gamma}_{60}$		.3971[a]	.5432[a]	.4545[a]	.5440[a]	.7994[a]	.8686[a]	.8108[a]

Cont'd Table 10

Supermarket $\hat{\beta}_{7j}$								
Supermarket Mean, $\hat{\gamma}_{70}$			.5436 [a]	.4284 [a]	.5078 [a]	.0433	-.0985	.0175
Convenience Store $\hat{\beta}_{8j}$								
Convenience $\hat{\gamma}_{80}$				-.6704 [a]	-.5948 [a]	-1.4455 [a]	-1.5777 [a]	-1.4404 [a]
Soft Discounter, $\hat{\beta}_{9j}$								
Discounter Mean, $\hat{\gamma}_{90}$					.4954 [b]	.1362	-.0711	.1310
Format Size, $\hat{\beta}_{10j}$								
Format Size Mean, $\hat{\gamma}_{100}$						.4773 [a]	.5051 [a]	.5178 [a]
Market Size $\hat{\gamma}_{101}$								-.0729 [a]
Random Components								
Level 1								
Within FBU variation, σ^2	1.8332	1.8113	1.7589	1.7315	1.7144	1.1939	1.1416	1.2455
Level 2								
Intercept	.7314	.7090	.7421	.7372	.7441	1.0465	.6186	.2948
Deviance	1267.3885	1262.5434 [c]	1254.7243 [d]	1249.5196 [c]	1246.6852 [d]	1112.3473 [c]	1024.6401 [c]	1082.9165 [c]
# Parameters	8	9	10	11	12	13	14	15

[a]Significant at p<.05, [b]Significant at p<.10, [c]Model comparison to previous model is significant at p<.05, [d] Model comparison to previous model is significant at p<.10

We observe that in markets with a greater number of retail outlets the association between format size and market share weakens. The residual variance between countries is $\tau_{00} = .29153$. A range of plausible values for corporate means is between 0 and 1.11%. Compared to Model 5, the final model with two country size variables explains approximately 72% of the true between-country variance in market share. By the last two models, the relative magnitudes of the governance variables stabilized to the following ordering: RACQ> RJV>RWOS> UWOS>UJV>UACQ. This contradicts predictions in the literature that would have the RWOS strategy dominating others.

In testing the time-invariance of the final model, we re-ran the analysis with market share for the same companies in 2004. This reduced the number of useable observations to 327. The magnitudes and directionality of the parameter coefficients are similar and significant. However, for the related pairs mean performance ordering changed again (RACQ>RWOS>RJV). That provides a second piece of evidence that RACQ outperforms other related governance modes. In addition, the structural industry variables (i.e., retail labor force size and total retail outlets) remain an influence on the intercept and the chain size-performance slope.

Discussion of Hypothesis 3 Findings

If we compare the final Level-1 models and the final contextual variables with country and corporate affects, we see that in three out of four models, RACQ is the most successful diversification strategy. The reliable 2004 corporate models switch the order with the RWOS garnering more market share

than the RACQ, whereas the country model has RACQ>RWOS>RJV. Extant research suggests that for related diversification, RWOS should outperform other strategies (Busija et al., 1997; Rumelt, 1982). Our findings do not support this hypothesis. We find that for most companies and in most countries, the RACQ strategy outperforms a RWOS strategy.

We must go back to the underlying theoretical assumptions about causal ambiguity and absorptive capacity to look for clues. Our results suggest that, for average FBU operations, both causal ambiguity and absorptive capacity are high enough to make buying knowledge from an outside firm less costly than developing it in-house. Some evidence implies that retailing operational know-how is more codifiable and transferable than other kinds of complex manufacturing know-how, such as R&D (Morgan et al., 2003; Szulanski, 1996). High causal ambiguity results from imperfect mobility of firm resources, leading to heterogeneous firm performance (Barney, 1991). This is perplexing since retailers who operate within the same segment should understand retailing fundamentals for that type of business, particularly if most of the sticky knowledge is embedded in back office operations (Coe, 2004). Our findings suggest the opposite – success in local market operations resides in the store-front or the visible parts of the 4P's (Kotler, 1997)[13].

Our findings are more in-line with Vargo & Lusch (2004). In a wider marketing context, they define *services* as "the application of specialized competencies (knowledge and skills) through deeds, processes, and

[13] However, visibility does not mean reproducibility. Firms can possess visible advantages, but how they arrived at them may be difficult to assess (i.e., causal ambiguity).

performances for the benefit of another entity. Knowledge competencies are considered the firm's most important resources and sources of strategic competitive advantages (Day, 1994). Building on the resource-based view of resources, resources can be operand or operant. Operand resources are physical, inert resources that must be acted upon in order to produce an effect, whereas operant resources are the assets that allow the firm to act upon the operand or other resources (Constantin and Lusch 1991). For example, exemplary supply chain management competencies function as operant resources producing strategic competitive advantages (Srivastava, Shervani and Fahey 1999). We can view firm knowledge competencies as "operant resources, consisting of prepositional (abstract) and prescriptive (technical) knowledge, which allow firms to apply their knowledge to create better value propositions for their customers relative to their competitors" (Vargo & Lusch, 2004a, p. 5). Operant resources are also less transparent to competitors. From a service-centered view, customers are "co-producers" of the value proposition by interacting with the firm to infuse the product/service with value and by actively participating in the exchange. Within this context, operational retail knowledge is technical, whereas the customer-interface in the stores is more abstract. All things equal, when an international retailer buys a local firm, it is tapping into the firm's prepositional resources. Used to dealing with and adapting to complex and changing consumer expectations, retailers may possess collaborative competences, a higher order resource that helps firms "continually renew, create, integrate and transform their service innovations" (Lusch, Vargo, & O'Brien,

2007, p. 9). If we view retailing as fundamentally a local phenomenon, then cost and time to develop these resources in-house would be too high and too long. Furthermore, Tanriverdi & Venkatraman (2005) address potential knowledge advantages for multi-business firms, including customer relationship management and alliance management. Thus, despite Ansoff's (1988) assertion that strategy should not overly emphasize customers (relative to business mission), the strongest retailer advantages seem to come from prioritizing customer needs.

Less surprising perhaps is the fact that related strategies outperform unrelated strategies. Delving into new, unfamiliar terrains is risky. Moreover, MNCs should possess unique advantages relative to competitors to be able to compete and win in foreign markets (Buckley & Casson, 1976; Dunning, 1988). The costs of integrating organizational cultures and managing completely new businesses make it nearly impossible for unrelated acquisitions to succeed relative to other diversification strategies, providing additional support to Porter (1987). Yet, theory suggests that unrelated acquisitions should be the most successful of the unrelated strategies since the costs of internal knowledge development should be much higher than the purchase cost of that same knowledge. In fact, the UWOS strategy is most successful in our sample. Because the retailer would lack both the technical and the abstract knowledge to operate the business, casual ambiguity would be particularly heightened. Selection and management of the appropriate partner would also be particularly costly and difficult. Instead if the retailer wants to experiment in a new area for

that market, at least the organizational culture is constant, facilitating better communication, which should ease learning and knowledge transfer. An alternative explanation is that, formats using a UACQ strategy are part of larger portfolio of acquisitions, whereas formats using UWOS represent proactive attempts by the international retailer to learn a new business.

In the retailing industry, business models can shift dramatically between segments (Bhatnagar & Ratchford, 2004). In terms of the value/price continuum, hard discounters primarily make a profit by delivering on a pricing promise to customers and depending upon higher sales volumes and modest customer service levels. For instance, Aldi and Lidl offer their customers rock bottom prices, wide product variety and shallow assortments, and reasonable quality private label products to inflate otherwise thin margins. While this fundamental business model does not drastically change within a discount segment (e.g., hypermarkets, supercenters, discounters, etc.), another segment (e.g., supermarkets, convenience stores) earns profits in a radically different way that emphasizes the product quality and customer service promised to justify higher markups. Whole Foods is a high-end supermarket known for its organic and specialty foods, deep assortment of wines and superior customer service. Business models between segments are driven by fundamentally different retail strategies to satisfy vastly different consumer expectations. Consequently, decisions to expand within the segment, irrespective of mode, are consistent with retail marketing realities.

These findings also support the excess capacity and synergy creation hypotheses. International retailers are able to use their slack resources effectively in foreign markets. Operating internationally, regardless of their governance choice, provides retailers with opportunities to discover new operational applications or synergies and to spread the costs between businesses (Markides & Williamson, 1996). Ansoff (1969) also argues that when managers try to expand at a faster rate than can be sustained internally, expansion via acquisition is the most used alternative.

We turn next to the ordering within the three pairs of related diversifiers. Interestingly, our findings indicate the RACQ strategy is surprisingly effective for international retailers. Foreign firms seem to be co-opting the competition by joining forces with them. This supports the findings of Trautwein (1990). Logically, a critical rationale for retailer acquisitions is access to suitable real estate for the format. Conversely, poor network real estate is a deal-breaker in retailing, and as such, those chains with poor real estate would be less likely to be acquired. Real estate is probably even a more important factor than the retail brand itself. Retailers have been known to absorb other chains and phase out local brands. For example, Tesco bought Kmart stores in the Czech Republic and converted them to their hypermarket brand. Even their own brands are replaceable. Recently, Carrefour Champion in Spain could see that they were losing the supermarket wars, so they re-branded Champion stores to their hypermarket format. Strong retail brands are an added-bonus to a strong property portfolio. When consumers form emotional attachments to local brands,

foreign retailers can instantly acquire name recognition and customer loyalty. Retailers also obtain access to local managerial talent and organizational knowledge of how to operate in that marketplace. Because retailers have very high fixed costs and low margins relative to manufacturers (Cortsjens & Cortsjens, 1995), pressure to deliver revenues to offset high entry and startup costs is intense. Buying into a knowledgeable managerial pool can accelerate the process of making money. Moreover, because the acquirer understands the basic rules of the segment, it is in a better position to evaluate and select companies that have a reasonable level of existing expertise (Eisenhardt, 1989). Thus, potential access to prime real estate, known brands, and local retail expertise make related acquisitions an attractive diversification strategy.

The evidence on related joint ventures is somewhat equivocal. Given our previous analyses in Hypothesis 2, the ability of the parent company to manage foreign joint ventures varies significantly, even for experienced international retailers. This suggests a particular capability may exist to manage international joint ventures (IJVs). However, Barkema et al. (1997) suggest that it is not the corporation's international diversification experience, but rather its experience in managing domestic joint venture partners and international WOS that aids IJV survival. While we cannot refute this study, our data suggests that international diversification experience influences how well retailers can translate an RJV strategy into performance.

While there may be learning benefits and other advantages to fully owning and operating a foreign subsidiary, it is rather unclear whether it pays to do so. In

traditional TCA/internalization literatures, a firm chooses governance forms to minimize transaction costs and protect proprietary information and products. Further, Woodcock et al. (1994) argue that *ex post* costs of marginal procurement and ownership and control costs should make new ventures less costly. We see that the RWOS strategy outperforms the unrelated counterpart, suggesting some kind of segment expertise and potentially other capabilities brought from the home country boost RWOS performance. Since Hypothesis 3 benchmarked all the other diversification strategies against the expected best performance of RWOS, we can say that this ordering hypothesis was not supported. Although our data shows this strategy being the most frequently used, it is not necessarily the best strategy option.

To a certain extent, the differing covariates may also explain some of the divergent results. We see that the contextual variables have unstable influences on retail performance over time. Logically, we would expect that corporate effects change more quickly than industry effects. Firms have the ability to make significant strategy shifts whereas major industry changes occur less frequently and with lesser magnitude. Our study supports Rumelt (1991), who finds that industry structure has a small, but lasting impact on firms. From a public policy perspective, the predictability of the industry change is an important factor in attracting (and keeping) foreign investment.

In the next section, we will attempt to draw conclusions from the multiple pieces of evidence we have collected. Collectively, these analyses help us tell a story about the value of diversification to retail performance in foreign markets.

CHAPTER V

CONCLUSIONS

The objective of this study is to understand the diversification-performance relationship in the context of international retailing. We treat MNCs as economies with vertical and horizontal knowledge flows that interact with and between each level of operations (Madhok & Liu, 2006). Operating in diverse local environments and possessing heterogeneous resource advantages, FBUs develop diversification strategies intended to elicit successful outcomes. Knowledge and other competencies gained in foreign markets are not only critical for FBU success, but also crucial for MNC development of strategic competitive advantages (Teece et al., 1997). Being able to exploit and expand on these strategic competitive advantages is the main challenge of diversification strategy.

Using a rich literature base, our research challenges the relevancy of extant theory at the foreign market operations level. Table 11 contains a summary of our findings.

Table 11: Summary of Results

H	Relationship	Key Variables	Key Findings
1	Diversification has an inverted U shaped relationship to performance	• diversification • market share	• Curvilinearity not supported • A positive, linear relationship between format diversification and performance • Related diversifiers outperform unrelated diversifiers • Length of retail experience strengthens the relationship between diversification and performance • International diversification experience is positively related to higher mean market share • Coming from a parent corporation with a large outlet network dampens the foreign market outlet size – performance relationship. • Large retail labor markets are associated with poor average market share • Emerging markets have lower mean market shares than developed markets. In addition, emerging markets dampen the outlet size – performance association.
2	Wholly-owned subsidiaries>joint ventures>acquisitions	• governance mode • market share	• In the corporate model, RWOS outperformed other modes, as predicted. • In the country model, acquisitions had the highest average market share. • Joint ventures fall in between. On average, experienced international diversifiers can strengthen the relationship between JV mode and performance.
3	Related diversifiers expanding through wholly-owned subsidiaries should outperform other combinations	• 6 diversification strategy pairs • market share	• Related acquisitions outperform other strategy combinations. • Related strategies perform better than unrelated strategies. • Industry structure has small, but lasting effects on FBU performance.

For bricks-and-mortar retailers, diversification is generally a sound strategy. In our sample, the average foreign firm garners between .07 and .09% retail market share. With a one unit change in diversification, an average firm can double its market share, holding size of operations constant. We find approximately the same result in both our country and corporate models. Furthermore, our sample reveals no evidence to suggest that retailers only benefit from a certain degree of diversification. Our data strongly suggest a linear relationship between format diversification strategy and performance.

Our findings also address how FBUs diversify. While FBUs benefited more from sticking within their retail segment, between segment expansions also facilitate market share boosts. This is confirmed when controlling for corporate and country factors. These results support the complementary relatedness hypotheses and provide further evidence that related diversifiers should outperform unrelated diversifiers. However, even unrelated diversification is associated with market share gains. Experimenting with new formats may also possibly aid long-term survival prospects by supporting learning and innovation objectives.

Our findings also shed some light on contextual influences. Age matters. More experienced firms are able to translate their organizational knowledge into stronger gains from their diversification strategies. This implies that knowledge sharing is taking place between the parent firm and its foreign operations. Conversely, size doesn't always matter. Larger corporations do not see the same results as smaller corporations from large retail store networks. In addition,

corporate size can explain mean market shares better than international diversification strategy, or the number of countries in which a firm operates. This suggests limitations to worldwide expansion strategies. In summary, age, size, and international diversification experience help us explain about 45% of the variations between corporations.

Our country model findings also offer some interesting insights into FBU operations. First, level of development and market size are important variables in explaining between country variance. Opportunities to capture higher market shares in emerging markets help explain differences between mean performance between emerging and developed markets. Our results also suggest that conventional wisdom that larger FBU chains outperform smaller ones may not hold in emerging markets. Higher logistics costs in emerging markets may account for larger chains' inability to capture market share. In other words, the coordination costs associated with maintaining larger chains in more challenging retail environments may limit merchandising strategies required to capture customer loyalty and repeat purchases. This is an avenue of research worth exploring.

Our last two hypotheses explore the nuances of diversification strategy. First, we attempt to explain how FBUs govern their businesses. In our corporate model, we find that mean RWOS market share is four times larger than JV market share and approximately seven times larger than ACQ and UWOS. This result needs to be taken with caution because our country model shows that ACQ outperforms other combined governance types. The models are also not

directly comparable since they control for membership in the dominant business segment, experience, and size in different ways.

Level 2 covariates are also tested. In the corporate model, we demonstrate that the firm's level of international diversification influences the average FBU's ability to manage its joint ventures. We also provide some evidence that having a centralized parent explains some of the variance in the intercept term. In the country model, the size of the retail labor market and the level of industry concentration influence our FBU parameters. Countries with large retail labor markets are more attractive for retailers. When our intercept represents non-chain acquisitions, retail employment explained a significant amount of the variance in mean performance. Taken in conjunction with the benefits from concentrated markets, we explain about 43% of the differences between countries.

Our last hypothesis provides evidence on the relative efficacy of six diversification strategies. By jointly considering mode and direction and controlling for many key formats, we reveal a clearer picture of mean market outcomes. Our findings suggest that RACQ strategies have greater mean performance outcomes than suggested in the extant literature, while UACQ strategies exemplify expected poor outcomes. Simultaneously considering key elements of diversification strategy supports benefits of acquisitions theorized in the literature. Similarly, joint ventures and WOS strategies did not have the expected average performance relative to RACQ strategy. In our two models, we test several effects including corporate centralization, labor market size and

retail market size. We are able to explain 63% of the between corporation variance and 72% of the between country variance, which would significantly impact regression results if not controlled.

LIMITATIONS AND FUTURE RESEARCH

Some caution is warranted in interpretation and generalization. These models do not prove causality, merely demonstrate the association between variables. Also, since our data structure is unbalanced, the parameter estimates are likely better representations of the FBUs and countries with more observations than those with fewer observations. However, given the enormous costs and data constraints in FBU data across nearly 49 countries, we believe that these data represent a realistic starting point for international retailing analyses. We also use an entropy measure of diversification. Critics argue that entropy measures do not measure actual, shared resources and capabilities and their market cost for undiversified companies (Markides & Williamson, 1996). Finally, market share is not the ideal outcome variable, but it is the only reliable variable at this level of analysis across corporations and countries. In contrast, most diversification studies use other financial and accounting performance measures. We believe that market share is a consistent and reliable performance measure widely used in retailing practice. Therefore, our results are relevant for retail practitioners.

Another issue concerns the limitations of the market share measure. Although common in the literature, there are specific challenges to using a

measure that is bounded between zero and one. Schwartz (1991) discusses the inherent problems with using this type of variable in regression-based techniques, including breaking of the unboundedness and connecting the variance of endogenous variable to its value assumptions. The consequence of using a bounded dependent variable is that the relationship between the dependent and independent variables can change at different points along the line. For example, if ten years difference in in-country experience leads to a 5% increase in market share, then that relationship should continue at other points along the predicted line. Thus, if the predicted market share is 10% for a company with 30 years experience, then it would be 15% for a company with 40 years experience. Although violations of regression assumptions do not necessarily negate the value of the results, statistical inferences are considerably strengthened by finding alternative methods that meet statistical assumptions.

Solutions to this limitation will be pursued in future research. One possible resolution is to create an arcsine transformation on the market share variable (High, 2005). Another solution could be to use another kind of HLM. The Hierarchical Generalized Linear Model for Binary Outcomes can be used. The predicted log-odds could be translated as the probability that an FBU within a given corporation or country would be chosen by domestic customers.

The intra-industry context limits the range of diversification choices examined in this analysis. Though most of our food retailers were not vertically integrated or operating in other service industries, this limitation may be responsible for the lack of curvilinearity seen in other diversification studies.

This study represents a first step in examining international retailing diversification strategies. Taken collectively, our analyses provide some compelling evidence that foreign market operations are an important and appropriate subject of study. While our research clearly supports some aspects of extant theory, we also raise some new questions. These questions provide the basis for future research.

An immediate extension of this research includes testing the stability of the parameter estimates and finding more contextual variables to explain country and corporate differences. RBV and diversification theorists suggest that strategic competitive advantages possess finite life spans. Either competitors will eventually figure out how to reproduce the advantage or will innovate better solutions to similar problems (Dierickx & Cool, 1989; Grant, 1996). This requires time series data and analyses, which would bolster our investigation in expansion strategies, and answer questions about the temporal affects of our contextual variables. With this same kind of data, we are also in a position to explore growth models, an area unexplored in the diversification literature. Individual strategies also deserve attention. For example, extending the Barkema et al. (1997) study assumptions about international diversification experience is worth exploring. In addition, the data itself suggests survival issues for international retailers. Researchers have suggested that foreign subsidiaries that diversify into unrelated products from the MNC have lower survival rates (Li, 1995). It would be interesting to see if this hypothesis holds in an international retailing context. Additionally, the measurement limitation pointed out by Markides & Williamson

(1996) points to an opportunity to examine which resources are shared amongst FBUs and how they relate to FBU performance. The relative recency of retail internationalization may allow us to collect data at the FBU level to test survival hypotheses. Finally, it would be interesting to compare our diversification-performance results with retailers who have not internationalized. These pursuits will significantly contribute to the international retailing literature.

Since international retail chains are a fairly recent phenomenon, more research in this area is an important contribution to both academics and practitioners. This study is intended to aid retailers in analyzing the impact of strategic expansion decisions in foreign markets. We provide evidence that refutes conventional wisdom on the relative benefits of different diversification strategies. We also identify how inter- and intra-segment strategies affect performance. Deepening our knowledge about the impact of these strategies enables managers to better evaluate market entry and expansion choices.

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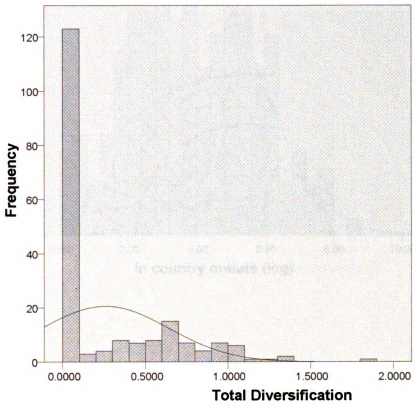
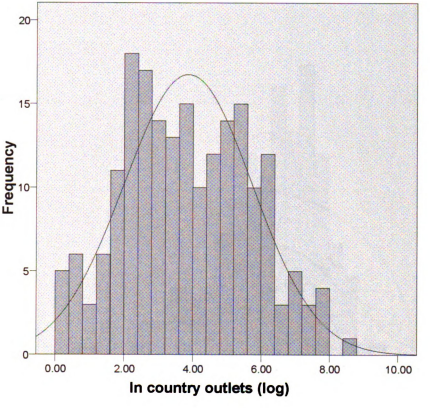
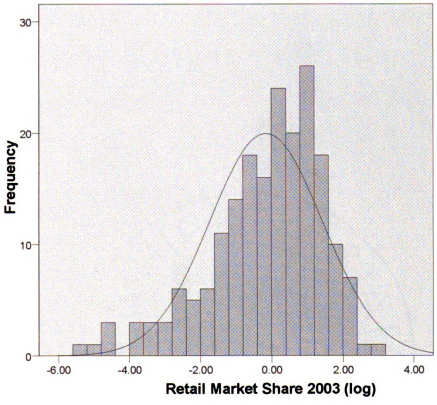
APPENDIX A: HISTOGRAMS, DESCRIPTIVE STATISTICS, AND BIVARIATE CORRELATIONS

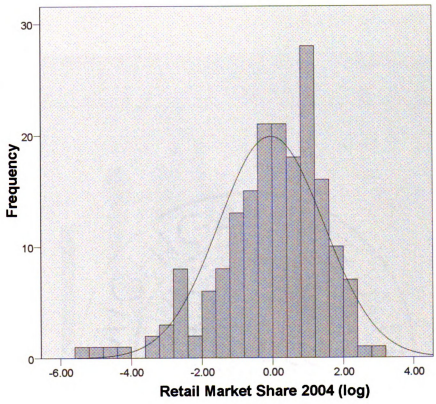
Level One Continuous Variables

Hypothesis 1

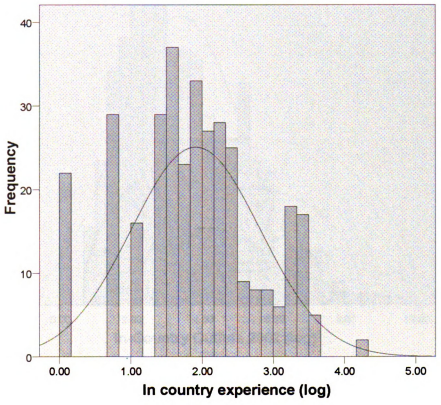


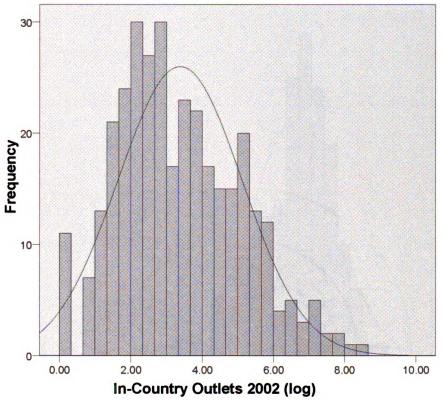

Frequency
20
15
10
5
0
0.00
2.00
4.00
6.00
8.00
10.00
ln country outlets (log)
Mean =3.86
Std. Dev. =1.877
N =197

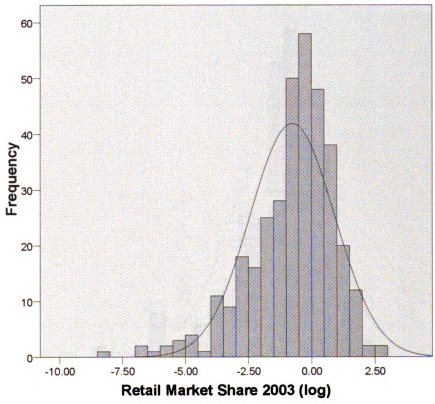

Frequency
30
20
10
0
-6.00
-4.00
-2.00
0.00
2.00
4.00
Retail Market Share 2003 (log)
Mean =-0.15
Std. Dev. =1.578
N =197

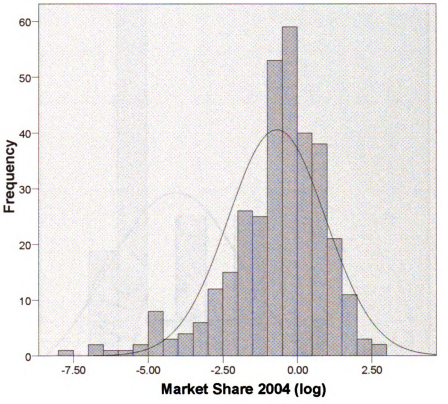

Frequency
30
20
10
0
-6.00
-4.00
-2.00
0.00
2.00
4.00
Retail Market Share 2004 (log)
Mean =-0.03
Std. Dev. =1.478
N =184

Hypotheses 2 & 3

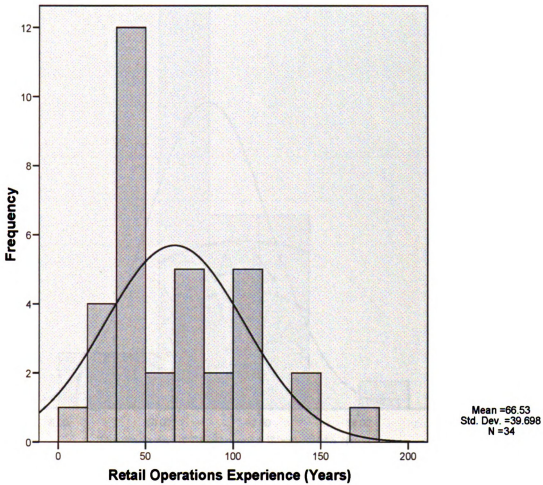


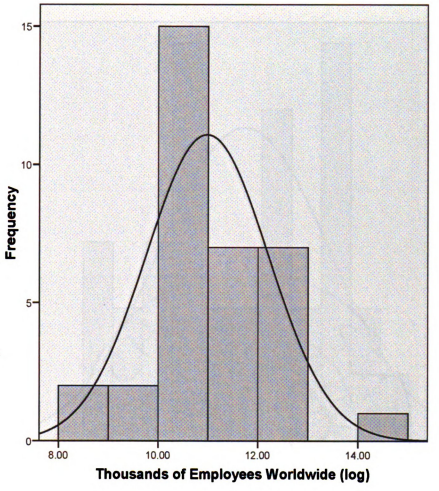

Frequency
30
20
10
0
0.00
2.00
4.00
6.00
8.00
10.00
In-Country Outlets 2002 (log)
Mean =3.38
Std. Dev. =1.74
N =340

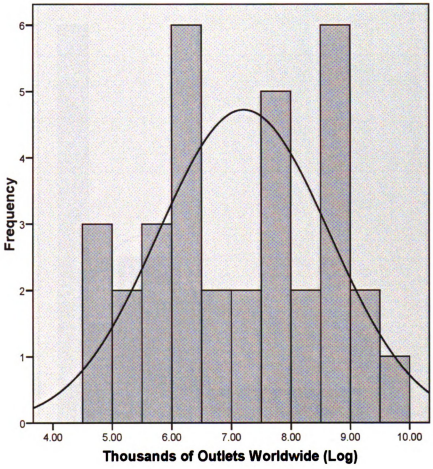

Frequency
60
50
40
30
20
10
0
-10.00
-7.50
-5.00
-2.50
0.00
2.50
Retail Market Share 2003 (log)
Mean =-0.76
Std. Dev. =1.673
N =351

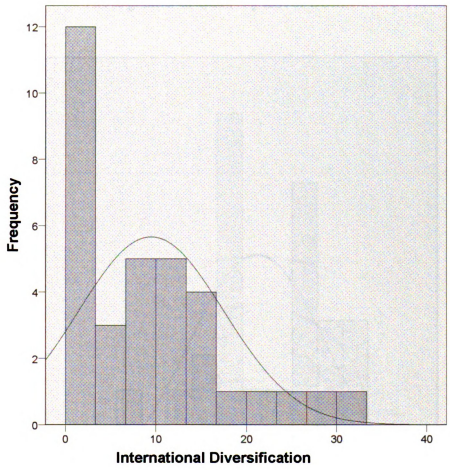

Frequency
60
50
40
30
20
10
0
-7.50
-5.00
-2.50
0.00
2.50
Market Share 2004 (log)
Mean =-0.69
Std. Dev. =1.638
N =333

Histograms of Corporate Level Continuous Variables

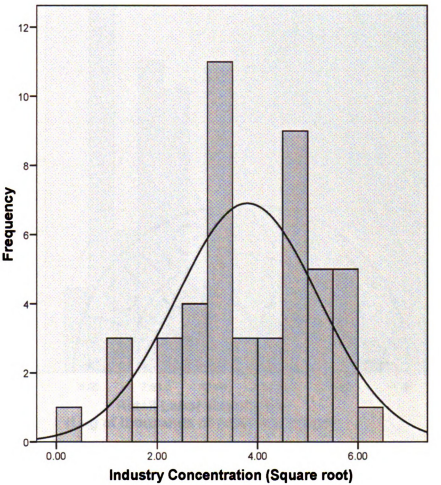


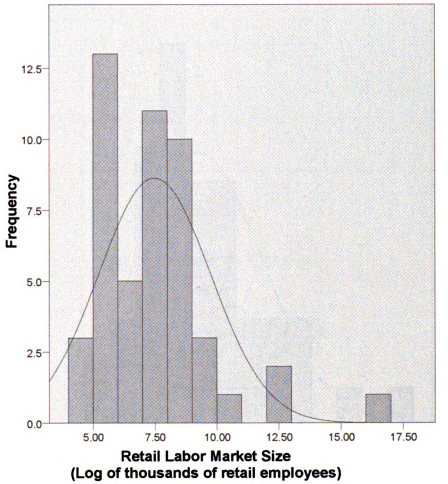

15
10
5
0
Frequency
8.00
10.00
12.00
14.00
Thousands of Employees Worldwide (log)
Mean =10.98
Std. Dev. =1.225
N =34

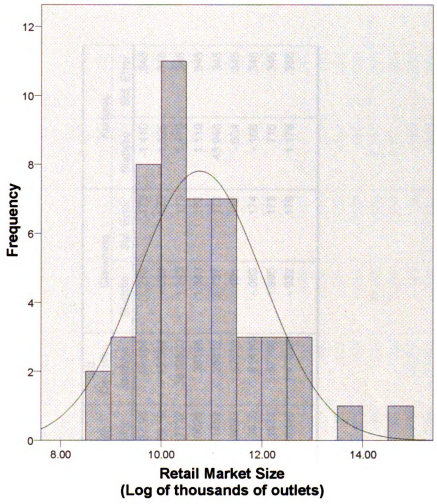

Frequency
0
1
2
3
4
5
6
4.00
5.00
6.00
7.00
8.00
9.00
10.00
Thousands of Outlets Worldwide (Log)
Mean =7.21
Std. Dev. =1.436
N =34


Frequency
12
10
8
6
4
2
0
0
10
20
30
40
International Diversification
Mean =9.47
Std. Dev. =7.986
N =34

Histograms of Country Level Continuous Variables




Frequency
12.5
10.0
7.5
5.0
2.5
0.0
5.00
7.50
10.00
12.50
15.00
17.50
Retail Labor Market Size
(Log of thousands of retail employees)
Mean =7.49
Std. Dev. =2.267
N =49


Frequency
12
10
8
6
4
2
0
8.00
10.00
12.00
14.00
Retail Market Size
(Log of thousands of outlets)
Mean =10.77
Std. Dev. =1.252
N =49

Level 1: Descriptive Statistics for Hypothesis 1

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
corpid	197	3	150	67.98	49.134	.218	.173	-1.410	.345
ctryid	197	1	52	26.19	15.584	-.029	.173	-1.325	.345
DT02	197	.0000	1.8714	.257737	.3819800	1.343	.173	1.119	.345
diffdt02	197	-.26	1.62	.0026	.38198	1.343	.173	1.119	.345
dfdt02sq	197	.00	2.61	.1452	.25612	5.737	.173	45.946	.345
lntlout02	197	.00	8.58	3.8639	1.87658	.101	.173	-.634	.345
lnexper03	196	.00	4.33	1.9670	.91410	-.063	.174	-.166	.346
lnmkt03	197	-5.28	2.81	-.1538	1.57796	-.895	.173	.716	.345
lnmkt04	184	-5.50	2.86	-.0340	1.47846	-.932	.179	1.178	.356
Valid N (listwise)	183								

Level 1: Descriptive Statistics for Hypotheses 2 & 3

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
corpid	351	1	150	64.38	49.249	.299	.130	-1.402	.260
ctryid	351	1	52	24.83	15.397	.047	.130	-1.287	.260
dominant	351	.0000	1.0000	.609687	.4885169	-.452	.130	-1.806	.260
related	351	.0000	1.0000	.105413	.3075234	2.581	.130	4.688	.260
RWOS	351	0	1	.31	.462	.837	.130	-1.307	.260
RJV	351	0	1	.16	.369	1.839	.130	1.389	.260
RACQ	351	0	1	.25	.431	1.191	.130	-.585	.260
UNWOS	351	0	1	.09	.292	2.794	.130	5.840	.260
UNJV	351	0	1	.04	.189	4.924	.130	22.373	.260
UNACQ	351	0	1	.14	.344	2.124	.130	2.524	.260
wos	351	0	1	.43	.496	.271	.130	-1.937	.260
acqless50	351	0	1	.08	.267	3.189	.130	8.217	.260
acq	351	0	1	.38	.487	.489	.130	-1.771	.260
jv	351	0	1	.20	.398	1.534	.130	.354	.260
hyper	351	0	1	.26	.437	1.121	.130	-.749	.260
supermkt	351	0	1	.21	.406	1.445	.130	.089	.260
convenie	351	0	1	.08	.267	3.189	.130	8.217	.260
discount	351	0	1	.07	.262	3.267	.130	8.721	.260
lnexp02	342	.00	4.33	1.9078	.90792	-.125	.132	-.165	.263
lnout02	340	.00	8.58	3.3798	1.73994	.389	.132	-.230	.264
lnmkt03	351	-8.09	2.92	-.7582	1.67327	-1.080	.130	1.785	.260
lnmkt04	333	-7.53	2.79	-.6852	1.63788	-1.133	.134	2.067	.266
Valid N (listwise)	319								

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
cntryid	49	1	52	26.08	15.411
conc2002	49	.2	38.3	16.396	10.2209
emerge	49	0	1	.55	.503
restrict	49	0	1	.35	.481
lnretail02	49	8.50	14.51	10.7681	1.25215
lnemploy02	49	4.38	16.81	7.4890	2.26653
sqrtconc	49	.45	6.19	3.7991	1.41563
Valid N (listwise)	49				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
corpid	34	3	150	78.29	51.109
birth	34	1828	1986	1935.47	39.698
central	34	0	1	.56	.504
dfintldiv	34	-8.47	21.53	.0006	7.98573
sqdfintldiv	34	.22	463.54	61.8962	98.20693
lnsize	34	8.33	14.14	10.9822	1.22458
lnout02	34	4.70	9.64	7.2123	1.43619
Valid N (listwise)	34				

APPENDIX B: DECOMPOSING DIVERSIFICATION RESULTS

Table 12: Corporate Level Effects

	Base Model	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Fixed Effects										
Mean Share, $\hat{\gamma}_{00}$	-.383295[a]	-.896272[a]	-1.740832[a]	-1.703506[a]	-1.788821[a]	-2.142123[a]	-2.239226[a]	-2.282879[a]	-2.313725[a]	-2.288233[a]
International Diversification, $\hat{\gamma}_{01}$					.046878[a]	.081925[a]	.087730[a]	.090415[a]	.092221[a]	.057993[a]
Size, $\hat{\gamma}_{02}$										.388002[a]
Related Diversification, $\hat{\beta}_{1j}$										
Diversification Mean, $\hat{\gamma}_{10}$		1.965808[a]	1.295540[a]	1.309231[a]	1.320819[a]	1.255799[a]	1.740529[a]	1.341414[a]	1.709772[a]	1.673399[a]
International Experience, $\hat{\gamma}_{11}$							.048773[a]		.040721[a]	.046488[a]
Unrelated Diversification, $\hat{\beta}_{2j}$										
Mean Unrelated Diversification, $\hat{\gamma}_{20}$		1.871159[a]	1.282214[a]	1.315623[a]	1.300474[a]	1.163926[a]	1.071173[a]	.973599[a]	.967336[a]	1.141763[a]
International Experience, $\hat{\gamma}_{21}$								.019466[a]	.012428	

Cont'd Table 12

Number of Outlets, $\hat{\beta}_{3j}$										
Mean Outlets, $\hat{\gamma}_{30}$			.244391[a]	.246382[a]	.229217[a]	.370576[a]	.390146[a]	.399233	.405659[a]	.391696[a]
Total Outlets, $\hat{\gamma}_{30}$						-.103873[a]	-.114642[a]	-.117701	-.121789[a]	-.124372[a]
Number of Governance Mechanisms, $\hat{\beta}_{4j}$										
Mean Governance, $\hat{\gamma}_{40}$				-.036194						
Random Components										
Level 1										
Within SBU variation, σ^2	2.11621	1.62466	1.46081	1.46259	1.47325	1.43674	1.33173	1.36034	1.30054	1.36154
Level 2										
Intercept	.46457	.46181	.61401	.60546	.41863	.30156	.39976	.40293	.45585	.19601
Deviance	727.814932	679.6820281[c]	665.498015[c]	665.457721	660.405274[c]	650.887831[c]	641.400105[c]	645.369343	639.348243	635.380012[c]
# Parameters	3	5	6	7	7	8	9	9	10	10

[a]Significant at p<.05, [b]Significant at p<.10, [c]Model comparison to previous model is significant at p<.05 [d]Model comparison to previous model is significant at p<.05

Table 13: Country Level Effects

	Base Model	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Fixed Effects							
Average Retail Market Share, $\hat{\beta}_{0j}$							
Intercept, $\hat{\gamma}_{00}$	-.166965	-.357688[a]	-.589750[a]	-1.558691[a]	-1.929259[a]	-2.523399[a]	-2.629745[a]
Emerging Market, $\hat{\gamma}_{01}$					.520388[b]	1.615240[a]	1.598302[a]
Size, $\hat{\gamma}_{02}$							-.297839[a]
Related Diversification, $\hat{\beta}_{1j}$							
Diversification Mean, $\hat{\gamma}_{10}$		2.809998[a]	2.180725[a]	1.461045[a]	1.411211[a]	1.345965[a]	1.426772[a]
Unrelated Diversification, $\hat{\beta}_{2j}$							
Mean Square Diversification, $\hat{\gamma}_{20}$			1.504948[a]	.755219[a]	.720407[a]	.982548[a]	.934101[a]
Number of Outlets, $\hat{\beta}_{3j}$							
Mean Outlets, $\hat{\gamma}_{30}$				.310992[a]	.335942[a]	.456237[a]	.460767[a]
Emerging Market, $\hat{\gamma}_{30}$						-.303225[a]	-.264456[a]
Random Components							
Level 1							
Within SBU variation, σ^2	1.69544	1.45637	1.34684	1.09668	1.09917	1.03824	1.03830
Level 2							
Intercept	.75471	.71753	.59578	.77888	.70966	.73526	.3830
Deviance	708.029491	681.055278[c]	662.499341[c]	636.755774[c]	634.054305[d]	625.876938[c]	606.462083[c]
# Parameters	3	4	5	6	7	8	9

[a]Significant at p<.05, [b]Significant at p<.10, [c]Model comparison to previous model is significant at p<.05 [d]Model comparison to previous model is significant at p<.05

APPENDIX C: ADDITIONAL ANALYSES

HYPOTHESIS 1

Corporate Model

Model 2 continues to determine other potential explanatory variables for the diversification model and then explore the impact of corporate level moderators. Moreover, we replace the mean difference diversification score with the raw diversification score for ease of interpretation. Because we are no longer testing curvilinearity, it is easier to interpret raw variables than difference scores. In this model, we extend our diversification-market share model with Level 1 covariate to account for varying sizes of the retail chains, i.e. the number of outlets possessed by the FBUs. We find significant relationships between both diversification ($\hat{\gamma}_{10} = 1.286508, t = 4.394$) and chain size ($\hat{\gamma}_{20} = .244419, t = 3.902$) and retail market share. The residual variance between corporations, $\tau_{00} = .61427$, is larger than the original random ANOVA model. A range of plausible values for corporate means, given that corporations have mean diversification scores and average chain sizes, is between 0 and 1.71%. Finally, we can see that corporate market share means vary significantly after adding diversification and chain store variables to the model ($\chi^2 = 113.72729, df = 32, p < .001$). Because there are important differences left to explain, we need to introduce covariates that can help us explain the sources of differences between corporations.

In the next series of models, we attempt to clarify the variability of the regression equations across corporations. Our FBU-level model remains the same as model 2. In models 3-6, we progressively incorporate corporate level explanatory variables, namely international diversification, corporate size, international experience and total number of outlets. All Level 2 variables are grand-mean centered to facilitate interpretation. In summary, we are trying to

explain why some corporations may have higher mean market shares than others and why the magnitude of the relationship between certain FBU characteristics and market share may strengthen or weaken.

Model 3 incorporates the corporation's international diversification experience, namely the number of countries in which the corporation operates, as an explanatory variable for the intercept. (The variable was tested as an explanation for the relationship between in-country diversification and performance, but was not significant.). The effect brought about from operating in foreign environments has a positive effect on a corporation's mean market share. By adding an explanatory variable to the equation at Level 2, we change the meaning of the residual, u_{0j} and make the variance, τ_{00}, a conditional variance of average corporate market share after controlling for international diversification experience. We observe a significant association between international diversification and mean market share. The residual variance between the Base Model ($\tau_{00} = .4647$) and this model ($\tau_{00} = .41905$) is lower. Controlling for international diversification status, the range of plausible values for mean market share is 0% to 1.36%. In other words, we explained 9.8% of the true between-corporation variance in market share by adding the international diversification variable. Even after controlling for the effects of international diversification, corporations still vary significantly in their mean market shares ($\chi^2 = 79.69298, df = 31, p < .001$), encouraging further exploration of explanatory variables.

Model 4 integrates the corporation's retail experience, namely the number of years that corporation has operated at the store-level, as an explanatory variable for the mean market share. In this model, we assume that retail experience has the same moderating effect across corporations. The residual variance between the previous model ($\tau_{00} = .41905$) and this model ($\tau_{00} = .59594$) is higher. Controlling for international diversification and retail experience, the range of plausible values for mean market share is 0% to 1.66%. Even after controlling for the effects of international diversification and retail experience,

corporations still vary significantly in their mean market shares $(\chi^2 = 102.01194, df = 31, p < .001)$.

Model 5 includes the corporation's retail outlet size, namely the total number of outlets that corporation has operates worldwide, as an explanatory variable for the size of their local operations. The residual variance between the previous model ($\tau_{00} = .59594$) and this model ($\tau_{00} = .46462$) is lower. Controlling for international diversification, retail experience and outlet size, the range of plausible values for mean market share is 0% to 1.43%. Even after controlling for the effects of international diversification, retail experience and outlet size, corporations still vary significantly in their mean market shares $(\chi^2 = 92.34137, df = 31, p < .001)$.

Country Model

In Model 2 we replace the mean difference diversification score with the raw diversification score for ease of interpretation and to establish a comparable deviance statistic. In Model 3, we extend our diversification-market share model with Level 1 covariate to account for varying sizes of the retail chains, i.e. the number of outlets possessed by the FBUs. We find positive significant relationships between both diversification ($\hat{\gamma}_{10} = 1.000802, t = 3.833$) and chain size ($\hat{\gamma}_{20} = .310188, t = 5.401$) and retail market share. The residual variance between countries, $\tau_{00} = .76434$, is larger than the original random ANOVA model. A range of plausible values for country means, given that FBUs within countries have mean diversification scores and average chain sizes, is between 0 and 1.92%. Finally, we can see that average country market share vary significantly after adding diversification and chain store variables to the model $(\chi^2 = 203.47084, df = 48, p < .001)$.

In the next series of models (4-6), we attempt to clarify the variability of the regression equations across countries. Our FBU-level model remains the same

as model 3. In models 4-6, we progressively incorporate country level explanatory variables, namely emerging market status and market size. All Level 2 variables are grand-mean centered to facilitate interpretation. In summary, we are trying to explain why some countries may have higher mean market shares than others and why the magnitude of the relationship between certain FBU characteristics and market share may strengthen or weaken.

Models 4 and 5 incorporate emerging market status and retail market size as explanatory variables for the intercept. In Model 4, operating in certain emerging markets may have a positive effect on a firm's mean market share because of the market's technological capabilities and market opportunities relative to the international retailers' home markets. By adding an explanatory variable to the equation at Level 2, we change the meaning of the residual, u_{0j} and make the variance, τ_{00}, a conditional variance of average corporate market share after controlling for emerging market status. We observe a significant association between emerging markets ($(\hat{\gamma}_{01} = .634039, t = 2.499)$ and size of the retail labor force $(\hat{\gamma}_{01} = -.303416, t = -5.095)$ and mean market share. The residual variance between the Base Model $(\tau_{00} = .75471)$ and Model 5 $(\tau_{00} = .34877)$ is lower. Controlling for emerging markets and labor market size, the range of plausible values for mean market share is 0% to 1.28%. In other words, we explained 53.8% of the true between-country variance in market share by adding the emerging market and market size variables. Even after controlling for emerging market and market size effects, countries still vary significantly in their FBU mean market shares $(\chi^2 = 111.99485, df = 46, p < .001)$, encouraging further exploration of explanatory variables.

HYPOTHESIS 2

Corporate Model

In our first series of models, we are looking at the corporate level effects on format level characteristics and strategies, and performance. Models 1 through 5 clarify the Level 1 (FBU) model. In Models 1 & 2, we establish the governance parameters. Initially, a composite number for related and unrelated wholly-owned subsidiaries (WOS) was used and found to be not significant. Then, related and unrelated WOS measures were tried. Only the related (RWOS) measure was significant in the model ($\hat{\gamma}_{10} = 471985, t = 2.253$) , so this measure was used. The joint venture (JV) parameter is also significant ($\hat{\gamma}_{20} = -.616796, t = -2.539$). However, we would not expect governance modes alone to be excellent predictors of market share, so we use Models 3-5 to explicate the Level 1 model by adding two kinds of formats (i.e., hypermarkets and supermarkets) and the in-country operating experience in the format for the FBU.

In Model 5 we extend our governance-market share model with Level 1 covariates to account for varying format experience and specific format operations. We find significant relationships between RWOS ($\hat{\gamma}_{10} = .525922, t = 2.510$) and JV ($\hat{\gamma}_{10} = -.567424, t = -2.390$) retail market share, after controlling for supermarkets, hypermarkets and in-country experience. The residual variance between countries, $\tau_{00} = .81083$, is larger than the original random ANOVA model. A range of plausible values for corporate means is between 0 and 1.90%. Since the intercept term has a definition by default, we can say that the average market share for all those FBU operations that are <u>not</u>: RWOS, JVs, hypermarkets, or supermarkets would fall in that range. Finally, we can see that average corporate market share vary significantly after Level-1 covariates to the model ($\chi^2 = 110.99955, df = 33, p < .001$).

In testing the time-invariance of the final model, we re-ran the analysis with market share for the same companies in 2004. This reduced the number of useable observations to 334. The magnitudes and directionality of the parameter coefficients are similar, and the parameters are significant.

Country Model

We use Models 2-5 to further explicate the Level 1 model. Unlike the previous corporate model, because a "relatedness" term is not included, we can capture the impact of being in the FBU's most important retail segment. The dominant term refers to the highest revenue generator in FBU group operations, while the related business refers to other formats that have similar business models and are contained within the same business segment as the dominant format. In Model 5 we extend our governance-market share model with Level 1 covariates to account for dominant business or related to the dominant business, in-country experience and chain size. We find significant relationships between ACQ ($\hat{\gamma}_{10} = .274965, t = 1.729$) and retail market share, after controlling for membership in the most important segment, in-country experience and chain size. The residual variance between countries, $\tau_{00} = 1.08165$, is larger than the original random ANOVA model. A range of plausible values for corporate means is between 0 and 2.08%. Since the intercept term has a definition by default, we can say that the average market share for all those FBU operations that are <u>not</u>: Acquisitions or in the dominant segment would fall in that range. Finally, we can see that average corporate market share vary significantly after Level-1 covariates to the model ($\chi^2 = 286.98374, df = 48, p < .001$).

HYPOTHESIS 3

Corporate Model

Our first series of analyses models corporate level influences on FBU format operations. The Base Model through Model 5 clarify the Level 1 (FBU)

model. In Models 1 & 2, we establish the governance parameters. Our Base Model consists of five of the six diversification strategies. This suggests that the sixth diversification strategy is represented in the term (among other things). We find that parameters for RWOS ($\hat{\gamma}_{10} = 1.026389, t = 3.710$), related acquisitions (RACQ) ($\hat{\gamma}_{30} = 1.088741, t = 4.008$) and unrelated joint ventures (UJV) ($\hat{\gamma}_{50} = 1.088741, t = 4.008$) are significant. However, the mean market share ordering is not as expected for the related pairs. In this first model, we find that RACQ>RWOS>RJV, although this ordering changes by final model that includes covariates. The parameters for related joint ventures (RJV) and unrelated wholly-owned subsidiaries (UWOS) are not significant, but at the magnitudes and in the directions expected.

In Models 1-5, we add important covariates to the Level-1 model relating to the format type and chain size. The format types included in the models are hypermarkets, supermarkets, convenience stores and soft discounters. We find significant relationships between RWOS ($\hat{\gamma}_{10} = .936285, t = 3.320$), RACQ ($\hat{\gamma}_{30} = .950419, t = 3.460$), UJV ($\hat{\gamma}_{50} = -1.194557, t = -2.536$) and retail market share, after controlling for supermarkets ($\gamma_{70} = .587541, t = 2.316$), hypermarkets ($\gamma_{60} = .717371, t = 2.833$), convenience stores ($\gamma_{80} = -.642250, t = -1.601$), soft discount ($\gamma_{90} = .570162, t = 1.598$) and in-country experience ($\gamma_{100} = .269285, t = 2.815$). The residual variance between countries is $\tau_{00} = .96708$. A range of plausible values for corporate means is between 0 and 2.02%. Since the intercept term has a definition by default, we can say that the average market share for unrelated acquisitions that are not hypermarkets or supermarkets. Finally, we can see that average corporate market share vary significantly after Level-1 covariates to the model ($\chi^2 = 126.10320, df = 33, p < .001$).

Country Model

The next series of analyses models country-level effects on FBU format operations. The Base Model to Model 5 clarify the Level 1 (FBU) model. Our Base Model includes five of the six governance pairs. We find that parameters for RWOS ($\hat{\gamma}_{10} = .701736, t = 2.87$), RJV ($\hat{\gamma}_{20} = .541675, t = 1.881$) RACQ ($\hat{\gamma}_{30} = 1.154387, t = 4.690$) and UJV ($\hat{\gamma}_{50} = -.774334, t = -1.702$) are significant, while the parameter UWOS is not significant. The directions for each of the related/unrelated variables are as expected, but the magnitudes are not. In this model, estimated mean market shares are RACQ>RWOS>RJV and the superior performance from being an RACQ does not change in our country analyses. In Models 1-5, we add important covariates to the Level-1 model relating to the format type and chain size. The format types included in the models are hypermarkets, supermarkets, convenience stores and soft discounters. We find significant relationships between RWOS ($\hat{\gamma}_{10} = .684133, t = 3.254$), RJV ($\hat{\gamma}_{20} = .821305, t = 3.274$) RACQ ($\hat{\gamma}_{30} = .978328, t = 4.682$), UJV ($\hat{\gamma}_{50} = -.648431, t = -1.710$) and retail market share, after controlling for supermarkets ($\gamma_{70} = .043314, t = .244$), hypermarkets ($\gamma_{60} = .799349, t = 4.785$), convenience stores ($\gamma_{80} = -1.445537, t = -5.417$), soft discounter ($\gamma_{90} = .136231, t = .514$) and in-country experience ($\gamma_{100} = .477331, t = 10.545$). The residual variance between countries is $\tau_{00} = 1.04648$. A range of plausible values for corporate means is between 0 and 2.05%. Since the intercept term has a definition by default, we can say that the average market share for unrelated acquisitions that are not hypermarkets or supermarkets. Finally, we can see that average corporate market share vary significantly after Level-1 covariates to the model ($\chi^2 = 347.41174, df = 48, p < .001$).